

# Canterbury Chief Executives Forum

## MEETING PACK

for

## Canterbury Chief Executives Forum

Monday, 8 November 2021

8:45 am

Held at:

Selwyn District Council

2 Norman Kirk Drive, Rolleston

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# AGENDA

## CANTERBURY CHIEF EXECUTIVES FORUM

<b>Name:</b>	Canterbury Chief Executives Forum
<b>Date:</b>	Monday, 8 November 2021
<b>Time:</b>	8:45 am to 12:00 pm
<b>Location:</b>	Selwyn District Council, 2 Norman Kirk Drive, Rolleston
<b>Committee Members:</b>	Hamish Riach (Committee Chair), Alex Parmley, Bede Carran, Dawn Baxendale, Hamish Dobbie, Jim Harland, Stefanie Rixecker, Stuart Duncan, Will Doughty
<b>Attendees:</b>	Amanda Wall, Maree McNeilly, Rosa Wakefield
<b>Apologies:</b>	David Ward, Suzette van Aswegen
<b>Guests/Notes:</b>	Tim Harris (Selwyn District Council, for David Ward), Jesse Burgess (Senior Strategy Manager, Environment Canterbury - item 2.4) Apologies: Ben Clark (Regional Public Service Commissioner)

### 1. Opening Meeting

#### 1.1 Welcome, introductions, apologies and wellbeing check in 8:45 am (15 min)

Hamish Riach

#### 1.2 Confirm Minutes 9:00 am (5 min)

Hamish Riach

Supporting Documents:

1.2.a Minutes : Chief Executives Forum - 2 Aug 2021	9
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#### 1.3 Action List 9:05 am (4 min)

Hamish Riach

Supporting Documents:

1.3.a Action List	20
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### 2. For discussion and decision

#### 2.1 Regional Public Service Commissioner update 9:09 am (5 min)

Hamish Riach

Supporting Documents:

2.1.a CEF Regional Public Service Commissioner update Nov 2021.docx	21
2.1.b CEF Regional Public Service Commissioner Update Nov 2021 Attachment 1 Regional Public Sector Commissioner report.docx	22



## Supporting Documents:

2.1.c	CEF Regional Public Service Commissioner update Nov 2021 Attachment 2 Regional System Leadership Framework brief.pdf	27
2.1.d	CEF Regional Public Service Commissioner update Nov 2021 Attachment 3 Regional System Leadership Framework.pdf	32

## 2.2 Regional economic development

9:14 am (5 min)

Hamish Riach

## Supporting Documents:

2.2.a	CEF Regional Economic Development Nov 2021.docx	33
2.2.b	CEF Regional Economic Development Group Nov 2021 Attachment 1 draft proposal.docx	35

## 2.3 Resource Management reform

9:19 am (5 min)

David Ward

## Supporting Documents:

2.3.a	CEF Resource Management reform Nov 2021.docx	37
2.3.b	CEF Resource Management reform Nov 2021 Attachment 1 draft EOI.docx	41
2.3.c	CEF Resource Management reform Nov 2021 Attachment 2a response from Taituarā to CMF letter.docx	42
2.3.d	CEF Resource Management reform Nov 2021 Attachment 2b response MfE to CMF letter re representation.pdf	43

## 2.4 Regional Transport Committee three-year work programme

9:24 am (10 min)

Stefanie Rixecker

## Supporting Documents:

2.4.a	CEF Canterbury Regional Transport Forward Work Programme Nov 2021.docx	45
2.4.b	CEF Canterbury Regional Transport Committee Nov 2021 Attachment 1 Proposed Governance and Delivery Structure.pptx	49
2.4.c	CEF Canterbury Regional Transport Committee Nov 2021 Attachment 2 RTC Work Programme Initiatives and Milestones.docx	51

## 2.5 Climate Change Risk Assessment

9:34 am (10 min)

Dawn Baxendale

## Supporting Documents:

2.5.a	CEF Climate Change Risk Assessment Nov 2021.docx	54
2.5.b	CEF Climate Change Risk Assessment Nov 2021 Attachment 1.pdf	66

## 2.6 Collaborative procurement update

9:44 am (5 min)

Bede Carran

Supporting Documents:

2.6.a	CEF Collaborative procurement update Nov 2021.docx	314
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## 2.7 Carbon footprint assessment

9:49 am (5 min)

Bede Carran

Supporting Documents:

2.7.a	CEF Carbon footprint assessment update Nov 2021.docx	317
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## 2.8 Regional Forums budget

9:54 am (3 min)

Maree McNeilly

Supporting Documents:

2.8.a	CEF Regional Forums Budget Nov 2021.docx	319
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## 2.9 Three-year work programme 2020-2022

9:57 am (3 min)

Maree McNeilly

Supporting Documents:

2.9.a	CEF Three-year work programme Nov 2021.docx	322
2.9.b	CEF Three-year work programme Nov 2021 Attachment 1.pdf	324

## 2.10 Elections and appointments 2022

10:00 am (10 min)

Hamish Riach

1. Election of Chair, Chief Executives Forum
2. Appointment of Chairs: Policy, Corporate and Operations Forums

## 2.11 Economic regulation and consumer protection - three waters services

10:10 am (10 min)

Hamish Riach

Supporting Documents:

2.11.a	CEF Economic regulation and consumer protection three waters services Nov 2021.docx	327
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## 3. For information

### 3.1 Morning tea

10:20 am (15 min)

### 3.2 Essential Freshwater Ashburton report

10:35 am (10 min)

Hamish Riach

Supporting Documents:

3.2.a	CEF Essential Freshwater Ashburton Report Nov 2021.docx	329
3.2.b	CEF Essential Freshwater Ashburton report Nov 2021 Attachment 1 Freshwater Nitrates Economic impact report.pdf	332

Supporting Documents:

3.2.c	CEF Essential Freshwater Ashburton report Nov 2021 Attachment 2 Social Impact Report.pdf	472
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### 3.3 Canterbury Water Management Strategy update

10:45 am (5 min)

Stefanie Rixecker

Supporting Documents:

3.3.a	CEF Canterbury Water Management Strategy update Nov 2021.docx	517
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### 3.4 COVID-19 vaccinations

10:50 am (10 min)

Hamish Riach

Supporting Documents:

3.4.a	CEF COVID-19 Vaccines November 2021.docx	525
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### 3.5 Flexible Working report

11:00 am (5 min)

Bede Carran

Supporting Documents:

3.5.a	CEF Short-term working party on flexible working report Nov 2021.docx	529
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### 3.6 Regional Forums report

11:05 am (5 min)

Bede Carran, Hamish Dobbie and David Ward

Supporting Documents:

3.6.a	CEF Regional Forums report Nov 2021.docx	554
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### 3.7 Future for Local Government update

11:10 am (10 min)

Hamish Riach

Supporting Documents:

3.7.a	CEF Future for Local Government update Nov 2021.docx	557
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### 3.8 Three waters

11:20 am (15 min)

### 3.9 CE information exchange

11:35 am (15 min)

### 3.10 Draft Mayoral Forum agenda, 19 November

11:50 am (5 min)

Hamish Riach

Supporting Documents:

3.10.a	19 Nov 2021 Draft Agenda Mayoral Forum.pdf	561
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#### 4. General business

#### 5. Close Meeting

##### 5.1 Close the meeting

**Next meeting:** Canterbury Chief Executives Forum - 31 Jan 2022, 9:00 am

**Other upcoming meetings:**

- Mayoral Forum – Friday 19 November 9.00am-12.00pm at Clearwater Resort

# MINUTES (in Review)

## CHIEF EXECUTIVES FORUM

<b>Name:</b>	Canterbury Chief Executives Forum
<b>Date:</b>	Monday, 2 August 2021
<b>Time:</b>	9:00 am to 11:45 am
<b>Location:</b>	Selwyn District Council, 2 Norman Kirk Drive, Rolleston
<b>Committee Members:</b>	Hamish Riach (Committee Chair), Alex Parmley, Bede Carran, David Ward, Hamish Dobbie, Jim Harland, Stefanie Rixecker, Stuart Duncan, Will Doughty
<b>Attendees:</b>	Amanda Wall, Maree McNeilly, Rosa Wakefield
<b>Apologies:</b>	Dawn Baxendale, Suzette van Aswegen
<b>Guests:</b>	Jane Davis (for Dawn Baxendale); Ben Clark, Regional Director Corrections, Canterbury Regional Public Service Lead (via Zoom).
<b>Notes:</b>	<b>Other Apologies</b> Angela Oosthuizen (Acting CE Mackenzie).

### 1. Opening meeting

#### 1.1 Welcome, introductions and apologies

The Chair welcomed all to the meeting.

Apologies were noted from Dawn Baxendale and Angela Oosthuizen (Acting CE Mackenzie)

An apology for lateness was noted from David Ward and Bede Carran.

The Chair welcomed both Alex Parmley and Jane Davis to their first Forum meeting.

#### 1.2 Confirmation of agenda

The agenda was confirmed with no items of general business.

#### 1.3 Confirmation of minutes, 3 May 2021



##### Decision

Minutes from the previous meeting on 3 May 2021 were confirmed, with all actions completed or relating to items on the agenda for this meeting.

**Decision Date:** 2 Aug 2021

**Outcome:** Approved



##### Action

Add Will Doughty to attendance list for previous meeting.

**Due Date:** 6 Oct 2021

**Owner:** Rosa Wakefield

## 1.4 Action List

## 2. For discussion and decision

### 2.1 Regional public sector priorities

The chair spoke to the paper, which suggests ways to progress the relationship with the Public Sector Lead. There is a question around how we can bring the workstreams together once per quarter or twice per year to discuss priorities. Many of the issues have a strong GCP focus, but this is not a GCP partnership and those outside the GCP need to be able to stay connected.

Ben Clark provided an update on the progress of the regional public sector priorities, acknowledging that the work has aligned further over the past few months and that there is a desire for clarity on an aligned work programme. It has been easy to agree on priorities, now work is underway to identify specific areas to focus on.

Several agencies are working together to focus on school enrolment for under-10s, mental health, and the first 1000 days of life. Front-line staff can provide key insight on how to make a difference so input is sought on how to capture that insight.

It was noted that there's a need to be careful of funding and where it is coming from, that is it not coming from rates.



### Decision

The Forum agreed to:

1. note the update provided by the Regional Public Service Lead on the development of Regional Public Service Priorities
2. agree to a standing item on future Chief Executive Forum meeting agendas for the Regional Public Service Lead
3. endorse the Chief Executives Forum Chair to attend Public Service Lead meetings as required
4. approve the secretariat to continue to work with the secretariats of the Greater Christchurch Partnership, Regional Skills Leadership Group and advisors to the Regional Public Service Lead to share relevant information to ensure alignment between our work programmes where appropriate.

<b>Decision Date:</b>	2 Aug 2021
<b>Mover:</b>	Hamish Dobbie
<b>Seconder:</b>	Stefanie Rixecker
<b>Outcome:</b>	Approved

### 2.2 Three Waters

Hamish Dobbie spoke to the paper. Members discussed issues around three waters reforms, including:

- a proposal for Canterbury rural and provincial councils to meet with Allan Prangnell from DIA on 31 August
- that Christchurch should be included in the 31 August meeting as although water issues affect them differently they are important to the big picture
- that Waimakariri District Council are seeking more information from DIA and doing a full community consultation as they are concerned about the central government numbers

- that if entity D is the result that there is an opportunity for entity D to look different from other entities, and that we should ensure the big picture is well understood
- that the work done by PwC concluded with a very similar outcome to DIA's modelling, with separate entities with a competence-based board
- that Waimate District Council is starting an ongoing discussion with their community via public meetings on Monday
- noting that the national perspective is understood by central government, and that many parts of the North Island are fully supportive of the reform
- issues around the spreading of costs for water supply across a broad population versus the community the water supply serves
- the perception that the investment of councils who have updated their water infrastructure will benefit others in the four entity model
- that Ngāi Tahu's preferences around the reforms need to be considered
- Environment Canterbury is supportive of Canterbury councils in this space, but is mindful of wastewater and stormwater which are significant in this space
- the challenge government has to balance Te Tiriti and the Local Government Act
- that there is a takiwā meeting being led by Ngāi Tahu next week.



### Decision

The Forum agreed not to commission further analysis and review of the Crown's three waters reforms at this time.

**Decision Date:** 2 Aug 2021  
**Mover:** Hamish Dobbie  
**Seconded:** Stuart Duncan  
**Outcome:** Approved



### Action

Check whether Waimakariri can make 31 August work for the three waters session.

**Due Date:** 31 Aug 2021  
**Owner:** Jim Harland



### Action

Jane Davis to check whether Christchurch prefers to be included in the meeting with DIA on 31 August.

**Due Date:** 31 Aug 2021  
**Owner:** Secretariat Secretariat

## 2.3 Future for local government

The Chair spoke to the paper. The Canterbury mayors and papatipu rūnanga chairs are meeting on Friday. Health sector reforms may offer an opportunity to try to influence the future structure.



### Decision

The Canterbury Chief Executives Forum agreed to note the information in the paper.

**Decision Date:** 2 Aug 2021  
**Mover:** Hamish Riach  
**Seconded:** Stefanie Rixecker  
**Outcome:** Approved

## 2.4 Improving collaborative procurement in Canterbury

Bede Carran spoke to the paper. The Corporate Forum has looked at collaborative procurement a few times, but has acknowledged that without a dedicated resource outcomes will not be achieved because councils do not have the time or resource to establish a proper collaboration structure.

The ambitious timeframe for reporting back was noted. Bede is confident that with a dedicated resource and a well-defined terms of reference this is achievable.

The Corporate Forum will ensure that areas of biggest benefit are also identified so that those can be addressed first.



### Decision

The Forum agreed to:

1. endorse the Canterbury Corporate Forum progressing work to investigate the feasibility and value of a model for collaborative procurement in Canterbury
2. agree to the appointment of an external contractor, up to a cost of \$25,000, to complete the investigation into a model for collaborative procurement in Canterbury, and identify opportunities for collaboration
3. require the Canterbury Corporate Forum to report to the November Chief Executives Forum with a recommended collaborative procurement model for Canterbury.

<b>Decision Date:</b>	2 Aug 2021
<b>Mover:</b>	Bede Carran
<b>Seconded:</b>	David Ward
<b>Outcome:</b>	Approved

## 2.5 Canterbury Story website options

The paper was taken as read.



### Decision

The Forum agreed that the contents of the Canterbury Story be moved to another repository and the site closed.

<b>Decision Date:</b>	2 Aug 2021
<b>Mover:</b>	Jim Harland
<b>Seconded:</b>	Will Doughty
<b>Outcome:</b>	Approved



### Action

Work with ChristchurchNZ to find a new repository and close the site.

<b>Due Date:</b>	31 Oct 2021
<b>Owner:</b>	Secretariat Secretariat

## 2.6 Three year work programme 2020-22

The paper was taken as read.



**Decision**

The Forum agreed to approve the updated three-year work programme 2020-2022.

**Decision Date:** 2 Aug 2021  
**Mover:** Stefanie Rixecker  
**Seconder:** Jim Harland  
**Outcome:** Approved

**2.7 Regional forums budget**

Maree McNeilly spoke to the paper, noting that levies are proposed to remain the same. Members agreed to keep the balance of \$10k of the three waters contributions aside for now, given the possibility of further work around entity D.

**Decision**

The Forum agreed to:

1. approve the regional forums 2020/21 income and expenditure report
2. approve the regional forums 2021/22 budget.

**Decision Date:** 2 Aug 2021  
**Mover:** Hamish Riach  
**Seconder:** David Ward  
**Outcome:** Approved

**2.8 Canterbury Mayoral Forum mid-term achievements 2019-2021**

Hamish Riach spoke to the paper, noting that it is a thorough summary and a nice reminder of the activity of the forum and its achievements.

It was noted that the Canterbury Story website is identified as an achievement, which should be clarified given the decision to close the site.

**Decision**

The Forum agreed to:

1. provide feedback (including corrections and omissions) on the draft mid-term report
2. note that the chair and secretariat will finalise the report, in consultation with the chair of the Mayoral Forum, for presentation to the Mayoral Forum on 20 August 2021, including opportunities to promote the work of the forum.

**Decision Date:** 2 Aug 2021  
**Mover:** David Ward  
**Seconder:** Stefanie Rixecker  
**Outcome:** Approved

**Action**

Update Canterbury Story in the paper to reflect the decision to close the site.  
 4/10 Work underway with ChristchurchNZ.

**Due Date:** 31 Oct 2021  
**Owner:** Rosa Wakefield

**Action**

Add to the recommendations in the paper to the Mayoral Forum that it consider releasing this information to the media and encourage councils to share the achievements document widely.

**Due Date:** 31 Oct 2021

**Owner:** Secretariat Secretariat

**2.9 Morning Tea****2.10 Resource management reform**

David Ward spoke to the paper, noting that today is the last day for advice on the submission on the Natural and Built Environments Bill: Parliamentary Paper.

The paper recommends engaging an independent contractor to assist with workload around submissions. Members support this in-principle but are keen to understand the financial implications. David will seek to form a job description for this role, work out the budget, and will come back to this group if there are financial implications.

It was noted that the contractor should not be engaging with Central Government and/or Ministers on our behalf.

It has been identified that Canterbury is not well represented on national working groups so the paper proposes sending letters to Local Government New Zealand, Taituarā, Ministry for the Environment and the Department of Internal Affairs. These can be included in the Mayoral Forum agenda for approval.

Jim Harland gave an update on the Ministry for the Environment and Department of Internal Affairs' Local Government Forum of Chief Executives for the resource management reform. It is looking at three fundamental areas:

- the national planning framework and whether to have an independent formal review panel
- strategic direction of regional spatial committees, how many people should sit around the table, and how to have the ability for spatial planning at the regional and sub-regional levels
- having an autonomous joint committee for Natural and Built Environments with a separate submission process. There is concern around whether this group would be linked back to the community in an electoral sense.

It was noted that the amount of time committed to these sessions is very significant, and materials and content of the sessions often can't be shared.

**Decision**

The Forum agreed to:

1. endorse and provide input into the Canterbury Mayoral Forum submission on the Inquiry on the Natural and Built Environments Bill: Parliamentary Paper
2. agree, in principle, to engage an independent contractor to assist the Canterbury Mayoral Forum with engagement through the resource reform processes and development of future submissions on the Natural and Built Environments Bill, Strategic Planning Bill and Climate Adaptation Bill
3. send letters to Local Government New Zealand, Taituarā, Ministry for the Environment and the Department of Internal Affairs requesting inclusion of at least one representative from Canterbury on national working groups.

**Decision Date:** 2 Aug 2021  
**Mover:** David Ward  
**Seconder:** Hamish Dobbie  
**Outcome:** Approved



### Action

Work with the Secretariat to identify funding allocation and prepare a PD for a shared resource to work on RM reform.

27/10 Work underway, to be discussed in item 2.3.

**Due Date:** 8 Nov 2021  
**Owner:** David Ward



### Action

Add draft letters to the paper for the Mayoral Forum.

**Due Date:** 31 Oct 2021  
**Owner:** Secretariat Secretariat

## 2.11 Canterbury Climate Change Risk Assessment update

David Ward spoke to the paper.

Members prefer the option to proactively release and engage. This will enable engagement with interest groups across the sector.



### Decision

The Forum agreed to:

1. support the approach to approval of the Canterbury Climate Change Risk Assessment deliverables
2. provide advice on approach options for communications and engagement for:
  - a. public release of the assessment's results
  - b. communicating results relating to sectors managing high and extreme risks
  - c. communicating results where high and extreme risks are managed by councils.

**Decision Date:** 2 Aug 2021  
**Mover:** David Ward  
**Seconder:** Jim Harland  
**Outcome:** Approved

## 2.12 Carbon footprint assessments by Canterbury councils

Bede Carran spoke to the paper. Councils have agreed on using the GHG methodology but reporting will likely require alignment in time.

The question of joint procurement has been discussed, and the Corporate Forum are exploring whether the same application could be used by all councils. Using a consistent methodology the same application will provide the most significant benefit.

Christchurch has developed its own software but it's unclear whether this could be shared. Christchurch is happy to share its experience and Jane will find out whether the software can be shared.

It would be useful to have one contact at each council to ensure clear communication on this issue.

Hurunui has used the MfE workbook and used its own resource to do the work so they understand the data.

It was noted that this piece of work might sit more comfortably under the climate change working group.



## Decision

Seconded by Jane Davis.

The Forum agreed to:

1. note that the three councils that are still to complete initial carbon emission assessments will request quotes to complete by December 2021
2. endorse the Carbon Emissions Working Group to investigate options to jointly procure a software programme specific to the Canterbury councils for ongoing collection of data following the GHG Protocols Scope 1, 2 and 3.

**Decision Date:** 2 Aug 2021  
**Mover:** Bede Carran  
**Outcome:** Approved



## Action

Action assigned to Jane Davis, who doesn't have an account in BoardPro. Find out whether software built by Christchurch could be shared with other councils.

**Due Date:** 31 Oct 2021  
**Owner:** Secretariat Secretariat



## Action

Action assigned to all members. Advise the secretariat of the best contact person in your council for carbon footprint assessments.

**Due Date:** 31 Oct 2021  
**Owner:** Secretariat Secretariat

## 3. For information

### 3.1 Canterbury Water Management Strategy update

Stefanie Rixecker spoke to the paper, highlighting that Environment Canterbury continues to work with the 10 papatipu rūnanga on Te Mana o te Wai. Risks remain around the capacity of the sector to manage conflicting priorities. Environment Canterbury is working with central government on this.

It was noted that because Te Mana o te Wai is now so prescriptive some iwi, including some in Canterbury, are now concerned this has become a pakeha tool. Operational Te Mana o te Wai workshops have been cancelled or postponed because of inter-iwi politics around this.

Stefanie noted concerns that the Essential Freshwater Steering Group is causing duplication of effort, and in light of importance of everything that is happening in this space does not appear to be a sensible structure.



### Decision

The Forum agreed to receive the CWMS update report.

**Decision Date:** 2 Aug 2021  
**Mover:** Stefanie Rixecker  
**Seconded:** David Ward  
**Outcome:** Approved

## 3.2 Building consent collaboration update

The paper was taken as read.



### Decision

The Forum agreed to note the update on the activities, outcomes and next steps of the building consent collaboration working group.

**Decision Date:** 2 Aug 2021  
**Mover:** Bede Carran  
**Seconded:** Stuart Duncan  
**Outcome:** Approved

## 3.3 Short-term working party on the impacts of flexible working

Bede Carran spoke to the paper, noting that the lessons were many and varied, and even within councils some were able to work from home readily, and some less so. The group will report back to the November meeting. Outcomes are unlikely to be statistically significant.



### Decision

The Forum agreed to note the update provided in the paper.

**Decision Date:** 2 Aug 2021  
**Mover:** Bede Carran  
**Seconded:** Stuart Duncan  
**Outcome:** Approved



### Action

All members to share flexible working / working from home policies with Stuart.

**Due Date:** 31 Oct 2021  
**Owner:** Secretariat Secretariat

## 3.4 Regional forums report

The paper was taken as read.

Bede Carran noted that the Canterbury Public Records Act Executive Sponsors and Canterbury Records and Information Management group are undertaking some work around what constitutes a public record under the Public Records Act, and the need for good practices in this space.

David Ward gave an update on the LTP working group, which had a debrief session this morning, with eight councils represented. Councils found the LTP working group valuable. David encouraged members to talk to their representatives on the working group.

The group will draft a letter to Audit NZ and OAG with feedback, noting the need for early engagement with Audit NZ and a clear plan from them at the outset, and frustrations around the hot review process, audits on previous asset management plans, and issues with NZTA funding.



### Decision

The Forum agreed to receive the report on regional forum meetings between May and July 2021.

**Decision Date:** 2 Aug 2021  
**Mover:** Stuart Duncan  
**Second:** Will Doughty  
**Outcome:** Approved

## 3.5 Flooding Update

Stefanie Rixecker spoke to the paper. A joint update on flood recovery and river rating schemes will be added to the Mayoral Forum agenda.

Environment Canterbury has created a sub-committee to review river rating schemes.

The report, Central Government Co-investment in River management for Flood Protection (November 2018), which was circulated to members notes that one of the major failures in flood protection is how funding is done and suggests a different funding model. River rating schemes are limited by farmers who agree to contribute. Protections are put in place for those specific areas that are funded but partially protected rivers leave everyone exposed.

Stefanie proposes preparing a paper around this covering the experience of the Canterbury floods, with input from councils, and suggests inviting Basil Chamberlain (one of the authors of the report) to speak to the Mayoral Forum at its next meeting.

The scope of this covers advanced erosion of braided rivers. Willow removal and riverbed height is also an issue in the hill country.

The Prime Minister is aware of the report but has said there is no money for this right now. Members consider it would be better to invest now to save money and provide resilience in the future. Minister Mahuta has flagged an interest in resilience.



### Action

Discuss paper with Mayor Sam Broughton and seek brief input from each council on their flood recovery status.

**Due Date:** 31 Oct 2021  
**Owner:** Secretariat Secretariat

## 3.6 CE information exchange

### 3.7 Draft Mayoral Forum agenda, 20 August 2021

Maree McNeilly spoke to the paper, noting that the Local Government Commission will attend the Mayoral Forum meeting to present on their code of conduct; they have been asking to come for some time.

Members suggested starting the meeting at 8.30am to ensure time for the items on the agenda and for Basil Chamberlain to present on essential freshwater.

The Regional Strategic Partnership Fund is on the agenda as it is looking at some proposals and needs Mayoral Forum support..

Hon David Parker, Minister for Environment will be attending the Mayoral Forum dinner on 19 August to discuss Essential Freshwater. His office has been advised that resource management reform is also likely to come up.



#### **Action**

Adjust Mayoral Forum agenda for the earlier start time.

**Due Date:** 31 Oct 2021

**Owner:** Secretariat Secretariat

## **4. General business**

### **4.1 General business**

There was no general business.

## **5. Documents from original meeting**

### **5.1 Original Board Pack**

## **6. Close meeting**

### **6.1 Close the meeting**

**Next meeting:** No date for the next meeting has been set.

Members were thanked for their attendance and contribution. The meeting closed at 11.45am.

The next meeting will take place on Monday 1 November 2021 at Selwyn District Council.

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

# Action List

## Canterbury Chief Executives Forum

*As of: 3 Nov 2021*

Action	In Progress
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Work with the Secretariat to identify funding allocation and prepare a PD for a shared resource to work on RM reform.	
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27/10 Work underway, to be discussed in item 2.3.

<b>Due Date:</b>	8 Nov 2021
<b>Owner:</b>	David Ward
<b>Meeting:</b>	2 Aug 2021 Chief Executives Forum, 2.10 Resource management reform



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach

## **Regional Public Service Commissioner update**

### **Purpose**

1. To provide an update on behalf of Ben Clark, Regional Public Service Commissioner (RPSC), on the Regional Public Service Leadership framework and the regional public service priorities.

### **Recommendations**

**That the Canterbury Chief Executives Forum:**

1. receive the Regional Public Service Commissioner update

### **Background**

2. At the August 2021 Chief Executives Forum it was agreed to a standing item on future Chief Executives Forum meeting agendas for the Regional Public Service Lead (now Regional Public Service Commissioner).

## **Regional Public Service Commissioner Update**

3. Due to the change in date for the Chief Executives Forum meeting, Ben Clark, RPSC is unable to attend the meeting.
4. A written report has been prepared and is provided as attachment 1.

## **Interface between RPSC and Regional Economic Development (RED) Senior Officials**

5. The attached report highlights the interface between RPSC and Regional Economic Development (RED) Senior Officials. In particular it notes that with the RPSC being regionally based and the REDSO national office-based this should support a strong connection between regional and national offices and respective decision makers.

### **Attachments**

- Regional Public Service Commissioner report

## Regional Public Service Commissioner Update:

### CE Forum 08/11/2021

#### Purpose

1. This paper provides an update on the Regional Public Service Leadership framework and the Regional Public Service priorities work programme.

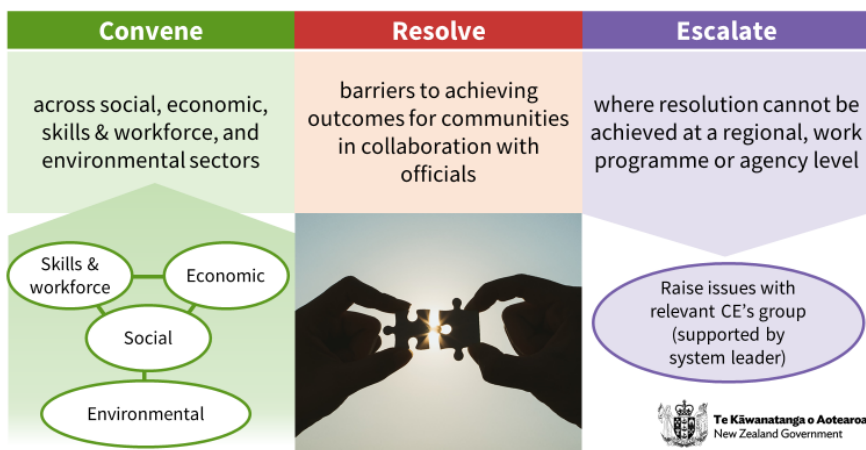
#### Regional Leadership Framework

2. On 12 July 2021, cabinet agreed to:
  - an expanded scope for the Regional Public Service Leads (now designated as Regional Public Service Commissioners (RPSCs) to recognise the broader role) to include both economic and environment, in addition to the social and skills sectors (Fact Sheets are provided at appendix 1)
  - a wider mandate for the RPSCs to not only convene, but also resolve and as/where necessary escalate issues to CEs for decisions/resolution
3. In addition, Peter Hughes, as Public Service Commissioner has designated the Secretary for Social Development, Debbie Power as system leader for regional public services. The system leader role is a new role that was established through the Public Service Act reforms, and this is the first time it has been used.
4. Supporting Debbie in this is a group of six CEs (including Debbie) who broadly cover the sectors. This group includes:
  - Debbie Power, Chief Executive of MSD, and Secretary for Social Development, SWB representative and System Leader for regional alignment
  - Iona Holsted, Chief Executive of MoE and Secretary for Education
  - Carolyn Tremain, Chief Executive of MBIE, and EET representative
  - Vicky Robertson, Chief Executive of MfE and Secretary for the Environment (representing natural resource sector)
  - Paul James, Chief Executive for the Department of Internal Affairs (representing local government sector)
  - Dave Samuels, Chief Executive of the Ministry of Māori Development and Secretary for Māori Development
5. The most recent paper setting out these decisions is now available online here: [Cabinet-Paper-Joined-up-Government-in-the-Regions-repor-back-Strengthening-a-regional-system-leadersship-framework-for-the-public-service.pdf](http://publicservice.govt.nz/Cabinet-Paper-Joined-up-Government-in-the-Regions-repor-back-Strengthening-a-regional-system-leadersship-framework-for-the-public-service.pdf) (<http://publicservice.govt.nz>)
6. The framework does not alter existing decision rights that sit with Ministers and government agencies. Individual agencies remain responsible for their core work programmes and delivery of portfolio areas. Instead, RPSCs work with agencies to build a strong connection between regional and national offices, and respective decision makers to support better decisions that meet the needs of communities.
7. How the framework is delivered, and over what period, will differ across regions, as each region's context, relationships between leaders and groups, and current public service presence differs.



8. As highlighted below, this widened mandate helps RPSCs improve the consistency of communication between partners across these sectors and generate engagement and coordinated action.

### Regional Public Service Commissioner Mandate



### Interface between Regional Public Service Commissioners and Regional Economic Development (RED) Senior Officials

9. RED Senior Officials (REDSO) will continue to coordinate and lead all-of-government regional economic development activity and will continue to connect in and align with RPSCs on relevant issues.
10. With RPSCs being regionally based and REDSOs national office-based, this should enable strong connection between regional and national offices, and respective decision makers.
11. Ben Clark (RPSC), has and will continue to meet with Paul Stocks (REDSO), and Senior Advisors to be across priorities that are linked and will be supported across roles. For example, social equity issues/skills development and training clearly overlap with economic development priorities being developed by the Canterbury Mayoral Forum alongside Kānoa.
12. Although early days, other examples of interface:
- where initiatives cannot be funded via the Regional Strategic Partnership Fund (RSPF), other options can be explored based on existing relationships and agency alignment
  - Kānoa priorities will inform the RPSC focus from a skills and labour market perspective, as will the Regional Skills Leadership Group (RSLG)

### Regional priorities for Canterbury

13. To date, our approach has been to build consensus around existing social and economic wellbeing concerns toward broad priority focus areas. From there, we have worked to define the problem and then identify specific 'intervention points', where we believe a joined-up approach will have most benefit.
14. The extended mandate, as noted above will provide further opportunities to support agency alignment around intersecting social, economic, skills and workforce, and environmental issues and opportunities.

15. The work of the RSLG will be critical to informing the workforce priority, but this also overlaps with other priorities and will support those. Lifting workforce capability as a practical means of driving equity, in turn incentivises investment based on solid foundations.
16. Continuing engagement across agencies, NGOs, Iwi, and partners are shaping not only priorities, but enablers to support more effective joined up government, such as workforce connectivity, and alignment of funding and commissioning.
17. A common theme in the development of these priorities is that we want to shift how the public service delivers supports to better reflect what's important for whānau, rather than what's important for individual agencies.
18. Two key enablers to integrating our service delivery are:
  - 1) improving our maturity in how we collectively commission services from NGOs to reduce the compliance burden on these providers so that they can focus on making a difference to whānau ora
  - 2) strengthening relationships across the front-line workforce, especially those involved in working with tamariki, so that our response to whānau reflects the complexity of people's lives. We all agree that needs don't arise in isolation and that working with individuals in their context will help them to become independent and self-determining.
19. Top of mind is that although the priorities are referred to as Public Service priorities, they aim to resonate with local government and iwi and reflect, where possible, broad issues of commonality across our strategy/planning documents.
20. It is noted that COVID priorities and restrictions have interrupted some momentum with the priority refinement.
21. On 6 October 2021 an update on development of Regional Public Service Priorities was submitted to Hon Chris Hipkins, Minister for Public Service.

## Regional Priorities

22. The four initial priorities collectively identified in Canterbury are:

### **All tamariki and rangatahi in Canterbury reach their full potential**

23. 'Workforce Connectivity' will look at how the system can be more tamariki-centric and whānau-focused in delivering services and supports to address the underlying causes of disadvantage.
24. This will set the foundation for the agreed priorities:
  - Intervening early to address the needs of tamariki and rangatahi, and their whānau
  - Tamariki and rangatahi are engaged and learning
25. The first workshop on 'Workforce Connectivity' is planned for November.

### **Workforce Development – transitioning Canterbury to become a more highly productive and sustainable economy**

26. With a particular focus on Māori, Pasifika, youth and women, this priority will seek to:
  - Increase pathways to support people into employment
  - Match labour force to job opportunities and address sector gaps (including dairy, aged-care, fishing, nursing, seasonal work, and infrastructure jobs)



27. *Note:* The Regional Skills Leadership Group supported by MBIE is supporting this priority area and its plans will be a critical reference point when progressing the Workforce Development priority.

### **Addressing housing concerns**

28. The broad priority is supporting whānau to be able to access affordable housing with secure tenure and streamlining agencies roles and responsibilities when working with community groups in trying to support whanau to maintain their tenancies.
29. Our initial focus will be to strengthen the collective response to support the cohorts of people with such complex issues where existing housing services alone cannot meet their needs. This is needed if we are to stem the cycle of disadvantage and prevent future more costly interventions being required later.

### **Supporting Mental Wellbeing: Improving access to health care for people with moderate mental health needs**

30. There is agreement across agencies that supporting mental wellbeing should be a focus within the priorities – how this looks is still being refined, while considering insights from literature, health professionals, NGOs, and sector agencies.
31. It is noted that people's health needs, whether physical, mental, or spiritual, are key factors in their ability to fulfil their potential and achieve independence for themselves and their family.
32. RPSC spent several weeks in July and August 2021 seconded to CDHB conducting fieldwork enquiry to support this priority, asking the question "How can government agencies in the region operate in a more integrated way to enhance health and wellbeing outcomes in the community?"
33. Feedback and recommendations from this fieldwork will be discussed Canterbury Regional Leads and key stakeholders.

### **Key next steps and timelines**

34. Reiteration of the priorities will occur over time as needed, based on updated insights reports, action plans, strategies, and the extended Regional Leadership Framework. In line with work to address the priorities, any reiterations will also need to be collaborative.
35. RPSC will continue to engage with key stakeholders, as we seek to introduce and embed the expanded Regional Leadership framework in our region. This includes strengthening engagement across the economic and environmental sectors.
36. In November (Covid permitting), DCEs from different agencies will meet with RPSCs to discuss key regional issues and opportunities to work together.
37. A report to cabinet in June 2022 will focus on actions underneath the priorities, as well as alignment with economic and environmental sectors. It will also report on an approach to monitoring and evaluation.
38. In addition, the Secretariats/Advisors for the Canterbury Mayoral Forum, Greater Christchurch Partnership, Regional Skills Leadership Group and Regional Public Service Commissioner will continue to meet regularly and share relevant information, including:
- 1) Plans/Priority Development and associated work programmes
  - 2) Briefing papers
  - 3) Minutes
  - 4) Relevant planning outcomes/milestones.

## **Attachments:**

- The Regional System Leadership Framework Public Service Information Brief
- Regional System Leadership Framework



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# The Regional System Leadership Framework

## Public Service Information Brief

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### Key Messages

- On 12 July 2021, Cabinet endorsed the regional system leadership framework as one way to improve the alignment and coordination of public services in the regions, how we deliver services, invest in communities, and engage with partners and communities.
- A key focus is building on what we are doing now to work better for communities.
- Many officials already work this way, resulting in strong interagency collaboration on some issues within some regions. But we're all still learning our way forward.
- The strengthened framework supports a way of working for the whole public service.
- The role of the Regional Public Service Commissioners does not change agencies' existing relationships. It continues to build on the existing relationships with other officials.
- While the public service collaborates well on many issues, we know we can always do better. There are examples of fragmentation and duplication across agencies, particularly cross sector issues that affect people and communities at the same time.
- There are many opportunities to better align how agencies invest, deliver services, and engage in the regions. This includes how agencies at national office level work.
- We know everyone involved is committed to making a difference and the Commissioners are here to help make that happen. Strong partnerships are key, and the great things achieved in the regions during lockdown is testimony to that.

### Background

This work started in June 2019 when the Government agreed to establish 11 Regional Public Service Leads, covering 15 regions. The Regional Public Service Leads were given a mandate to convene public service, initially in the social and skills sectors.

The Regional Public Service Leads built on existing structures and relationships to start forming shared public service priorities. These are one way that officials in the region can show what is most important to support community wellbeing.



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## What's changing

On 25 August 2021, the Regional Public Service Leads were designated by the Public Service Commissioner as Regional Public Service Commissioners.

The scope of the Regional Public Service Commissioner role now includes the social, economic, skills and workforce, and environmental sectors.

An expanded scope is expected to:

- support a more unified and effective approach to addressing the needs of communities,
- help bring together agencies that may have important levers and perspectives relevant to the issues that matter to communities, and
- streamline engagement with central government for communities and regional leaders, including iwi, other Māori organisations, and local government.

With an expanded mandate to convene, resolve and escalate, Regional Public Service Commissioners are expected to:

- **convene:** bring together, coordinate and align central government decision-makers as it relates to regional leadership, planning, and delivery of wellbeing outcomes for communities.
- **resolve:** coordinate with officials to resolve barriers to achieving outcomes for communities. This can include working collaboratively with iwi/Māori, local government and regional stakeholders.
- **escalate:** identify and raise issues with relevant Chief Executives groups, where resolution cannot be achieved at a regional, work programme or single agency level; this will be done through the System Leader for Regional Public Services.

The strengthened framework does not alter existing decision rights that sit with Ministers and government agencies. Individual agencies remain responsible for their core work programmes and delivery of portfolio areas.

## Learning our way forward

Better alignment and coordination will enable government in the regions to contribute more effectively to delivering better wellbeing outcomes.

Over time, improved public service collaboration will enable:

- a well-connected regional and national public service that works cohesively and credibly with communities and regional leaders, including iwi, other Māori organisations, and local government, resulting in reduced engagement fatigue and more effective and sustained relationships;





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- better coordination of services and processes, resulting in reduced duplication of work programmes and services; fewer gaps in service delivery and improved opportunities to maximise the benefit of public service investment in the regions, and
- shared regional public service priorities that reflect and support iwi, local government and community aspirations, enabling collective opportunities to align investment and services.

## **The role of the System Leader for regional alignment**

On 25 August 2021, the Public Service Commissioner designated the Secretary for Social Development as the System Leader for Regional Public Services under section 56 of the Public Service Act 2020.

The System Leader is working with relevant Chief Executives to support the success of the framework. The System Leader will be responsible to the Minister for the Public Service for the effectiveness of this coordination.

The Public Service Commissioner, in conjunction with the Public Service Leadership Team, will ensure alignment of the public service around the framework.

## **Next Steps**

The System Leader for Regional Public Services, along with the Public Service Commissioner and relevant Chief Executives are working through the process to implement Cabinet decisions.

Implementation planning is being led by the regions with support from Chief Executives and national office-based officials.

Officials will work collaboratively across agencies to develop a plan for delivering the strengthened regional systems leadership framework in the regions.

The Minister for Public Service, Minister for Social Development and Employment and Minister for Economic and Regional Development will report back to Cabinet on implementation progress, including against objectives, by June 2022.

Further updates will be provided through Chief Executives as implementation progresses.

You can read the Cabinet Paper on Joined up Government here

[Cabinet-Paper-Joined-up-Government-in-the-Regions-repor-back-Strengthening-a-regional-system-leadership-framework-for-the-public-service.pdf \(publicservice.govt.nz\)](#)



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# REGIONAL SYSTEM LEADERSHIP FRAMEWORK



Te Kāwanatanga o Aotearoa  
New Zealand Government

## Why do we need joined up government in the regions?

- Working as a **unified public service** and **acting collaboratively** around communities’ needs and strengths will help to achieve better wellbeing outcomes, including by reducing duplication in the way public service agencies engage, invest and deliver services in regions.
- It is an important part of the **Public Service reform** process. The mandate to convene and collaborate at the regional level aims to improve how the public service works in regions to improve the **wellbeing of New Zealanders**.
- Iwi and other Māori groups, and regional stakeholders (including local government, business and community groups) know the realities of their communities and hold valuable insights on what can work to improve their wellbeing. Central government agencies work better with stakeholders to **define priorities with their communities and partner** to achieve outcomes.

### CORE PRINCIPLES

#### Spirit of Service

*Putting whānau and communities at the heart of our work and our purpose*

#### Partnering with Māori

*Support the Crown in its partnership with Māori under the Treaty/Te Tiriti, and act reasonably, honourably and in good faith when engaging with iwi and other Māori groups*

#### A Unified Public Service

*Being informed, organised and bringing together our collective levers as a unified public service to support better outcomes for our communities*

## Joining up in the regions through stronger mandated leadership

### A Framework for Mandated Public Service Leadership

A senior Public Servant in each region is appointed as a Regional Public Service Commissioner (RPSC). RPSCs operate with a **mandate** to:

- **convene**: bring together, coordinate and align central government decision makers (supporting and building on existing groups) across the social, economic, skills and workforce, and environmental sectors, as it relates to regional leadership, planning and delivery of wellbeing outcomes for communities in their regions. If requested, act as a central government representative for other public service agencies (in consultation with agencies) on issues that cut across domains
- **resolve**: coordinate with officials to resolve barriers to achieving outcomes for communities. This coordination may include working collaboratively with officials and existing groups, including with iwi/Māori, local government and regional stakeholders as necessary, to resolve coordination barriers to achieving outcomes
- **escalate**: working with officials to identify barriers to achieving action/outcomes for communities and raise with the relevant Chief Executives group where resolution cannot be achieved at a regional, work programme or single agency level. As a last resort, RPSC may escalate directly to the system leader for regional alignment.

Mandate is clearly communicated by CEs through their agencies.

Fifteen regions have been defined based on Regional Council boundaries, for the purpose of establishing RPSCs.

#### Resourcing

Depending on regional need, RPSCs are supported by **ongoing, dedicated resource** to support the role and deliver its mandate. This will be managed by agencies deploying existing resources in a more coordinated way.

*This will enable more coordinated public service engagement with other leaders in the region*

### Improve collaboration with other regional leaders

Key stakeholders and partners in the social, economic, skills and workforce, and environmental sectors, work collectively through their preferred leadership group/s. The desired outcome is that in all regions the leadership group includes iwi, Māori, local government, and central government regional leaders.

Where there are no existing leadership arrangements in a region, the RPSC may convene a group or groups that can provide strategic oversight for the region’s wellbeing priorities.

The Public Service:

- works **cohesively and credibly** with regional leaders,
- is **joined-up in its contributions** to the leadership group(s), and
- **collaborates** with the region’s leaders to **reduce duplication** and **maximise the impact** of its engagement, investments and service delivery to support the region’s plan and priorities.

### Strengthen contributions to broader regional plans

The region’s leadership group(s) may develop and collectively own an agreed overarching plan that sets out a shared vision for regional wellbeing.

Where these plans are in place, the public service is aligned in its contribution to that plan through the RPSC, and it helps ensure alignment with national direction and strategies, including industry and sector strategies.

The plan’s delivery is overseen through the region’s agreed leadership group, which is connected to service delivery to communities.

## Enablers of the Framework

### Reporting and Accountability

The System Leader for regional alignment works with relevant CE group on behalf of the Public Service Leadership Team (PSLT). System Leader leads on the coordination of public service activity at a regional level through the framework and is responsible to the Minister for the Public Service for the effectiveness of this coordination.

Reporting is through System Leader to the appropriate CE group, with the option of involving PSLT.

### Monitoring and Evaluation

Monitoring and evaluation supports ongoing learning and adaptation, and ensures line of sight between local, regional and national-level outcomes-focused action.

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach, Chair

## Regional Economic Development

### Purpose

1. To update the Chief Executives Forum on the Canterbury Mayoral Forum's Regional Economic Development Group and seek confirmation of officer membership for the group.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. confirm council officer representation on the Canterbury Mayoral Forum's Regional Economic Development Group.

### Background

2. The Regional Strategic Partnership Fund was discussed at both the May and August Canterbury Mayoral Forum (CMF) meetings. Concerns were raised by members around the amount of work that would be required to apply for a relatively small amount of seed funding that would then require more work to co-fund and deliver.
3. Kānoa (MBIE's Regional Economic Development and Investment Unit) has indicated that the CMF is the right forum for projects to be promoted to the fund. However there would likely need to be engagement with Ngāi Tahu, other stakeholders and the business community on any projects that are to be promoted.
4. The CMF has agreed to convene a discussion with Ngāi Tahu and other stakeholders around specific regional priorities for Canterbury.
5. Paul Stocks, Deputy Secretary Labour, Science and Enterprise, and Regional Economic Development Senior Official for Canterbury will be attending the November Mayoral Forum meeting.

### CMF Regional Economic Development Group

6. The August CMF meeting proposed Mayors Marie Black, Dan Gordon, Nigel Bowen and Graham Smith convene the CMF Regional Economic Development (RED) group, with support from Venture Timaru and ChristchurchNZ.

7. It was agreed at the meeting that CE support for the group would be decided at this meeting of the CE Forum.
8. Along with Venture Timaru and ChristchurchNZ it was suggested that the Economic Development Manager from Ashburton District Council and Enterprise North Canterbury were also included. Both these organisations will be represented at the initial meeting.
9. An invitation has been sent to the Chairs of the Papatipu Rūnanga seeking their involvement. At this stage we have not received any response from Ngāi Tahu.
10. A representative from Kānoa has been invited to attend the CMF RED Group.
11. The CMF RED Group will hold its first meeting on Friday 5 November 2021.

### **Draft proposal**

12. A draft proposal for the CMF RED group has been prepared for discussion at the first meeting and is provided at Attachment 1.
13. The draft purpose of the group is “to support the promotion of regional priorities for central government funding either through the Regional Strategic Partnership Fund or other funding avenues”.
14. It is proposed that the group would consider the development of a decision and evaluation framework to support their decisions based on the Mayoral Forum’s Plan for Canterbury.

### **Next steps**

15. A verbal update on the outcomes from the initial CMF Regional Economic Development group meeting will be provided at the meeting.

### **Attachments**

- Canterbury Mayoral Forum Regional Economic Development group – draft proposal

## Canterbury Mayoral Forum Economic Development Group – draft proposal

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The Canterbury Mayoral Forum has agreed to invite Ngāi Tahu, ChristchurchNZ, Venture Timaru, Enterprise North Canterbury and Ashburton DC Economic Development to work with them to develop a coordinated response across Canterbury on regional priorities for potential central government funding and support.

A sub-group of mayors comprising Marie Black (Hurunui, Chair); Nigel Bowen (Timaru); Graham Smith (Mackenzie) and Dan Gordon (Waimakariri) has been proposed to lead this workstream.

Kānoa – Regional Economic Development and Investment Unit will be invited to attend meetings.

### Approach

Meeting with mayors and representatives from Ngāi Tahu, Venture Timaru, Enterprise North Canterbury, ChristchurchNZ, and Ashburton DC Economic Development to:

- confirm Chair
- agree purpose of group
- develop a decision and evaluation framework to support decisions.

A draft purpose and framework for discussion are set out below.

**Draft Purpose** – to support the promotion of regional priorities for central government funding, either through the Regional Strategic Partnership Fund or other funding avenues.

### Draft Framework

- consistent with the Mayoral Forum's Plan for Canterbury priorities
- consistent with Kānoa objectives to build more Productive, Resilient, Inclusive, Sustainable and Māori-enabling regional economies
- identified within a local/regional economic development strategy
- priority is developed to a level that supports funding requirements
- clearly demonstrates benefit to the Canterbury region.

### Next Steps

Following confirmation of the purpose and framework the CMF Economic Development group would provide support to proposals that meet the framework.

Proposals may come to this group's consideration via regional economic development agencies, Ngāi Tahu, councils, Kānoa, and other avenues.

The process for reviewing future proposals for support will be discussed and agreed by the CMF Economic Development group at its first meeting.



## Mayoral Forum's Plan for Canterbury 2020-2022

The Canterbury Mayoral Forum developed the *Mayoral Forum's Plan for Canterbury 2020-2022* (the Plan), building on the work started in 2015 with the Canterbury Regional Economic Development Strategy. In developing the Plan, the Mayoral Forum elected to broaden its scope from economic development to sustainable development across the four interdependent aspects of well-being (environmental, economic, social and cultural wellbeing) and to narrow its focus to a handful of priority issues where the Forum can have the greatest impact through its leadership, facilitation and advocacy.

The Mayoral Forum's Plan for Canterbury vision is **sustainable development** with **shared prosperity, resilient communities** and **proud identity**.

The plan has five priorities:

- **sustainable environmental management** of habitats (land, air, water and ecosystems), focusing on land use and freshwater management
- **shared economic prosperity** – through sustainable, value-added primary production, high-value manufacturing, high-value tourism and growing, attracting and retaining a skilled workforce, investment and new businesses
- **better freight transport options** – mode shift to optimise movement of long-distance freight by rail and coastal shipping to improve road safety, decrease carbon emissions and reduce wear and tear on the region's roads
- **climate change mitigation and adaptation** – reducing out carbon footprint, building community resilience and making our infrastructure as strong as it can be
- **Three Waters services** – securing safe drinking-water supplies, and ensuring that infrastructure, institutional arrangements and regulation enable the sustainable management of drinking water, wastewater and stormwater in Canterbury

## Regional Strategic Partnership Fund

The Regional Strategic Partnership Fund (RSPF) is a \$200 million central government fund to support regions to make steps towards achieving their potential, through partnering with regions to develop regionally-specific projects that support improved economic outcomes.

The RSPF's objective is to build more Productive, Resilient, Inclusive, Sustainable and Māori-enabling regional economies by delivering local approaches tailored to a region's particular needs and advantages.

Kānoa – Regional Economic Development and Investment Unit (Kānoa – REDIU) will work in partnership with regions, providing them with support and advice. Kānoa – REDIU will support regions to strengthen regional planning documents and identify economic development priorities and co-funding opportunities to assist economic growth for their region.

The RSPF has a focus on identifying potential initiatives for funding from regional economic development strategies, or new economic development strategies.



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** David Ward, Chair Policy Forum

## Resource management reform

### Purpose

1. The purpose of this paper to seek the Chief Executives approval to appoint an independent contractor to support the Canterbury Mayoral Forum's engagement with the resource management reform process and to seek feedback from the Chief Executives on ensuring Canterbury voices on national-level working groups and committees.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **agree to the appointment of an independent contractor, up to a cost of \$30,000, to support the Canterbury Mayoral Forum's engagement with the resource management reform process**
2. **delegate final approval of the independent contractor appointment to the chairs of the Chief Executives' Forum and the Policy Forum**
3. **agree to proactively support the nomination of Canterbury representatives onto national-level working groups and committees.**

### Background

2. The Canterbury Mayoral Forum (CMF) has made a submission on the Inquiry on the Natural and Built Environments Bill: Parliamentary Paper and Mayor Sam Broughton (Chair CMF), supported by Hamish Riach (Chair CEs Forum) and David Falconer (Chair Canterbury Planning Managers Group) appeared before the Environment Select Committee on 2 September in support of the CMF submission.
3. Concerns have been raised at the process for appointment to working parties by both the local government sector and by central government, specifically in relation to the resource management reform process. At the August Mayoral Forum meeting it was agreed to send letters to the Department of Internal Affairs, the Ministry for the Environment, Local Government New Zealand and Taituarā to reiterate the importance of ensuring there are Canterbury voices on national-level committees and working groups.

## **Resourcing to engage in the resource management reform process**

4. At the CEs Forum meeting on 2 August it was agreed, in principle, to engage an independent contractor to assist the CMF with engagement through the reform processes and development of future submissions on the Natural and Built Environments Bill, Strategic Planning Bill and Climate Adaptation Bill.
5. It was noted at that meeting that key engagement with central government on the reform process will be led by the Canterbury Mayors, Chair and Chief Executives and that technical input may be required to support this engagement.
6. A draft Expression of Interest (EOI) (see attachment 1) and budget of \$30,000 for approval by the Chief Executives has been developed for the appointment of an independent contractor to support the CMF in the resource management reform process. The budget is provided for within the regional forums budget (see agenda item 2.8).
7. The Policy Forum has nominated a sub-group comprising David Falconer (Chair, Canterbury Planning Managers Group); Katherine Trought (Environment Canterbury), Mark Lowe (Timaru) and Victoria van der Spek (Waitaki) to manage the recruitment process.
8. The procurement process will be managed through Environment Canterbury with the sub-group seeking expressions of interest from 3-4 suitably qualified candidates and making a recommendation on the preferred candidate. It is proposed that the Chief Executives Forum delegates to the Chairs of the Chief Executives' Forum and Policy Forum final approval of the preferred candidate.

## **Canterbury representation on national working and advisory groups**

9. At the August Mayoral Forum meeting, it was agreed to send letters to the Department of Internal Affairs, the Ministry for the Environment, Local Government New Zealand and Taituarā to reiterate the importance of ensuring there are Canterbury voices in national-level committees and working groups.
10. Responses have been received from the Ministry for the Environment and Taituarā which are provided at attachment 2.
11. The Ministry for the Environment noted the Mayoral Forum's concerns and advised that it had been working with Local Government New Zealand, the Department of Internal Affairs and Taituarā on establishing a long-term partnership with local government, working on legislative design, and transitioning to and implementing the new resource management system.
12. The letter stated that the Ministry's first step in this process was to establish a national level steering group made up of elected members and council chief executives to

provide input to the Ministry for the Environment, other reform ministries and ministers as appropriate on all aspects of the reform programme.

13. Mayor Sam Broughton and Dr Stefanie Rixecker have both been approached to be part of this group.
14. Taituarā's response focused on the current Canterbury representation on its committees and reference groups, noting that one of its five committees is chaired by the chief executive of Timaru District Council (and previously two other committees were chaired by chief executives from Selwyn and Waimakariri respectively), and one of its reference groups is chaired by me. In addition, the response noted that Taituarā helped establish the 3 Waters Reform Steering Group, of which two Canterbury chief executives are members.
15. The response also advised that Taituarā had recently called for nominations for its new reference group system. While some Canterbury members enquired about some of the groups, no one from Canterbury applied. Taituarā stated they found this "extremely disappointing" and is very keen to see a higher level of Canterbury members participating in its work.
16. Taituarā also noted that it was working its way through the nominations for the reference groups, and if it is unable to fill places it will call for further nominations, which may elicit more interest from Canterbury members.
17. The CMF letter to MfE, LGNZ, DIA and Taituarā noted that our councils have significant knowledge and experience at both executive management and operational levels and are well versed at working collaboratively for the good of our communities. It went on to state that while we understand the difficulties in setting up representative groups for them to ensure that the largest region – one that is not unfamiliar with adapting quickly to change and work with others in a spirit of community and collaboration – is effectively represented when national-level groups are established.
18. In light of the response from Taituarā that no applications were received from Canterbury for the new reference group system, we may like to consider what can be done to encourage more Canterbury representation on the member committees and reference groups.

## Next steps

19. Following the Chief Executives approval of the EOI and budget for the recruitment of a contractor to support the Mayoral Forum's engagement with the resource management process, the Policy Forum sub-group will proceed with the recruitment process, with final approval by the Chairs of the Chief Executive and Policy Forums.
20. Chief Executives Forum members to consider resourcing requirements for national working groups as requests come through to provide for Canterbury representation.

## **Attachments**

- Draft EOI – resource management reform process contractor
- Ministry for the Environment and Taituarā responses to Mayoral Forum letters

***DRAFT Expressions of Interest: Resource Management Reform***

Expressions of interest are being called for suitably qualified candidates to assist the Canterbury Mayoral Forum (CMF) with engagement through the resource reform process and in preparing regional submissions on the Government's resource management reform bills, specifically the Natural and Built Environments Bill, the Strategic Planning Bill, and the Climate Adaptation Bill expected to be introduced into Parliament in 2022 and 2023.

Key engagement with central government on the reform process will be led by the Canterbury Mayors and Chief Executives. Technical input may be required to support this engagement.

Preparations of the regional submission will require:

- following the CMF guidelines for preparing regional submissions (January 2020) ([Regional-submissions-guidelines\\_Jan-2020.pdf \(canterburymayors.org.nz\)](#))
- reviewing the CMF's submission to the *Resource Management Review Panel's Transforming the Resource Management System: Issues and Options Paper* ([CMF-submission\\_RMA-issues-and-options-paper\\_February2020-1.pdf \(canterburymayors.org.nz\)](#))
- reviewing the CMF's submission *Inquiry on the Natural and Built Environments Bill Parliamentary Paper* ([Canterbury Mayoral Forum Submission Inquiry-on-the-Natural-and-Built-Environments-Bill-Parliamentary-Paper.pdf \(canterburymayors.org.nz\)](#))
- engaging with the ten Canterbury territorial authorities and regional council and seeking input from the Canterbury Planning Managers Group, Canterbury Policy Forum and Canterbury Chief Executives Forum
- drafting submissions to both pieces of legislation allowing time for review and feedback from the Canterbury Planning Managers Group and Canterbury Policy Forum
- drafting speaking notes for the CMF presentation to the Environment Select Committee
- drafting Q&A to support the CMF presentation to the Environment Select Committee

Timing of this work will be dependent on the release of the Natural and Built Environment Bill, the Strategic Planning Bill and the Climate Adaptation Bill, at this stage expected to be introduced into Parliament in 2022 and 2023, however additional support may be requested to support any pre-engagement between the CMF and MfE team preparing the Bills.

The successful candidate will be able to demonstrate

- relevant experience in the current Resource Management system
- a clear understanding of the resource management reform process
- an understanding of the Canterbury region
- a clear and concise writing style
- the ability to engage with others effectively
- the ability to meet tight timelines

## Attachment 2a – response from Taituarā to CMF letter re representation

Kia ora Maree,

Please thank Mayor Sam Broughton for his letter of 23 August. I have investigated the matters raised in it.

I have assumed that the working groups and advisory committees you are referring to in the case of Taituarā are our Member Committees and Reference Groups.

We have five Committees (previously Working Parties) and one of the five is Chaired by Bede Carran, Chief Executive of Timaru District Council. Previously we had five Working Parties and two of the five were Chaired by David Ward, Chief Executive of Selwyn District Council and Jim Palmer, former Chief Executive of Waimakariri District Council.

Under our new system David Ward now chairs a Reference Group.

Last year we were part of the establishment of the 3Waters Reform Steering Group – there are eight Chief Executives on this group, two from Canterbury – Hamish Riach and Dawn Baxendale.

As we worked to implement our new Reference Group system, five weeks ago we called for nominations from our membership. This call was broadcast on our Discussion Groups – namely Finance, Assets, Risk, Policy, Strategy and Lawyers. It was also promulgated in our Membership newsletter. Despite a couple of Members from Canterbury enquiring about the work of the Reference Groups, **NO** applications were received from any Member working for any Canterbury Council. We find this situation extremely disappointing. As you have pointed out in your letter, Canterbury is New Zealand's largest region by land area, spanning the territory of 10 local authorities and 10 Ngāi Tahu papatipu rūnanga, as well as a regional council. It includes New Zealand's second-largest city, Christchurch, and a diverse range of urban and rural communities from the Kaikōura district in the north to the Waitaki River catchment in the south.

We are currently working our way through the large number of applications we did get from other regions around the country. If we are unable to fill all the spots we have available we will again call for nominations. Perhaps this time around we will encounter some interest from Canterbury in assisting us with our work. We understand that the region has had more than its fair share of challenges over the last decade, but like you, we would like to see a higher level of Canterbury members participate in our work.

Ngā mihi nui

**Karen Thomas CMInstD**

Chief Executive

Taituarā - Local Government Professionals Aotearoa

**DDI** 04 978 1282 **M** 022 609 1544 **E** [karen.thomas@taituara.org.nz](mailto:karen.thomas@taituara.org.nz) **W** [www.taituara.org.nz](http://www.taituara.org.nz)

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CORD-36

Sam Broughton  
Mayor, Selwyn District  
Chair Canterbury Mayoral Forum  
secretariat@canterburymayors.org.nz

Tēnā koe Sam

### **Canterbury representation on working groups and advisory committees**

Many thanks for your letter raising concerns about Canterbury's representation on national-level working groups and advisory committees including with the resource management reforms (RM Reform).

A long-term partnership with local government is integral to the success of the RM reforms and achieving the on-the-ground outcomes we all desire. Early in the reform programme, the Department of Internal Affairs (DIA) supported us by establishing a Local Government Chief Executives Forum (LG CE Forum) which has been an invaluable source of local government advice, especially as we developed the Natural and Built Environments Act exposure draft. As you know, Jim Harland, Chief Executive of Waimakariri District Council, joined for the last few meetings and has made a valuable contribution.

Now that the exposure draft is in the Select Committee process, the RM Reform team is working on the detailed design of the system. There is an opportunity to engage more widely and deeply with local government experts to ensure that the new system has been tested and designed with the input of those who will be critical to its future operation.

As you know, David Parker, the Minister for the Environment, wrote to all mayors, chairs and council chief executives on 24 June expressing a willingness to establish a long-term partnership with local government, working on legislative design, transitioning to and implementing the new system. My officials have been working closely with Local Government New Zealand, Taituarā and DIA on how best to make this can happen.

The first step I am taking is to establish a national level steering group made up of elected members and council chief executives. The group will provide input to the Ministry for the Environment, other reform ministries and ministers as appropriate on all aspects of the reform programme. We are seeking perspectives from a diverse range of councils, locations and communities. Based on the advice of LGNZ and Taituarā, I will shortly be approaching individuals to appoint to this group. This will include representatives from Canterbury.

The steering group will provide us with advice on, and will be supplemented by, other engagement. In addition, I am happy to meet with the Mayoral forum and take your guidance on the timing of when we might do this. I am happy to do so via zoom whilst we are in this COVID lockdown should you wish to do so.



We are committed to working with all councils and regions as we transition to and implement this major reform programme and we are looking forward to working with the Canterbury region.

Ngā mihi,

A handwritten signature in blue ink, appearing to read 'Vicky Robertson'.

Vicky Robertson  
**Secretary for the Environment**  
**Ministry for the Environment | Manatū Mō Te Taiao**



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Stefanie Rixecker, Chief Executive Environment Canterbury

## Canterbury regional transport forward work programme 2021-24

### Purpose

1. To update the Chief Executives Forum on the forward work programme of the Canterbury Regional Transport Committee (RTC) and South Island Regional Transport Committee Chairs (SI RTC Chairs).

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **receive the report on the Canterbury regional transport forward work programme.**

### Background

2. On 1 July 2021, the 2021-31 Canterbury Regional Land Transport Plan (RLTP) became operative. The RLTP agrees a \$5.5 billion programme of land transport maintenance and improvement works over the next 10 years in the Canterbury region.
3. The RLTP also contains a 30-year vision, five strategic objectives and three headline targets for the land transport network that address safety, emissions and freight. The 30-year vision for the land transport network in Canterbury is to:

*Provide all transport users with sustainable options that move people and freight around and through our region in a safe and efficient way that enables us to be responsive to future challenges.*

4. While the RLTP is developed and agreed by the Canterbury Regional Transport Committee, the activities in it are mostly planned and delivered by road controlling authorities, which are the local councils plus Waka Kotahi.
5. The activities contained in the RLTP are usually co-funded by local councils and Waka Kotahi through the National Land Transport Fund (NLTF), and occasionally through direct Crown funding, such as the NZ Upgrade Programme and the Provincial Growth Fund.
6. The role of the Regional Transport Committee (RTC) is one of governance and oversight over the activities contained in the RLTP and monitoring of implementation.

## Discussion

7. Following adoption of the RLTP, the RTC instructed staff to develop a forward work programme for the RTC that would support regional alignment with its strategic direction.
8. In doing so, staff have picked up the three headline targets and key investment priorities contained in the RLTP and translated these into 6 themes for the purposes of progressing a forward work programme. These are:
  - safety – reducing deaths and serious injuries on the transport network by 40%
  - growth – ensuring the RLTP programme of activities supports planned growth across the region
  - maintenance – ensuring a sustainable approach to funding and maintaining our existing networks
  - emissions – reducing greenhouse gas emissions from land transport by 30%
  - resilience – improving our understanding of, and responses to, network vulnerabilities arising from climate change and natural hazards
  - freight – developing more sustainable options for the movement of freight, including a 100% increase in the tonnage of freight carried by rail.
9. These themes are proposed to become the key workstreams for the RTC work programme and each theme will be assigned to an existing sub-group of the RTC or other key stakeholder group to lead, with the RTC retaining governance-level oversight.
10. The principles we applied when thinking about the governance and delivery structure were:
  - increasing accountability and ownership of regional transport outcomes
  - avoiding duplication with others, using and working within existing structures where possible
  - focusing the RTC's political capital into areas where it can have the greatest impact.
11. The governance and delivery structure has been developed from the model used for the Regional Road Safety Working Group, which is an established sub-group of the Canterbury RTC with responsibility for road safety in the Canterbury region, governed by a terms of reference and chaired by Mayor Dan Gordon of Waimakariri District.
12. Staff propose that four key groups will have responsibility to develop and deliver a work programme for the following themes:
  - Regional Road Safety Working Group (RRSWG): safety
  - Transport Officers Group (TOG): emissions and maintenance
  - Canterbury Planning Managers Group: growth
  - Canterbury Regional Transport Committee: freight and resilience

13. The RTC held its first workshop, which agreed the key themes, in June 2021. While members have interests across all themes, the themes of resilience and freight are perhaps of greatest importance to them.

## **RTC draft Work Programme**

14. A draft list of potential actions was then identified under each theme and discussed by RTC at a second (online) workshop on Monday 13 September, along with the proposed governance and delivery structure. These are provided at attachments 1 and 2.
15. While there was broad support from RTC for the governance and delivery structure and the proposed actions within each theme, members sought to exercise a greater degree of control/influence over the resilience and freight work themes than what was proposed in the draft governance and delivery structure, which had the South Island Regional Transport Committee Chairs as the delivery/working group for these two themes.
16. A key reason for this position was a concern amongst Canterbury RTC members for the limited capacity, resource and influence of the South Island Regional Transport Committee Chairs Group (SI RTC Chairs) to effectively progress the work. The group has not met since October 2020.
17. An updated draft governance and delivery structure reflecting the RTC's role in these two themes. Staff will continue to work closely and collaboratively with other RTCs across the South Island and the SI RTC Chairs group to ensure a joined-up approach. Staff will review this approach prior to the end of FY21-22.
18. The potential actions are now being further discussed and worked through with the relevant working groups. The RTC secretariat have already contracted some work (namely emissions research and a website update) and begun scoping and developing project briefs for others.
19. The work should assist local authorities across Canterbury to respond to emerging issues in the transport sector. There should be limited additional resourcing required from local authorities as most work will be undertaken within existing forums. There may be additional time required on the part of local authorities to contribute and respond to the emissions workstream as this is a dynamic and evolving space for the transport sector.

## **Cost, compliance and communication**

### **Financial implications**

20. The development of a forward work programme for the RTC is included within existing ECan budgets. In total there is currently around \$150,000 of goods and services budget available per annum toward the programme and 1.8 FTE staff. This forms part of the Air Quality, Transport and Urban Development portfolio.

21. The provision of basic secretariat support and advice for the existing working groups is also broadly covered within existing budgets. However, there is limited resource (staffing) available for new activities, or existing ones, should they increase in scope.
22. The budget for the work programme is also jointly funded by Waka Kotahi through the National Land Transport Fund (NLTF). Co-share funding for these investment management activities is included in the NLTP for the 2021-24 period.

### **Significance and engagement**

23. In developing the work programme, staff have met with and sought the feedback of several groups prior to bringing a draft proposal to RTC. These groups include the Transport Offices Group (TOG), RRSWG, the Greater Christchurch Partnership Transport Managers Group, and the Canterbury Planning Managers Group. We are also engaging with Mahaanui Kura Taiao and Waka Kotahi Pou Arahi (Brett Lee).
24. Earlier feedback from the TOG has been generally supportive of the approach taken, and territorial authority transport officers have expressed a particular interest in the maintenance and emissions themes.
25. Greater Christchurch Partnership transport managers requested regular updates on the work programme. However, they distinguished between the role the partnership plays in managing growth in the sub-region and the regional level of the RTC and agreed that the growth work should ideally sit with the RTC and/or Canterbury Mayoral Forum.
26. Waka Kotahi also has an interest in growing the capacity and involvement of the Canterbury RTC & secretariat in relation to freight. This is being driven by the Brougham Street project, Greater Christchurch Spatial Planning and a need to pick up on prior freight work undertaken by the Canterbury RTC.

### **Next steps**

27. A paper with recommendations on the work programme will be brought to the next meeting of the Canterbury Regional Transport Committee on 18 November.
28. A meeting of the South Island Regional Transport Committee Chairs is planned for 29 November.
29. A joint meeting of South Island RTC Chairs, Regional Council Chairs, chief executives and transport officers is proposed for February/March 2022 to discuss South Island freight.

### **Attachments**

- Attachment 1: Proposed Governance and Delivery Structure
- Attachment 2: RTC Work Programme Initiatives and Milestones

# RLTP Strategic Direction

## Headline Targets

### Freight



**Tonnage of freight moved by rail in Canterbury:**  
100% increase in tonnage of freight moved by rail in Canterbury

### Safety



**Number of deaths and serious injuries on Canterbury's roads:**  
40% reduction in deaths and serious injuries on Canterbury roads

### Emissions



**Greenhouse gas emissions from land transport in Canterbury:**  
30% reduction in greenhouse gas emissions from land transport in Canterbury

## Key Investment Priorities

### Resilience



**Priority:**  
Manage risk of exposure to extreme events

### Safety



**Priority:**  
Safer systems implemented (Road to Zero)

### Emissions



**Priority:**  
Invest in a sustainable transport network that is integrated with land use

### Growth



**Priority:**  
Manage demand sustainably

## Themes

Freight

Safety

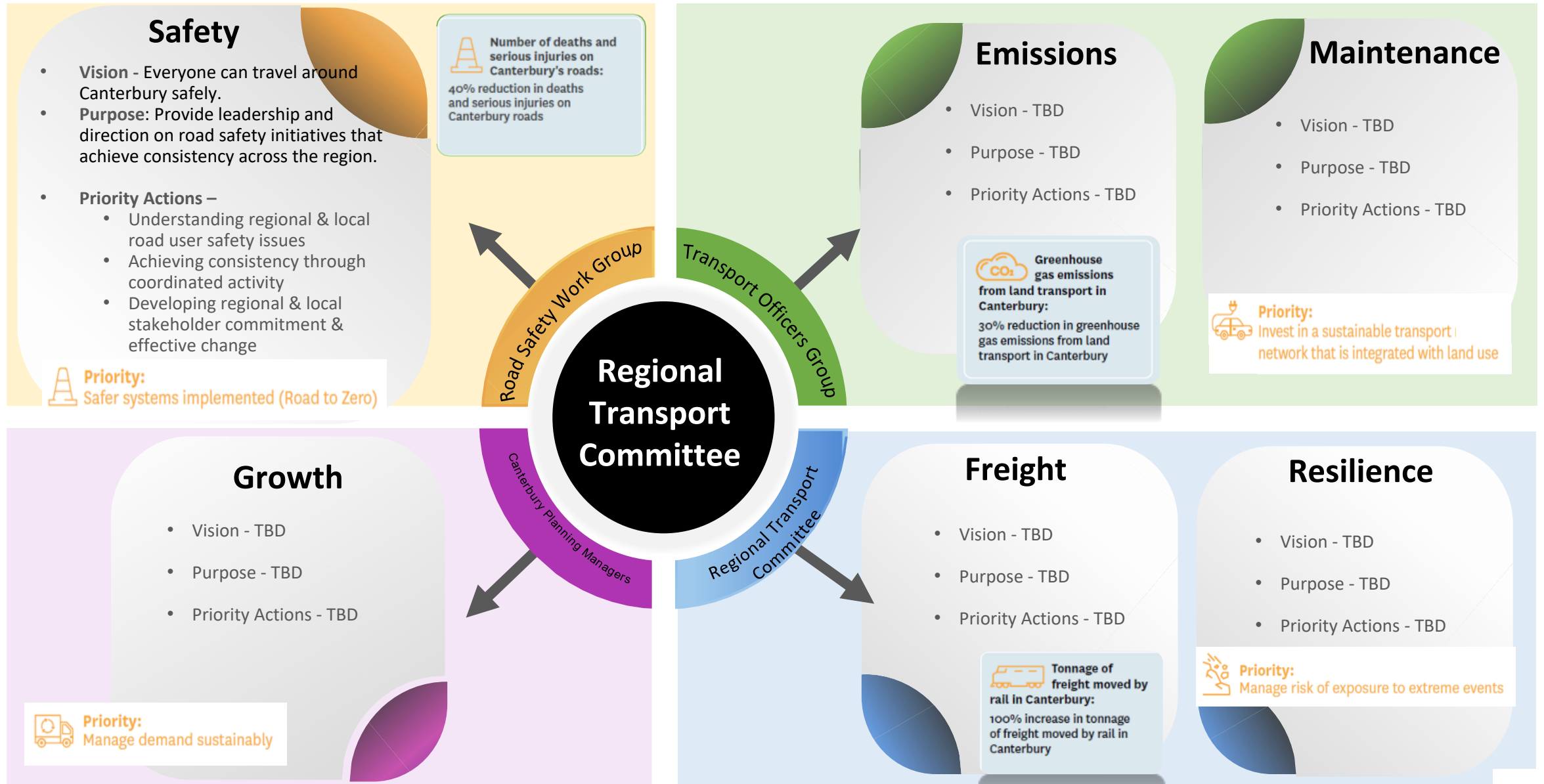
Emissions

Maintenance

Resilience

Growth

# RTC Governance & Delivery Structure - Strategy to Action



## Attachment 2 – Regional Transport Committee initiatives and milestones

What		Who	Milestones					
Initiative	RLTP Theme	Lead Group	Year 1: Q1 Jul – Sep 2021	Year 1: Q2 Oct – Dec 2021	Year 1: Q3 Jan – Mar 2022	Year 1: Q4 Apr – Jun 2022	Year 2: Jul 2022 – Jun 2023	Year 3: Jul 2023 – Jun 2024
<b>Canterbury Regional Transport Committee Work Programme</b>								
Achieve consistency through coordinated activity	<b>Safety</b>	Regional Road Safety Working Group				Develop and consult on a Canterbury Regional Speed Management Plan and regional road safety plan.		
Understanding regional and local road user safety issues: <i>develop a regional monitoring framework</i>	<b>Safety</b>	Regional Road Safety Working Group			Hold indicators workshop with RRSWG	data collection for regional monitoring		Establish regional priorities
Understanding regional and local road user safety issues: <i>Road safety education programmes</i>	<b>Safety</b>	Regional Road Safety Working Group	Stocktake of current road safety education programmes			Initial report to RRSWG	Improve consistency of road safety education across Canterbury.	
Approaches to reducing transport emissions: <i>Canterbury attitudes and perceptions research</i>	<b>Emissions</b>	Transport Officers Group	Tendering and procurement	Research work underway		Report back to RTC and TOG		
Develop a regional emissions modelling tool. <i>(pending investigation)</i>	<b>Emissions</b>	Transport Officers Group		Investigate various approaches	Report back to RTC and TOG on an approach			
Input into national policy and direction-setting on reducing transport sector emissions.	<b>Emissions</b>	Canterbury Regional Transport Committee	Joint RTC/CMF submission on <i>Hikina te Kohupara</i>	Input into joint submission on NERP discussion document	ongoing input into national policy and direction-setting			



Regional Road Maintenance Modelling Proposal	<b>Maintenance</b>	Transport Officers Group					Investigate DTIMS Pavement Modelling
Better articulate the benefits of investment: <i>South Island Strategic Economic Network Modelling</i>	<b>Maintenance</b>	South Island Transport Officers		Develop project brief	Fund and procure work	Undertake modelling	Completion and report back
Develop a method to provide RTC with oversight of the transport projects that support planned growth across the region.	<b>Growth</b>	Canterbury Planning Managers Group		Collate existing growth information	Identify infrastructure dependencies. Initial report write up and feedback		<i>Input into Regional Spatial Planning</i>
Effective advocacy to Central Government to include resilience as a GPS priority.	<b>Resilience</b>	Canterbury RTC		Waka Kotahi resilience programme presentation		Advice to RTC and SI RTC Chairs on regional resilience priorities.	Scope development of a regional (local roads) approach.
Input into MoT Freight and Supply Chain Strategy	<b>Freight</b>	Canterbury RTC		Attend workshops and report back to RTC			
Building a shared understanding of Canterbury and South Island freight movement	<b>Freight</b>	Canterbury RTC		South Island RTC Chairs meeting 29 Nov	Joint South Island freight meeting		Re-establish a freight working group (potential focus on freight mode shift to rail)
Update of Greater Christchurch Freight Demand & Infrastructure Statement	<b>Freight</b>	Canterbury RTC			Evaluate freight study, consider scope	Commission update	<i>Input to GCP and spatial planning</i>
<b>Other Initiatives / BAU</b>							
Website update - update of regional transport pages and reporting	<b>Other</b>	RTC Secretariat		regional transport web pages review and update			



RLTP Monitoring Project + RLTP Templates and Guidance Material	<b>Other</b>	RTC Secretariat, on behalf of TSIG		contribute to working group meetings				
2024-26 Canterbury RLTP Review	<b>BAU</b>	RTC Secretariat					prep work	RLTP development and consultation
<b>Canterbury RTC Secretariat</b>	<b>BAU</b>	RTC Secretariat	<i>Secretariat support for Aug meeting.</i>	<i>Secretariat support for Nov meeting.</i>	<i>Secretariat support for Feb meeting.</i>	<i>Secretariat support for May meeting.</i>	<i>4 meetings annually.</i>	<i>4 meetings annually.</i>
<b>South Island Regional Transport Committee Chairs Group Secretariat</b>	<b>BAU</b>	RTC Secretariat		South Island RTC Chairs meeting 29 Nov	Joint South Island freight meeting		2 meetings annually	2 meetings annually (or as required)
<b>Regional Road Safety Working Group secretariat</b>	<b>BAU</b>	RTC Secretariat	<i>Secretariat support for 22 July meeting.</i>	<i>Secretariat support for 21 October meeting.</i>	<i>Secretariat support for February meeting.</i>	<i>Secretariat support for April meeting.</i>	<i>4 meetings annually.</i>	<i>4 meetings annually.</i>
<b>Canterbury Transport Officers Group secretariat</b>	<b>BAU</b>	RTC Secretariat	<i>Secretariat support for 22 July meeting.</i>	<i>Secretariat support for 21 October meeting.</i>	<i>Secretariat support for February meeting.</i>	<i>Secretariat support for April meeting.</i>	<i>4 meetings annually.</i>	<i>4 meetings annually.</i>

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Dawn Baxendale, Climate Change Steering Group

## Canterbury Climate Change Risk Assessment update

### Purpose

1. The purpose of this paper is to provide an update on the Canterbury Climate Change Risk Assessment (CCRA) project and seek approval for the technical report to be provided to the Canterbury Mayoral Forum for its endorsement and public release.

### Recommendations

That the Canterbury Chief Executives Forum:

1. **endorse the Te Ao Māori integrated risk assessment framework and the gifted Ngāi Tahu name 'Te Tutei o Te Hau – Surveillance of the Wind'**
2. **endorse the Canterbury Climate Change Risk Assessment technical report to be provided to the Canterbury Mayoral Forum for its approval and subsequent public release**
3. **note that the Canterbury Climate Change Working Group will develop further advice regarding the next steps for the Canterbury Climate Change Risk Assessment Project.**

### Key points

2. The Climate Change Risk Assessment technical report is now completed, showing climate change risk increasing in likelihood between now and 2100. This report asks for the Forum's endorsement for the report to go to the upcoming Canterbury Mayoral Forum (CMF) meeting for approval and subsequent public release.
3. The project reflects the CMF's pioneering approach to its climate change work programme and notably includes a new Ngāi Tahutanga-informed climate change integrated framework for assessing climate change risk, with the Ngāi Tahu gifted name *Te Tutei o te Hau – Surveillance of the Wind*.
4. The disruptions of COVID-19 and the mid-year floods have put pressure on the project, however despite the timeline and scope shifts the CMF is now well set to integrate this technical report into Waitaha/Canterbury climate change planning and action.

## Background

5. The CMF has taken a pioneering approach to understanding the climate change risks to Waitaha/Canterbury. Since 2017/18 the CMF has invested in a dedicated regional climate change work programme and has moved in advance of national direction and guidance to develop Waitaha/Canterbury specific approaches. The CMF recognises that collaboration is key to building a shared understanding and awareness of climate change risks across the region and highlight the need for adaptation, an essential prerequisite for joint adaptation efforts.
6. Ngāi Tahu is an influential regional leader on climate change. They released the Ngāi Tahu Climate Change Strategy: *He Rautaki mō te Huringa o te Āhuarangi: Te Tāhū o te Whāriki, Anchoring the Foundation* in 2018, and held their first tribal wānanga on climate change in 2019. In addition, the Government appointed Ngāi Tahu Kaiwhakahaere Lisa Tumahai as Deputy Chair of the new Climate Change Commission.
7. In delivering the regional climate change work programme the CMF has noted that the national guidelines and work by other councils has insufficiently incorporated Mātauranga Māori and Te Ao Māori worldview into understanding and addressing climate change risk, so this has been a focus of the Waitaha/Canterbury approach.
8. In mid-2018, the Canterbury Chief Executives Forum requested a regional climate change risk assessment to understand the climate change risks and opportunities for Waitaha/Canterbury. This project is part of filling that directive.

## National context

9. The Ministry for the Environment released *He kupu ārahi mō te aromatawai tūraru huringa āhuarangi ā-rohi – A guide to local climate change risk assessments* in October 2021. The guide is not statutory national direction but provides a standard that we can use to assess the Canterbury Climate Change Risk Assessment, and to inform future work. This builds on the previous work of the National Climate Change Risk Assessment and supports local authorities and communities implementing the National Adaptation Plan which is due for consultation next year. The Plan is required under the Climate Change Response Act 2002 to be in effect from August 2022 at the latest. The Plan will set out the governments objectives, strategies, policies and proposals for adapting to the effects of climate change.

## Canterbury Climate Change Risk Assessment Project Overview

10. In December 2020, Environment Canterbury engaged a consortium led by Tonkin + Taylor (T+T) to conduct a detailed climate change risk assessment to identify the priority risks and opportunities from climate change to Waitaha/Canterbury's natural environment, built environment, social, cultural, economic and governance systems. This detailed assessment of climate change risks builds on the Canterbury Climate Change Risk Screening which was conducted in 2019/20 and identified a 'long-list' of risks and opportunities for Waitaha/Canterbury. This project was steered by the Canterbury

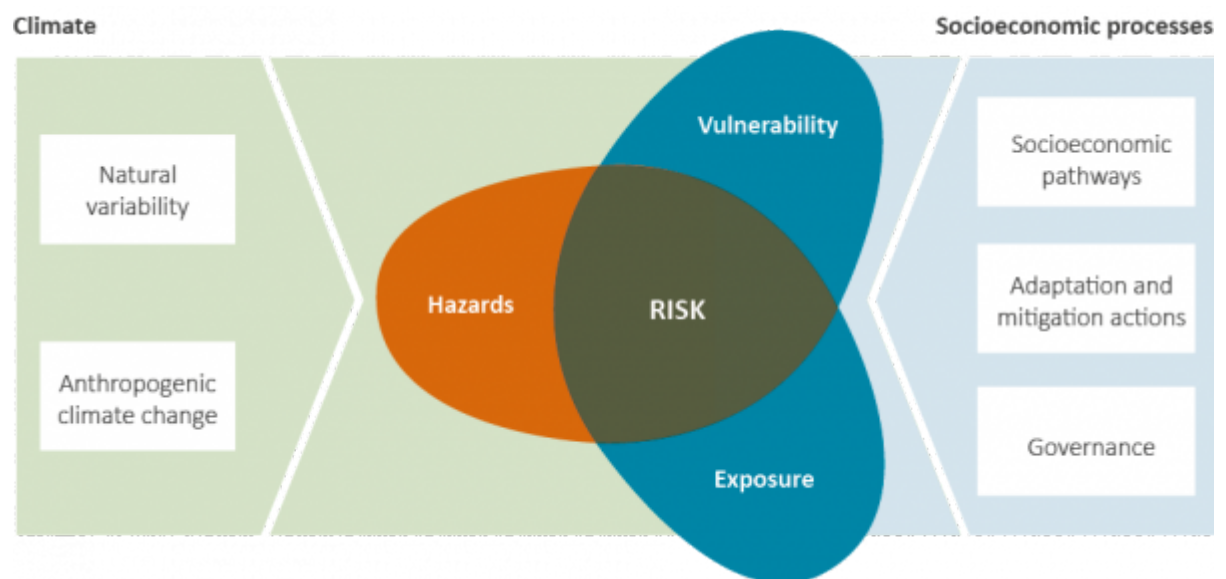
Climate Change Working Group (staff from Waitaha/Canterbury councils and two Ngāi Tahu representatives).

11. The contracted project deliverables are the risk assessment as a technical report, along with public-facing communications materials consisting of an executive summary and infographics, and a risk workbook for staff use. The executive summary is yet to be finalised by T+T, however this is expected by the end of October and will be available for the CMF's consideration in November. A copy will be provided to Chief Executives ahead of the Chief Executives Forum meeting on 8 November but is not available at the time of writing.

### Objectives of the risk assessment

12. Objectives of the risk assessment are to incorporate interconnected risks (the first in New Zealand), Ngāi Tahu values, and Mātauranga Māori to support adaptation planning by local authorities and Papatipu Rūnanga in Waitaha/Canterbury. The methodology for the report used the overlapping elements of hazard, exposure and vulnerability to develop qualitative assessment of risk through the criteria of exposure, sensitivity and adaptive capacity, as shown in Figure 1 below.

*Figure 1 - Intergovernmental Panel on Climate Change model of risk*



### Papatipu Rūnanga involvement in the Canterbury Climate Change Risk Assessment Project

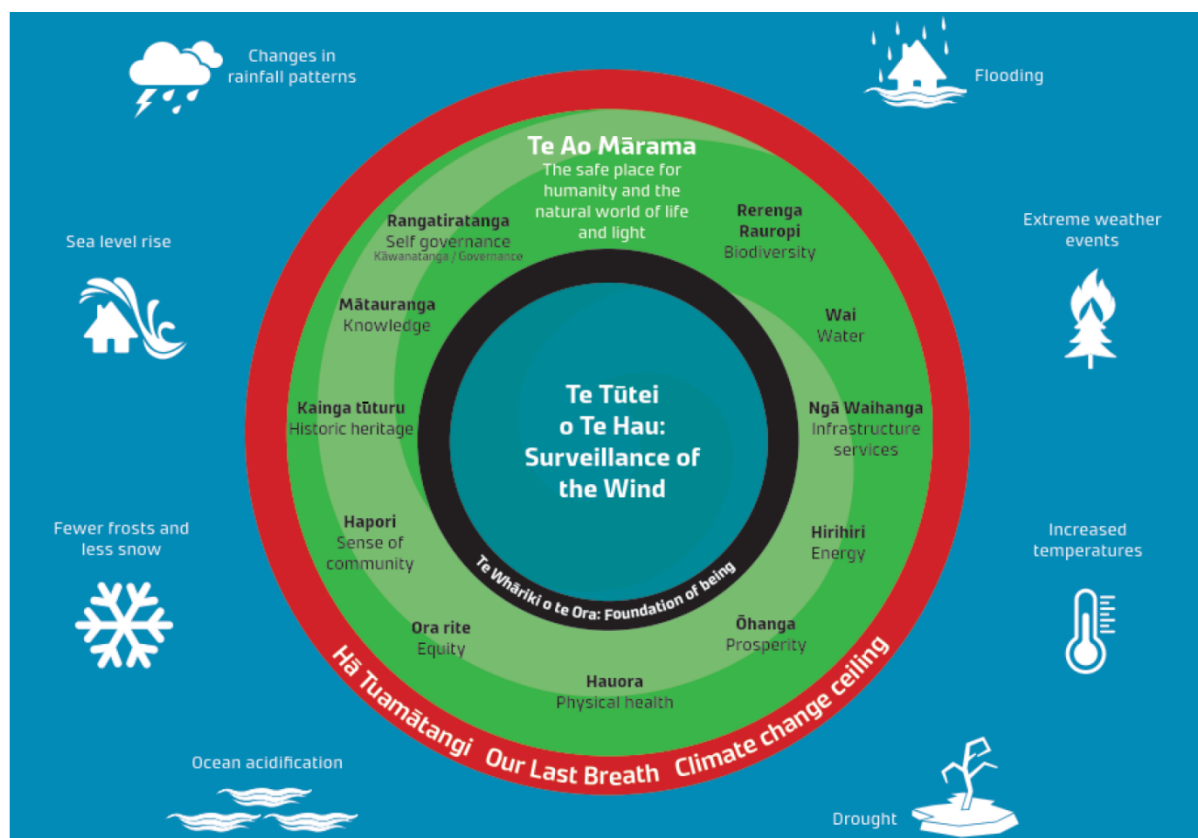
13. At the end of 2020, Papatipu Rūnanga were invited to be involved in the project and a Rūnanga Steering Group was established to enable this. The Papatipu Rūnanga Steering Group for the Regional Climate Change Risk Assessment project consisted of Graeme Page (Koukourārata) and Rachel Robilliard (Taumutu). Benita Wakefield (Wairewa) was an initial member of the group but withdrew towards the end of the project due to reasons not related to the project.

14. The Group has advised and supported the project team, particularly Professor Shaun Ogilvie<sup>1</sup>, to develop an integrated Te Ao Māori integrated risk assessment framework which is more relevant to Waitaha/Canterbury and Ngāi Tahu than the current national framework.

### Integrated climate change risk assessment framework

15. The framework has been gifted a Ngāi Tahu name, *Te Tutei o Te Hau – Surveillance of the Wind*. The climate / wind / breath is described as a guardian, an alert system, for the environment, with climate change a warning from the environment to human beings. The framework is visualised in a diagram of a series of rings, shown below in Figure 2.

Figure 2 - *Te Tutei o Te Hau: Surveillance of the Wind* – Integrated climate change risk framework developed in collaboration with the Rūnanga Project Steering Group



16. The rings in the diagram reflect the cycles and circles of the world, with an inner boundary – visualised as the black ring – of the spiritual and ancestral realm of whakapapa. The green ring depicts the natural world Te Ao Mārama within which human life exists. Lastly, the red ring is the upper limit of the climate system which, as now

<sup>1</sup> Professor of Ecology and the Environment at the Ngāi Tahu Research Centre, University of Canterbury; Kaihautū Ngātahi, Co-Director-Māori, for the Biological Heritage National Science Challenge; Director of Eco Research Associates Ltd,

breached, is threatening the ecosystems, environment and humans through climatic changes – Hā Tuamātangi – our last breath.

17. Climate change in this framework is conceptualised as a revenge or utu due to the lack of balance and harmony within society, due to the destruction and desecration of Te Taiao, the environment. The hazards created or exacerbated by climate change, which are now occurring and will occur more into the end of the century, are visualised as white icons outside the limits of Ti Iho Nui (the safe place for humanity), reflecting that the natural world is becoming less safe for humans and the ngā pono – values of the green ring are under threat.
18. These ngā pono, values, that exist within Te Ao Mārama (the natural world) are identified in the risk assessment as: Rerenga Rauropi (biodiversity), Wai (water), Ngā Waihanga (infrastructure services), Hirihihi (energy), Ōhanga (prosperity), Hauora (physical health), Ora rite (equity), Hapori (sense of community), Kainga tūturu (historic heritage), Mātauranga (knowledge), Rangatiratanga and Kāwanatanga (governance). These concepts sit within the Te Ao Māori framework of Te Tūte o Te Hau while also being relevant for all in Waitaha/Canterbury.

## **Climate Change Risk Assessment Project progress, scope and timeline shifts**

19. The Canterbury Climate Change Risk Assessment project team completed an extensive engagement programme including setting up and running a Project Steering Group, Rūnanga Steering Group, Rūnanga risk hui, expert and youth workshops.
20. This extensive engagement resulted in an extension of the project timeframe proposed earlier this year. This then put pressure on the latter stages of the report drafting process and allowed for fewer engagements and feedback windows than initially agreed to achieve the project deadline of approval by the CMF by the end of 2021.

## **Project scope and timeline shift**

21. Partner constraints leading to an inability to provide feedback within compressed timelines led to delays in the provision of information for analysis. The mid-year floods and COVID-19 Delta Alert Level disruptions further stretched capacity of partners, staff and T+T.
22. This has created an issue for the project's delivery as information could not be easily and accurately collated, analysed, internally connected and socialised within required timelines to inform the analysis for the assessment. For example, a key workshop for collating and analysing adaptation actions was attended by only four of the eleven Waitaha/Canterbury councils and follow up requests for information went unanswered.
23. This lack of information therefore prevented T+T from assessing the urgency of climate change adaptation actions and this analysis was removed from the scope by mutual agreement. This urgency assessment would have been a significant part of supporting

you, partners, stakeholders and our communities to prioritise action and guide adaptation decisions, highlighting where more action or research is needed as a lead in for adaptation planning. An approach for assessing urgency is detailed by T+T in the next steps section of the report; this could be followed in further work on the project.

24. The descoping of the urgency aspect of the report opens up the incorporation or delivery of this work as part of other ongoing planning processes, specifically regional planning, district planning, sub-regional spatial planning and climate change strategies and action planning. Examples of these are detailed in **Error! Reference source not found.** below.

*Table 1 - examples of climate planning and action in Waitaha/Canterbury (not comprehensive)*

District /sub-region / region	Process ongoing or part of 2021-31 Long-Term Plans (LTP)
Kaikōura	Kaikōura District Plan Review
Hurunui	Hurunui Coastal Conversations
Waimakariri	Waimakariri Climate Change Response Strategy
Christchurch	Coastal Hazards Adaptation Planning Programme
Selwyn	Selwyn District Plan Review
Ashburton	Ashburton River adaptation planning and management
Timaru	Timaru Climate Change Strategy within the first three years of the LTP
Mackenzie	Mackenzie District Plan Review
Waimate	Waimate Climate Change Strategy within the first three years of the LTP
Waitaki	Waitaki District Plan Review
Waitaha/Canterbury	Canterbury Climate Change Action Plan within the first three years of the LTP
Greater Christchurch	Greater Christchurch Spatial Plan

25. These processes already include, or will be designed to include, collaborative processes with elected members, Papatipu Rūnanga and Waitaha/Canterbury communities to understand the climate adaptation work already underway, and understanding the consequences of risk. They also support the collaborative value-judgement required to support the prioritisation of adaptation actions to climate change risks, particularly through dynamic adaptive policy pathways/planning. These processes are therefore well placed to develop prioritised lists of climate change adaptation actions according to decision urgency and maladaptation risks.



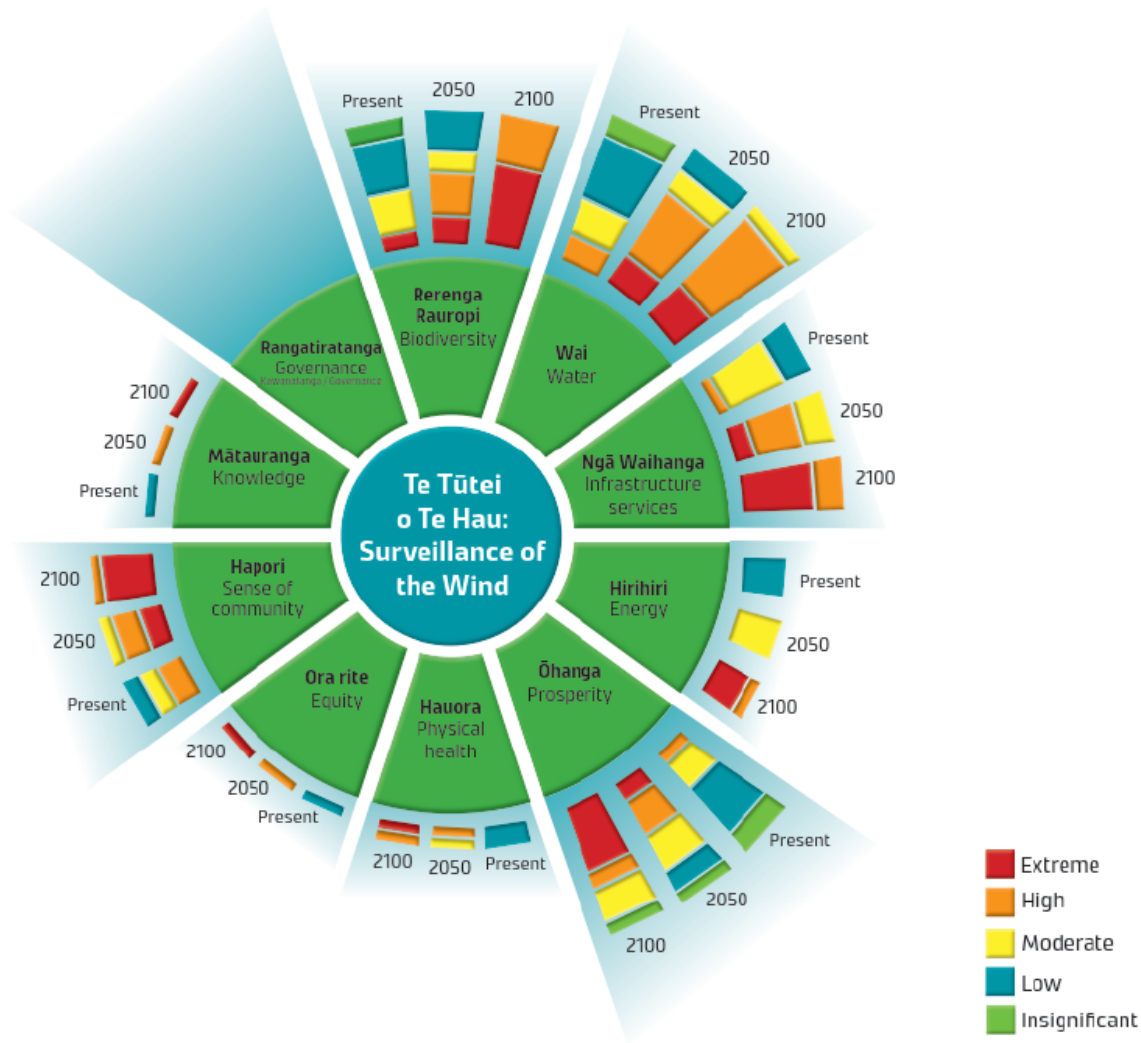
26. The same challenges impacted the timely provision of feedback on the draft technical report to T+T. Feedback from the Project Steering Group on the draft technical report was provided to T+T on 25 August, with most Waitaha/Canterbury councils giving input. As the breadth of this feedback was considerable and addressed concerns with the methodology that had previously been agreed, it required additional time for T+T to address the feedback beyond the existing timelines of finalising the draft report.
27. We previously indicated to the CMF that the Canterbury Climate Change Risk Assessment Project Steering Group would present the final deliverables (technical report, risk workbook and public-facing communications materials) for approval by the Chief Executives Forum and endorsement by the CMF in August, ahead of public release. The timeline shift means that we will now seek the technical report's endorsement at the November Mayoral Forum meeting. These changes were acknowledged by the Climate Change Steering Group, and it is comfortable with the shift given the disruptions that have occurred this year.

### **Canterbury Climate Change Risk Assessment Project – draft technical report**

28. The overall finding of the report is that climate change risks are threatening all the ngā pono, values. Figure 3 visualises an overall summary of the risks and shows that direct and indirect risks from climate change will increase over time. The assessment found that while at the present time risks are currently rated as insignificant or low (shown in green and blue), by 2100 there are high or extreme risks (shown in orange and red) predicted against all ngā pono, values.
29. The highly rated risks mainly include those to rerenga rauropi (biodiversity), wai (water), and ngā waihanga (infrastructure services). The present-day risks that are rated extreme include those relating to water supply and irrigation.



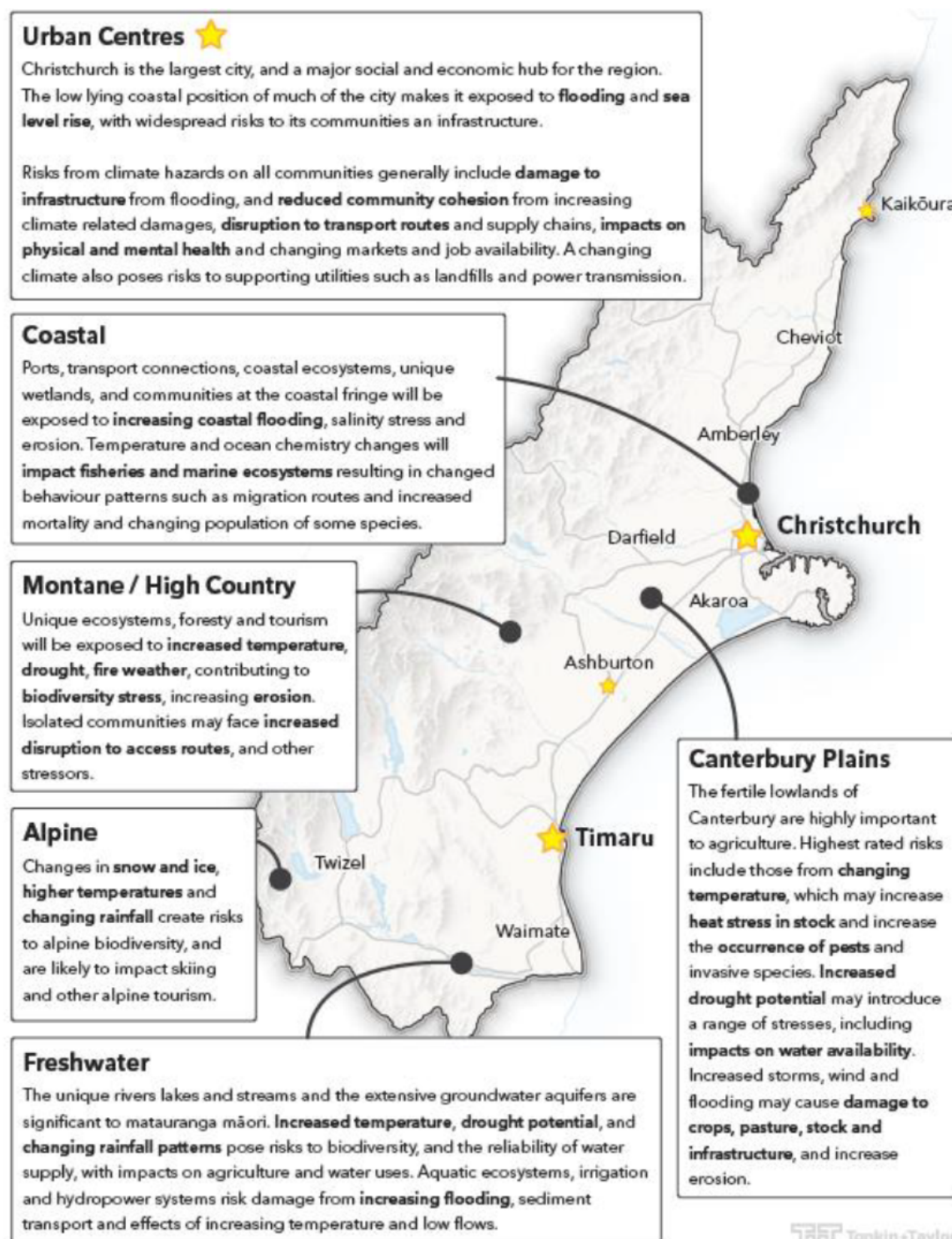
Figure 3 - Summary of risk profiles for each of ngā pono (the values) across present, 2050 and 2100 timeframes



### Impacts from climate change across Waitaha/Canterbury's different geographic areas

30. The challenges that climate change introduces will occur in different ways across the region. The large land area and geographic diversity of Waitaha/Canterbury mean that some risks will be more relevant to certain areas. The differing impacts of these risks to different geographic areas is described in the narrative of the report and visualised in this map-based risk summary in Figure 4:

Figure 4 - Canterbury Regional Climate Risk Summary



## Opportunities due to climate change

31. The technical report also includes an opportunities section (page 175-185 in the attachment) that highlights the positive benefits from the physical effects of climate change. The identified opportunities are:

- warmer living conditions in winter
- increased tourism
- water storage
- new marine fish species
- increased migration from climate displacement
- viticulture
- reduced transport disruptions
- increased horticulture productivity.

32. It's important to note that these opportunities cannot be considered in isolation but must be considered as part of the broader report, as the risks may often outweigh the benefits. This section was specifically requested by this Forum.

33. The Climate Change Risk Assessment Project Steering Group will now seek approval from all Waitaha/Canterbury councils and Ngāi Tahu for the final project deliverables (technical report, risk workbook and public-facing communications materials). To achieve this, the intention is to seek advice from, and review by, the following approval fora in Table 2.

*Table 2- Approval timeline for draft material*

<b>Approval of draft materials</b>			
<b>Meeting</b>	<b>Original Date*</b>	<b>New Date</b>	<b>Action/Rationale</b>
<b>Climate change steering group</b>	17/09/2021	15/10/2021	Completed: Presented interim report for review and feedback.
<b>Te Paiherenga</b>	10/09/2021	5/11/2021	Timeline shift does not allow presentation and review of draft material, instead presenting final material.
<b>Te Rōpū Tuia</b>	24/09/2021	3/12/2021	
<b>Individual Waitaha/Canterbury councils</b>	1 Sept- early Nov	26 October onwards	Project Steering Group members may wish to brief their own councils and rūnanga. Councils may wish to engage T+T directly to present the report.
<b>CE Forum</b>	1/11/2021	8/11/2021 – meeting date changed	Review and endorse report and agree that advice regarding public release and next steps for the project will come next year.
<b>Mayoral Forum</b>	19/11/2021	No change	Review and endorse report and agree that advice regarding public release and next steps for the project will come next year.

**\*Significantly impacted by COVID-19 Delta Alert Levels**

34. Given the project shift that has been discussed in paragraphs 21-27 above, the Canterbury Climate Change Working Group will consider the next steps of the Canterbury Climate Change Risk Assessment and bring this for consideration in the new year. This could include further work to understand decision urgency, or district detailed analysis of climate change risk.
35. With the additional capacity in councils to respond to climate change, through the creation by some councils of climate change teams or climate change and sustainability focused positions, Waitaha/Canterbury local authorities are a strong position to develop a new work programme focusing on climate change risk management and action planning.
36. Advice on scoping for the next phase of the work, which will include engaging with local authorities and rūnanga on identifying the urgency of the risks and localised effects of climate change across the region, will be provided in early 2022. As part of this advice, we will consider the approaches of both the Christchurch City Council and the Hurunui District Council respectively, as both have commenced engaging with their communities on coastal hazards. This was recommended by the Canterbury Climate Change Steering Group. The Group noted that both approaches were proving valuable and successful, and members considered they would be useful approaches to consider when developing the next steps for the Risk Assessment Project.

## **Cost, compliance and communication**

### **Financial implications**

37. Environment Canterbury invoiced councils for the Canterbury Climate Change Risk Assessment, as agreed by the Chief Executives Forum on 27 July 2020.
38. Further funding of up to \$10k, if required for additional engagement activities, has been allocated within the regional forums budget, however detail on how, or if, this may be expended is still to be confirmed.

### **Risk assessment and legal compliance**

39. The legal risk for releasing the results of the Canterbury Climate Change Risk Assessment is low as the findings cannot be used as an evidentiary base for regional, district or spatial planning as they are not sufficiently detailed.
40. There is however potentially high public interest in the results. Environment Canterbury staff will provide communications support to the Canterbury Mayoral Forum.
41. Staff will prepare a holding statement in the event the results are prematurely released. Dr Tim Davie, as convenor of the Canterbury Climate Change Working Group, will act as spokesperson if this occurs. This allows the CMF to make its own statement, at the appropriate time.

## Significance and engagement

42. The project team engaged with Ngāi Tahu via a Rūnanga Steering Group and Environment Canterbury staff will brief Te Rōpū Tuia (Environment Canterbury-papatipu rūnanga governance group) and Te Paiherenga (Environment Canterbury-papatipu rūnanga operational group) in November.
43. The Project Steering Group received requests from Papatipu Rūnanga Steering Group members for direct engagement with ngā Rūnanga about the report and the impacts of climate change on their takiwā/territory. The Rūnanga Project Steering Group specifically requested that the technical report be taken to all Papatipu Rūnanga Marae Hui in advance of public release, with support from Environment Canterbury and Territorial Authority Councillors and staff. This will not be possible however without significantly delaying the public release of the report. The Climate Change Working Group will develop advice on further engagement with Papatipu Rūnanga on climate change action following release of the report.

## Communication

44. It is proposed that the CMF will lead the public release of the assessment in late November or early December. The reduction of scope as described in paragraphs 21-27 means our advice is substantially different from advice to the Mayoral Forum in August which encouraged a significant proactive campaign. This change is because the de-scoped technical report has been assessed by our communications and engagement advisors as having considerably less saliency for public communications and engagement than was expected.
45. We therefore recommend that the final technical report and accompanying public facing material would be published on the CMF website along with a media release. The material would also be made available to councils to use for their own engagement, and form part of the *It's Time, Canterbury* engagement campaign.
46. The CMF Secretariat will also work with the project team to arrange a briefing of the regional climate change councillor group in advance of the release.

## Next steps

47. The technical report is expected to be endorsed by the CMF in November for public release.
48. Further advice, led by the Climate Change Working Group, on the next steps for the project will be developed in the new year.

## Attachments

- Canterbury Climate Change Risk Assessment – Technical Report  
- redacted as not yet finalised

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Bede Carran, Chair Corporate Forum

## Collaborative procurement update

### Purpose

1. The purpose of this paper is to update the Chief Executives Forum on progress with the feasibility study on collaborative procurement models.

### Recommendation

**That the Canterbury Chief Executives Forum:**

1. **note the update in this paper.**

### Background

2. At its meeting on 2 August, the Chief Executives Forum agreed to:
  - endorse the Canterbury Corporate Forum progressing work to investigate the feasibility and value of a model for collaborative procurement in Canterbury
  - the appointment of an external contractor, up to a cost of \$25,000, to complete the investigation into a model for collaborative procurement in Canterbury, and identify opportunities for collaboration
  - require the Canterbury Corporate Forum to report to the November Chief Executives Forum with a recommended collaborative procurement model for Canterbury.
3. The initial next steps agreed were for the Collaborative Procurement Working Group (through the Finance Managers Group) to draft a scope of work and select an appropriate contractor.

### Progress update

4. The Finance Managers Group met on 13 August and discussed the feasibility study as part of a workstream already under way on collaborative procurement.
5. The Canterbury Finance Managers Group had previously agreed to utilise some of the Christchurch City Council's procurement team resources for this workstream, as the City Council is further progressed than other councils with developing mature procurement and contract management. The agreement and funding from the Chief



Executives Forum for a consultant to undertake a feasibility study on a LASS or other shared model allowed this programme of work to expand further.

6. Following an update on the work from the Finance Managers Group at the Corporate Forum meeting on 13 September, a scope of work was drafted in preparation for contracting a consultant to progress the work. The scope makes it clear that the feasibility study must:
  - include a needs assessment
  - document the current state of collaborative procurement in Canterbury's councils (referencing the work Deloitte has previously undertaken on a procurement stocktake)
  - engage with each council on their appetite to participate in this, or a similar model (for example, there may be more appetite amongst councils for the Corporate Forum to simply join the MahiTahi collaboration portal rather than set up a new collaborative procurement structure)
  - identify and evaluate the various models that may be valuable for Canterbury – including a LASS-type model, other council-controlled organisation (CCO) model, or other shared service operating model
  - assess the procurement areas of minimum effort/cost and biggest benefit so that these can be addressed as a starting point
  - identify other areas of shared services or standardisation outside of procurement for which a LASS, CCO or other shared model that would provide value for Canterbury (e.g. legal service provisioning, consenting collaboration, and so on)
  - evaluate whether there is value in the model including other local authority areas (i.e. West Coast, Otago)
  - advise on whether an opt-in or opt-out system would be most appropriate
  - identify the financial implications for councils on setting up a new model/structure, and how it might be resourced and funded
  - provide a recommendation on the most appropriate model(s) for Canterbury going forward
  - consider the impacts of current reforms/reviews currently underway, e.g. Three Waters, resource management reform and the Review into the Future for Local Government.
7. At the time of writing, the scope of work was close to being completed. The Finance Managers Group is leading the work, with the Christchurch City Council taking responsibility for procuring the consultant who will undertake the feasibility study.
8. A verbal update on progress will be provided at the meeting.

### **Financial implications**

9. As previously agreed, the regional forums budget is being used to fund some of this work (at a cost of no more than \$25,000).

### **Next steps**

10. A verbal update on next steps will be provided at the meeting.



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Bede Carran, Chair Corporate Forum

## Carbon footprint assessment project update

### Purpose

1. This paper provides information on the status of carbon footprint assessments by Canterbury councils and provides an update on the proposal to investigate options for a software programme for the collection of data following the GHG Protocols Scope 1, 2 and 3.

### Recommendation

**That the Canterbury Chief Executives Forum:**

1. note the update provided in this paper

### Background

2. Following a decision by the Corporate Forum in March 2020 to investigate the opportunity to align regionally on methodology and reporting of carbon footprint information, a working party was set up, led by Timaru District Council.
3. Staff changes and workload issues over the past year meant that the working party was not able to complete its work in the timeframe originally anticipated. To give some momentum to the work, at the August Chief Executives Forum, it was agreed chief executives would:
  - endorse the working party to investigate options to jointly procure a software programme specific to Canterbury councils for ongoing collection of data based on the GHG Protocols Scope 1, 2 and 3
  - identify and/or confirm the name of the key contact person at their council to be a part of the working party.

### Progress update

4. Confirmation of contacts at each council during August meant that the working party has been able to regroup, and with a clear focus on its purpose.
5. Following clarification that the Christchurch City Council's in-house bespoke IT data collection and reporting system for capture of emissions across the organisation was

not able to be used region-wide, the City Council undertook to provide support and advice to the working party. This will include:

- arranging a session for working party members with the City Council's Resource Efficiency Manager to present on their bespoke system and discuss the Council's approach in collecting data
- reviewing the bespoke solution to determine if any parts of it could be used as a base for, or form part of, a regional IT data collection and reporting system.

## **Next steps**

6. The group intends to meet in November to progress the matters outlined in paragraph 5.
7. Outcomes of the investigation will be reported to the Corporate Forum and Chief Executives Forum.

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Secretariat

## **Regional forums budget 2021/2022**

### **Purpose**

1. This paper provides an update on the regional forums budget for 2020/21 at 30 September 2021.

### **Recommendations**

**That the Canterbury Chief Executives Forum:**

1. receive the quarterly update on the regional forums budget for 2021/2022
2. approve the allocation of \$25,000 from the collaborative projects budget to support records management work to be undertaken by Canterbury Records Information Management Support Group (CRIMS).

### **Background**

2. The Canterbury Chief Executives Forum approved the regional forums 2021/2022 budget at its meeting in August 2021.
3. The regional forums budget funds collaborative projects and regional training workshops. Environment Canterbury acts as fund holder for regional forums, as part of providing secretariat support.

### **2021/2022 Regional Forums Budget**

4. The income and expenditure report at 30 September 2021 is provided at Attachment 1.
5. There is no change to the Three Waters budget, with \$10,768 remaining in the account ringfenced for this work. This has been incorporated into the main budget for simplicity.
6. As discussed in agenda item 2.3 \$30,000 has been allocated to appoint an independent contractor to support the Canterbury Mayoral Forum's engagement with the resource management reform process.
7. Following on from the six-month work programme funded by the Regional Forums from November 2020, CRIMS is requesting a further \$25,000 for further records management work.

8. This further funding will enable preparation for administrative change, including confirming a model for councils to agree and allocate costs when transferring records; identifying records and data to be transferred; and identifying specific management requirements for the various formats. It will also cover guidance relating to Te Ao Māori and information and records management in councils.
9. Note that CRIMS has already spent \$3,799 against our 2021/2022 budget, of which \$600 was approved in November 2020. The \$3,199 overspend would be deducted from the \$25,000 for a total additional spend of \$21,801.
10. Both the \$30,000 for resource management and the \$25,000 for records management would be funded out of the collaborative projects budget, which was set at \$50,000, along with \$5,000 from surplus funds carried forward.

## **Attachments**

- Regional forums income and expenditure report 2021/2022 at 30 September 2021

**Regional Forums Budget 2021/2022 at 30 September 2021**

<b>INCOME</b>		<b>Budget 2021/22</b>	<b>Actual 2021/22</b>
<b>Regional Forums Levy 2021/22</b>	<b>Contribution Ratios</b>		
Environment Canterbury	21%	\$12,907.32	\$12,907.32
Christchurch City	21%	\$12,907.32	\$12,907.32
Selwyn District	11%	\$6,760.98	\$6,760.98
Waimakariri District	11%	\$6,760.98	\$6,760.98
Ashburton District	10%	\$6,146.34	\$6,146.34
Timaru District	10%	\$6,146.34	\$6,146.34
Hurunui District	5%	\$3,257.54	\$3,257.54
Waimate District	4%	\$2,458.54	\$2,458.54
Waitaki District	4%	\$2,458.54	\$2,458.54
Kaikōura District	3%	\$1,598.05	\$1,598.05
Mackenzie District	3%	\$1,598.05	\$1,598.05
<b>TOTAL INCOME</b>	<b>100%</b>	<b>\$63,000.00</b>	<b>\$63,000.00</b>

<b>EXPENDITURE</b>		<b>Budget 2021/22</b>	<b>Actual 2021/22</b>
<b>Research</b>			
Canterbury Wellbeing – refresh		\$500.00	\$-
		\$500.00	\$-
<b>Future for Local Government Workshops</b>			
Workshop facilitation (Health reforms)		\$3,000.00	\$1,095.00
		\$3,000.00	\$1,095.00
<b>Training Events</b>			
TBC		\$1,000.00	\$-
		\$1,000.00	\$-
<b>Collaborative projects</b>			
LASS Model for Procurement		\$25,000.00	\$-
Climate Change Risk Assessment engagement		\$10,000.00	\$-
Resource Management Reform		\$30,000.00	\$-
CRIMS work programme		\$25,000.00	\$3,799.00
		\$90,000.00	\$3,799.00
<b>Three waters</b>			
Three waters council contributions carried forward		\$10,768.00	\$-
		\$10,768.00	\$-
<b>Secretariat / Administration</b>			
Travel (secretariat support)		\$1,000.00	\$-
		\$1,000.00	\$-
<b>TOTAL EXPENDITURE</b>		<b>\$106,268.00</b>	<b>\$4,894.00</b>

<b>SURPLUS / DEFICIT 2021/22</b>	<b>\$-43,268.00</b>	<b>\$58,106.00</b>
<b>SURPLUS / DEFICIT carried forward from 2020/21</b>	<b>\$55,620.46</b>	<b>\$55,620.46</b>
<b>FUNDS IN HAND</b>	<b>\$12,352.46</b>	<b>\$113,726.46</b>

# Canterbury Chief Executives Forum

**Date:** 1 November 2021

**Presented by:** Secretariat

## Three-year work programme 2020-2022

### Purpose

1. This paper seeks approval of the updated three-year work programme 2020-2022.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **approve the updated three-year work programme 2020-2022**
2. **provide feedback to the secretariat on the approach to update the document *Canterbury 2019: An Overview*.**

### Background

2. The three-year work programme has been updated since it was reported to the Chief Executives Forum in August 2021. The updated programme is attached.
3. These updates reflect actions from the *Mayoral Forum's Plan for Canterbury* and other changes responding to central and local government initiatives.

### Review of *Canterbury 2019: An Overview*

4. As agreed at the Mayoral Forum's July workshop on the health reforms, the secretariat has commenced a review of the wellbeing overview developed in 2019<sup>1</sup>.
5. The statistical information has been reviewed and updated where possible (for example, some figures are from census numbers and won't be available until the next census occurs). The narrative is being updated where applicable.
6. The overview was completed prior to the commencement of the pandemic so in many places within the document (e.g. visitor arrivals) the narrative needs to be updated to reference COVID-19 and its impacts. Feedback from chief executives on what COVID-19 impacts should be highlighted in the document would be welcome.

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<sup>1</sup> A copy of the current version is available for reference at <https://www.canterburymayors.org.nz/wp-content/uploads/Canterbury-wellbeing-overview-Nov-2019.pdf>

7. The indicators for each section of the report have also been reviewed to ensure relevant and useful indicators are captured. The secretariat considers it may be valuable to include some or all of the below in the updated document:
  - housing affordability index
  - more age, sex, ethnicity trends (e.g. for employment)
  - more territorial authority comparisons (e.g. age and ethnicities)
  - education attainment levels
  - more social and cultural indicators e.g. volunteering hours and perception of environment
  - number on benefits (e.g. jobseeker) or other hardship indicators
  - % of children living in households in material hardship
  - regional greenhouse gas emissions.
8. Feedback is sought from chief executives on the inclusion of these indicators, and any other indicators or associated information that is considered useful to include in an updated version of the document.
9. Following feedback from chief executives, an updated draft will be completed and provided for further consideration.

## **Financial implications**

10. The work programme will be funded by:
  - contracts with the Ministry of Business, Innovation and Employment
  - the agreed cost-share for work on Three Waters
  - the regional forums budget
  - Environment Canterbury's regional forums secretariat budget (meetings and secretariat support for advocacy).

## **Attachments**

- Three-year work programme dated 8 November 2021

## Three-year work programme 2020–22

as at 1 November 2021

WHAT	TASK	PLAN FOR CANTERBURY PRIORITY	SPONSOR	LEAD	ACTION	DUE	STATUS	UPDATE
Canterbury Water Management Strategy	To continue providing governance oversight and strategic support to the implementation of the Canterbury Water Management Strategy (CWMS)	Sustainable environmental management of our habitats	Mayoral Forum	Jenny Hughey	Request the Regional Committee to work with CWMS partners to re-engage communities and stakeholders on actions undertaken to deliver the CWMS across the region in order to maintain and nurture commitment to the delivery of the CWMS	30/09/2022	On track	Updated Zone Committee terms of reference approved CMF 27 November 2020
	Renew community acceptance and commitment to the Canterbury Water Management Strategy				Progress report on joint actions undertaken to deliver the CWMS across Canterbury	1/12/2021	On track	Work in progress with CWMS team
					CWMS Regional Committee reports on progress towards the 2025 and 2030 goals	30/06/2022	On track	Work in progress with CWMS team
Build capacity and influence to understand climate impacts, risks and opportunities and incorporate these into regional planning documents and community awareness.	Complete our first regional climate change risk assessment, aligned with the national climate change assessment, and identify critical gaps in our adaptation planning	Climate change mitigation and adaptation	Mayoral Forum	Climate Change Steering Group	Progress Stages 2 and 3 of the Climate Change Risk Assessment	30/06/2021	On track	Climate Change Risk Assessment (Stage 2 & 3) expected to be completed third quarter 2021 Agenda Item 2.5
	Encourage all Canterbury local authorities to complete carbon footprint assessments, to inform action plans for reductions				All Canterbury local authorities are encouraged and supported to commission council carbon footprint assessments	31/12/2020	On track	Working group went to market in December 2020 with an RFP and expected to be in a position to begin negotiations and plan the implementation of the agreed methodology for reporting on carbon emissions by February 2021. Agenda Item 2.7
CREDS 2016–2019 continuing work programmes	Canterbury Story	Shared economic prosperity	Mayoral Forum	Secretariat		17/12/2021	Complete	Following a review of the Canterbury Story website the chief executives agreed that this should be decommissioned. The secretariat are working with ChristchurchNZ to relocate collateral from the site
	Food, Fibre and Innovation				High value manufacturing Value added production	30/06/2022	On track	Work is underway on hosting and publishing industry roadmaps, work on developing industry clusters continues, and initiatives are underway with Ara and FoodSouth to continue to build the industry pipeline and improve productivity.
	South Island Destination Management plan					30/10/2021	Complete	South Island Destination Management plan completed in March 2020. The Mayoral Forum agreed in August 2021 to endorse the plan's strategic aims and to seek endorsement of these at the Zone 5 and 6 meeting in October.
Freshwater Package investments	Advocate with Government for the region's interests to be addressed in the investment decisions to support the Government's Freshwater Package	Sustainable environmental management of our habitats	Mayoral Forum		Add to the agenda for the Mayoral Forum visit(s) to Wellington		On track	Essential Freshwater Steering Group established and held first meeting in March. Hon David Parker met with the Mayoral Forum on 11 October. Ashburton DC has prepared both economic and social impact reports on the new Essential Freshwater regulations for the Ashburton district. Agenda Item 2.2



Education Forum	Facilitate a forum of key tertiary education and training providers to enable the exchange of ideas and information and support collaboration Advocate for transition of secondary students to further study and training or work	Shared economic prosperity	Mayoral Forum	Dan Gordon	Forum meets at least twice each year	30/06/2021	On track	
Skilled Workforce	Advocate with Government for education and immigration policies that deliver a skilled workforce now and into the future	Shared economic prosperity	Mayoral Forum		Add to the agenda for the Mayoral Forum visit(s) to Wellington	30/11/2020	On track	Discussed Mayoral Forum 19 February 2021
Better freight options	Participate on the Canterbury Regional Land Transport Committee	Better freight transport options	Mayoral Forum		Communicate to the RTC the forum's desire that the new RTLP provide a planning and investment framework that results in fewer trucks on the road		On track	Freight Tour was held 18 / 19 February 2021
	Collaborate with South Island chairs of RLTC to drive multi-modal transport planning investment						On track	
	Advocate with Government for investment in multi-modal transport outcomes, especially moving more long-distance freight by rail				Write to Ministers to advocate for Canterbury's position Add to agenda for Mayoral Forum visit(s) to Wellington		On track	Discussed Mayoral Forum 19 February 2021 Met with Minister Wood 27 May 2021
Three Waters	Advocate a Three Waters regulatory system that utilises risk-and evidence-based interventions to ensure safe and efficient delivery of water services	Three Waters services	CEs Forum	Secretariat	Write to Ministers to advocate for Canterbury's position Add to agenda for Mayoral Forum visit(s) to Wellington		On track	Meeting with Minister Mahuta 12 May 2021, with LGNZ Zone 6 and Ngāi Tahu.
Update Canterbury Biodiversity Strategy	Oversee the review of the Canterbury Biodiversity Strategy 2008 to ensure alignment with the NZ Biodiversity Strategy 2020 and the proposed National Policy Statement on Indigenous Biodiversity	Sustainable environmental management of our habitats	Policy Forum			30/06/2021	On track	Environment Canterbury's LTP includes the Canterbury Biodiversity Strategy review and work will commence when the Government announces the NPS IB. Canterbury Regional Biodiversity Champions Group established in Environment Canterbury.
IT systems and digital services	Lead development of a 10-year plan for Canterbury councils to move to a common platform for IT systems and digital services (including valuation and rating functions) and secure cost savings through group licensing procurement, with specific concrete actions to be implemented in each year of the 10-year plan		Corporate Forum	CIOs	Conduct a stocktake of where everyone is at	30/06/2020	On track	CCF agreed 16 March 2020 that CIOs will conduct a stocktake of Canterbury councils' IT platforms, applications and procurement / licensing cycles and investment intentions to inform planning to move towards a common platform by 2030. On track.
	Develop a business case (with value proposition and a request for funding) to go to member councils to test and build consensus on a collective vision, commitment and understanding of what it might mean over time for procurement and renewal cycles					30/11/2020	On track	
Procurement	Develop a proposal for a joined-up procurement system/service for Canterbury councils, including legal services provisioning Develop a proposal for consideration by member councils		Corporate Forum	CFMG		30/11/2020	On track	In late 2020 Deloitte were contracted to analyse third-party expenditure by Canterbury councils, to inform collaborative procurement options. In August 2021 the CE's Forum approved funding to engage a consultant to evaluate options for collaborative procurement for Canterbury. Work is underway to initiate this contract.

Implementing new Water Safety Plan format	Share advice and lessons between drinking water suppliers from implementing the new Water Safety Plan to improve compliance across the region		Operations Forum	DWRG			On track	Councils are working on plans but it is a slow process as they require a lot of effort and DHB-side resources have been preoccupied by Taumata Arowai changes. At least three in Canterbury have been approved as of June 2021. There is concern about the what the status of these will be as we transition through with Taumata Arowai.
Resource Management Reform	Engage with central government on the resource management reforms through participation in the Local Government Forum of Chief Executives for resource management reform, reviewing and preparing submissions on new legislation, participating in Select Committte processes		Chief Executives Forum	David Ward	Jim Harland nominated for Local Government Forum of Chief Executives for resource management reform Policy Forum (through CPMG) keep watching brief on exposure drafts of the Natural and Built Environment Act and prepare to draft a regional submission when released	30/06/2021	On track	CMF submission made on the Inquiry on the Natural and Built Environments Bill: Parliamentary Paper. Letter to sent to LGNZ, Taituarā, Department of Internal Affairs and Ministry for the Environment requesting Canterbury presence on national working parties and reference groups, responsees to be discussed at November meeting.
				Policy Forum	Policy Forum (with CCWG & CPMG) keep watching brief on drafts of Strategic Planning Act and Climate Change Adaptation Act		On track	
Future for Local Government	Engage with central government on the future for local government by supporting development of a regional approach and participating in the Future for Local Government Review		Mayoral Forum	Chief Executives Forum	Progress actions from the Future for Local Government Workshop (April 2021) and actively participate in engagement with central government's Future for Local Government Review	1/04/2023	On track	Initial workshop held 19 March 2021, including papatipu rūnanga chairs and central government regional directors. Follow-up meeting and workshop held 28 May, which also included chair and executive director of Local Government Review Panel. Health Reform workshop held 5 July 2021 Future for Local Government Review report to be

Key to acronyms

CCWG	Climate Change Working Group	CIOs	Chief Information Officers Group	CREDS	Canterbury Regional Development Strategy
CEF	Chief Executives Forum	CMF	Canterbury Mayoral Forum	CWMS	Canterbury Water Management Strategy
CEMG	Canterbury Engineering Managers Group	COF	Canterbury Operations Forum	DWRG	Drinking Water Reference Group
CFMG	Canterbury Finance Managers Group	CPF	Canterbury Policy Forum	ECan	Environment Canterbury

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach, Chair

## **Economic regulation and consumer protection - three waters services**

### **Purpose**

1. The purpose of this paper is to seek direction from the Chief Executives Forum on the preparation of a Canterbury Mayoral Forum submission on the Ministry of Business, Innovation and Employment's discussion paper, *Economic regulation and consumer protection for three waters services in New Zealand*.

### **Recommendations**

**That the Canterbury Chief Executives Forum:**

1. **confirm the intention to prepare a submission on the Ministry of Business, Innovation and Employment's discussion paper, *Economic regulation and consumer protection for three waters services in New Zealand*, on behalf of the Canterbury Mayoral Forum**
2. **nominate the Policy Forum to prepare the submission, with input from the Corporate and Operations Forums**
3. **agree the key points to be covered in the draft submission.**

### **Background**

2. The Ministry of Business, Innovation and Employment (MBIE) is consulting on how economic regulation and consumer protection for the future three waters system should be designed and is seeking written submissions on the issues raised in the *Economic regulation and consumer protection for three waters services in New Zealand* discussion paper by 20 December 2021.
3. The Three Waters reform process has revealed a range of problems that relate to natural monopoly characteristics of the system and is considering regulatory safeguards to ensure that consumers and communities receive efficient and affordable three waters services that meet their needs both now and into the future.

## Discussion paper

4. MBIE has produced a discussion paper that looks at both economic regulation and consumer protection<sup>1</sup>.
  - **Economic regulation** to help consumers with problems that can occur when businesses have a lot of market power.
  - **Consumer protection** to incorporate the voices of consumers and communities should be incorporated throughout the design of the three waters regulatory system, to ensure it is responsive and accountable.
5. Specifically the discussion paper seeks feedback on issues such as:
  - whether economic regulation should apply to all three waters, or just drinking water and wastewater, and which suppliers it should apply to
  - what form of economic regulation should apply, such as information disclosure and price-quality regulation, and how this should be designed
  - whether additional consumer protections are needed for the three waters sector, e.g. whether there should be minimum service level requirements
  - how to give consumers a strong voice and resolve consumer disputes
  - who the economic regulation and consumer protection regulator(s) should be, and how the regimes should be funded.

## Draft submission

6. Submissions on the discussion paper close on 20 December 2021. It is proposed that the Policy Forum take the lead on preparing the Canterbury Mayoral Forum submission, with input from the Corporate and Operations Forums.
7. There is a submission template for completion that includes questions on economic regulation, consumer protection, implementation and regulatory stewardship and an opportunity to provide any other comments.

## Next steps

8. Should the Chief Executives Forum confirm the intention to prepare a CMF submission on the discussion paper, the next step would be for the Chair of the Policy Forum, in consultation with members, to identify a member of the Forum to hold the pen on developing the submission.

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<sup>1</sup> [Economic regulation and consumer protection for three waters | Ministry of Business, Innovation & Employment \(mbie.govt.nz\)](https://www.mbie.govt.nz/economic-regulation-and-consumer-protection-for-three-waters)

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach

## Essential Freshwater Ashburton reports

### Purpose

1. The purpose of this paper is to provide copies of the *Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District* research undertaken on behalf of Ashburton District Council on the likely economic impact of land and water legislation across the Ashburton District, and the *Essential Freshwater Social Impact Report: Ashburton District* prepared for the Mid-Canterbury Rural Support Trust.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **receive the reports *Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District* and *Essential Freshwater Social Impact Report: Ashburton District*.**

### Background

2. The National Policy Statement for Fresh Water Management (NPS-FWM), the National environmental standards for Fresh Water Regulations, and Stock Exclusion Regulations were passed into law in 2020.
3. This policy statement sets out a target of achieving a freshwater soluble nitrate level of 2.4mg N/L. 3.
4. This economic impact report builds on a previous report that was commissioned by Ashburton District Council (ADC) titled '*Land and Water Reforms and Economic Impact for the Ashburton District*', which was shared with the Mayoral Forum in February 2021.
5. The social impact report was commissioned by the Mid-Canterbury Rural Support Trust to explore the social impact of the new freshwater rules and regulations on the Ashburton District.

### ***Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District***

6. The *Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District* report (the report) was commissioned by the ADC as the implications of achieving a freshwater

soluble nitrate level of 2.4mg N/L are not well understood at a farm level nor are the effects on the district's economy.

7. The report outlines the changes that would need to occur within the Ashburton District to achieve a nitrate level of 2.4 mg N/L and the impacts on the economy of achieving this level.
8. Macfarlane Rural Business (MRB) undertook the analysis of farm system improvements, land use change and the use of managed aquifer recharge systems as part of the reporting system.
9. Infometrics was engaged to calculate on-farm impact, farm expenditure changes and the effect on employment across the Ashburton District, specifically quantifying direct, indirect and induced effects of the changes needed to achieve the mandated freshwater standards.

## Report Summary

10. The summary of the report notes that while it is technically possible to change the farming landscape in Ashburton (291,000ha farmed) to give effect to 2.4ppm N in surface water, the actions we take to achieve the target will have a material effect on the style of farming and the physical landscape.
11. Ashburton District's farming community could expect to see:
  - significant and widespread changes to farming practices, particularly housed cattle
  - an increase in the forestry area by 102,691 ha (35% of the catchment)
  - using 17.1 m<sup>3</sup> /sec alpine river water for additional Managed Aquifer Recharge.
12. The scenario modelled hinges on the above three items all being achieved. Without one of them, the chances of achieving the desired 2.4ppm N in surface water is unlikely as farm management cannot achieve N losses low enough.
13. Nett farm revenue will decline significantly under the modelled scenario and farm working expenses will also decline, but at a lower rate leading to a reduction in regional farm profit of at least \$173m p/a (\$592/ha).
14. Reduced business profitability ultimately ends up resulting in de-valuation of the business assets. In this instance the main asset is land. We could expect to see the erosion of \$25,309/ha in land value (\$7.4 bn for whole catchment).
15. The reduced business profitability on farm and land use change will have significant downstream consequences for the surrounding industry. The biggest changes likely are:
  - 3,522ha less arable land available for seed multiplication and vegetable production
  - 85,000,000kg less milk solids produced
  - 185,000 head less cattle killed annually.

16. Attempting to meet a water quality target of 2.4ppm N would be extremely financially, physically and psychologically challenging for most Ashburton farmers and could have material sociological impacts on the wider community.

### ***Essential Freshwater Social Impact Report: Ashburton District***

17. This research was commissioned to provide insight into the impacts of the freshwater rules and regulations on the people of the Ashburton District. The report adds to the economic impact report produced by the Council in 2020 (referenced in paragraph 4).

#### **Report summary**

18. The report found that the new freshwater rules and regulations have wide social implications for people in the Ashburton District.
19. Key points include:
  - there has been an increasingly adverse impact on farmers and their families in recent times; the new rules have compounded existing stressors, including droughts, banking reforms, Mycoplasma bovis, and COVID-19 impacts
  - the way the new rules and regulations were introduced failed to take into consideration the on-flow socio-economic impacts of such an intervention on some rural communities
  - the initial engagement process for the freshwater rules, specifically the consultation seminar held in Ashburton, created anxiety, stress, and uncertainty for the agri-sector; this uncertainty has only increased over time, hindering farmers and those working in the agricultural sector's ability to plan, provide practical advice, and progress forward with projects
  - decreased confidence in farming was a theme particularly for young farmers; one of the main concerns for young farmers was the negative way they felt the public viewed farmers
  - in terms of the broader community, there was a view that the possible flow-on impact from a loss of farms and reduced spending in the district could affect the viability of some rural supply businesses, increasing unemployment and resulting in families relocating away from the district
  - a shared commitment to tackle the complex environmental issues, including a willingness from government to work with farmers to create a time appropriate pathway for water quality improvements would result in a more effective and sustainable change in the way that land and water is managed and could achieve more positive social outcomes.

#### **Attachments**

- Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District
- Essential Freshwater Social Impact Report: Ashburton District



2021

## Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District



Ashburton District Council

10/20/2021



# Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District

By

Richard Fitzgerald

Agricultural Portfolio Advisor

Ashburton District Council

## Executive Summary

The implications of achieving a freshwater soluble Nitrate level of 2.4mg N/L, are not well understood at a farm level nor are the effects on a district's economy. The Ashburton District Council commissioned the **'Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District'** report to understand the effects of achieving this aspect of the freshwater regulations more fully.

An understanding of the impact on the Ashburton District has been established by analysing the effects of three mitigation interventions, on-farm nutrient loss mitigations, coupled with ground water supplementation, and land use change to forestry. Forestry was used as an intervention because it is a low nitrate crop known to Canterbury plains.

The report makes no claim that these interventions are the most suitable land use change nor are they proposed as the most likely response by farmers to achieve the freshwater regulations. These interventions have been used to represent change that can be quantified and are used in this report to demonstrate the potential economic impact of achieving the freshwater regulations.

This report shows that at a farm level, the interventions will result in a reduction of dairy farming and dairy support land use by over fifty percent from current levels. This is replaced with forestry land use. The remaining dairying, dairy support, arable and red meat farming land uses will change their operations significantly by implementing all nutrient loss mitigation measures available. This will involve widespread changes to farm systems and increased investment in farm infrastructure and technology. This will result in a decline in farm profitability across the Ashburton District by -62% even though farm expenditure declines by 11.7%. The decline in farm profitability and changes to land use lead to a decline in land values of \$25,306 per hectare or \$7.4B districtwide.

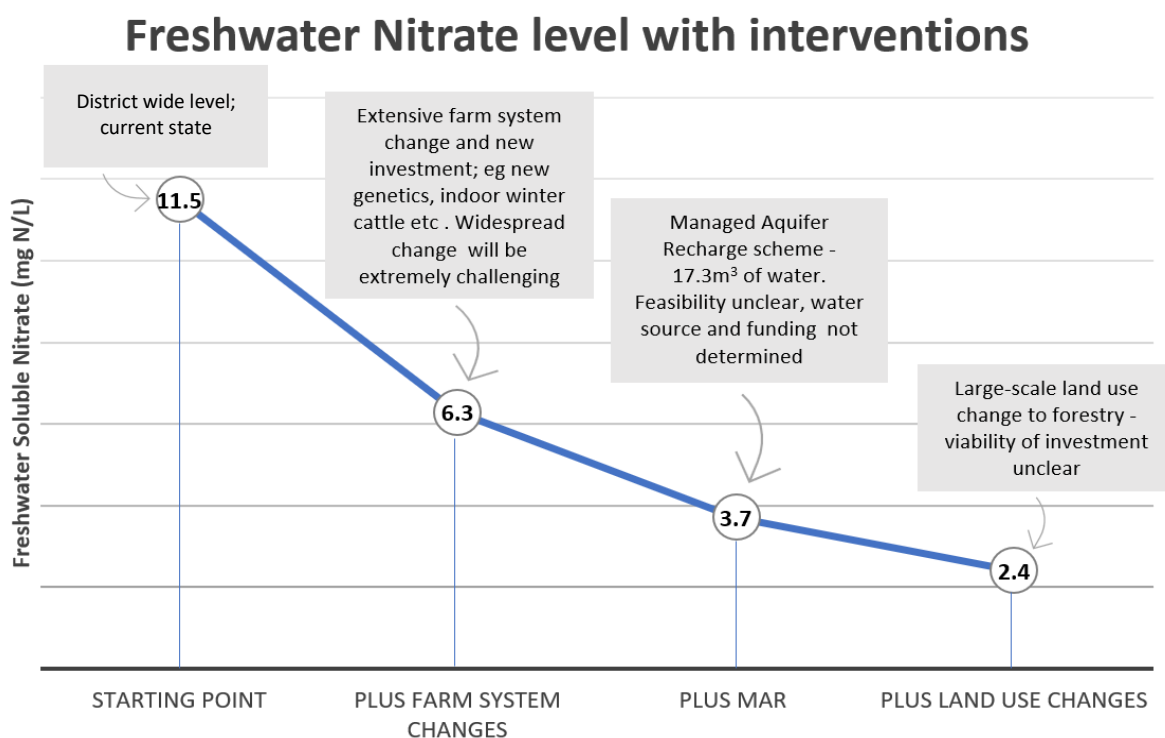
Agriculture is a significant contributor to the district's GDP and the decline in farm productivity and financial performance flows through to agricultural support businesses and the wider economy. The reduction in livestock numbers and lower volumes of produce result in a decline in the transport industry by -25.9%, reductions in irrigation because of land use change shows that water services will decline by -20.7%, and businesses which provide vehicle and equipment maintenance will experience reduced demand for their services leading to a 37.0% decline.

As a result, the Ashburton District's GDP is calculated to decline by \$409M or 23%, with the loss of 1735 jobs and the tax take from the district will decline by \$72M.

The regulations do not define the timeframe by when they must be met. A short timeframe will exacerbate the negative effects while a longer timeframe will enable businesses to adjust and adopt new science and technology to meet the regulations.

By applying the interventions, the freshwater Nitrate levels will shift from the weighted average starting point of 11.5mg N/L to 6.3mg N/L when all the on-farm nutrient loss mitigations are applied. Additionally, when the Managed Aquifer Recharge scheme and land use changes are also included, the freshwater Nitrate levels shift from 6.3mg N/L to 2.4mg N/L.

Summary of the effect of the interventions on freshwater Nitrate levels.



Importantly, meeting the freshwater regulations requires all the interventions to be implemented fully across the district. An underperformance of any of the interventions means that the freshwater targets will not be achieved.

This will be challenging.

Challenging because farmers are businessmen and women and as such, are unlikely to invest where there is a negative return and unclear benefits. They will act when they understand the connections between the problem and the solution. They will act when they are engaged in the change process and are able to provide their expertise to help shape the future for their farms and their community.

They will also act when they are confident about the risks and benefits of change, and to achieve this further research is crucial to fill gaps in current knowledge.

All the Ashburton District community want good environmental outcomes and a strong and healthy economy for them and their children, so do all farmers. The real challenge is not about trading off one against the other, but rather it is about achieving good outcomes for the environment, businesses, and the community.

To achieve that future, government, industry, and the farming community need to work collectively and solve the problems together.

## Introduction

Land and Water management is a hot topic of discussion throughout New Zealand. After a period of community consultation, the National Policy Statement for Fresh Water Management (NPS-FWM), the National environmental standards for Fresh Water Regulations, and Stock Exclusion Regulations were passed into law in 2020. The regulations are intended to address a range of issues associated with freshwater quality and environmental management. The regulations will influence the impact primary production has on the environment. Since the implementation, several aspects of these regulations have attracted debate about workability and economic impact.

A desktop review of relevant research papers was undertaken by the Ashburton District Council to better understand the impacts of the NPS-FWM. The report 'Land and Water Management in the Ashburton District – Economic Impact'<sup>1</sup> was completed by the Economic Development unit of the Ashburton District Council in late 2020. This report studied the economic impact of achieving a freshwater soluble Nitrate level of 6.9mg Nitrate per litre (mg N). The results showed there is a risk of significant decline in farm profitability causing a decline in employment in the district.

The report did not capture the full impact of NPS-FWM because the NPS-FWM requires a freshwater level of 2.4mg N, which is significantly more stringent than the 6.9mg N levels examined in the Ashburton District Economic Impact report. A follow up report was commissioned by the Ashburton District Council to gain a clearer understanding of what achieving a level of 2.4mg N means to the Ashburton District's economy.

## Overview

This report, '**Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District**' explores the impacts of achieving a freshwater soluble Nitrate level of 2.4mg/L at a farm level and the associated effects on the Ashburton District's economy. It was commissioned by the Ashburton District Council to better understand the potential implications of achieving the freshwater regulations.

This report firstly analyses two research papers. The first research paper, 'Land and Water Management in the Ashburton District – Economic Impact' (referred to as the '*Freshwater Nitrate: 2.4mg/L - appendix 1*' paper) was prepared by MacFarlane Rural Business. It models farm system change (in Farmax) with resulting nutrient loss analysis. Importantly, this research paper includes farm systems budgets and cashflow assessments to determine the financial implications of the changes. The second research paper, 'Economic Impact of freshwater environmental standards in Ashburton District', (referred to as the '*Economic Impact of 2.4mg/L – appendix 2*' paper) was prepared by Infometrics. It uses the output data from the farm systems and budget cashflow modelling (presented in appendix 1) to calculate the economic impact for the Ashburton District. This report then analyses the findings and presents them in the context of the Ashburton District. It will identify the farm and district economic cost of achieving a freshwater soluble Nitrate level of 2.4mg/L.

## The Scope

The purpose of this report is to present a high-level analysis of interventions that decrease the impact of agriculture on freshwater nitrate levels. This is to understand what achieving a freshwater Nitrate level of 2.4mg/L looks like on-farm and at a community level. It examines how to achieve the freshwater regulations and considers changing on-farm practices, supplementing ground water, and substituting land use to forestry as a low nutrient-loss land use.

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<sup>1</sup> Land and Water Manager in the Ashburton District – Economic Impact (2020). Ashburton District Council.

The report encompasses the plains area of the Ashburton District only and is only focussed on achieving the Nitrate aspect of the freshwater regulations and identifying the costs associated with the achievement. It does not consider the economic impact of other aspects of the regulations such as wetland protection, and achieving other freshwater attributes etc. The high-country areas are not accounted for in the study as they represent a relatively small contribution to the freshwater quality issue compared to farm systems on the plains. Additionally, determining the practicality and achievability of the interventions are outside the scope of this report.

The report does not attempt to quantify the benefits or value of improved ecosystem health, which should be a focus of future research.

### Assumptions

This report recognises the complexity of the interrelationship between farm systems, human behaviour, and the environment, and as such, there are limitations as to how this mix of factors can be accurately analysed and quantified. Several assumptions have been utilised to develop interventions that are plausible, however, the report acknowledges that the likelihood of all interventions being enacted, is open to be challenged.

Expert judgement has been utilised to ensure validity of the assumptions used in the analysis of the interventions. The analysis is undertaken in several steps, each step is an intervention that theoretically decreases soluble Nitrogen in freshwater. The interventions include changing on-farm systems to minimise nutrient losses, a district-scale Managed Aquifer Recharge scheme, and land use change to largescale forestry. The steps of analysis are carried out in a linear manner, adding the reduction of soluble nitrogen to the outcome of the previous intervention. The purpose of this is to demonstrate the scale of interventions needed to reach the freshwater targets outlined in the NPS-FWM. It can be assumed in practice the interventions will not occur one after another but instead develop omnidirectionally, therefore the rolling tallies are arbitrary but still highlight feasible outcomes.

It should be noted that significant value would be gained from undertaking hydro-geological research to better understand the relationship between soils, climate, land uses and water movement in Ashburton District's natural environment.

### The Analysis

This section summarises and analyses '*Freshwater Nitrate: 2.4mg/L - appendix 1*' and '*Economic Impact of 2.4mg/L - appendix 2*'. The '*Freshwater Nitrate: 2.4mg/L - appendix 1*' identifies three interventions that can be utilised for agriculture to achieve the NPS-FWM regulations. These are; (1) the implementation of practice change on-farm and capital investment (including technology) that would mitigate nutrient losses, (2) the implementation of a district-scale Managed Aquifer Recharge scheme, and (3) changing land use to a lower nitrogen loss farming system. The analysis will consider the impact each intervention has on decreasing the soluble Nitrate levels as well as the economic impact.

For each intervention, the change in individual farm financial performance and the impact on the Freshwater soluble nitrate level is calculated. The results of the first intervention are carried through onto the next to give a rolling tally of the financial and environmental impact of undergoing each intervention. Extrapolated to the district level, this helps determine the economic impact these interventions could have on the Ashburton District's economy.

## Changing On-Farm Practices

'Freshwater Nitrate: 2.4mg/L - appendix 1' identified that changing and adopting different on-farm practices and further investment resulted in a reduction of freshwater soluble nitrate levels. However, these changes come at a cost. The research paper considered most mitigation practices currently available to agriculture, for example, housing cattle (including dairy) during winter, the utilisation of different farm practices, and the use of the latest technology such as precision irrigation technology. To assess the impact of changing on-farm systems, the research paper 'Freshwater Nitrate: 2.4mg/L - appendix 1' calculated the baseline financial and environmental 'Starting Point' for each type of farming. From there, the theorised changes which reduce nutrient losses that can be implemented on-farm were modelled and the cost of implementing these changes, calculated. The recalculated financial and environmental status of each farm system was shown in the 'Forecast' farm system.

Table 1 summarises the impacts at a district level and highlights the change in farm performance resulting from changes to the farm practices. Refer to appendix 1 paper - 'Freshwater Nitrate: 2.4mg/L' (p20).

Table 1 District wide financial impact of changing on-farm systems

Farm Performance area – Ashburton District	Pre changes (\$1M)	Post practice changes* (\$1M)	Change impacts** (\$1M)	Change Impact*** (% change)
Nett farm income	1,779	1,984	205	+11.5%
Farm working expense	1,221	1,545	324	+26.5%
Earnings before interest and tax (EBIT)	558	439	-119	-21.3
Interest	26	33	7	+26.9%
Tax	107	45	-62	-57.9%
Plant replacement	148	204	64	+37.8%
Nett profit	277	144	-133	-48.0%

\*Figures are derived from 'Freshwater Nitrate: 2.4mg/L - appendix 1' paper. They are calculated by multiplying 'starting point' land uses on page 14, figure 8, with the 'forecast' figures on page 20, table 5.6.5. These figures only consider the on-farm system changes, and do not account for MAR or land use change.

\*\* Figures are calculated as the difference between 'pre changes' and 'post practice change'.

\*\*\* Figures are calculated as the percentage change from 'pre changes' from 'post practice change'.

Table 1 demonstrates an increase in farm income with associated increases in farm expenditure. The expenditure increases greater than income, leading to a decline in EBIT of -21.3% (-\$119M). The decline in EBIT leads to lower tax payments.

The on-farm changes result in increased operating expenditure of 26.5% (\$324M) on different management practices such as pasture renewal, nutrient inhibitors, and plant genetics. These changes deliver a negative cost benefit while reducing the amount of nutrient loss; for every \$1 dollar of increased operating expenditure, farm income increases only \$0.63. Additionally, farms show an increase in capital expenditure with investment in farm infrastructure such as winter barns and precision technology, resulting in a decline in farm profitability of -48.0% (-\$133M).

Table 2 summarises the impacts at a district level and highlights the effects on freshwater Nitrate levels because of on-farm practice and system changes. Refer to appendix 1 paper - 'Freshwater Nitrate: 2.4mg/L' (p10. Figure 2).

Table 2 District wide effect on freshwater nitrate levels from changing on-farm systems

District wide effects	Pre system changes level (District weighted average)	Post system changes level*	Change impacts**
<b>Freshwater Soluble Nitrate Level</b>	11.5 ppm N/L	6.3 ppm N/L	A decline of 5.3ppm N/L

\*The figures show the change from the current state of farm system nutrient loss, and the loss after the nutrient loss reduction farm system changes.

The widespread change to farm systems and investment in new technology is calculated to achieve a reduction in freshwater soluble Nitrate levels from a starting point of 11.5ppm N/L to 6.3ppm N/L, after all possible on-farm system mitigations are implemented.

It should be noted that the breadth and scale of change identified in the report will be very disruptive to all farm businesses and achieving unilateral commitment amongst all farmers to this magnitude of change will be extremely challenging.

### Managed Aquifer Recharge

The Hekeao/Hinds area currently has a Managed Aquifer Recharge (MAR) scheme in operation which recharges the ground aquifers in the area. It is speculated that this may be scaled up and extended across the district to provide the same benefits. The '*Freshwater Nitrate: 2.4mg/L - appendix 1*' paper does not assert whether this is feasible or not, nor does the report assess the effectiveness of this intervention on freshwater Nitrate levels. The rationale of using a MAR intervention is based on a modelled catchment N load which will receive the same flow rate of 0.055lps/ha as per the current MAR scheme. The volume of water required to supplement a district scale MAR scheme is calculated at 17.1m<sup>3</sup>.

The expenditure associated with a district scale MAR (capital and operating costs) is accounted for in the '*Freshwater Nitrate: 2.4mg/L - appendix 1*' paper. The costings are derived from the Hekeao/Hinds MAR scheme and scaled up to meet the theoretical needs of an Ashburton District scale scheme. Importantly, the analysis does not determine how or by whom such a large-scale MAR scheme will be funded. For this reason, the capital and operating costs are not incorporated within the farm budget calculations.

Table 3 shows the cost of establishing a MAR scheme that supplements ground water by 17.1m<sup>3</sup> as per the paper '*Freshwater Nitrate: 2.4mg/L - appendix 1*' (p14).

Table 3 The estimated cost of establishing and operating a MAR scheme that supplements ground water by 17.1m<sup>3</sup>.

Effect of a District Scale MAR	Impact
Capital cost	\$23,528,906
Operating cost (annual)	\$1,368,000

The table shows the initial one-off cost of building the MAR scheme and the annual operating costs. These operating costs include overheads such as personnel and scheme maintenance.

Table 4 shows the effect on freshwater soluble Nitrate levels after the introduction of 17.1m<sup>3</sup> of water through a Managed Aquifer Recharge scheme as well as the on-farm system changes. Refer '*Freshwater Nitrate: 2.4mg/L - appendix 1*' (p 12. Figure 5).

Table 4 District wide effect on freshwater nitrate levels from introducing MAR and changing on-farm systems

District wide effects	Pre MAR level *	Post MAR level*	MAR impacts
<b>Freshwater Soluble Nitrate level</b>	6.3ppm N/L	3.7ppm N/L.	A decline of 2.6ppm N/L

\*The figures include the effects of on-farm system changes.

The implementation of intervention one, widespread change to farm systems and investment in new technology, and intervention two, a district scale MAR scheme is calculated to achieve a reduction in freshwater to a soluble Nitrate level of 3.7ppm N/L.

It should be noted that it is unclear whether a district scale MAR is feasible. It is undetermined where 17.1m<sup>3</sup> of water will be sourced, nor how the scheme will be funded. It is recognised that the lack of clarity of key pieces of information is problematic for assessing the merits of this intervention.

### Land Use change

The 'Freshwater Nitrate: 2.4mg/L - appendix 1' report evaluated the impact of widespread land use change to forestry. It is recognised that land use change is not simple and will take many forms involving different land use options. However, forestry was chosen for modelling because it has historically been a land use on the Canterbury Plains and is one of the lowest nutrient loss land use options.

Several land use options were considered for analysis, but none were as suitable for modelling as forestry for agronomic reasons. This report does not propose that forestry is a recommended land use change for the Ashburton District.

Table 5 identifies the area of land that would need to be converted to meet the freshwater soluble nitrate levels. The economic impact of the conversions was calculated by determining the value of the forestry land use plus the value of the remaining land uses in the district (arable, dairy, dairy support, and red meat).

Table 5 summarises the impacts at a district level and highlights the total impact of all mitigation measures, farm system changes and land use change, required to meet the freshwater regulations. Refer to 'Freshwater Nitrate: 2.4mg/L - appendix 1' (p14 and p20).

Table 5 The financial and environmental impact of land use change to forestry – refer to 'Freshwater Nitrate: 2.4mg/L - appendix 1'

Land use change	Change to area – hectares (ha)
Arable area - change	-3,522 ha
Dairy area - change	-57,659 ha
Dairy Support area – change	-31,967 ha
Red Meat area - change	-9,877 ha
Forestry area - change	+105,079 ha
<b>Farm Performance area – Ashburton District</b>	
<b>Farm systems change impacts (\$1M)</b>	
Nett farm income	-409
Farm working expense	-143
Earnings before interest and tax (EBIT)	-267
Interest	-3
Tax	-72
Plant replacement	-19
Nett profit	-172



The paper '*Freshwater Nitrate: 2.4mg/L - appendix 1*' identifies that land use change to forestry would occur across 35% (105,079 ha) of the district to achieve the freshwater regulations. This change would impact all types of land use with dairy farming, (a reduction of -57,659 ha), and Dairy Support (-31,967 ha) the most affected.

Collectively, the interventions will result in a decline in all the farm financial performance areas. Nett Farm Income will decline -23% (-\$409M), Farm Working Expenses will decline -11.7% (-\$143M), and EBIT will decline -52.1% (-\$267M). The Tax take from farming will decline -68% (-\$72M) and farm profitability across the whole district will decline -62.2% (-\$172M).

Table 6 shows the effect on freshwater soluble Nitrate levels after land use change to forestry after the implementation of a Managed Aquifer Recharge scheme as well as the on-farm system changes. Refer '*Freshwater Nitrate: 2.4mg/L - appendix 1*' (p 13. Figure 6).

*Table 6 District wide effect on freshwater nitrate levels from land use change along with MAR and changing on-farm systems*

District wide effects	Pre land use change *	Post land use change*	Land Use Change impacts
<b>Freshwater Soluble Nitrate level</b>	3.7ppm N/L	2.4ppm N/L.	A decline of 1.3ppm N/L

\*The figures include the accumulated effects of farm systems change and the use of MAR

The implementation of intervention one, widespread change to farm systems and investment in new technology, and intervention two, a district scale MAR scheme plus intervention three, land use change to forestry is projected to achieve a reduction in freshwater to a soluble Nitrate level of 2.4ppm N/L.

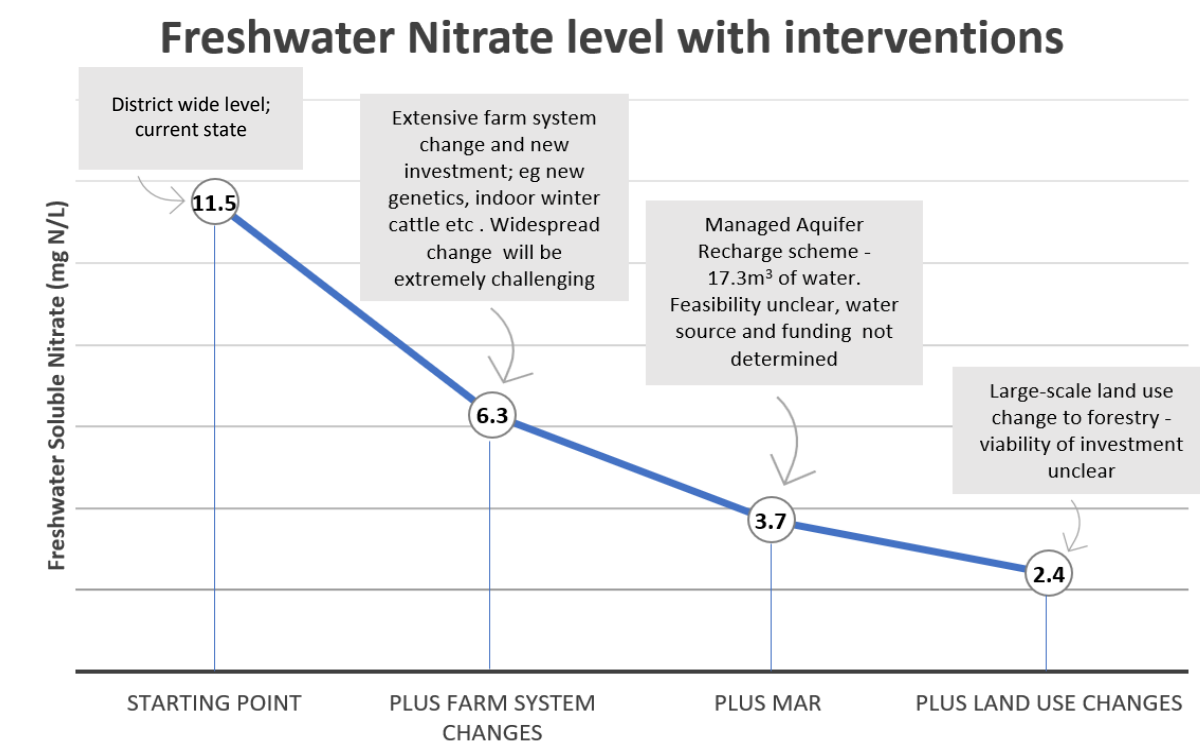
It should be noted that currently for several reasons, forestry land use occupies a small area on the plains of the Ashburton District eg fire risk, windfall, timber quality. Under climate change, which is forecast to become drier and hotter, forestry land use will be less attractive as an investment option. Going forward, this is likely to limit the merits of forestry land use as a nutrient loss intervention unless additional value emerges for forestry as a carbon sink.

### Summary of the effects of interventions on freshwater Nitrate levels

Table 7 summarises the changes to freshwater nitrate levels resulting from each of the three nutrient loss mitigation interventions.



Table 7 Summary chart of the district wide effect on freshwater nitrate levels from all mitigations – changing on-farm systems along with MAR and land use change.



### The Economic Impact

The 'Economic Impact of 2.4mg/L – appendix 2' paper details the economic impact of the NPS-FWM regulations on the Ashburton District. Calculated from the farm level modelling, district scale MAR, and a land use change to forestry, the district's GDP will reduce by 16.3% (\$409M) and employment will decline by 9.1% (loss of 1735 jobs). Furthermore, the district will contribute -\$72M less in taxes to the national economy.

The decline in farm profitability and changed land use will flow through to land values and a projected decline in value of \$7.4B district wide (or \$25,309 per ha). A decline of this scale will have significant implications for the equity position of many farms as well as bank security. Minimal or negative equity will be problematic for farm succession.

Including the direct, indirect, and induced effects, the analysis shows a decline in all areas of the economy except mining (due to the positive effect of gravel extraction to build the MAR scheme). The Agricultural GDP will decline -44.1% with 1475 fewer employees as farms change their systems to forestry, which has a low labour requirement. Changes to forestry will lead to reduced irrigation use affecting the Electricity and Water Services which will decline by -20.7% (-\$27.8M) resulting in -7.8% (18 personnel) fewer employees. Other Services, which includes vehicle and equipment maintenance, is affected through reduced demand for maintenance from the agriculture industry, leading to a 37.0% reduction in GDP and Transport Services will decline by -25.9% (-\$13.2M) as fewer livestock are farmed and volumes of farm output decline.

## Discussion

The analysis shows that the district's GDP, employment, and farm productivity and profitability will decline significantly. Given the significance of agriculture to the Ashburton District's economy and the targeted approach of the regulations, it is unsurprising that the impact is large. Reducing farm productivity (intensity) without a corresponding reduction in farm profitability can be challenging unless there are viable high value land use alternatives. There currently exists very few high value alternative options for land use in the Ashburton District. This may change under climate change and new options for land use should be explored. Further research in this area is recommended.

To achieve the nutrient reductions as per the regulations, all farms will need to undergo a comprehensive change to their farm systems. This will involve a significant change to how these farms operate, significant changes to the operating cost structures, and significant changes to their capital investment programmes. Some of this expenditure, such as wintering all cattle indoors, will move New Zealand agriculture away from all-natural farm systems for which New Zealand is well recognised which may have market implications. An aging agricultural workforce will be further challenged by the need to adopt a wide range of mitigation technologies.

Supplementing ground water through a district-scale MAR is untested and may not be feasible. It is unclear where the water will come from for such an exercise, and it is unclear who will fund it.

Large-scale plantation forestry will employ fewer staff which will impact rural communities and affect student numbers in rural schools. Climate change will bring increased droughts and fire risk making forestry an increasingly riskier option.

Achieving the freshwater regulations will be extremely challenging and as highlighted by the papers '*Freshwater Nitrate: 2.4mg/L - appendix 1*' and '*Economic Impact of 2.4mg/L – appendix 2*', all three areas of intervention must succeed to achieve the requirements of NPS-FWM. The underperformance of just one of the interventions will put the freshwater Nitrate level of 2.4mg N/L out of reach.

The on-farm mitigations will be very difficult to implement, and they will reduce the viability of the remaining businesses unless there is new technology or viable alternative land uses. MAR may not be feasible and forestry, while it is possible, may be unlikely and will have a significant negative impact on the social cohesion of the Ashburton District community.

The timeframe for achieving the freshwater regulations is critical. A shorter timeframe is likely to exacerbate the downside of changes, whereas a longer timeframe will enable business practices, science, and communities to adjust to the regulations. A longer timeframe will enable a more cohesive transition to alternative land uses for all.

The purpose of the freshwater regulations is to establish good environmental outcomes, of which all in the Ashburton District would agree is the right thing to do. The risk is that, in the pursuit of this outcome the financial, social, and cultural domains are lost sight of.

## Summary

The implications of achieving a freshwater soluble Nitrate level of 2.4mg N/L, are not well understood at a farm level nor are the effects on a district's economy. The Ashburton District Council commissioned the '**Freshwater Nitrate – 2.4mg and Economic Impact for Ashburton District**' report to understand the effects of achieving this aspect of the freshwater regulations more fully.

The research approach in this report utilises several assumptions that help quantify impact figures and identify the scale of the challenge, and the issues that exist for achieving a freshwater Nitrate level of 2.4mg/L.

By analysing the effects of on-farm nutrient loss mitigations, coupled with ground water supplementation, and land use change to forestry, a picture of the potential impact on the Ashburton District has emerged.

The mitigation interventions will lead to a significant decline in farm performance which flows through to a greatly reduced district GDP and over 1700 job losses. At a farm level, all the key performance metrics show a negative shift, and the viability of many businesses will come under scrutiny.

The purpose of the freshwater regulations is to establish good environmental outcomes and all people in the district want a healthy and prosperous future. The challenge is how the community gets there and what does a good future look like. It will take a unified approach with all community, iwi, business, and government, working together with good practices, science, and innovation to realise that future.

A future that is informed by research and supported by central government working together with the community to achieve positive environmental, financial, social, and cultural outcomes for all the community.

## Where to next?

Tensions are emerging between achieving the freshwater regulations and maintaining the standard of living enjoyed throughout the district. Achieving good environmental outcomes are important, so are strong businesses and thriving communities. The real challenge is achieving good outcomes for the environment, businesses, and the community.

To move forward, empowering agriculture to deliver on the four domains is vital (environment, financial, social, and cultural) but it will not happen by chance. Collaboration across the district is key. By harnessing leading science and smart innovative solutions that are implemented by knowledgeable and skilled farmers, the Ashburton District will be able to seize opportunities and make them happen. A structured and joined-up approach will enable this by engaging farmers, scientists, experts, regulators, the government, and community stakeholders who will learn from each other and develop down-to-earth solutions.

Through a structured community collaboration, smart people will wrestle with and resolve the challenges facing the district through innovative agriculture. Like a district wide living laboratory, farmers, scientists, and industry will identify and act on opportunities and front foot issues such as land use change, climate change, greenhouse gasses, new crops, and value chains.

This will create place where practical solutions are developed based on sound knowledge, tested, and implemented on-farm, and where innovation and technology enable agriculture to support a healthy environment and where its people, its businesses, and its economy are resilient.

## Recommendations

There are two recommendations from this report:

1. This report was commissioned by the Ashburton District Council to understand the potential impact of the NPS - FWM at a farm level and the flow on effects to the Ashburton District's economy. This report will help the Council understand the effects of achieving the freshwater nitrate requirements of the NPS - FWM.

**Recommendation: That the Ashburton District Council receive the report.**

2. The report highlights the economic impact of achieving a freshwater nitrate level of 2.4mg per litre. The findings of this report, in principle, can be applied to other territorial Authorities to help them understand the emerging challenges and potential opportunities of the NPS - FWM.

Co - ordinating with other territorial authorities will enable more effective engagement with central government to achieve better outcomes both environmentally and economically. This will be achieved through an aligned voice, a deeper and more consistent understanding of the issues and opportunities, alignment of resources, and greater reach and influence for positive change.

**Recommendation: That the report be referred to the Canterbury Mayoral Forum and other relevant stakeholders (both political and industry organisations) for consideration and comment.**

# Appendix 1

# **Economic Impacts of Achieving 2.4ppm N in Ashburton District Surface Water**

**Final (version 2.3)**



**8 August 2021**

**Prepared by Macfarlane Rural Business Ltd**

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## 1. Glossary

ADC	Ashburton District Council
MAR	Managed Aquifer Recharge
PC2	Plan Change 2 to the LWRP
LWRP	Land and Water Regional Plan
Start Point	Proxy water quality and farm system position that could have been implemented by the community under ECan's LWRP to achieve a catchment water quality target of 6.9ppm.
Forecast	The proposed catchment model to achieve the 2.4ppm N in ground and surface water under the National Environmental Standards 2020.
GMP	Good Management Practice
Horticulture	Representative term for high value perennial horticultural and viticulture crops
AM1	Advanced Mitigation Level 1 (practices from PC2 catchment modelling)
AM2	Advanced Mitigation Level 2 (practices from PC2 catchment modelling)
AM3	Advanced Mitigation Level 3 (practices from PC2 catchment modelling)
DCD	Nitrification Inhibitor
Farmax	Bio-physical farm modelling software
VL	Very Light Soil (PAW= 60mm water per 600mm soil depth)
L	Light Soil (PAW = 81mm water per 600mm soil depth)
MH	Medium Heavy Soil (PAW = 110mm water per 600mm soil depth)
DPD	Deep Poorly Drained Soil (PAW = 105mm water per 600mm soil depth)
PDL	Poorly Drained Light Soil (PAW = 92mm water per 600mm soil depth)
IC	In Calf
LUC	Land Use Change
N	Nitrogen

## 2. Introduction

This report has been prepared for ADC to examine the economic impact of achieving a freshwater Nitrogen level of 2.4ppm to the Ashburton District.

This report “version 2.3” considers the community impacts for land use change required to meet the 2.4ppm Nitrogen standards. The primary land use change considered is forestry in this report.

The primary intention of this analysis is to think laterally and try and implement farm system and management changes required while preserving some profit on farm with the current farm systems.

When identifying land use change as a mitigation tool, forestry was chosen to quantify environmental, economic and community impacts. It is recognised that there are alternative land use options other than just forestry, however, preliminary investigations into regional viability indicated implementation of these options would likely be nominal due to poor previous performance, lack of processing and handling infrastructure and/or constrained industry/market growth at a time that other areas of New Zealand will also be considering them as viable options. Therefore, in this report forestry was considered a credible land use change scenario to consider.

This report has been a collaborative effort by the following contributing authors:

- Jamie Gordon (livestock systems)
- Trevor Gee (dairy systems)
- Anton Nicholls (arable systems and agronomy)
- Reuben Edkins (nutrient management)
- Nicole Mesman (nutrient management)
- Mark Everest (livestock systems, project supervisor)

This report and prefacing analysis have been undertaken without a hydrology model. Hydrological modelling was outside of the report scope. The limitation of this approach is that without a robust hydrology model overlaid by land use data, we are unable to ascertain which parts of the catchment could be focused on (with respect to water quality) to get the best water quality results while preserving community prosperity.

Without this hydrology, we have assumed that all farms in the catchments would need to observe the same production and financial reductions. It is therefore possible that we are at risk of overstating or understating the regional economic impacts of achieving the 2.4ppm water quality policy objectives.

If you have any questions, please contact the writer.

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### 3. Summary

While it is technically possible to change the farming landscape in Ashburton (291,000ha farmed) to give effect to 2.4ppm N in surface water, the actions we take to achieve the target will have a material effect on the style of farming and the physical landscape.

Ashburton Districts farming community could expect to see:

- Significant and widespread changes to farming practices, particularly housed cattle.
- An increase in the forestry area by 102,691 ha (35% of the catchment)
- Using 17.1 m<sup>3</sup>/sec alpine river water for additional Managed Aquifer Recharge.

The scenario modelled hinges on the above three items all being achieved. Without one of them, the chances of achieving the desired 2.4ppm N in surface water is unlikely as farm management cannot achieve N losses low enough.

Nett farm revenue will decline significantly under the modelled scenario and farm working expenses will also decline, but at a lower rate leading to a reduction in regional farm profit of at least \$173m p/a (\$592/ha).

Reduced business profitability ultimately ends up resulting in de-valuation of the business assets. In this instance the main asset is land. We could expect to see the erosion of \$25,309/ha in land value (\$7.4 bn for whole catchment).

The reduced business profitability on farm and land use change will have significant downstream consequences for the surrounding industry. The biggest changes likely are:

- 3,522ha less arable land available for seed multiplication and vegetable production.
- 85,000,000kg less milk solids produced.
- 185,000 head less cattle killed annually.

Attempting to meet a water quality target of 2.4ppm N would be extremely financially, physically and psychologically challenging for most Ashburton farmers and could have material sociological impacts on the wider community.

## 4. Methodology

### 4.1. Farm System and Nutrient Loss Modelling

#### 4.1.1. Start Point

The initial start point for farm systems and catchment water quality was based on the Hinds/PC2 catchment feasibility undertaken by MRB for ECan in 2013. The farm models prepared for the 2013 project were intended to reflect the catchment as a whole rather than individual farms at the time. The same methodology has been applied to this project for ADC in the interest of being consistent.

From GMP based files, the mitigation levels were applied until one of the following was achieved:

1. 20kgN/ha/year loss was achieved
2. 36% reduction in N loss relative to GMP N loss was achieved
3. Farm business was unprofitable (no profit)

The resulting farms and management regimes that were used to represent the Start Point were:

- Arable 1: AM1
- Arable 2: AM3
- Arable 3: AM2
- Arable 4: GMP
- Dairy 1: AM2
- Dairy 2: AM2
- Dairy Support 1: AM1
- Dairy Support 2: AM2
- Red Meat 1: GMP
- Red Meat 2: AM2

Once the farm system was established, the nutrient budget models were updated to include:

- nitrification inhibitors where applicable
- pasture blocks containing 20% plantain
- centre pivot (high efficient) irrigation on all blocks
- deficit irrigation management to take advantage of spring and autumn rains

The cash budgets were then updated to reflect 2021 market conditions and pricing. The product and input pricing we have used is a professional opinion based on historical pricing balanced for forecast pricing given current long term market indicators.

#### 4.1.2. Forecast

To reflect the likely change in farm systems required to achieve the national water quality target of 2.4ppm N in surface water, we developed four representative farms for Dairy, Dairy Support, Arable and Red Meat (sheep, beef and deer).

Due to the limited scope, a list of known tools to improve nitrogen efficiency was collated to implement in the systems and the suite of tools was implemented to make a best one-attempt at minimising N losses from farm systems. See Appendix 17.

The feasibility of the farm systems was ascertained by modelling the proposed farms in Farmax, followed by Overseer and finally a cash budget prepared.

The results of the N loss reductions were collated.

Where the improved Forecast farm systems did not enable the catchment to achieve the 2.4ppm N, MAR was added or increased in the catchment to a maximum of 0.055lps/ha (approximately 40% of annual recharge for the catchment)

Once MAR was fully utilised, forestry was added on the lightest soils until the target catchment concentration of 2.4ppm N were achieved. To make space for forestry the enterprises on the lightest soils were displaced at proportional rates.

We did not include a reversion of land use to dryland sheep, cattle and cropping as preliminary assessments indicated this would result in a higher concentration of N in drainage than irrigated land use.

#### **4.1.3. Debt on Land**

For this analysis we have not assumed any debt on any business. Currently, in Canterbury we are observing debt:asset ratios of approximately 60% in dairy, 30% in arable and 25% in red meat or dairy support.

Typically bank debt must be repaid in 25 years, with the low forecast profitability of the forecast farm systems, debt levels will need to reduce to almost zero in order for owners to get a return on capital that would make farming worth while.

### **4.2. Catchment Modelling**

The “Start Point” was assumed to be the current groundwater quality targets as set under the LWRP.

While the Forks and Rakaia catchments do not currently have reduction targets as Hinds does in PC2, it was assumed that the Hinds target of 6.9ppm nitrogen would apply to the Forks and Rakaia catchments.

#### **4.2.1. Land Use**

Looking at only the land between the lower foothills (flat intensive) and the east coast of the Canterbury Plains between the Rakaia and Rangitata Rivers, the land use data for three catchments was attained from Asure Quality:

1. Hinds (Rangitata River to Ashburton South Branch)
2. Forks (between the Ashburton River North and South Branches)
3. Rakaia (Ashburton River North Branch to Rakaia River)

The land use data was then corrected to balance dairy and dairy support grazing numbers to represent 22.5% replacement grazing.

Corrected land use data was then overlaid with Irrigation information from ECan’s GIS portal, and soil texture information from the Landcare database and ECan GIS databases to calculate land use across the catchments.

#### **4.2.2. Soil Type and Climate Scaling**

- Climate: One representative location was defined as the central location for all climate modelling purposes, located at Latitude: -43.799291; Longitude: 171.641346.
- Soils: All farms were only modelled using one soil type in Overseer. The relativity coefficients from catchment modelling by Scott (2013) prepared in the PC2 modelling were then used to adjust N loss and drainage for soil type. This then gave a matrix of drainage and N losses for farm systems by soil type.

#### **4.2.3. Catchment Water Quality**

Nitrogen losses and drainage volumes from the overseer files were then applied to the relevant land use data (and MAR added if necessary) to calculate the catchment drainage concentration, to use as a proxy for N concentration in rivers.

## 5. Results

### 5.1. N Loss and Drainage by Farm System

Note below a summary of the N loss and drainage per hectare of the modelled representative farm systems used in the comparison report.

Farm	ha	N loss/ha	Drainage	N ppm
Arable 1	320	23	258	8.8
Arable 2	320	28	246	11.3
Arable 3	320	24	246	9.8
Arable 4	320	19	176	10.3
Dairy 2	220	36	248	14.6
Dairy 2	220	36	248	14.7
Dairy Support 1	270	44	293	15.0
Dairy Support 2	270	27	214	12.5
Red Meat 1	350	13	168	7.6
Red Meat 2	375	18	189	9.3
Viticulture	22	5	258	2.1
Forestry	270	2	175	0.0
Arable 5	320	16	248	6.5
Dairy 4	220	12	226	5.2
Dairy Support 4	270	27	249	9.9
Red Meat 3	360	18	197	8.3

Figure 1: comparison of farm system on environment impacts

### 5.2. Likely Water Quality under LWRP ("Start Point")

Feasibility work for PC2 MAR (Scott, 2013) modelled scenarios of using up to 5m<sup>3</sup>/sec alpine water to dilute the nutrient concentrations in the lowland drains and streams in the Hinds catchment.

The crude hydrology modelling suggests that for the existing balance of farm systems to remain in all three main catchments assessed in this report, MAR would be required to achieve shallow groundwater and surface water nitrogen concentrations of 6.9ppm.

To achieve the 6.9ppm, the following MAR flow rates would be required by catchment:

	Hinds	Forks	Rakaia
Catchment Total Area	137,446	29,349	145,213
MAR lps/catchment	7,500	1,450	7,100
MAR lps/hectare	0.055	0.049	0.049
Catchment N Load	3961	773	3968
Catchment ppm N without MAF	11.8	11.5	11.4
Catchment ppm with MAR	6.9	6.9	6.9

Figure 2: Possible water quality outcomes under "Start Point" scenario

At the quoted MAR rates above, approximately 40% of the ground and surface water recharge would come from MAR. A hydrologist should be engaged to assess whether this is possible, let alone any further increases beyond the nominated rates in this report.

For the purposes of this modelling, we have assumed that no further MAR is possible or available and any further improvements must come from farm system change and/or land use change.

### 5.3. Farm Model Profit Summary

#### 5.3.1. Start Point Models

	"Start Point" Farm Models											
	Arable 1	Arable 2	Arable 3	Arable 4	Dairy 1	Dairy 2	D Support 1	D Support 2	Red Meat 1	Red Meat 2	Forestry	Viticulture
Nett Farm Income	6,642	5,255	3,824	2,213	11,591	10,372	3,860	4,073	1,780	2,317	2,126	16,716
Farm Working Expenses	5,070	3,518	2,399	1,676	8,253	7,217	2,565	2,349	1,232	1,757	1,751	12,738
Earnings Before Interest and Tax	1,572	1,738	1,425	537	3,338	3,155	1,296	1,724	548	560	376	3,978
Interest (on Overdraft)	106	74	50	35	173	152	54	49	26	37	37	267
Tax	238	266	241	103	691	641	189	340	114	94	93	409
Plant Replacement/Depreciation	613	677	490	113	715	708	557	461	115	180	0	2,136
Net Profit	615	721	645	286	1,759	1,655	496	874	292	249	246	1,165

Figure 3: Farm Profit Summary "Start Point"

#### 5.3.2. Forecast Models

	"Forecast" Farm Models					
	Forestry	Viticulture	Arable 5	Dairy 4	D Support 4	Red Meat 3
Nett Farm Income	2,126	16,716	5,085	11,451	3,762	3,466
Farm Working Expenses	1,751	12,738	3,998	8,851	3,003	2,748
Earnings Before Interest and Tax	376	3,978	1,086	2,600	759	717
Interest (on Overdraft)	37	267	84	186	63	58
Tax	93	409	0	382	59	61
Plant Replacement/Depreciation	0	2,136	750	1,043	478	439
Net Profit	246	1,165	253	989	159	159

Figure 4: Farm Profit Summary "Forecast"

Note that both the viticulture (horticulture) and forestry models are common between the two scenarios. Viticulture in the "Forecast" balance of farms is used to represent only the viticulture area that is present in the "Start Point" balance of farms.

### 5.4. Water Quality Improvement Without Land Use Change

By modifying the farm systems to house cattle indoors and use every technology available on every farm in the catchment, the balance of farms would have to change, particularly dairy and dairy support.

In the Start Point modelling, for every 1 ha in dairy farms, the catchment requires 0.41 ha of dairy support land to graze replacements and winter dry cows.

If all cattle are housed inside, the relative area of dairy support land to dairy farm land is reduced to 0.27 ha dairy support per 1 ha dairy land.

We have assumed that the farm area reduction in dairy support between Start Point and the Forecast models would revert to the Red Meat 3 farm model (50% irrigated).



Even given the major change in farm system and maintaining the MAR contribution, the N in groundwater would reduce so far as 3.6-3.8 ppm. No catchment would meet the target without land use change, see the summary table below.

		<b>Hinds</b>	<b>Forks</b>	<b>Rakaia</b>
Catchment Total Area		137,446	29,349	145,213
MAR lps/catchment		7,500	1,450	7,100
MAR lps/hectare		0.055	0.049	0.049
Catchment N Load		1962	403	2139
Catchment ppm N without MAR		6.3	6.3	6.4
Catchment ppm with MAR		3.6	3.7	3.8

Figure 5: Possible water quality outcomes under "Forecast" farm systems without LUC

## 5.5.2.4ppm N with "Forecast" farm system and LUC

### 5.5.1. Process

To achieve 2.4ppm N in ground and surface water, land use change will be required, even after significantly modifying farm systems.

When considering the land use change to reduce environmental impact we have followed the following steps in sequential order:

#### 1. Increase MAR water to 0.055lps/ha

The MAR flow rate was initially set to attain an average catchment concentration of 6.9ppm under the "Start Point" catchment modelling.

In order to optimise chances of meeting 2.4ppm N in surface water under the NES 2020, initially the MAR flow rates were brought up to the arbitrary 0.055lps/ha cap rate. The 0.055lps/ha represents approximately 40% of catchment water recharge.

It is expected that with improvements in water use efficiency and further redundancy of irrigation plant due to the planting of forestry that there would be some additional surplus water available.

Increasing the MAR flow rates requires a total of 17.1 m<sup>3</sup>.sec supplied to:

- Hinds: 7.5 m<sup>3</sup>.sec
- Forks: 1.6 m<sup>3</sup>.sec
- Rakaia: 8.0 m<sup>3</sup>.sec

This part of the proposal is highly reliant on water being made available and not being surrendered back to the source.

#### 2. Increase forestry area.

As forestry has the lowest emitting land use (2kgN/ha/year compared to circa 10kgN/ha/year for the weighted average for farm systems), it therefore was used as the solution to make significant reductions in contributions to N losses beyond farm programme change.

While considering forestry, I expect that it would be possible to cover up to 10% of the catchment with relative ease provided farmers plant some difficult-to-irrigate areas and some wider (3 row) shelter belts.

Increases beyond 10% area will likely require some targeted investment in large scale forests, planted for the purposes of logs.

We have not considered the value of Carbon or Carbon Credits in this assessment as the carbon can only be sold once and does not have a perpetuating cashflow.

While forestry might be planted on a range of soils I have assumed that it would firstly be planted on the lightest soils to preserve the productive areas for future food production.

The resulting forestry area totals is 105,079ha (35% of the total catchment) spread as:

- Hinds 32% (43,983ha)
- Forks 35% (10,272ha)
- Rakaia 35% (50,825ha)

This final step achieved ground and surface water concentrations of 2.4ppm across all three catchments.

## 5.5.2. Results

With the total Ashburton catchment investing in:

- 17.1m3.sec MAR
- 102,691 forestry

The community would be able to achieve a ground and surface water nitrogen concentration of 2.4ppm.

	Hinds	Forks	Rakaia
Catchment Total Area	137,446	29,349	145,213
MAR lps/catchment	7,500	1,600	8,000
MAR lps/hectare	0.055	0.055	0.055
Catchment N Load	1236	258	1341
Catchment ppm N without MAR	4.4	4.5	4.5
Catchment ppm with MAR	2.4	2.4	2.4

Figure 6: water quality outcomes for NES 2020

## 5.6. Economic Impacts of Achieving 2.4ppm

### 5.6.1. Cost of MAR

Based on the Hekeao Hinds Water Enhancement Trust business case (Kerr+Partners, 2020), projected capital expenditure and operating expenditure were estimated to be:

MAR Volume 5 m<sup>3</sup>/sec

Capital expenditure \$6,879,797

Operating expenditure \$400,000 p/a (excluding cost of water consent leases)

It is still undecided in the Hinds catchment how the MAR capital costs will be met and how the operating costs will be met. Given that both the farming and non-farming communities both benefit from MAR, it is likely that the cost will be divided between both the farming and non-farming communities.

Because of the uncertainty of obligation, I have not included the costs of MAR in the farm budgets, rather listed as a separate cost to the community.

Table 7 below provides a breakdown of the estimated cost for utilising 17,1m<sup>3</sup> of water for a district wide MAR project.

MAR Cost		Hinds	Forks	Rakaia	Total
Capital Expenditure (\$)		10,319,696	2,201,535	11,007,675	23,528,906
Operational Expenditure (\$p/a)		600,000	128,000	640,000	1,368,000

Figure 7: Estimated costs of MAR

### 5.6.2. Land Use Summary (hectares)

The table below represents the expected land use between the Starting Point land use (where the water quality outcome achieved should be 6.9ppm N) and the Forecast land use (where the water quality outcome achieved should be 2.4ppm N).

	Starting Point	Forecast	Change
Arable	65,059	61,538	-3,522
Dairy	112,427	54,768	-57,659
Dairy Support	46,704	14,737	-31,967
Red Meat	53,029	43,152	-9,877
Viticulture	9	9	0
Forestry	2,388	105,079	102,691
Other	11,940	12,273	333

Figure 8: land use area (hectares) required to achieve 6.9 or 2.4ppm N

Under the Forecast land use, the total irrigated area is reduced by 61,169ha from approximately 213,000ha to 153,000ha.

Assuming an average application rate of 0.45lps per hectare, this would release 27.5m<sup>3</sup>/sec of flow rate from agricultural consents. Some of this water will come from bores and some will come from surface water schemes. Due to the unknown origin, it is difficult to assess whether this water might be made available for MAR. However, given that river based irrigation schemes account for approximately 50% of the irrigated area in Ashburton, it could be conservatively assumed that a portion of this water could be available for MAR.

**5.6.3. Farm Budget Breakdowns**

	Arable 1		Arable 2		Arable 3		Arable 4	
<b>Land Area</b>								
Area - Total	320		320		320		320	
Area - Effective	300		300		300		300	
<b>Budget Summary</b>	<b>\$ total</b>	<b>\$/ha</b>	<b>\$ total</b>	<b>\$/ha</b>	<b>\$ total</b>	<b>\$/ha</b>	<b>\$ total</b>	<b>\$/ha</b>
<b>Income</b>								
Nett Sheep and Wool	170,140	532	74,117	232	147,386	461	274,177	857
Nett Cattle	0	0	0	0	276,791	865	0	0
Nett Deer and Velvet	0	0	0	0	0	0	0	0
Milk	0	0	0	0	0	0	0	0
Grain, Seed and Horticulture	1,882,400	5,883	1,496,499	4,677	773,700	2,418	408,600	1,277
Other Income	72,974	228	111,143	347	25,960	81	25,522	80
<b>Total Nett Farm Income</b>	<b>2,125,514</b>	<b>6,642</b>	<b>1,681,758</b>	<b>5,255</b>	<b>1,223,836</b>	<b>3,824</b>	<b>708,299</b>	<b>2,213</b>
	0		0		0		0	
<b>Expenses</b>								
Wages	242,484	758	154,440	483	106,421	333	119,218	373
Veterinary and Animal Health	10,965	34	4,210	13	19,522	61	11,370	36
Stockfeed - Grazing	0	0	0	0	0	0	0	0
Stockfeed - Domestic	0	0	0	0	0	0	0	0
Stockfeed - Imported	0	0	0	0	0	0	0	0
Stockfeed - Conservation	17,855	56	35,632	111	31,256	98	26,663	83
Other Stock Expenses	1,500	5	1,000	3	1,000	3	3,750	12
Contracting	239,243	748	35,188	110	10,454	33	15,297	48
Freight	132,224	413	41,250	129	16,391	51	20,309	63
Fertiliser - Product	208,989	653	96,681	302	107,545	336	50,929	159
Fertiliser - Cart and Spread	11,280	35	6,215	19	21,195	66	10,049	31
Seed	220,875	690	47,345	148	53,963	169	27,720	87
Certification and Dressing	36,785	115	117,228	366	26,275	82	34,726	109
Agrichemical - Product	147,965	462	205,729	643	81,443	255	54,942	172
Agrichemical - Application	0	0	780	2	0	0	13,860	43
Repairs and Maintenance	54,300	170	49,300	154	39,588	124	25,300	79
Vehicles - Fuel	69,500	217	56,500	177	43,300	135	40,500	127
Vehicles - Repairs and Maintenance	23,500	73	21,500	67	19,200	60	12,000	38
Electricity	63,400	198	63,400	198	63,400	198	4,000	13
Other Farm Working Expenses	28,635	89	73,405	229	25,696	80	5,055	16
Administration	28,500	89	27,500	86	27,500	86	27,500	86
Standing Charges - Rates	25,920	81	25,920	81	14,000	44	18,432	58
Standing Charges - Insurances	17,970	56	21,788	68	26,985	84	14,413	45
Standing Charges - Other	40,600	127	40,600	127	32,560	102	400	1
<b>Total Farm Working Expenses</b>	<b>1,622,489</b>	<b>5,070</b>	<b>1,125,609</b>	<b>3,518</b>	<b>767,692</b>	<b>2,399</b>	<b>536,432</b>	<b>1,676</b>
	0		0		0		0	
<b>EBIT</b>	<b>503,025</b>	<b>1,572</b>	<b>556,149</b>	<b>1,738</b>	<b>456,144</b>	<b>1,425</b>	<b>171,867</b>	<b>537</b>
	0		0		0		0	
<b>Non-Operting Expenses</b>								
Interest	34,072	106	23,638	74	16,122	50	11,265	35
Tax	76,000	238	85,000	266	77,000	241	33,000	103
Plant Replacement/Depreciation	196,124	613	216,700	677	156,760	490	36,000	113
<b>Total Non-Operating Expenses</b>	<b>306,196</b>	<b>957</b>	<b>325,338</b>	<b>1,017</b>	<b>249,882</b>	<b>781</b>	<b>80,265</b>	<b>251</b>
	0		0		0		0	
<b>Net Profit</b>	<b>196,829</b>	<b>615</b>	<b>230,811</b>	<b>721</b>	<b>206,262</b>	<b>645</b>	<b>91,602</b>	<b>286</b>
<b>Capital</b>								
Plant and Machinery	1,800,000	5,625	1,537,000	4,803	970,000	3,031	360,000	1,125
Land, Irrigation Hardware and Water	14,400,000	45,000	14,400,000	45,000	13,440,000	42,000	9,280,000	29,000
Capital Stock	\$0	0	0	0	0	0	0	0
<b>Total Capital (excl Overdraft)</b>	<b>16,200,000</b>	<b>50,625</b>	<b>15,937,000</b>	<b>49,803</b>	<b>14,410,000</b>	<b>45,031</b>	<b>9,640,000</b>	<b>30,125</b>
<b>Tax-Paid Return on Capital</b>	<b>1.21%</b>		<b>1.45%</b>		<b>1.43%</b>		<b>0.95%</b>	

	Dairy 1		Dairy 2		Dairy Support 1		Dairy Support 2	
<b>Land Area</b>								
Area - Total	220		220		270		270	
Area - Effective	210		210		260		260	
<b>Budget Summary</b>	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha
<b>Income</b>								
Nett Sheep and Wool	0	0	0	0	0	0	0	0
Nett Cattle	114,560	521	108,109	491	765,891	2,837	952,203	3,527
Nett Deer and Velvet	0	0	0	0	0	0	0	0
Milk	2,435,496	11,070	2,167,867	9,854	0	0	0	0
Grain, Seed and Horticulture	0	0	0	0	257,470	954	102,600	380
Other Income	0	0	5,800	26	18,955	70	44,900	166
<b>Total Nett Farm Income</b>	<b>2,550,056</b>	<b>11,591</b>	<b>2,281,776</b>	<b>10,372</b>	<b>1,042,316</b>	<b>3,860</b>	<b>1,099,703</b>	<b>4,073</b>
<b>Expenses</b>								
Wages	309,250	1,406	248,700	1,130	132,700	491	132,700	491
Veterinary and Animal Health	105,801	481	99,153	451	2,000	7	2,000	7
Stockfeed - Grazing	390,186	1,774	359,408	1,634	0	0	0	0
Stockfeed - Domestic	377,890	1,718	230,830	1,049	2,000	7	2,000	7
Stockfeed - Imported	0	0	9,324	42	0	0	0	0
Stockfeed - Conservation	0	0	0	0	2,000	7	40,828	151
Other Stock Expenses	18,840	86	17,640	80	68,150	252	0	0
Contracting	12,600	57	12,600	57	19,700	73	26,340	98
Freight	29,340	133	25,470	116	0	0	13,535	50
Fertiliser - Product	148,071	673	151,191	687	120,960	448	113,283	420
Fertiliser - Cart and Spread	25,891	118	25,941	118	12,301	46	9,955	37
Seed	10,784	49	10,784	49	41,378	153	35,220	130
Certification and Dressing	500	2	500	2	500	2	500	2
Agrichemical - Product	6,725	31	6,725	31	53,328	198	69,174	256
Agrichemical - Application	3,234	15	3,234	15	8,008	30	4,360	16
Repairs and Maintenance	106,345	483	103,258	469	22,000	81	22,891	85
Vehicles - Fuel	23,916	109	24,049	109	18,800	70	18,800	70
Vehicles - Repairs and Maintenance	22,400	102	22,400	102	31,000	115	31,000	115
Electricity	73,180	333	70,780	322	56,740	210	31,819	118
Other Farm Working Expenses	10,540	48	10,360	47	3,500	13	5,975	22
Administration	25,935	118	25,935	118	24,700	91	24,700	91
Standing Charges - Rates	21,780	99	17,160	78	20,412	76	16,281	60
Standing Charges - Insurances	42,564	193	50,660	230	15,424	57	13,424	50
Standing Charges - Other	49,889	227	61,554	280	36,840	136	19,420	72
<b>Total Farm Working Expenses</b>	<b>1,815,660</b>	<b>8,253</b>	<b>1,587,655</b>	<b>7,217</b>	<b>692,441</b>	<b>2,565</b>	<b>634,204</b>	<b>2,349</b>
<b>EBIT</b>	<b>734,396</b>	<b>3,338</b>	<b>694,122</b>	<b>3,155</b>	<b>349,875</b>	<b>1,296</b>	<b>465,499</b>	<b>1,724</b>
<b>Non-Operating Expenses</b>								
Interest	38,129	173	33,341	152	14,541	54	13,318	49
Tax	152,000	691	141,000	641	51,000	189	91,778	340
Plant Replacement/Depreciation	157,240	715	155,790	708	150,400	557	124,400	461
<b>Total Non-Operating Expenses</b>	<b>347,369</b>	<b>1,579</b>	<b>330,131</b>	<b>1,501</b>	<b>215,941</b>	<b>800</b>	<b>229,496</b>	<b>850</b>
<b>Net Profit</b>	<b>387,027</b>	<b>1,759</b>	<b>363,991</b>	<b>1,655</b>	<b>133,934</b>	<b>496</b>	<b>236,002</b>	<b>874</b>
<b>Capital</b>								
Plant and Machinery	721,000	3,277	701,000	3,186	725,000	2,685	725,000	2,685
Land, Irrigation Hardware and Water	12,100,000	55,000	12,100,000	55,000	11,340,000	42,000	9,045,000	33,500
Capital Stock	1,605,250	7,297	1,500,000	6,818	0	0	0	0
<b>Total Capital (excl Overdraft)</b>	<b>14,426,250</b>	<b>65,574</b>	<b>14,301,000</b>	<b>65,005</b>	<b>12,065,000</b>	<b>44,685</b>	<b>9,770,000</b>	<b>36,185</b>
<b>Tax-Paid Return on Capital</b>	<b>2.68%</b>		<b>2.55%</b>		<b>1.11%</b>		<b>2.42%</b>	

	Red Meat 1		Red Meat 2		Forestry		Viticulture	
<b>Land Area</b>								
Area - Total	350		350		270		22	
Area - Effective	340		340		260		20	
<b>Budget Summary</b>	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha
<b>Income</b>								
Nett Sheep and Wool	156,337	447	107,689	308	0	0	0	0
Nett Cattle	394,420	1,127	518,120	1,480	0	0	0	0
Nett Deer and Velvet	46,960	134	61,478	176	0	0	0	0
Milk	0	0	0	0	0	0	0	0
Grain, Seed and Horticulture	17,100	49	60,040	172	0	0	367,750	16,716
Other Income	8,026	23	63,676	182	574,089	2,126	0	0
<b>Total Nett Farm Income</b>	<b>622,844</b>	<b>1,780</b>	<b>811,003</b>	<b>2,317</b>	<b>574,089</b>	<b>2,126</b>	<b>367,750</b>	<b>16,716</b>
<b>Expenses</b>								
Wages	140,660	402	138,307	395	0	0	162,680	7,395
Veterinary and Animal Health	19,970	57	38,276	109	0	0	0	0
Stockfeed - Grazing	0	0	0	0	0	0	0	0
Stockfeed - Domestic	28,100	80	17,750	51	0	0	0	0
Stockfeed - Imported	0	0	0	0	0	0	0	0
Stockfeed - Conservation	46,800	134	36,816	105	0	0	0	0
Other Stock Expenses	3,951	11	3,000	9	1,500	6	0	0
Contracting	3,100	9	8,151	23	291,974	1,081	14,600	664
Freight	8,022	23	17,640	50	102,143	378	3,350	152
Fertiliser - Product	44,027	126	123,845	354	0	0	8,370	380
Fertiliser - Cart and Spread	9,702	28	13,587	39	0	0	0	0
Seed	5,370	15	22,097	63	2,835	11	0	0
Certification and Dressing	500	1	500	1	0	0	0	0
Agrichemical - Product	11,600	33	33,293	95	2,682	10	9,300	423
Agrichemical - Application	3,080	9	8,360	24	2,088	8	12,000	545
Repairs and Maintenance	20,000	57	25,000	71	0	0	18,000	818
Vehicles - Fuel	12,200	35	12,200	35	0	0	5,540	252
Vehicles - Repairs and Maintenance	12,000	34	12,000	34	0	0	2,140	97
Electricity	5,260	15	27,009	77	0	0	4,600	209
Other Farm Working Expenses	3,500	10	3,500	10	0	0	5,000	227
Administration	24,700	71	24,700	71	52,100	193	19,000	864
Standing Charges - Rates	15,750	45	18,963	54	4,860	18	3,240	147
Standing Charges - Insurances	10,924	31	15,424	44	12,000	44	9,230	420
Standing Charges - Other	2,000	6	14,570	42	500	2	3,180	145
<b>Total Farm Working Expenses</b>	<b>431,215</b>	<b>1,232</b>	<b>614,987</b>	<b>1,757</b>	<b>472,681</b>	<b>1,751</b>	<b>280,230</b>	<b>12,738</b>
<b>EBIT</b>	<b>191,629</b>	<b>548</b>	<b>196,016</b>	<b>560</b>	<b>101,408</b>	<b>376</b>	<b>87,520</b>	<b>3,978</b>
<b>Non-Operating Expenses</b>								
Interest	9,056	26	12,915	37	9,926	37	5,885	267
Tax	40,000	114	33,000	94	25,000	93	9,000	409
Plant Replacement/Depreciation	40,400	115	63,000	180	0	0	47,000	2,136
<b>Total Non-Operating Expenses</b>	<b>89,456</b>	<b>256</b>	<b>108,915</b>	<b>311</b>	<b>34,926</b>	<b>129</b>	<b>61,885</b>	<b>2,813</b>
<b>Net Profit</b>	<b>102,174</b>	<b>292</b>	<b>87,101</b>	<b>249</b>	<b>66,482</b>	<b>246</b>	<b>25,635</b>	<b>1,165</b>
<b>Capital</b>								
Plant and Machinery	355,000	1,014	355,000	1,014	0	0	165,000	7,500
Land, Irrigation Hardware and Water	8,750,000	25,000	10,535,000	30,100	6,750,000	25,000	1,940,000	88,182
Capital Stock	195,500	559	0	0	0	0	0	0
<b>Total Capital (excl Overdraft)</b>	<b>9,300,500</b>	<b>26,573</b>	<b>10,890,000</b>	<b>31,114</b>	<b>6,750,000</b>	<b>25,000</b>	<b>2,105,000</b>	<b>95,682</b>
<b>Tax-Paid Return on Capital</b>	<b>1.10%</b>		<b>0.80%</b>		<b>0.98%</b>		<b>1.22%</b>	

	Arable 5		Dairy 4		Dairy Support 4		Red Meat 3	
<b>Land Area</b>								
Area - Total	320		220		270		360	
Area - Effective	300		210		260		350	
<b>Budget Summary</b>	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha	\$ total	\$/ha
<b>Income</b>								
Nett Sheep and Wool	212,540	664	0	0	0	0	179,671	499
Nett Cattle	0	0	92,595	421	452,215	1,675	884,849	2,458
Nett Deer and Velvet	0	0	0	0	0	0	179,577	499
Milk	0	0	2,420,902	11,004	0	0	0	0
Grain, Seed and Horticulture	1,369,500	4,280	0	0	536,580	1,987	0	0
Other Income	45,000	141	5,800	26	26,880	100	3,500	10
<b>Total Nett Farm Income</b>	<b>1,627,040</b>	<b>5,085</b>	<b>2,519,297</b>	<b>11,451</b>	<b>1,015,675</b>	<b>3,762</b>	<b>1,247,598</b>	<b>3,466</b>
	0		0		0		0	
<b>Expenses</b>								
Wages	251,938	787	248,700	1,130	127,000	470	167,089	464
Veterinary and Animal Health	10,500	33	146,896	668	9,105	34	59,143	164
Stockfeed - Grazing	0	0	102,938	468	0	0	0	0
Stockfeed - Domestic	0	0	605,778	2,754	0	0	26,644	74
Stockfeed - Imported	0	0	0	0	0	0	0	0
Stockfeed - Conservation	15,000	47	190,000	864	102,760	381	151,020	420
Other Stock Expenses	1,500	5	14,400	65	0	0	4,959	14
Contracting	51,078	160	4,760	22	43,700	162	52,125	145
Freight	46,652	146	3,308	15	19,620	73	38,128	106
Fertiliser - Product	120,899	378	141,275	642	80,845	299	128,191	356
Fertiliser - Cart and Spread	42,057	131	23,524	107	18,176	67	21,128	59
Seed	117,975	369	8,568	39	83,764	310	48,100	134
Certification and Dressing	50,699	158	500	2	500	2	500	1
Agrichemical - Product	220,474	689	6,862	31	56,354	209	28,625	80
Agrichemical - Application	0	0	2,992	14	30,822	114	14,300	40
Repairs and Maintenance	54,300	170	126,200	574	44,500	165	46,750	130
Vehicles - Fuel	81,500	255	42,000	191	33,973	126	40,487	112
Vehicles - Repairs and Maintenance	26,000	81	46,400	211	20,500	76	28,000	78
Electricity	63,400	198	67,260	306	58,480	217	41,650	116
Other Farm Working Expenses	25,410	79	10,360	47	3,500	13	3,500	10
Administration	32,740	102	25,935	118	24,900	92	27,500	76
Standing Charges - Rates	6,912	22	17,160	78	7,020	26	9,450	26
Standing Charges - Insurances	19,730	62	62,680	285	21,346	79	28,068	78
Standing Charges - Other	40,600	127	48,756	222	23,950	89	23,950	67
<b>Total Farm Working Expenses</b>	<b>1,279,363</b>	<b>3,998</b>	<b>1,947,251</b>	<b>8,851</b>	<b>810,815</b>	<b>3,003</b>	<b>989,306</b>	<b>2,748</b>
	0		0		0		0	
<b>EBIT</b>	<b>347,677</b>	<b>1,086</b>	<b>572,046</b>	<b>2,600</b>	<b>204,860</b>	<b>759</b>	<b>258,292</b>	<b>717</b>
	0		0		0		0	
<b>Non-Operating Expenses</b>								
Interest	26,867	84	40,892	186	17,027	63	20,775	58
Tax	0	0	84,000	382	16,000	59	22,000	61
Plant Replacement/Depreciation	240,000	750	229,500	1,043	129,000	478	158,137	439
<b>Total Non-Operating Expenses</b>	<b>266,867</b>	<b>834</b>	<b>354,392</b>	<b>1,611</b>	<b>162,027</b>	<b>600</b>	<b>200,913</b>	<b>558</b>
	0		0		0		0	
<b>Net Profit</b>	<b>80,810</b>	<b>253</b>	<b>217,653</b>	<b>989</b>	<b>42,833</b>	<b>159</b>	<b>57,379</b>	<b>159</b>
<b>Capital</b>								
Plant and Machinery	1,830,000	5,719	3,057,000	13,895	2,122,000	7,859	3,270,000	9,083
Land, Irrigation Hardware and Water	4,577,323	14,304	4,074,674	18,521	1,151,169	4,264	2,774,957	7,708
Capital Stock	0	0	1,194,750	5,431	0	0	0	0
<b>Total Capital (excl Overdraft)</b>	<b>6,407,323</b>	<b>20,023</b>	<b>8,326,424</b>	<b>37,847</b>	<b>3,273,169</b>	<b>12,123</b>	<b>6,044,957</b>	<b>16,792</b>
<b>Tax-Paid Return on Capital</b>	<b>1.26%</b>		<b>2.61%</b>		<b>1.31%</b>		<b>0.95%</b>	

#### 5.6.4. Assessing Return on Capital and Land Value

The “Starting Point” return on capital has been ascertained using arbitrary land values, considered by MRB to represent medium-term value with no irrigation scheme debt (MRB are not registered valuers and value noted should be considered an opinion, not a valuation).

The Starting Point land values were set as land and buildings (including dairy sheds, excluding barns).

Dairy 1	\$55,000
Dairy 2	\$55,000
Dairy Support 1	\$42,000
Dairy Support 2	\$33,500
Arable 1	\$45,000
Arable 2	\$45,000
Arable 3	\$42,000
Arable 4	\$29,000
Red Meat 1	\$25,000
Red Meat 2	\$30,100
Viticulture (land + establishment)	\$97,000
Forestry	\$25,000
Other	\$43,196

Figure 9: Starting Point nominal land values

To calculate the underlying land values in the Forecast models, the return on capital that was enjoyed by the farm system in the Starting Point models was applied to the tax paid EBIT to ascertain total asset value. The improvements (for example barns) that were added to run the Forecast farm system were deducted from the total capital, as were stock and plant, to define the residual land asset value.

Formula:

$$(\text{Tax Paid Profit} / \text{Starting Point ROC}) - \text{new improvements, stock and plant} = \text{land asset value}$$



**5.6.5. Consolidated Catchment Budget Comparison**

<b>CATCHMENT BUDGET</b>	<b>Starting Point (\$M)</b>	<b>Forecast (\$M)</b>	<b>Variance (\$M)</b>
<b>Income</b>			
Nett Sheep and Wool	44.3	62.4	<b>18.1</b>
Nett Cattle	302.1	153.8	<b>-148.3</b>
Nett Deer and Velvet	8.2	21.5	<b>13.3</b>
Milk	1,129.8	602.7	<b>-527.2</b>
Grain, Seed and Horticulture	263.8	292.8	<b>29.0</b>
Other Income	31.2	235.4	<b>204.2</b>
<b>Total Nett Farm Income</b>	<b>1,779.4</b>	<b>1,368.6</b>	<b>-410.8</b>
<b>Expenses</b>			
Wages	203.0	137.4	<b>-65.6</b>
Veterinary and Animal Health	58.6	46.2	<b>-12.4</b>
Stockfeed - Grazing	186.2	25.6	<b>-160.6</b>
Stockfeed - Domestic	133.8	154.0	<b>20.2</b>
Stockfeed - Imported	4.0	0.0	<b>-4.0</b>
Stockfeed - Conservation	16.3	73.9	<b>57.6</b>
Other Stock Expenses	16.4	5.1	<b>-11.3</b>
Contracting	19.8	133.3	<b>113.5</b>
Freight	23.6	55.2	<b>31.6</b>
Fertiliser - Product	131.8	78.2	<b>-53.6</b>
Fertiliser - Cart and Spread	19.9	17.5	<b>-2.4</b>
Seed	25.9	36.3	<b>10.3</b>
Certification and Dressing	13.5	10.0	<b>-3.6</b>
Agrichemical - Product	44.8	51.7	<b>6.9</b>
Agrichemical - Application	3.8	5.0	<b>1.2</b>
Repairs and Maintenance	69.2	49.9	<b>-19.3</b>
Vehicles - Fuel	27.5	32.8	<b>5.4</b>
Vehicles - Repairs and Maintenance	22.7	21.0	<b>-1.7</b>
Electricity	59.4	37.1	<b>-22.3</b>
Other Farm Working Expenses	15.8	8.1	<b>-7.7</b>
Administration	27.3	37.7	<b>10.4</b>
Standing Charges - Rates	19.0	9.0	<b>-10.0</b>
Standing Charges - Insurances	34.8	28.6	<b>-6.2</b>
Standing Charges - Other	44.0	24.3	<b>-19.7</b>
<b>Total Farm Working Expenses</b>	<b>1,221.1</b>	<b>1,077.7</b>	<b>-143.4</b>
<b>EBIT</b>	<b>558.3</b>	<b>290.9</b>	<b>-267.4</b>
<b>Non-Operting Expenses</b>			
Interest	25.6	22.6	<b>-3.0</b>
Tax	106.9	34.2	<b>-72.7</b>
Plant Replacement/Depreciation	148.4	129.3	<b>-19.1</b>
<b>Total Non-Operating Expenses</b>	<b>280.9</b>	<b>186.1</b>	<b>-94.8</b>
<b>Net Profit</b>	<b>277.4</b>	<b>104.8</b>	<b>-172.6</b>
<b>Capital</b>			
Plant and Machinery	788.1	1,620.8	<b>832.7</b>
Land, Irrigation Hardware and Water	12,297.1	4,917.8	<b>-7,379.2</b>
Capital Stock	789.6	297.4	<b>-492.1</b>
<b>Total Capital (excl Overdraft)</b>	<b>13,874.8</b>	<b>6,836.1</b>	<b>-7,038.7</b>

### 5.6.6. Consolidated Catchment Budget Comparison by Enterprise

Catchment Based Enterprise Budget Variance Summary									
Budget Summary	Arable (\$M)			Dairy (\$M)			Dairy Support (\$M)		
	Start Point	Forecast	Variance	Start Point	Forecast	Variance	Start Point	Forecast	Variance
Income									
Nett Sheep and Wool	24.4	40.9	16.4	0.0	0.0	0.0	0.0	0.0	0.0
Nett Cattle	29.9	0.0	-29.9	55.8	23.1	-32.7	147.0	24.7	-122.3
Nett Deer and Velvet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Milk	0.0	0.0	0.0	1,129.8	602.7	-527.2	0.0	0.0	0.0
Grain, Seed and Horticulture	225.2	263.4	38.2	0.0	0.0	0.0	32.5	29.3	-3.2
Other Income	12.8	8.7	-4.1	2.5	1.4	-1.0	5.3	1.5	-3.8
Total Nett Farm Income	292.3	312.9	20.6	1,188.1	627.2	-560.9	184.8	55.4	-129.3
Expenses									
Wages	26.8	48.4	21.7	132.1	61.9	-70.2	23.0	6.9	-16.0
Veterinary and Animal Health	2.6	2.0	-0.6	51.2	36.6	-14.6	0.3	0.5	0.2
Stockfeed - Grazing	0.0	0.0	0.0	186.2	25.6	-160.6	0.0	0.0	0.0
Stockfeed - Domestic	0.0	0.0	0.0	130.0	150.8	20.8	0.3	0.0	-0.3
Stockfeed - Imported	0.0	0.0	0.0	4.0	0.0	-4.0	0.0	0.0	0.0
Stockfeed - Conservation	6.6	2.9	-3.7	0.0	47.3	47.3	3.4	5.6	2.2
Other Stock Expenses	0.2	0.3	0.1	9.1	3.6	-5.5	6.5	0.0	-6.5
Contracting	6.0	9.8	3.8	6.4	1.2	-5.3	3.9	2.4	-1.5
Freight	6.3	9.0	2.6	13.3	0.8	-12.5	1.1	1.1	0.0
Fertiliser - Product	21.5	23.2	1.7	77.0	35.2	-41.8	20.3	4.4	-15.9
Fertiliser - Cart and Spread	2.9	8.1	5.2	13.3	5.9	-7.4	1.9	1.0	-1.0
Seed	11.6	22.7	11.1	5.5	2.1	-3.4	6.7	4.6	-2.1
Certification and Dressing	13.1	9.7	-3.3	0.3	0.1	-0.1	0.1	0.0	-0.1
Agrichemical - Product	27.4	42.4	15.0	3.4	1.7	-1.7	10.5	3.1	-7.4
Agrichemical - Application	0.1	0.0	-0.1	1.7	0.7	-0.9	1.1	1.7	0.6
Repairs and Maintenance	8.9	10.4	1.5	53.0	31.4	-21.6	3.9	2.4	-1.4
Vehicles - Fuel	10.1	15.7	5.6	12.3	10.5	-1.8	3.3	1.9	-1.4
Vehicles - Repairs and Maintenance	4.1	5.0	0.9	11.4	11.6	0.1	5.4	1.1	-4.2
Electricity	12.7	12.2	-0.5	36.4	16.7	-19.6	7.9	3.2	-4.7
Other Farm Working Expenses	9.2	4.9	-4.3	5.3	2.6	-2.7	0.8	0.2	-0.6
Administration	5.6	6.3	0.7	13.3	6.5	-6.8	4.3	1.4	-2.9
Standing Charges - Rates	4.0	1.3	-2.6	9.1	4.3	-4.9	3.2	0.4	-2.8
Standing Charges - Insurances	4.9	3.8	-1.1	25.2	15.6	-9.6	2.5	1.2	-1.3
Standing Charges - Other	7.2	7.8	0.6	30.5	12.1	-18.4	5.0	1.3	-3.7
Total Farm Working Expenses	191.9	246.0	54.2	830.1	484.8	-345.3	115.2	44.3	-71.0
EBIT	100.5	66.9	-33.6	358.0	142.4	-215.6	69.5	11.2	-58.3
Non-Operating Expenses									
Interest	4.0	5.2	1.1	17.4	10.2	-7.3	2.4	0.9	-1.5
Tax	16.2	0.0	-16.2	73.0	20.9	-52.0	12.0	0.9	-11.1
Plant Replacement/Depreciation	36.8	46.2	9.4	79.7	57.1	-22.6	24.0	7.0	-17.0
Total Non-Operating Expenses	57.0	51.3	-5.6	170.1	88.2	-81.9	38.4	8.8	-29.6
Net Profit	43.5	15.5	-28.0	187.9	54.2	-133.7	31.1	2.3	-28.8
Capital									
Plant and Machinery	249.0	351.9	103.0	359.9	761.0	401.2	125.4	115.8	-9.6
Land, Irrigation Hardware and Water	2,805.2	880.2	-1,925.0	6,183.5	1,014.4	-5,169.1	1,782.9	62.8	-1,720.1
Capital Stock	0.0	0.0	0.0	775.2	297.4	-477.8	0.0	0.0	0.0
Total Capital (excl Overdraft)	3,054.2	1,232.2	-1,822.0	7,318.6	2,072.8	-5,245.7	1,908.3	178.7	-1,729.7

Catchment Based Enterprise Budget Variance Summary									
Budget Summary	Red Meat (\$M)			Viticulture (\$M)			Forestry (\$M)		
	Start Point	Forecast	Variance	Start Point	Forecast	Variance	Start Point	Forecast	Variance
Income									
Nett Sheep and Wool	19.9	21.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Nett Cattle	69.4	106.1	36.7	0.0	0.0	0.0	0.0	0.0	0.0
Nett Deer and Velvet	8.2	21.5	13.3	0.0	0.0	0.0	0.0	0.0	0.0
Milk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grain, Seed and Horticulture	5.9	0.0	-5.9	0.2	0.2	0.0	0.0	0.0	0.0
Other Income	5.6	0.4	-5.1	0.0	0.0	0.0	5.1	223.4	218.3
Total Nett Farm Income	109.0	149.5	40.5	0.2	0.2	0.0	5.1	223.4	218.3
Expenses									
Wages	21.1	20.0	-1.1	0.1	0.1	0.0	0.0	0.0	0.0
Veterinary and Animal Health	4.5	7.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Stockfeed - Grazing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stockfeed - Domestic	3.5	3.2	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
Stockfeed - Imported	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stockfeed - Conservation	6.3	18.1	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Other Stock Expenses	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.6	0.6
Contracting	0.9	6.2	5.4	0.0	0.0	0.0	2.6	113.6	111.0
Freight	2.0	4.6	2.6	0.0	0.0	0.0	0.9	39.8	38.8
Fertiliser - Product	12.9	15.4	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Fertiliser - Cart and Spread	1.8	2.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Seed	2.1	5.8	3.6	0.0	0.0	0.0	0.0	1.1	1.1
Certification and Dressing	0.1	0.1	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agrichemical - Product	3.4	3.4	-0.0	0.0	0.0	0.0	0.0	1.0	1.0
Agrichemical - Application	0.9	1.7	0.8	0.0	0.0	0.0	0.0	0.8	0.8
Repairs and Maintenance	3.4	5.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Vehicles - Fuel	1.8	4.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicles - Repairs and Maintenance	1.8	3.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	2.5	5.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Other Farm Working Expenses	0.5	0.4	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Administration	3.7	3.3	-0.4	0.0	0.0	0.0	0.5	20.3	19.8
Standing Charges - Rates	2.6	1.1	-1.5	0.0	0.0	0.0	0.0	1.9	1.8
Standing Charges - Insurances	2.0	3.4	1.4	0.0	0.0	0.0	0.1	4.7	4.6
Standing Charges - Other	1.3	2.9	1.6	0.0	0.0	0.0	0.0	0.2	0.2
Total Farm Working Expenses	79.7	118.6	38.9	0.1	0.1	0.0	4.2	184.0	179.8
EBIT	29.4	31.0	1.6	0.0	0.0	0.0	0.9	39.5	38.6
Non-Operating Expenses									
Interest	1.7	2.5	0.8	0.0	0.0	0.0	0.1	3.9	3.8
Tax	5.5	2.6	-2.9	0.0	0.0	0.0	0.2	9.7	9.5
Plant Replacement/Depreciation	7.9	19.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Operating Expenses	15.1	24.1	9.0	0.0	0.0	0.0	0.3	13.6	13.3
Net Profit	14.3	6.9	-7.4	0.0	0.0	0.0	0.6	25.9	25.3
Capital									
Plant and Machinery	53.8	392.0	338.2	0.1	0.1	0.0	0.0	0.0	0.0
Land, Irrigation Hardware and Water	1,465.0	332.6	-1,132.3	0.8	0.8	0.0	59.7	2,627.0	2,567.3
Capital Stock	14.4	0.0	-14.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Capital (excl Overdraft)	1,533.1	724.6	-808.5	0.9	0.9	0.0	59.7	2,627.0	2,567.3

## 6. Discussion

### 1. At a catchment level, the nett farm income may reduce as a result of trying to achieve 2.4ppm N in surface water

A mitigation to additional fixed costs in a farming business is to try and increase the level of output from the fixed resources. In this particular analysis the livestock operations (dairy, beef, deer sheep) performance was increased markedly, which in turn increases nett sales for more product is sold. Despite the projected increase in nett farm revenue from agriculture, the significant land use change to forestry which has a much lower nett revenue results in a catchment reduction in nett farm income.

### 2. Reduced Farm Working Expenses

\$143,000,000 reduction in expenditure.

In partnership with the drive to increase income when under pressure, this comes with additional costs. In all agriculture budgets there is a material change in infrastructure to putting cattle in barns over winter which not only comes at a capital cost, but all the feed must be harvested, stored, and fed out again which adds further cost.

The increase in farm working expenses for is offset by the increase in forestry area with much lower farm working expenses, resulting in a nett reduction in regional spend.

### 3. Reduced rates

To reflect reduced asset values, the rates have been reduced proportionally to suit. This will impact Councils ability to spend in the community, including maintaining roads.

An alternative approach might be that total rates are maintained, resulting in an increase in rates to some, to compensate for the reduced rating revenue from rural land.

### 4. Lower Profit

As a result of both a reduction in farm expenses and a much greater reduction in farm income a nett reduction in regional EBIT (\$267 million p/a less) is projected. Consequently we could expect to see at least a \$72.7m less tax paid to the government.

Residual profit after tax reduced by \$592 per effective hectare, total \$173m less profit in the community.

### 5. Land Capital

Profit and asset value are intrinsically linked. In the modelled farm and forestry scenarios considered, cash profit is reduced and significant capital investment has been required. Collectively these two actions result in a devaluation of the underlying asset value (land in this case) when investors seek to maintain a return on total capital.

The modelling forecasts a loss of land equity of \$7.4bn for the Mid Canterbury Plains. This equates to an average reduction in land value of \$25,309/ha.

### 6. Forestry and the potential impact on infrastructure

The forestry is not new to Canterbury, although it has become less popular and therefore less common mid-plains in the recent decades.

With the advent of 105,079 ha forestry, approximately 3800 ha will be harvested in the Ashburton district annually. This will put significant pressure on roading networks and regional infrastructure.

The Ashburton District would need to consider what further investment in the infrastructure will be required in the future to provide for this land use change.

## **7. Displacing established businesses.**

Local specialist businesses (meat processors, grain and seed merchants or vegetable producers) will have their businesses models threatened if Ashburton is to achieve 2.4ppm N in surface water in the way modelled.

Changes in land use detailed in the scenario considered in this report indicate the local business impact could be:

- 85,000,000kgMS less production
- 3,522 ha less available to the seed multiplication and process vegetable market.
- Approximately 185,000 less head of cattle (dairy and beef) to process for meat.

## **8. Culture, personnel, and market access**

Moving to a housed livestock system is at odds with the free-range system on which much of NZ's market access and trade reputation is based. Widespread change in the way we farm, away from a more "free range" system to indoor farming may undermine our reputation and challenge NZ's premium position in the market place.

Housed livestock systems can be very mechanical in terms of day to day management. Being inside for 5 months of the year would be a large psychological challenge for many New Zealand farmers as they (mostly) prefer to work outdoors. We would expect to see a large change in management personnel, similar to that with the introduction of irrigation schemes to an area (90% turnover in 10 years).

## **9. Managed Aquifer Recharge.**

This scenario is highly dependant on finding 17.1m<sup>3</sup>.sec from alpine rivers to seep into the aquifers or directly into rivers/drains/streams. The political and social resistance to this is increasing constantly and there are no guarantees that unused water on existing consents will not be mandated to return to the river of origin.

## 7. Conclusions

1. While it is technically plausible to achieve the national environmental standards of nitrogen in water of 2.4ppm, there will be material economic, social and physical changes to the (traditionally) agricultural land in the Ashburton District. The focal consequences in terms of productivity and land use are:
  - a. 3,522ha less arable land.
  - b. 85,000,000kg less milk solids produced.
  - c. 185,000 head less cattle to process.
  - d. 102,691 ha increase in forestry, lost from food production unless carbon credits are repaid.
2. To achieve the 2.4ppm Nitrate Nitrogen in rivers, Ashburton District will also rely on obtaining 17.1 m<sup>3</sup>/sec alpine water for Managed Aquifer Recharge. The availability of this water would need to be ascertained and hydrological assessments would need to be made to ensure this is feasible. If 17.1 m<sup>3</sup>/sec MAR is hydrologically, socially or culturally impractical, the further land use change to forestry would need to be considered.
3. While we are able to model financial viability of farm systems with a much reduced environmental footprint, the significantly reduced profit and significantly increased cash loss exposure due to commodity price swings may have more adverse impacts than the modelling indicates. The modelling indicates the Ashburton District would see:
  - a. Average \$592/ha less profit across the catchment.
  - b. Increased cost structures will result in reduced business resilience and greater profit/loss volatility.
  - c. \$7.4 bn loss in land asset values.
4. Significant investment in market development and alternative business opportunities will be required by the district (and country) to ensure it survives, because the changes to farming methods proposed in this assessment would undermine a large portion of NZ's current market positioning.
5. Attempting to meet a water quality target of 2.4ppm N would be extremely financially, physically and psychologically challenging for most Ashburton farmers and could have material sociological impacts on the wider community.

8. Appendices

8.1. Appendix 1: Arable 1 - Start Point

Farm System Summary

Area:

Total	320ha
Effective	300ha

Irrigated balance:

100% Pivot Irrigated

Stock policy:

3800 trading Lambs.

Labour Policy:

Waged:

Two permanent staff responsible particularly for machinery operations.

Two casual labour units through summer months e.g. agricultural students helping with irrigation and harvest.

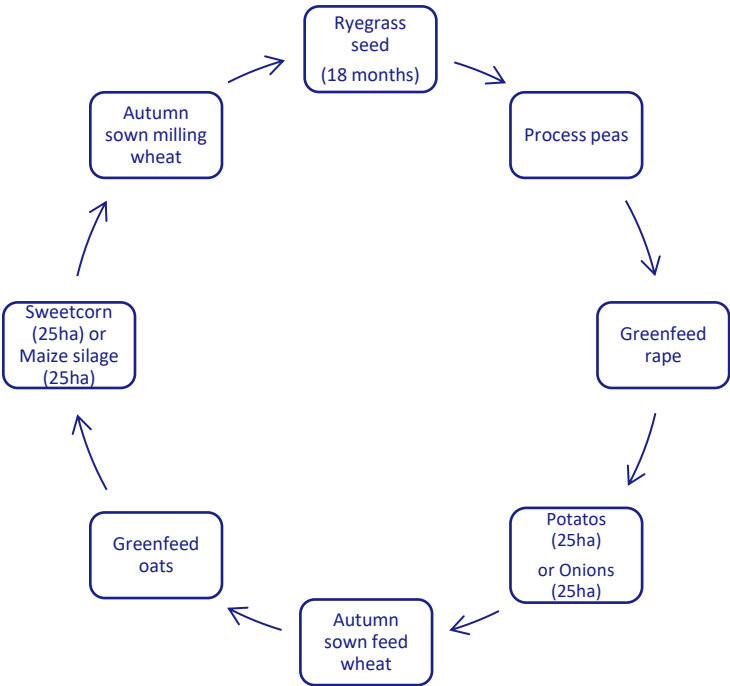
Own labour used for cultivation, drilling, boom-spraying, fertiliser spreading, grain & seed harvest, grain/seed cartage to sale.

Contractors:

Specialist contractors employed for:

all fertiliser spreading, boom-spraying, direct-drilling of kale, windrowing & heading & drying of ryegrass seed crop, straw baling, shearing and crutching, grain/seed/livestock cartage to sale.

Crop Rotation:



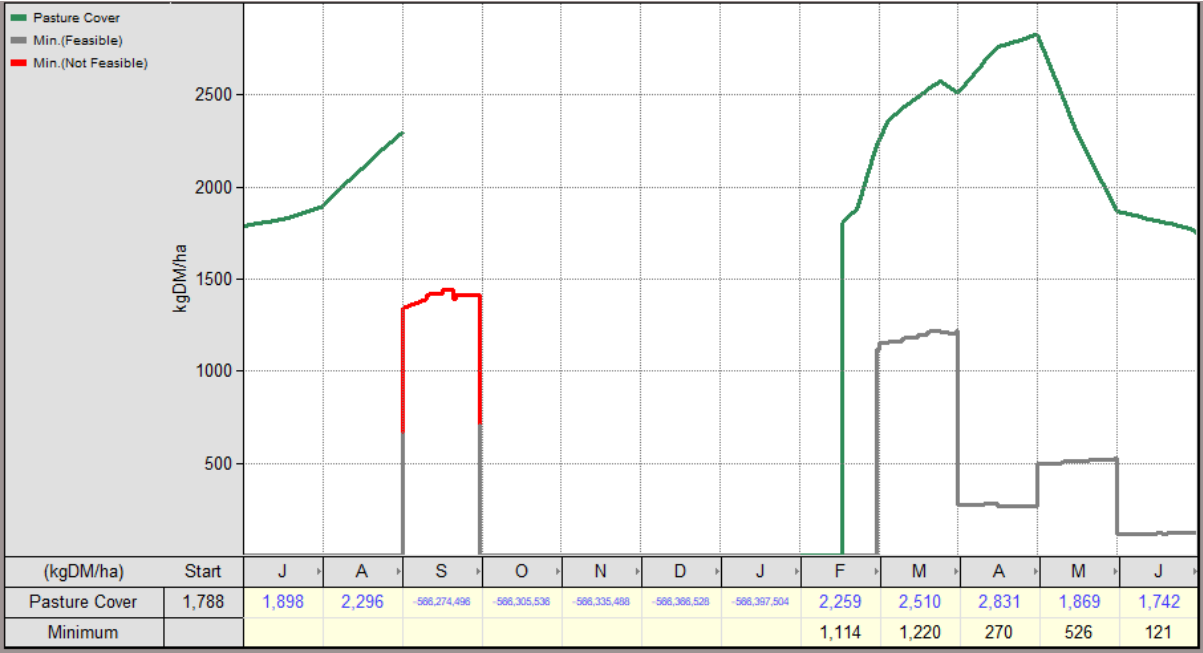
**Budget Summary**

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		320 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	242,484	758	SHEEP	435,781	
VETERINARY AND ANIMAL HEALTH	10,965	34	WOOL	24,671	
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	1,500	5	VELVET		
STOCKFEED - Conservation	17,855	56	GRAIN AND PULSE PRODUCE		
CONTRACTING	239,243	748	Previous Yr Sales		
FREIGHT	132,224	413	Current Yr Sales	1,658,150	
FERTILISER - Product	208,989	653	Unsold At Year End		
FERTILISER - Cart and Spread	11,280		SMALL SEED PRODUCE		
SEED	220,875	690	Previous Yr Sales		
CERTIFICATION AND DRESSING	36,785	115	Current Yr Sales	224,250	
AGRICHEMICAL - Product	147,965	462	Unsold At Year End		
AGRICHEMICAL - Application			MISCELLANEOUS INCOME	72,974	
REPAIRS & MAINTENANCE	54,300	170			
VEHICLES - Fuels	69,500	217	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	23,500		Sheep	-290,312	
ELECTRICITY	63,400	198	Cattle		
OTHER WORKING EXPS	28,635	89	Deer		
ADMINISTRATION	28,500	89	Other		
STANDING CHARGES - Rates	25,920	81			
STANDING CHARGES - Insurance & ACC	17,970				
STANDING CHARGES - Other	40,600				
<b>CASH FARM WORKING EXPENSES</b>	<b>1,622,489</b>	<b>5,070</b>	<b>CASH FARM INCOME</b>	<b>2,125,514</b>	<b>6,642</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>503,025</b>	<b>1,572</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	34,072	106			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,656,561</b>	<b>5,177</b>	<b>CASH OPERATING INCOME</b>	<b>2,125,514</b>	<b>6,642</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>468,953</b>	<b>1,465</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	76,000	238			
PLANT REPLACEMENT	196,124	613	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,928,685</b>	<b>6,027</b>	<b>TOTAL CASH INCOME</b>	<b>2,125,514</b>	<b>6,642</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>196,829</b>	<b>615</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>196,829</b>	<b>615</b>			

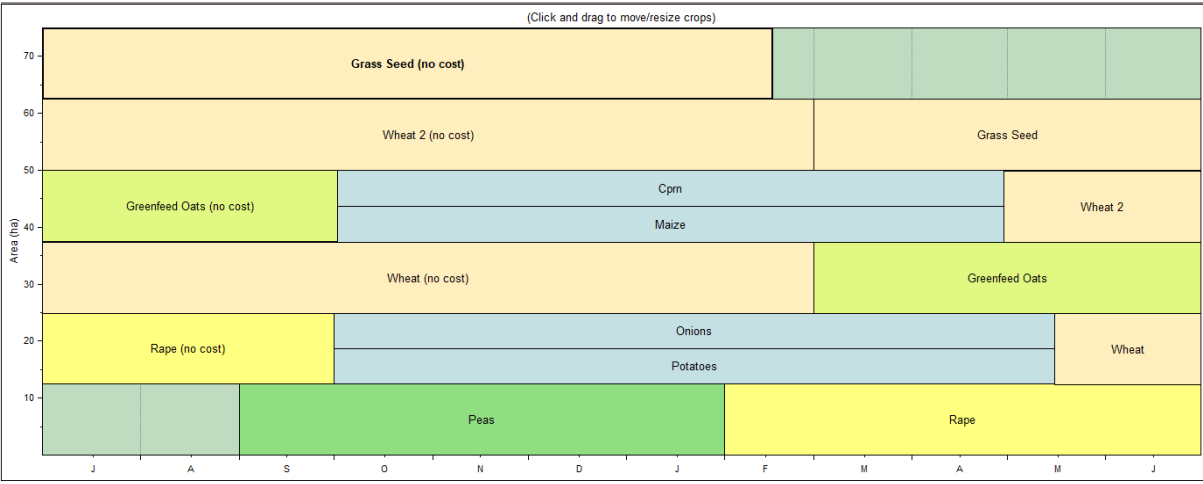
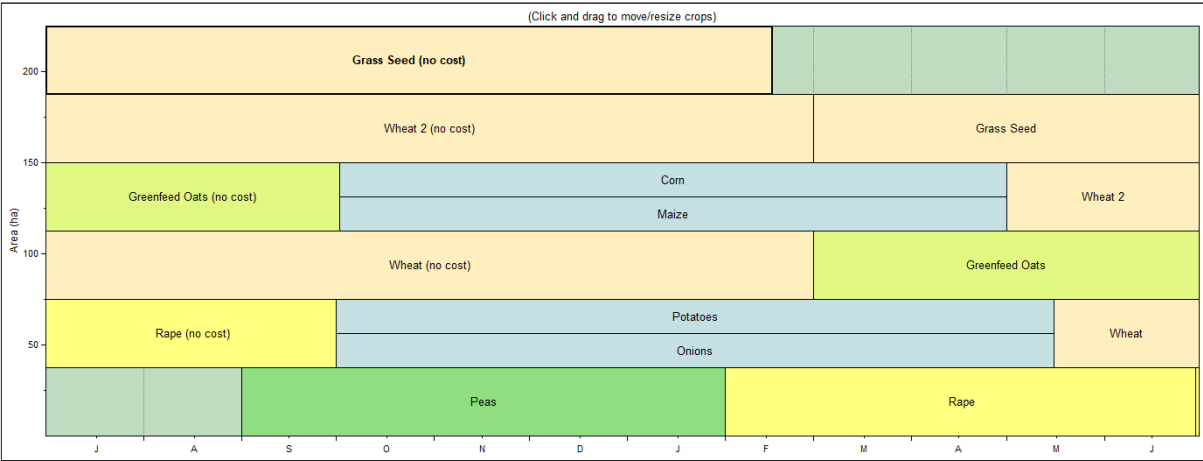


Farmax Summary

Pasture Covers




Crops by Block`



Stock Numbers by Month


Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs								500	1,490	2,615	3,010	2,499
Mixed Hoggets	2,489	1,899										
Total	2,489	1,899						500	1,490	2,615	3,010	2,499

Overseer Summaries



MRB

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



Ovr-Arable 1 - AM1\_2035.21

Analysis type

Predictive

Is publication

No

Application version

3.4.1.3

Printed date

27 May 2021, 11:30AM

Model version

6.3.5

Farm details

Total area

320 ha

Productive block area

300.00 ha

Nitrogen conversion efficiency (NCE)

97%

N Surplus

5 kg/ha

Region

Canterbury

Sheep stock rate (RSU)

945

N: 7,207

N/ha: 23

P: 143

P/ha: 0.4

GHG/ha: 3,655

NCE: 97%

Page 29 of 109

374

8.2. Appendix 2: Arable 2 - Start Point

Farm System Summary

Area:

Total	320ha
Effective	300ha

Irrigated balance:

100% Pivot Irrigated

Stock policy:

- 1400 summer trading Lambs
- 700 winter trading lambs

Labour Policy:

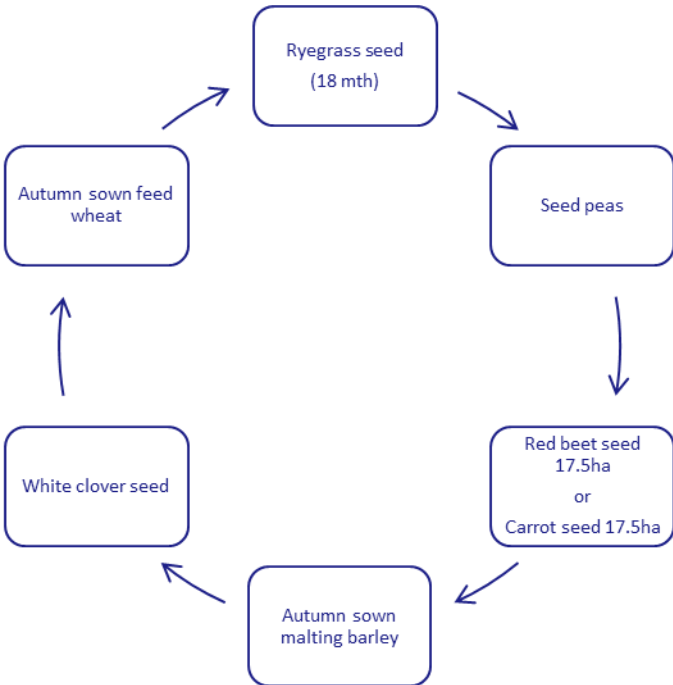
Waged:

Two permanent staff, plus one casual labour unit helping with irrigation and harvest.  
Own labour used for cultivation, drilling, boom-spraying, harvest, grain/seed cartage to sale.  
Crutching carried out by own farm labour.

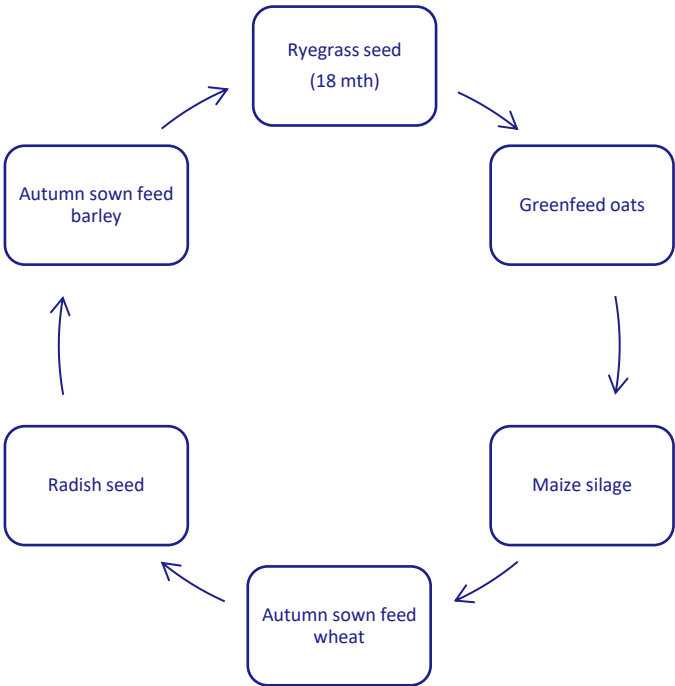
Contractors:

Specialist contractors employed for all fertiliser spreading, all hybrid seed crop related operations, maize planting, windrowing & heading & drying of ryegrass seed crop, windrowing & drying of carrot seed crop, straw baling, shearing. Contract cartage for delivery-to-sale of various grain & seed produce.

Crop Rotation 1 (70% Area):



Crop Rotation 2 (30% Area):

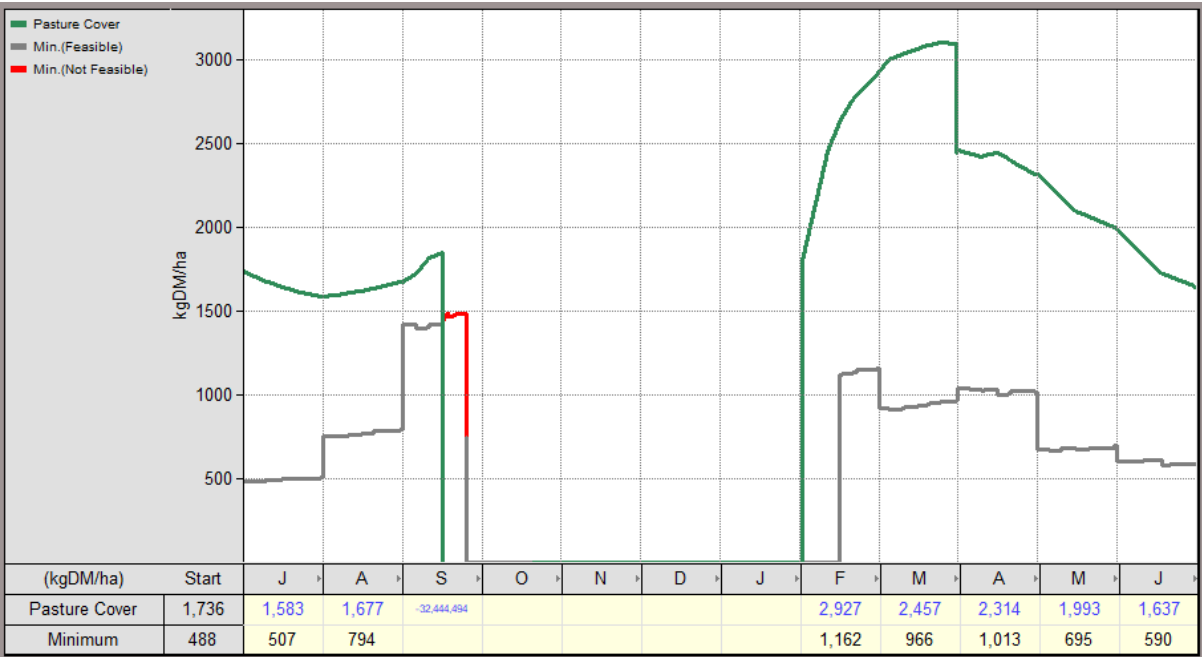


**Budget Summary**

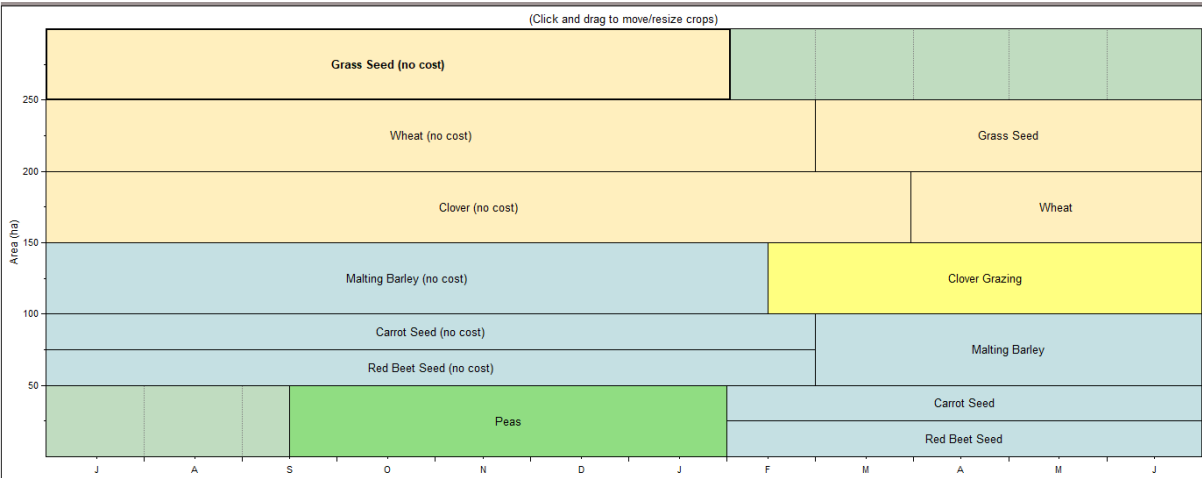
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		300 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	154,440	515	SHEEP	221,256	
VETERINARY AND ANIMAL HEALTH	4,210	14	WOOL	11,999	
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	1,000	3	VELVET		
STOCKFEED - Conservation	35,632	119	GRAIN AND PULSE PRODUCE		
CONTRACTING	35,188	117	Previous Yr Sales		
FREIGHT	41,250	137	Current Yr Sales	660,824	
FERTILISER - Product	96,681	322	Unsold At Year End		
FERTILISER - Cart and Spread	6,215	21	SMALL SEED PRODUCE		
SEED	47,345	158	Previous Yr Sales		
CERTIFICATION AND DRESSING	117,228	391	Current Yr Sales	835,675	
AGRICHEMICAL - Product	205,729	686	Unsold At Year End		
AGRICHEMICAL - Application	780	3	MISCELLANEOUS INCOME	111,143	
REPAIRS & MAINTENANCE	49,300	164			
VEHICLES - Fuels	56,500	188	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	21,500	72	Sheep	-159,138	
ELECTRICITY	63,400	211	Cattle		
OTHER WORKING EXPS	73,405	245	Deer		
ADMINISTRATION	27,500	92	Other		
STANDING CHARGES - Rates	25,920	86			
STANDING CHARGES - Insurance & ACC	21,788	73			
STANDING CHARGES - Other	40,600	135			
<b>CASH FARM WORKING EXPENSES</b>	<b>1,125,609</b>	<b>3,752</b>	<b>CASH FARM INCOME</b>	<b>1,681,758</b>	<b>5,606</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>556,149</b>	<b>1,854</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	23,638	79			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,149,247</b>	<b>3,831</b>	<b>CASH OPERATING INCOME</b>	<b>1,681,758</b>	<b>5,606</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>532,511</b>	<b>1,775</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	85,000	283			
PLANT REPLACEMENT	216,700	722	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,450,947</b>	<b>4,836</b>	<b>TOTAL CASH INCOME</b>	<b>1,681,758</b>	<b>5,606</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>230,811</b>	<b>769</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>230,811</b>	<b>769</b>			

Farmax Summary

Pasture Covers



Crops by Block



Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs								595	1,237	1,200	1,232	698
Mixed Hoggets	688	586										
Total	688	586						595	1,237	1,200	1,232	698

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



**OverseerFM**

Ovr-Arable2 - AM3\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 11:17AM
Model version	6.3.5

Farm details

Total area	360 ha
Productive block area	300.00 ha
Nitrogen conversion efficiency (NCE)	43%
N Surplus	85 kg/ha
Region	Canterbury
Sheep stock rate (RSU)	369

N: 9,047 N/ha: 25 P: 36 P/ha: 0.1 GHG/ha: 2,448 NCE: 43%

8.3. Appendix 3: Arable 3 - Start Point

Farm System Summary

Area:

Total	320ha
Effective	300ha

Irrigated balance:

- 80% Pivot Irrigated
- 20% Dry land

Stock policy:

- 3000 summer trading Lambs
- 1000 winter trading lambs
- 300 beef cross calves bought as 100kg weaners and sold prime.

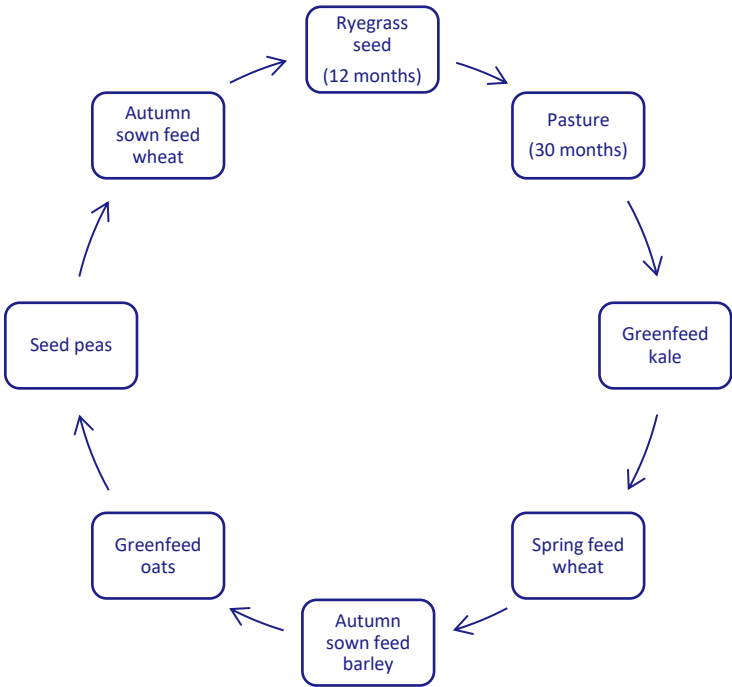
Labour Policy:

- Waged:
  - One full time labour unit plus one casual labour unit helping with irrigation and harvest.
  - Own labour used for cultivation, drilling, boom-spraying, harvest, grain/seed cartage to sale.

Contractors:

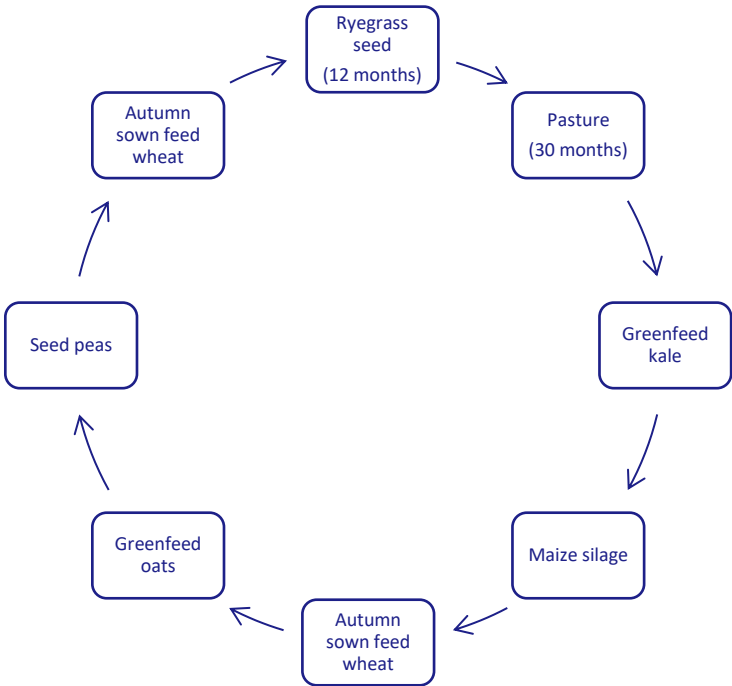
- Specialist contractors employed for: all fertiliser spreading, direct-drilling of kale, maize planting, windrowing & heading & drying of ryegrass seed crop, straw baling, maize harvest and silage stack preparation, shearing and some crutching.

Crop Rotation 1 (Dryland):





Crop Rotation 2 (Irrigated):

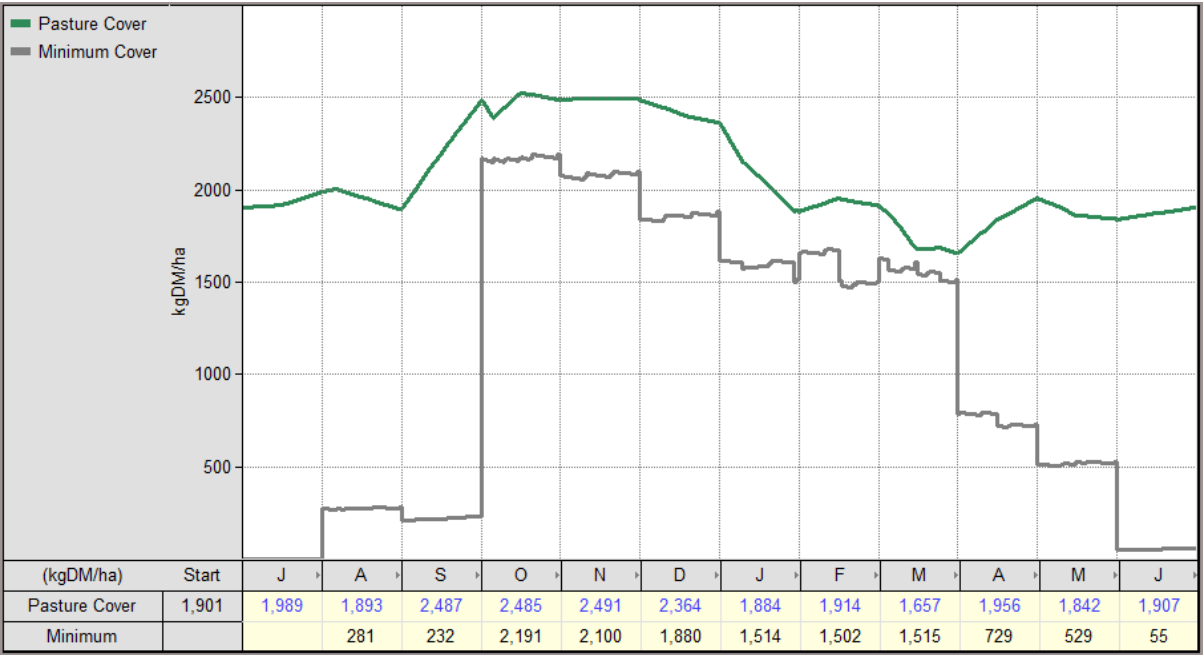


**Budget Summary**

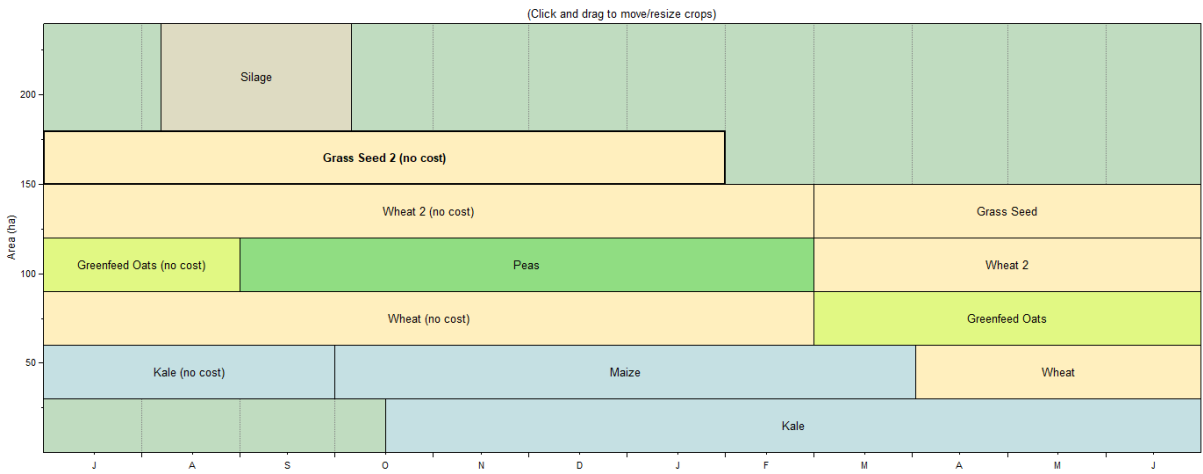
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		320 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	106,421	333	SHEEP	431,687	
VETERINARY AND ANIMAL HEALTH	19,522	61	WOOL	27,317	
STOCKFEED - Grazing			CATTLE	411,791	
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	1,000	3	VELVET		
STOCKFEED - Conservation	31,256	98	GRAIN AND PULSE PRODUCE		
CONTRACTING	10,454	33	Previous Yr Sales		
FREIGHT	16,391	51	Current Yr Sales	616,200	
FERTILISER - Product	107,545	336	Unsold At Year End		
FERTILISER - Cart and Spread	21,195	66	SMALL SEED PRODUCE		
SEED	53,963	169	Previous Yr Sales		
CERTIFICATION AND DRESSING	26,275	82	Current Yr Sales	157,500	
AGRICHEMICAL - Product	81,443	255	Unsold At Year End		
AGRICHEMICAL - Application			MISCELLANEOUS INCOME	25,960	
REPAIRS & MAINTENANCE	39,588	124			
VEHICLES - Fuels	43,300	135	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	19,200	60	Sheep	-311,619	
ELECTRICITY	63,400	198	Cattle	-135,000	
OTHER WORKING EXPS	25,696	80	Deer		
ADMINISTRATION	27,500	86	Other		
STANDING CHARGES - Rates	14,000	44			
STANDING CHARGES - Insurance & ACC	26,985	84			
STANDING CHARGES - Other	32,560	102			
<b>CASH FARM WORKING EXPENSES</b>	<b>767,692</b>	<b>2,399</b>	<b>CASH FARM INCOME</b>	<b>1,223,836</b>	<b>3,824</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>456,144</b>	<b>1,425</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	16,122	50			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>783,814</b>	<b>2,449</b>	<b>CASH OPERATING INCOME</b>	<b>1,223,836</b>	<b>3,824</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>440,022</b>	<b>1,375</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	77,000	241			
PLANT REPLACEMENT	156,760	490	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,017,574</b>	<b>3,180</b>	<b>TOTAL CASH INCOME</b>	<b>1,223,836</b>	<b>3,824</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>206,262</b>	<b>645</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>206,262</b>	<b>644.6</b>			

Farmax Summary

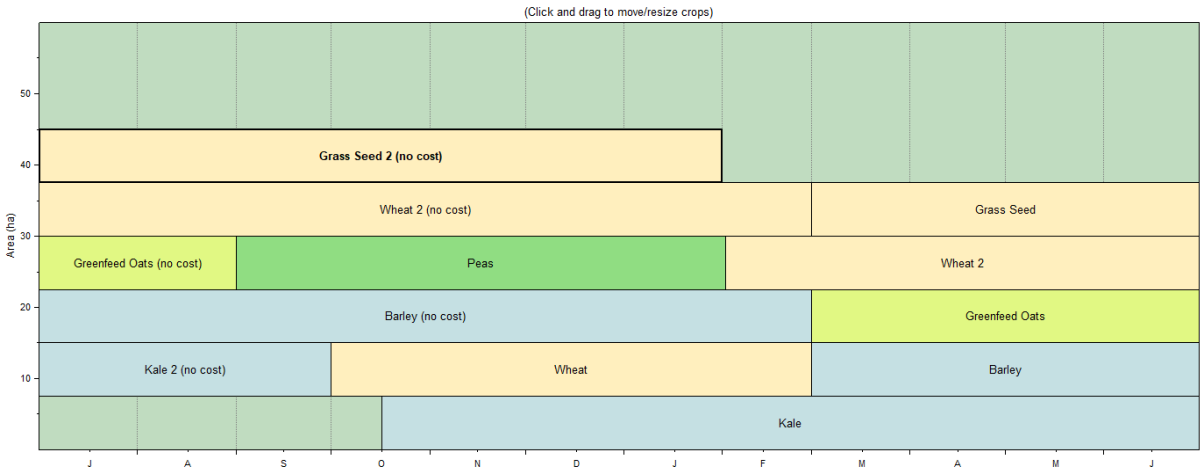
Pasture Cover



Crops by Block (Irrigated)



Crops by Block (Dryland)




Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs							895	1,837	2,118	2,507	1,929	1,161
Mixed Hoggets	1,151	955										
Total	1,151	955					895	1,837	2,118	2,507	1,929	1,161


Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Bull Calves						300	300	300	300	300	300	300
1-Year Bulls	298	297	296	295	295	278	123	93	28	2		
Total	298	297	296	295	295	578	423	393	328	302	300	300

Overseer Summaries



MRB

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



Ovr-Arable 3\_AM2\_2035.12

Analysis type

Predictive

Is publication

No

Application version

3.4.1.3

Printed date

27 May 2021, 11:57AM

Model version

6.3.5

Farm details

N: 7,662

N/ha: 24

P: 129

P/ha: 0.4

GHG/ha: 5,176

NCE: 57%

Total area	320 ha
Productive block area	300.00 ha
Nitrogen conversion efficiency (NCE)	57%
N Surplus	63 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	1612	Percent male beef animals	100
Total liveweight reared (kg/ha grazed)	1981	Beef / dairy grazing stock rate (RSU)	1839
Total liveweight sold (kg/ha grazed)	4893	Sheep stock rate (RSU)	960

8.4. Appendix 4: Arable 4 - Start Point

Farm System Summary

Area:

Total	320ha
Effective	300ha

Irrigated balance:

100% dryland

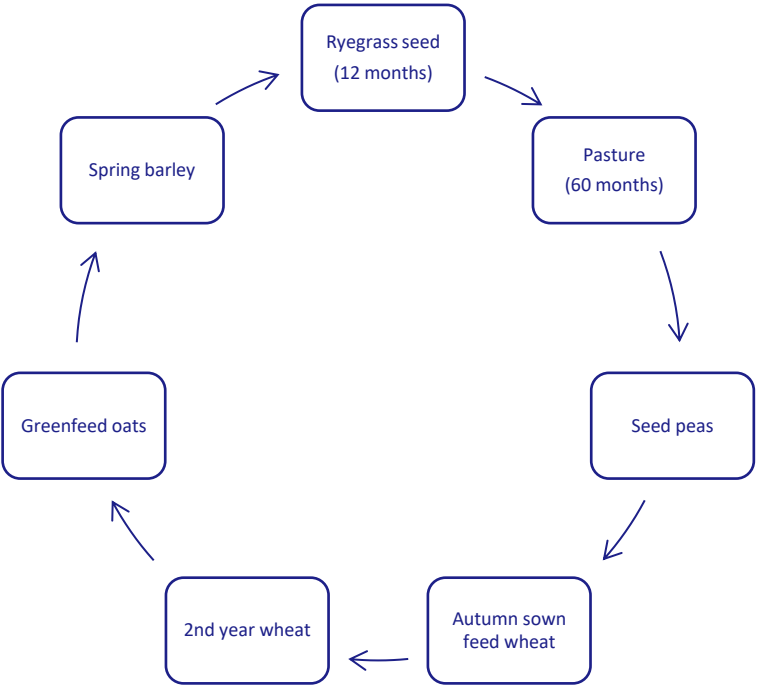
Stock policy:

- 1500 lambing ewes (one year culls)
- 1200 trading lambs finished to meet winter schedule

Labour Policy:

- Waged:
- One full time and one casual labour unit through summer months helping with irrigation and harvest.
  - Own labour used for cultivation, drilling, harvest of grain crops.
- Contractors:
- Specialist contractors employed for:
- all fertiliser spreading, boom-spraying, direct-drilling of kale, windrowing & heading & drying of ryegrass seed crop, straw baling, shearing and crutching, grain/seed/livestock cartage to sale.

Crop Rotation:

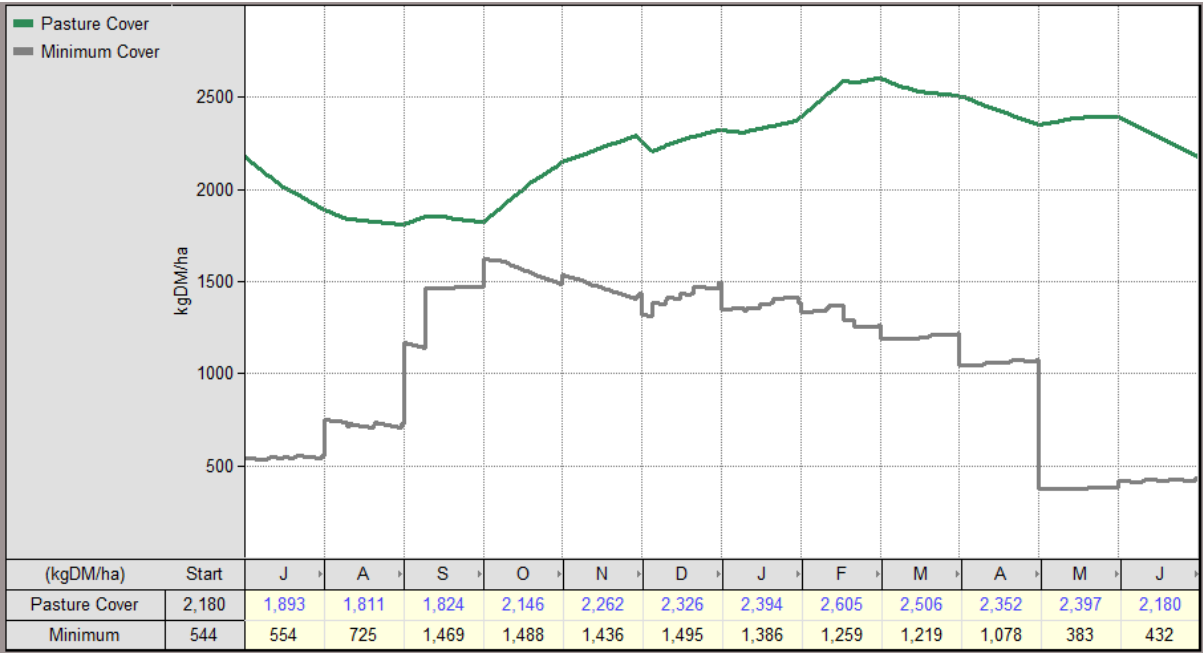


**Budget Summary**

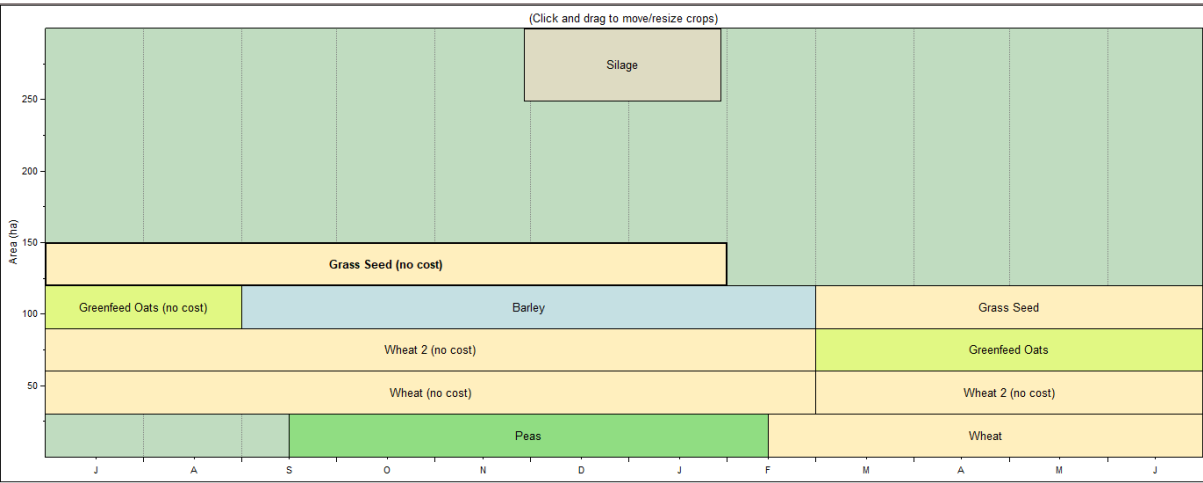
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		320 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	119,218	373	SHEEP	508,912	
VETERINARY AND ANIMAL HEALTH	11,370	36	WOOL	43,845	
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	3,750	12	VELVET		
STOCKFEED - Conservation	26,663	83	GRAIN AND PULSE PRODUCE		
CONTRACTING	15,297	48	Previous Yr Sales		
FREIGHT	20,309	63	Current Yr Sales	330,600	
FERTILISER - Product	50,929	159	Unsold At Year End		
FERTILISER - Cart and Spread	10,049	31	SMALL SEED PRODUCE		
SEED	27,720	87	Previous Yr Sales		
CERTIFICATION AND DRESSING	34,726	109	Current Yr Sales	78,000	
AGRICHEMICAL - Product	54,942	172	Unsold At Year End		
AGRICHEMICAL - Application	13,860	43	MISCELLANEOUS INCOME	25,522	
REPAIRS & MAINTENANCE	25,300	79			
VEHICLES - Fuels	40,500	127	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	12,000	38	Sheep	-278,580	
ELECTRICITY	4,000	13	Cattle		
OTHER WORKING EXPS	5,055	16	Deer		
ADMINISTRATION	27,500	86	Other		
STANDING CHARGES - Rates	18,432	58			
STANDING CHARGES - Insurance & ACC	14,413	45			
STANDING CHARGES - Other	400	1			
<b>CASH FARM WORKING EXPENSES</b>	<b>536,432</b>	1,676	<b>CASH FARM INCOME</b>	<b>708,299</b>	2,213
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>171,867</b>	537			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	11,265	35			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>547,697</b>	1,712	<b>CASH OPERATING INCOME</b>	<b>708,299</b>	2,213
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>160,602</b>	502			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	33,000	103			
PLANT REPLACEMENT	36,000	113	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>616,697</b>	1,927	<b>TOTAL CASH INCOME</b>	<b>708,299</b>	2,213
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>91,602</b>	286			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>91,602</b>	286.3			

Farmax Summary

Pasture Cover



Crops by Block



Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Ewes	1,500	1,500	1,500	1,475	1,450			1,500	1,500	1,500	1,500	1,500
Mixed Lambs					1,800	1,695	764	276	1,276	1,266	1,256	
Mixed Hoggets	1,242	206										
Rams	10	10	10	10	10	10	10	10	15	15	15	15
Total	2,752	1,716	1,510	1,485	3,260	1,705	774	1,786	2,791	2,781	2,771	1,515



## Overseer Summaries


**MRB**

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand


**OverseerFM**

### Ovr-Arable 4 - GMP

Analysis type Predictive  
 Is publication No  
 Application version 3.4.1.3  
 Printed date 27 May 2021, 12:30PM  
 Model version 6.3.5

### Farm details

N: **6,187** N/ha: **19** P: **30** P/ha: **0.1** GHG/ha: **3,563** NCE: **41%**

Total area	320 ha
Productive block area	300.00 ha
Nitrogen conversion efficiency (NCE)	41%
N Surplus	57 kg/ha
Region	Canterbury

 Total liveweight brought (kg/ha grazed) **644**

 Total liveweight sold (kg/ha grazed) **1039**

 Total liveweight reared (kg/ha grazed) **98**

 Sheep stock rate (RSU) **2153**

### Blocks

NAME	TYPE	AREA (HA)	N LOSS	N LOSS/HA	N SURPLUS/HA	P LOSS	P LOSS/HA
Dryland Pasture	Pasture	150	1,173	8	92	10	0.1
DL (Pasture > Peas)	Crop	30	2,273	76	-61	1	0
DL (S Peas > Wheat)	Crop	30	1,057	35	8	1	0
DL (Sp Barley > RGS)	Crop	30	803	27	239	1	0
DL (Wheat > GF Oats > SP Barley)	Crop	30	156	5	-15	2	0.1
DL (Wheat > Wheat)	Crop	30	714	24	22	1	0
Other sources	Other	-	11	-	-	13	-

## 8.5. Appendix 5: Dairy 1 - Start Point

### Farm System Summary

Area:

Total	220ha
Effective	210ha

Irrigated balance:

100% Irrigated with centre pivots

Stock policy:

785 peak cows

3.74 cows/ha

500kgMS/cow

Covered feed pad not used for wintering

Labour Policy:

Waged:

Five full time plus casual labour over calf rearing.

Contractors:

Specialist contractors employed for all cultivation, drilling and forage making or freight.

Crop Rotation:

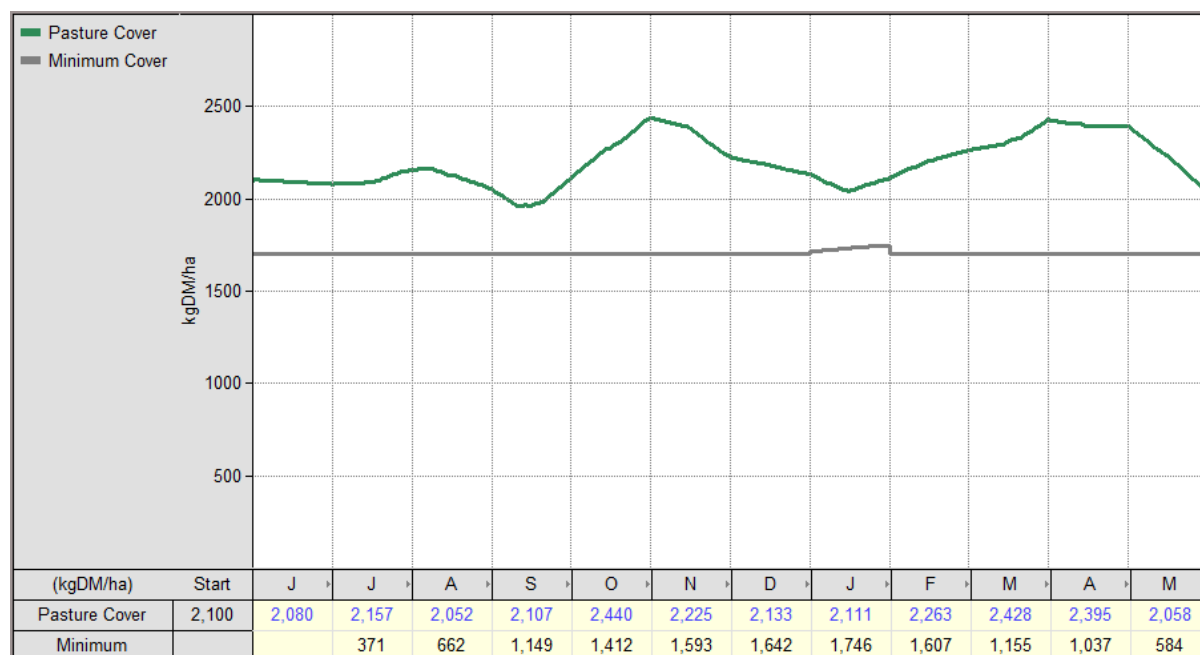
Regrassing only (no forage or feed crops grown)

**Budget Summary**

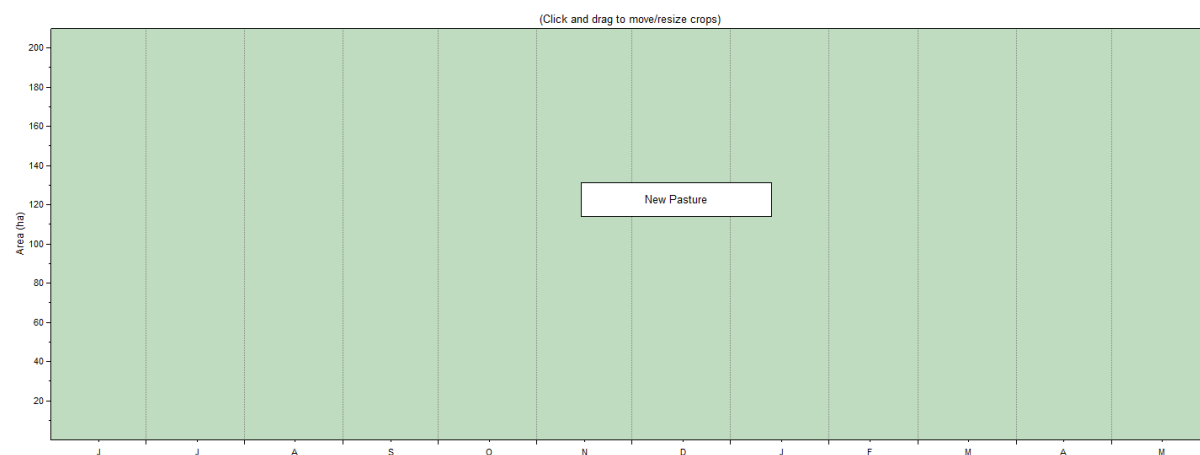
<b>MACFARLANE RURAL BUSINESS LTD</b>					
<b>BUDGET SUMMARY</b>					
<b>220 Su or Ha</b>					
	TOTAL \$	Income		TOTAL \$	Income
WAGES	309,250	1,406	SHEEP		
VETERINARY AND ANIMAL HEALTH	105,801	481	WOOL		
STOCKFEED - Grazing	390,186	1,774	CATTLE	139,760	
STOCKFEED - Domestic	377,890	1,718	GRAZING		
STOCKFEED - Imported			MILK	2,435,496	
OTHER STOCK EXPENSES	18,840	86	DEER		
STOCKFEED - Conservation			VELVET		
CONTRACTING	12,600	57	GRAIN AND PULSE PRODUCE		
FREIGHT	29,340	133	Previous Yr Sales		
FERTILISER - Product	148,071	673	Current Yr Sales		
FERTILISER - Cart and Spread	25,891	118	Unsold At Year End		
SEED	10,784	49	SMALL SEED PRODUCE		
CERTIFICATION AND DRESSING	500	2	Previous Yr Sales		
AGRICHEMICAL - Product	6,725	31	Current Yr Sales		
AGRICHEMICAL - Application	3,234	15	Unsold At Year End		
REPAIRS & MAINTENANCE	106,345	483	MISCELLANEOUS INCOME	5,800	
VEHICLES - Fuels	23,916	109			
VEHICLES - Repairs and Maintenance	22,400	102	STOCK PURCHASES		
ELECTRICITY	73,180	333	Sheep		
OTHER WORKING EXPS	10,540	48	Cattle	-25,200	
ADMINISTRATION	25,935	118	Deer		
STANDING CHARGES - Rates	21,780	99	Other		
STANDING CHARGES - Insurance & ACC	42,564	193			
STANDING CHARGES - Other	49,889	227			
<b>CASH FARM WORKING EXPENSES</b>	<b>1,815,660</b>	<b>8,253.0</b>	<b>CASH FARM INCOME</b>	<b>2,555,856</b>	<b>11,617.5</b>
<b>CASH FARM WORKING PROFIT</b>	<b>740,196</b>	<b>3,364.5</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	38,129	173.3			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,853,789</b>	<b>8,426.3</b>	<b>CASH OPERATING INCOME</b>	<b>2,555,856</b>	<b>11,617.5</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>702,067</b>	<b>3,191.2</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	152,000	690.9			
CAPITAL PURCHASES & PAYMENTS	157,240	714.7	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>2,163,029</b>	<b>9,831.9</b>	<b>TOTAL CASH INCOME</b>	<b>2,555,856</b>	<b>11,617.5</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>392,827</b>	<b>1,785.6</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>392,827</b>	<b>1,785.6</b>			

## Farmax Summary

### Pasture Cover



### Crops by Block



### Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
F4 Hay/Straw bought		21.7			21.7	
F1 Meal and Grains bought		624			624	
F2 Pasture Silage						
New Pasture						
F2 Pasture Silage bought		227			227	
<b>Total</b>	<b>0.00</b>	<b>872</b>	<b>0.00</b>	<b>0.00</b>	<b>872</b>	<b>0.00</b>

### Stock Numbers by Month

<b>Mob</b>	<b>30 Jun</b>	<b>31 Jul</b>	<b>31 Aug</b>	<b>30 Sep</b>	<b>31 Oct</b>	<b>30 Nov</b>	<b>31 Dec</b>	<b>31 Jan</b>	<b>28 Feb</b>	<b>31 Mar</b>	<b>30 Apr</b>	<b>31 May</b>
Cows at home		178	795	790	785	785	785	780	780	780	740	555
Cows Grazing	800	622										
2011 Born Heifers Grazing	180	180	180	180	180	180	180	180	180	180	180	180
2012 Born Heifers Grazing							180	180	180	180	180	180
2012 Born Heifers at Home		43	180	180	180	180						
Bobby Calves		24	72	32								
<b>Total</b>	<b>980</b>	<b>1,047</b>	<b>1,227</b>	<b>1,182</b>	<b>1,145</b>	<b>1,145</b>	<b>1,145</b>	<b>1,140</b>	<b>1,140</b>	<b>1,140</b>	<b>1,100</b>	<b>915</b>

## Overseer Summaries


**MRB**

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand


**OverseerFM**

### Ovr - Dairy1\_AM2\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 1:28PM
Model version	6.3.5

### Farm details

N: **7,886** N/ha: **36** P: **176** P/ha: **0.8** GHG/ha: **17,035** | NCE: **30%**

Total area	220 ha
Productive block area	210.00 ha
Nitrogen conversion efficiency (NCE)	30%
N Surplus	276 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	493
Total liveweight reared (kg/ha grazed)	100
Total liveweight sold (kg/ha grazed)	559
Default calving date	06 August
Milk production per cow (kg milk solids / cow)	499.5

Milk solids (kg/ha grazed)	1867
Milking herd size (peak cows/ha grazed)	3.7
Dairy stock rate (RSU)	8685
Dairy replacements stock rate (RSU)	0

## 8.6. Appendix 6: Dairy 2 - Start Point

### Farm System Summary

#### Area:

Total	220ha
Effective	210ha

#### Irrigated balance:

100% Irrigated with centre pivots

#### Stock policy:

735 peak cows

3.5 cows/ha

476kgMS/cow

Covered feed pad not used for wintering

#### Labour Policy:

##### Waged:

Four full time plus casual labour over calf rearing.

##### Contractors:

Specialist contractors employed for all cultivation, drilling and forage making or freight.

#### Crop Rotation:

Regrassing only (no forage or feed crops grown)

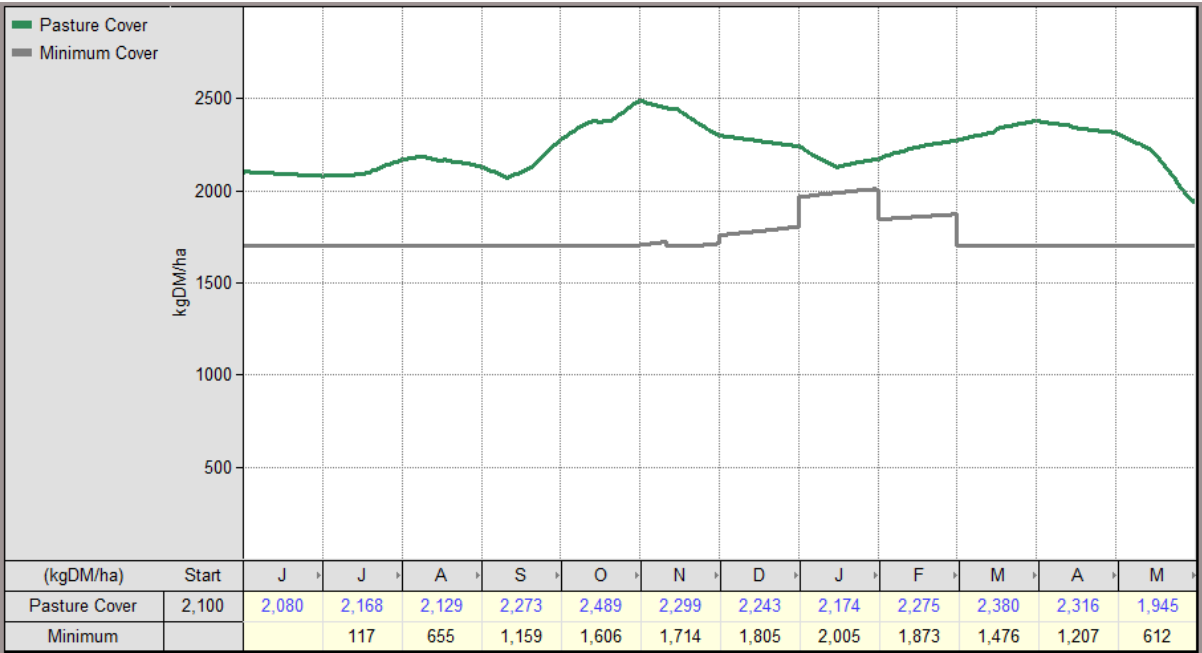
**Budget Summary**

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY		220 Su or Ha	
	TOTAL \$	Income		TOTAL \$	Income
WAGES	248,700	1,130	SHEEP		
VETERINARY AND ANIMAL HEALTH	99,153	451	WOOL		
STOCKFEED - Grazing	359,408	1,634	CATTLE	126,109	
STOCKFEED - Domestic	230,830	1,049	GRAZING		
STOCKFEED - Imported	9,324	42	MILK	2,167,867	
OTHER STOCK EXPENSES	17,640	80	DEER		
STOCKFEED - Conservation			VELVET		
CONTRACTING	12,600	57	GRAIN AND PULSE PRODUCE		
FREIGHT	25,470	116	Previous Yr Sales		
FERTILISER - Product	151,191	687	Current Yr Sales		
FERTILISER - Cart and Spread	25,941	118	Unsold At Year End		
SEED	10,784	49	SMALL SEED PRODUCE		
CERTIFICATION AND DRESSING	500	2	Previous Yr Sales		
AGRICHEMICAL - Product	6,725	31	Current Yr Sales		
AGRICHEMICAL - Application	3,234	15	Unsold At Year End		
REPAIRS & MAINTENANCE	103,258	469	MISCELLANEOUS INCOME	5,800	
VEHICLES - Fuels	24,049	109			
VEHICLES - Repairs and Maintenance	22,400	102	STOCK PURCHASES		
ELECTRICITY	70,780	322	Sheep		
OTHER WORKING EXPS	10,360	47	Cattle	-18,000	
ADMINISTRATION	25,935	118	Deer		
STANDING CHARGES - Rates	17,160	78	Other		
STANDING CHARGES - Insurance & ACC	50,660	230			
STANDING CHARGES - Other	61,554	280			
<b>CASH FARM WORKING EXPENSES</b>	<b>1,587,655</b>	<b>7,216.6</b>	<b>CASH FARM INCOME</b>	<b>2,281,776</b>	<b>10,371.7</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>694,122</b>	<b>3,155.1</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	33,341	151.5			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,620,995</b>	<b>7,368.2</b>	<b>CASH OPERATING INCOME</b>	<b>2,281,776</b>	<b>10,371.7</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>660,781</b>	<b>3,003.5</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	141,000	640.9			
PLANT REPLACEMENT	155,790	708.1	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,917,785</b>	<b>8,717.2</b>	<b>TOTAL CASH INCOME</b>	<b>2,281,776</b>	<b>10,371.7</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>363,991</b>	<b>1,654.5</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>363,991</b>	<b>1,654.5</b>			

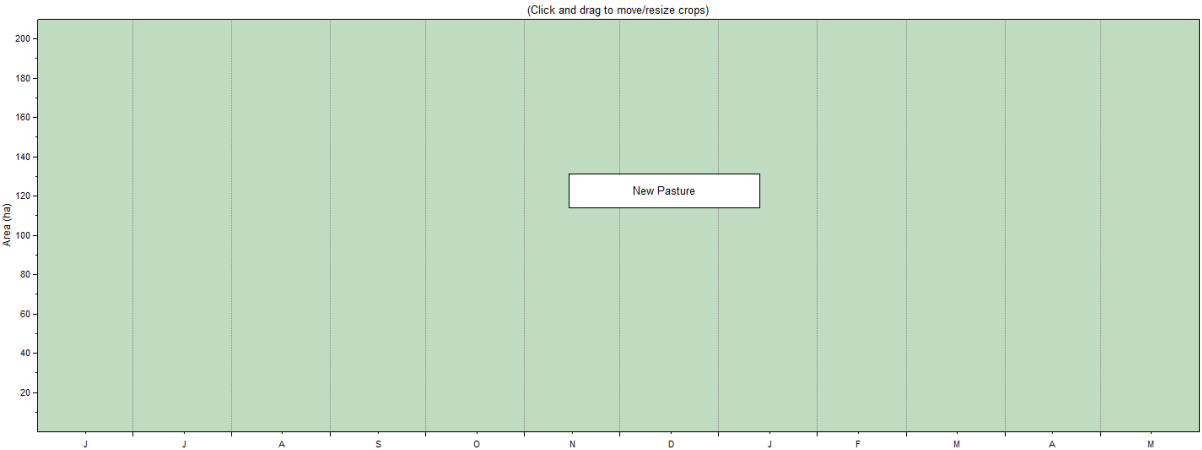


Farmax Summary

Pasture Cover



Crops by Block



Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
F4 Hay/Straw bought		26.9			26.9	
F1 Meal and Grains bought		288			288	
F2 Pasture Silage						
New Pasture						
F2 Pasture Silage bought		172			172	
Total	0.00	487	0.00	0.00	487	0.00

## Stock Numbers by Month

Mob	30 Jun	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May
Cows at home		178	745	740	735	735	735	730	730	730	690	582
Cows Grazing	747	569										
2011 Born Heifers Grazing	165	165	165	165	165	165	165	165	165	165	165	165
2012 Born Heifers Grazing							135	135	135	135	135	135
2012 Born Heifers at Home		11	135	135	135	135						
Bobby Calves		7	64	8								
<b>Total</b>	<b>912</b>	<b>930</b>	<b>1,109</b>	<b>1,048</b>	<b>1,035</b>	<b>1,035</b>	<b>1,035</b>	<b>1,030</b>	<b>1,030</b>	<b>1,030</b>	<b>990</b>	<b>882</b>

## Overseer Summaries


**MRB**

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand


**OverseerFM**

### Ovr - Dairy2\_AM2\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 1:39PM
Model version	6.3.5

### Farm details

N: **7,922** N/ha: **36** P: **168** P/ha: **0.8** GHG/ha: **15,721** NCE: **29%**

Total area	220 ha
Productive block area	210.00 ha
Nitrogen conversion efficiency (NCE)	29%
N Surplus	265 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	507	Milk solids (kg/ha grazed)	1665
Total liveweight reared (kg/ha grazed)	103	Milking herd size (peak cows/ha grazed)	3.5
Total liveweight sold (kg/ha grazed)	576	Dairy stock rate (RSU)	7981
Default calving date	06 August	Dairy replacements stock rate (RSU)	0
Milk production per cow (kg milk solids / cow)	469.3		

8.7. Appendix 7: Dairy Support 1 - Start Point

Farm System Summary

Area:

Total	270ha
Effective	260ha

Irrigated balance:

100% Irrigated with centre pivots

Stock policy:

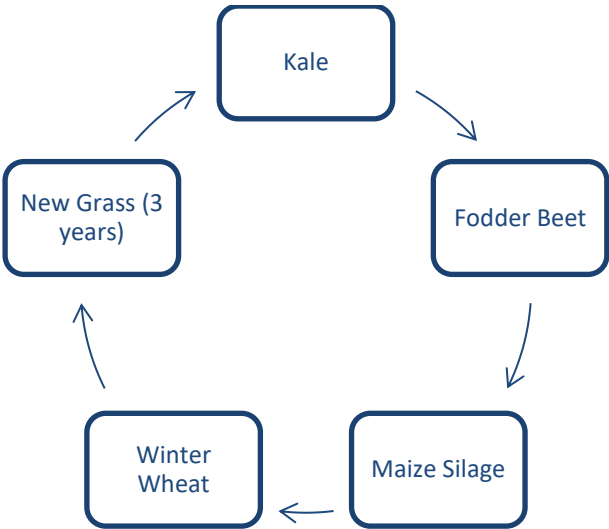
- 520 R1 Heifers
- 520 R2 Heifers
- 520 R2 IC Heifers wintered
- 550 Mixed Age cows wintered

Labour Policy:

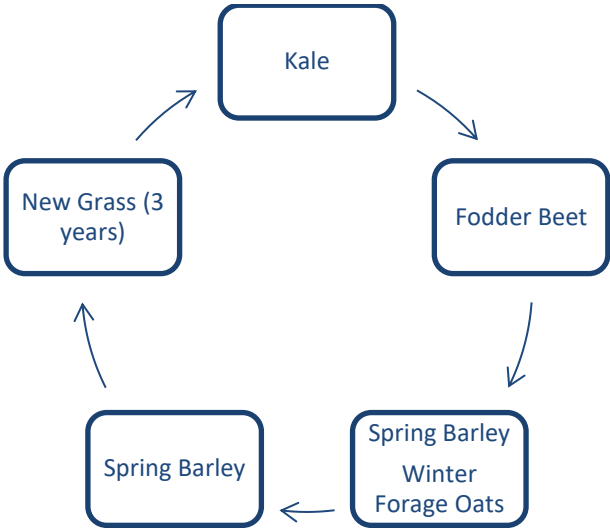
Waged:  
Two full time plus casual labour.

Contractors:  
Specialist contractors employed for some cultivation, drilling and forage making or freight.  
Harvest completed by farm staff with own machinery.

Crop Rotation 1 (Blocks 1 & 2):



Crop Rotation 2 (Block 3):

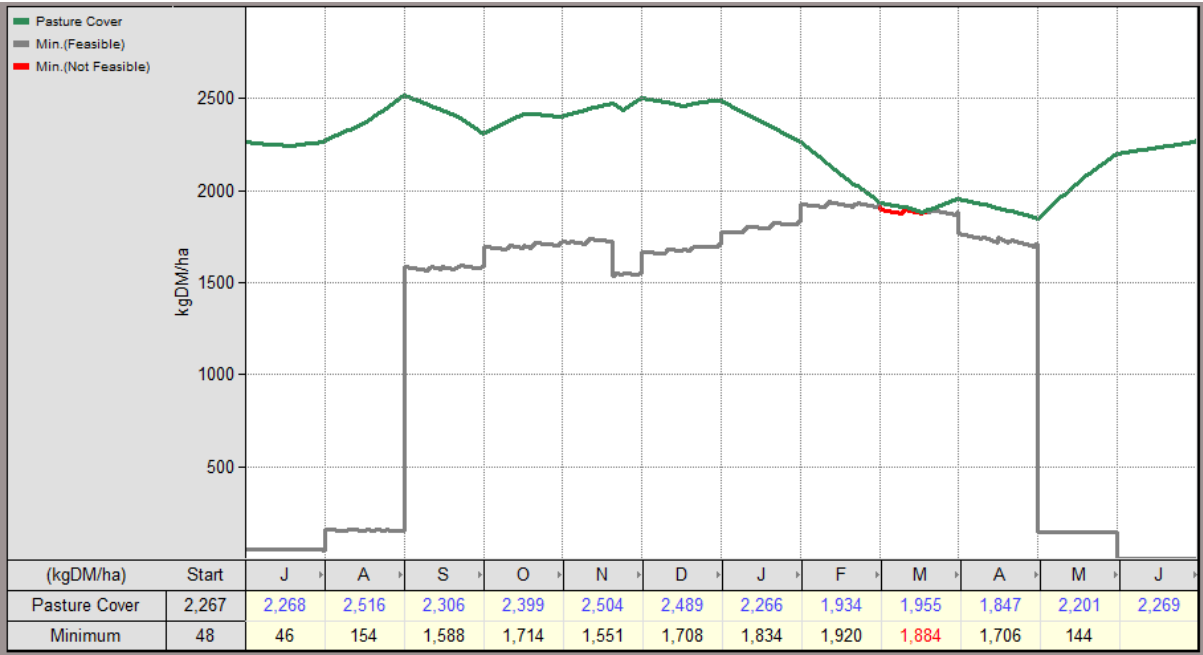


**Budget Summary**

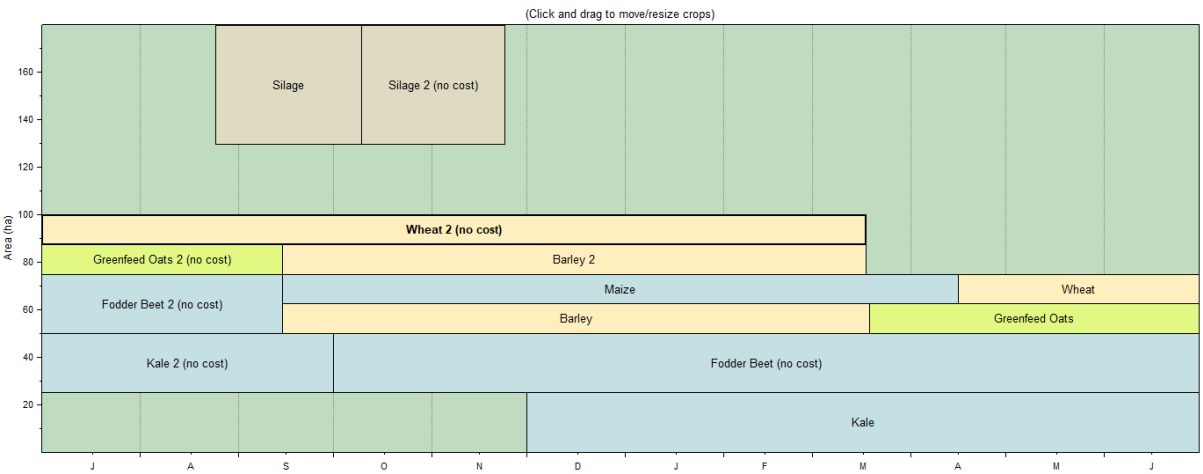
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		270 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	132,700	491	SHEEP		
VETERINARY AND ANIMAL HEALTH	2,000	7	WOOL		
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic	2,000	7	GRAZING	765,891	
STOCKFEED - Imported			MILK		
OTHER STOCK EXPENSES	2,000	7	DEER		
STOCKFEED - Conservation	68,150	252	VELVET		
CONTRACTING	19,700	73	GRAIN AND PULSE PRODUCE		
FREIGHT			Previous Yr Sales	95,615	
FERTILISER - Product	120,960	448	Current Yr Sales	161,855	
FERTILISER - Cart and Spread	12,301	46	Unsold At Year End	95,615	
SEED	41,378	153	SMALL SEED PRODUCE		
CERTIFICATION AND DRESSING	500	2	Previous Yr Sales		
AGRICHEMICAL - Product	53,328	198	Current Yr Sales		
AGRICHEMICAL - Application	8,008	30	Unsold At Year End		
REPAIRS & MAINTENANCE	22,000	81	MISCELLANEOUS INCOME	18,955	
VEHICLES - Fuels	18,800	70			
VEHICLES - Repairs and Maintenance	31,000	115	STOCK PURCHASES		
ELECTRICITY	56,740	210	Sheep		
OTHER WORKING EXPS	3,500	13	Cattle		
ADMINISTRATION	24,700	91	Deer		
STANDING CHARGES - Rates	20,412	76	Other		
STANDING CHARGES - Insurance & ACC	15,424	57			
STANDING CHARGES - Other	36,840	136			
<b>CASH FARM WORKING EXPENSES</b>	<b>692,441</b>	<b>2,564.6</b>	<b>CASH FARM INCOME</b>	<b>1,042,316</b>	<b>3,860.4</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>349,875</b>	<b>1,295.8</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	14,541	53.9			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>706,982</b>	<b>2,618.5</b>	<b>CASH OPERATING INCOME</b>	<b>1,042,316</b>	<b>3,860.4</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>335,334</b>	<b>1,242.0</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	51,000	188.9			
PLANT REPLACEMENT	150,400	557.0	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>908,382</b>	<b>3,364.4</b>	<b>TOTAL CASH INCOME</b>	<b>1,042,316</b>	<b>3,860.4</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>133,934</b>	<b>496.1</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>133,934</b>	<b>496.1</b>			

Farmax Summary

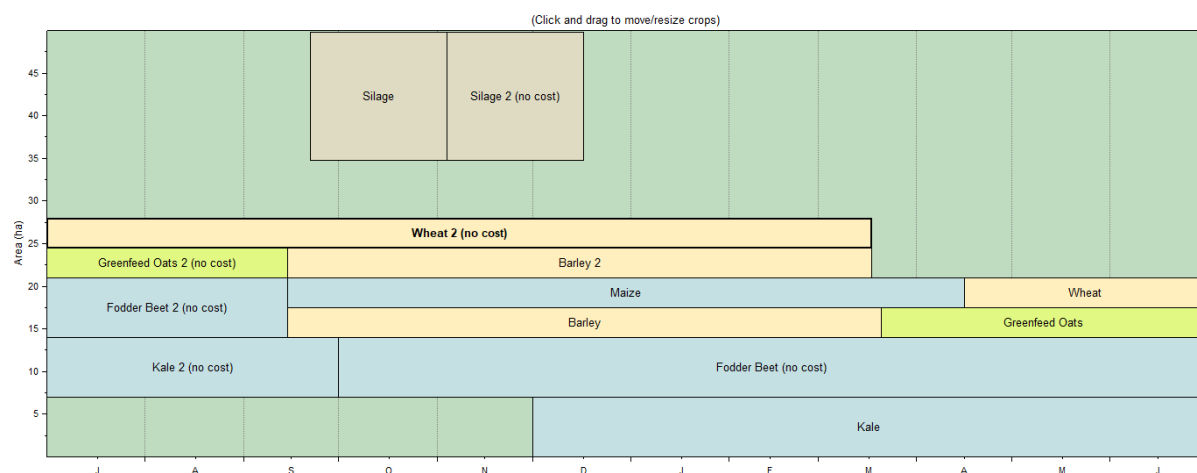
Pasture Cover



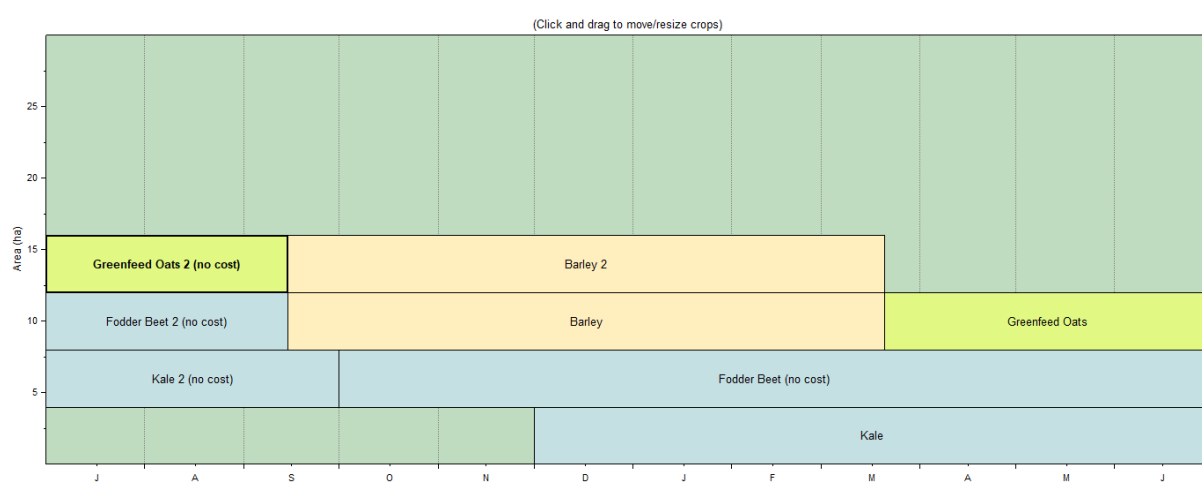
Crops by Block (Main Block)



Crops by Block (Second Block)



Crops by Block (Third Block)



Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Kale			1,190		1,190	
Straw	69.6				69.5	0.12
Wheat			479	479		
Greenfeed Oats			60.0		54.0	5.98
Maize			272			272
Silage	38.3		94.4	6.60	87.8	38.3
<b>Total</b>	<b>108</b>	<b>0.00</b>	<b>2,096</b>	<b>486</b>	<b>1,401</b>	<b>316</b>

Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Heifer Calves					520	520	520	520	520	520	520	520
1-Year Heifers	520	520	520	520	520	520	520	520	520	520	520	520
2-Year Heifers	520											
Cows												550
<b>Total</b>	<b>1,040</b>	<b>520</b>	<b>520</b>	<b>520</b>	<b>1,040</b>	<b>1,040</b>	<b>1,040</b>	<b>1,040</b>	<b>1,040</b>	<b>1,040</b>	<b>1,040</b>	<b>1,590</b>



Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



**OverseerFM**

Ovr - Dairy Support 1\_AM1\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 1:00PM
Model version	6.3.5

Farm details

N: 11,996 N/ha: 44 P: 46 P/ha: 0.2 GHG/ha: 7,027 NCE: 30%

Total area	270 ha
Productive block area	260.00 ha
Nitrogen conversion efficiency (NCE)	30%
N Surplus	108 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	7037	Total liveweight sold (kg/ha grazed)	7676
Total liveweight reared (kg/ha grazed)	1582	Beef / dairy grazing stock rate (RSU)	4153

8.8. Appendix 8: Dairy Support 2 - Start Point

Farm System Summary

Area:

Total	270ha
Effective	260ha

Irrigated balance:

- 50% Irrigated with centre pivots
- 50% dryland

Stock policy:

- 260 R1 Heifers
- 260 R2 Heifers
- 260 R2 IC Heifers wintered
- 2400 Mixed Age cows wintered

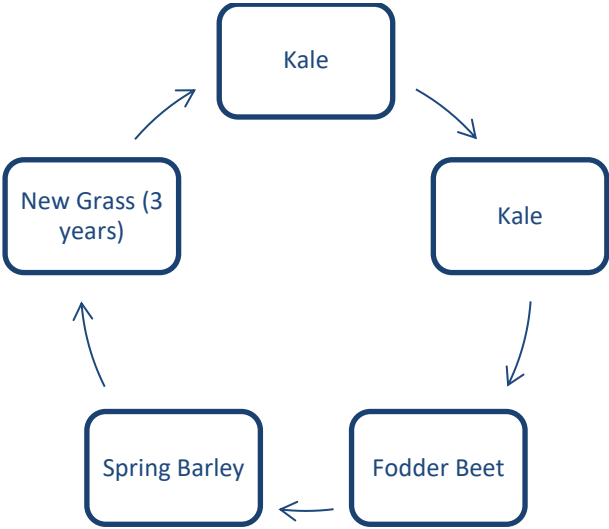
Labour Policy:

- Waged:
- Two full time plus casual labour.

Contractors:

- Specialist contractors employed for some cultivation, drilling and forage making or freight.
- Harvest completed by farm staff with own machinery.

Crop Rotation (Blocks 1 & 2):

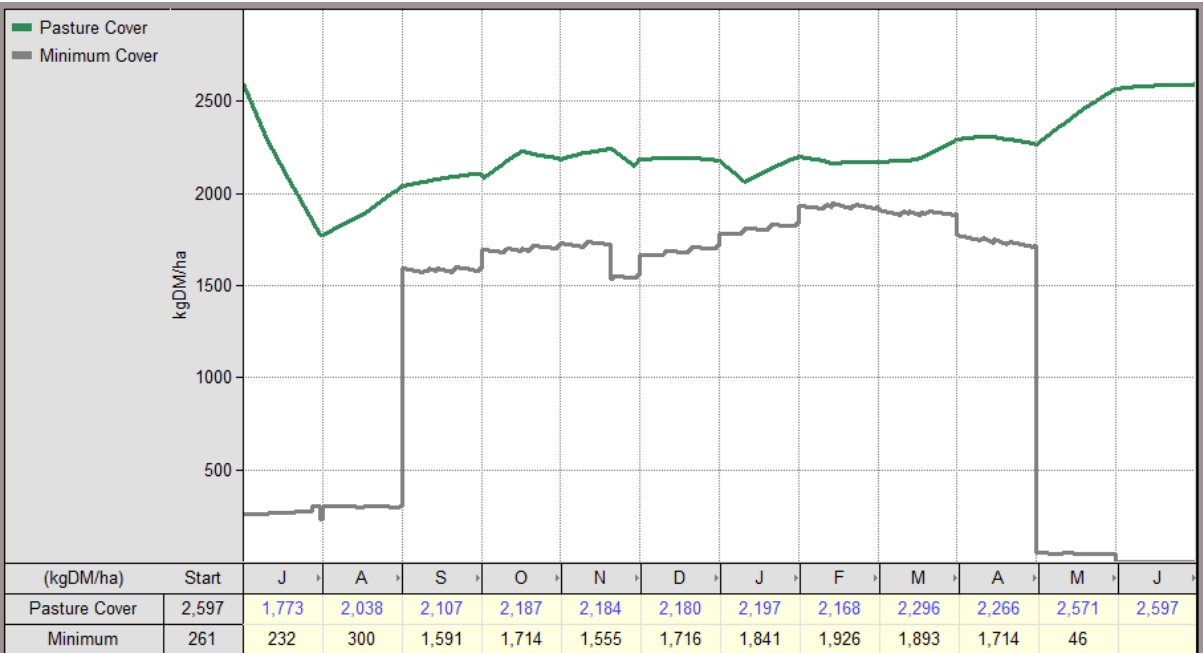


**Budget Summary**

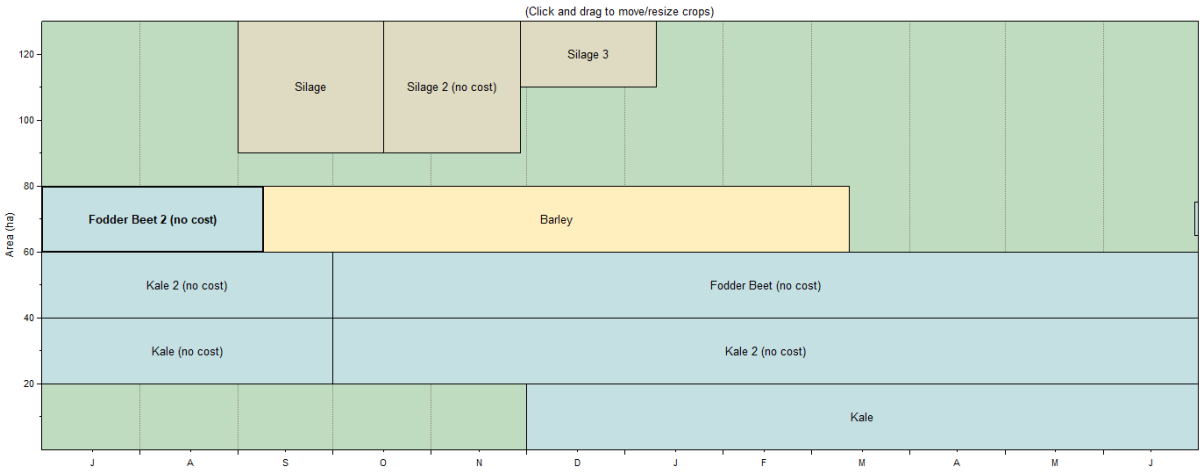
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		270 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	132,700	491	SHEEP		
VETERINARY AND ANIMAL HEALTH	2,000	7	WOOL		
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic	2,000	7	GRAZING	952,203	
STOCKFEED - Imported			MILK		
OTHER STOCK EXPENSES			DEER		
STOCKFEED - Conservation	40,828	151	VELVET		
CONTRACTING	26,340	98	GRAIN AND PULSE PRODUCE		
FREIGHT	13,535	50	Previous Yr Sales	51,300	
FERTILISER - Product	113,283	420	Current Yr Sales	51,300	
FERTILISER - Cart and Spread	9,955	37	Unsold At Year End	51,300	
SEED	35,220	130	SMALL SEED PRODUCE		
CERTIFICATION AND DRESSING	500	2	Previous Yr Sales		
AGRICHEMICAL - Product	69,174	256	Current Yr Sales		
AGRICHEMICAL - Application	4,360	16	Unsold At Year End		
REPAIRS & MAINTENANCE	22,891	85	MISCELLANEOUS INCOME	44,900	
VEHICLES - Fuels	18,800	70			
VEHICLES - Repairs and Maintenance	31,000	115	STOCK PURCHASES		
ELECTRICITY	31,819	118	Sheep		
OTHER WORKING EXPS	5,975	22	Cattle		
ADMINISTRATION	24,700	91	Deer		
STANDING CHARGES - Rates	16,281	60	Other		
STANDING CHARGES - Insurance & ACC	13,424	50			
STANDING CHARGES - Other	19,420	72			
<b>CASH FARM WORKING EXPENSES</b>	<b>634,204</b>	<b>2,348.9</b>	<b>CASH FARM INCOME</b>	<b>1,099,703</b>	<b>4,073.0</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>465,499</b>	<b>1,724.1</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	13,318	49.3			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>647,523</b>	<b>2,398.2</b>	<b>CASH OPERATING INCOME</b>	<b>1,099,703</b>	<b>4,073.0</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>452,180</b>	<b>1,674.7</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	91,778	339.9			
PLANT REPLACEMENT	124,400	460.7	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>863,701</b>	<b>3,198.9</b>	<b>TOTAL CASH INCOME</b>	<b>1,099,703</b>	<b>4,073.0</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>236,002</b>	<b>874.1</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>236,002</b>	<b>874.1</b>			

Farmax Summary

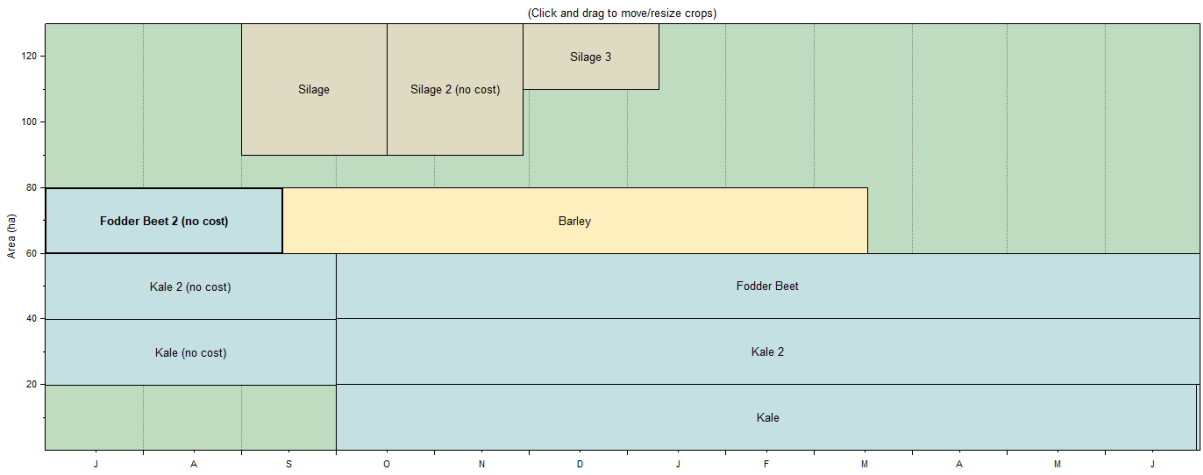
Pasture Cover



Crops by Block (Irrigated Block)



Crops by Block (Dryland Block)



Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Kale	228		2,040		2,040	228
Straw	83.9	171			171	83.9
Wheat			260	185		75.0
Silage	42.2		145	68.3	76.9	42.2
Total	354	171	2,445	253	2,288	429

Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Heifer Calves					260	260	260	260	260	260	260	260
1-Year Heifers	260	260	260	260	260	260	260	260	260	260	260	260
2-Year Heifers	260											
Cows												2,400
Total	520	260	260	260	520	520	520	520	520	520	520	2,920

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



**OverseerFM**

Ovr - Dairy Support 2\_AM2\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 1:04PM
Model version	6.3.5

Farm details

N: 7,262 N/ha: 27 P: 42 P/ha: 0.2 GHG/ha: 5,815 NCE: 16%

Total area	270 ha
Productive block area	260.00 ha
Nitrogen conversion efficiency (NCE)	16%
N Surplus	78 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	29581	Total liveweight sold (kg/ha grazed)	29952
Total liveweight reared (kg/ha grazed)	918	Beef / dairy grazing stock rate (RSU)	3883

8.9. Appendix 9: Red Meat 1 - Start Point

Farm System Summary

Area:

Total	350ha
Effective	340ha

Irrigated balance:

100% dryland

Stock policy:

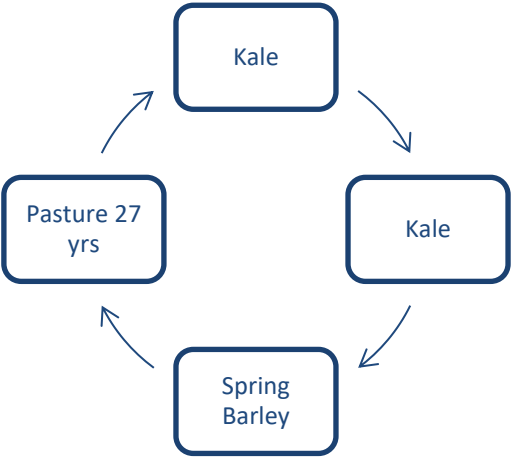
- 959 breeding ewes lambing 136%, lambing hoggets
- 574 weaner beef cattle in February/March to finish at 260kg CW before second winter
- 192 weaner trading deer

Labour Policy:

Waged:  
Two full time plus seasonal casual.

Contractors:  
Specialist contractors employed for all agricultural tasks including ground work and drilling.

Crop Rotation:



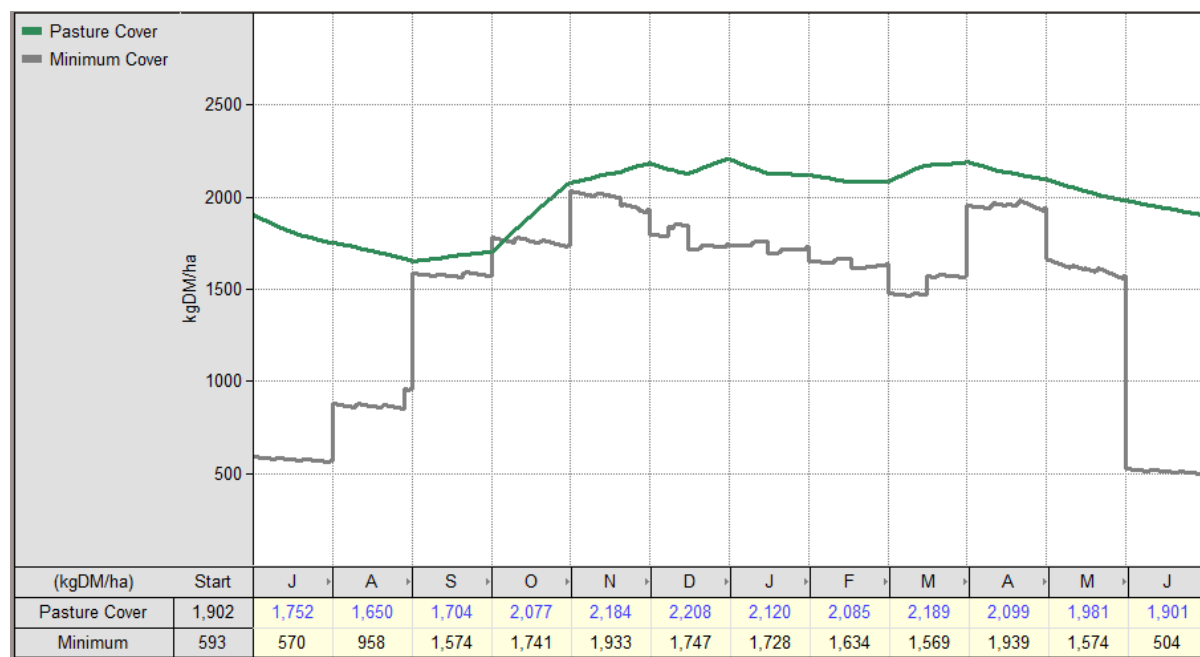
**Budget Summary**

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		350 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	140,660	401.9	SHEEP	145,494	
VETERINARY AND ANIMAL HEALTH	19,970	57.1	WOOL	14,443	
STOCKFEED - Grazing			CATTLE	764,478	
STOCKFEED - Domestic	28,100	80.3	MILK		
STOCKFEED - Imported			DEER	88,825	
OTHER STOCK EXPENSES	3,951	11.3	VELVET	3,563	
STOCKFEED - Conservation	46,800	133.7	GRAIN AND PULSE PRODUCE		
CONTRACTING	3,100	8.9	Previous Yr Sales	17,100	
FREIGHT	8,022	22.9	Current Yr Sales		
FERTILISER - Product	44,027	125.8	Unsold At Year End	17,100	
FERTILISER - Cart and Spread	9,702	27.7	SMALL SEED PRODUCE		
SEED	5,370	15.3	Previous Yr Sales		
CERTIFICATION AND DRESSING	500	1.4	Current Yr Sales		
AGRICHEMICAL - Product	11,600	33.1	Unsold At Year End		
AGRICHEMICAL - Application	3,080	8.8	MISCELLANEOUS INCOME	8,026	
REPAIRS & MAINTENANCE	20,000	57.1			
VEHICLES - Fuels	12,200	34.9	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	12,000	34.3	Sheep	-3,600	
ELECTRICITY	5,260	15.0	Cattle	-370,058	
OTHER WORKING EXPS	3,500	10.0	Deer	-45,427	
ADMINISTRATION	24,700	70.6	Other		
STANDING CHARGES - Rates	15,750	45.0			
STANDING CHARGES - Insurance & ACC	10,924	31.2			
STANDING CHARGES - Other	2,000	5.7			
<b>CASH FARM WORKING EXPENSES</b>	<b>431,215</b>	<b>1,232.0</b>	<b>CASH FARM INCOME</b>	<b>622,844</b>	<b>1,779.6</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>191,629</b>	<b>547.5</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	9,056	25.9			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>440,271</b>	<b>1,257.9</b>	<b>CASH OPERATING INCOME</b>	<b>622,844</b>	<b>1,779.6</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>182,574</b>	<b>521.6</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	40,000	114.3			
PLANT REPLACEMENT	40,400	115.4	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>520,671</b>	<b>1,487.6</b>	<b>TOTAL CASH INCOME</b>	<b>622,844</b>	<b>1,779.6</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>102,174</b>	<b>291.9</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>102,174</b>	<b>291.9</b>			

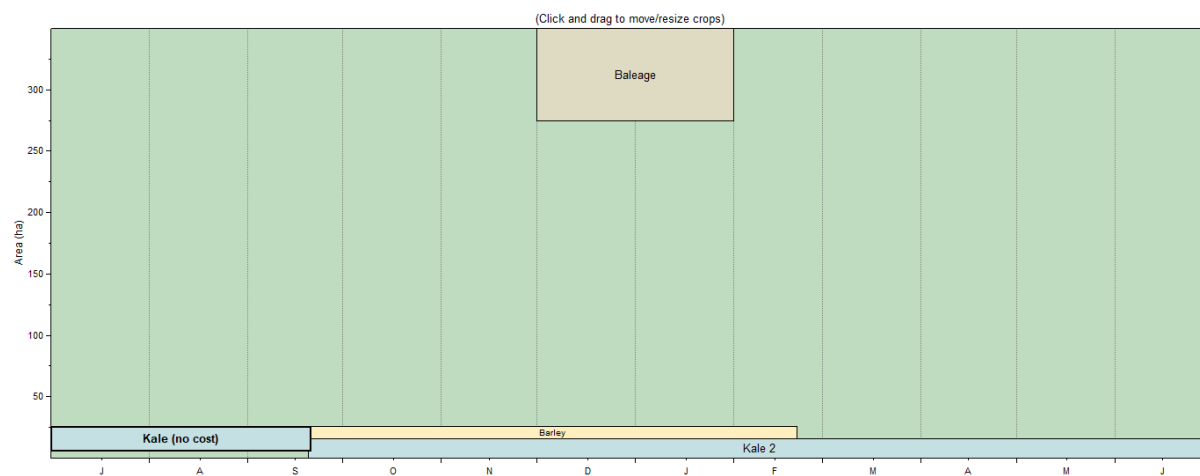


## Farmax Summary

### Pasture Covers



### Crops by Block



### Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Kale	90.0		216		120	186
Straw	17.9	86.3			104	
Baleage	135		225		225	135
Barley	8.50				8.50	
Wheat	55.0		55.0	45.0		65.0
<b>Total</b>	<b>306</b>	<b>86.3</b>	<b>496</b>	<b>45.0</b>	<b>457</b>	<b>386</b>


## Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Beef Weaners									574	574	574	574
R1 Beef	574	574	574	574	488	341	256	171	56	15		
<b>Total</b>	<b>574</b>	<b>574</b>	<b>574</b>	<b>574</b>	<b>488</b>	<b>341</b>	<b>256</b>	<b>171</b>	<b>630</b>	<b>589</b>	<b>574</b>	<b>574</b>

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Ewes	959	959	949	939	929	827	827	827	827	827	754	958
Ewe Hoggets	230	226	216	216	212	212	212	212	208	208	208	
Ewe Lambs					652	230	230	230	230	230	230	230
Mixed Lambs					847	885	718	320				
Rams	10	10	10	10	10	10	10	10	13	13	10	10
<b>Total</b>	<b>1,199</b>	<b>1,195</b>	<b>1,175</b>	<b>1,165</b>	<b>2,650</b>	<b>2,164</b>	<b>1,997</b>	<b>1,599</b>	<b>1,278</b>	<b>1,278</b>	<b>1,202</b>	<b>1,198</b>


Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Fawns								192	191	191	190	190
R1 Mixed Deer	190	190	63									
<b>Total</b>	<b>190</b>	<b>190</b>	<b>63</b>					<b>192</b>	<b>191</b>	<b>191</b>	<b>190</b>	<b>190</b>

Overseer Summaries



MRB

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



Ovr - Sheep & Beef 1\_GMP\_2035.21

Analysis type

Predictive

Is publication

No

Application version

3.4.1.3

Printed date

27 May 2021, 1:38PM

Model version

6.3.5

Farm details

N: 4,704N/ha: 13P: 46P/ha: 0.1GHG/ha: 4,931NCE: 16%

Total area	350 ha
Productive block area	340.00 ha
Nitrogen conversion efficiency (NCE)	16%
N Surplus	89 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	678	Beef / dairy grazing stock rate (RSU)	2496
Total liveweight reared (kg/ha grazed)	529	Deer stock rate (RSU)	207
Total liveweight sold (kg/ha grazed)	1171	Sheep stock rate (RSU)	1571
Percent male beef animals	50		

8.10. Appendix 10: Red Meat 2 - Start Point

Farm System Summary

Area:

Total	350ha
Effective	340ha

Irrigated balance:

- 30% Irrigated with centre pivots
- 70% dryland

Stock policy:

- 1200 winter trade lambs
- 3150 summer trade lambs
- 620 dairy beef cross calves bought at 100kg and finished
- 250 weaner deer finished

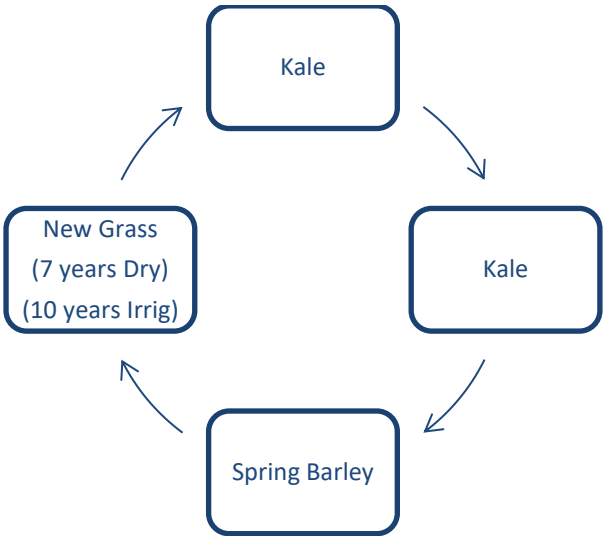
Labour Policy:

- Waged:
- Two full time plus casual labour.

Contractors:

- Specialist contractors employed for all crop establishment and harvest tasks.

Crop Rotation (Irrigated and Dryland):



Crop Rotation (Dryland):

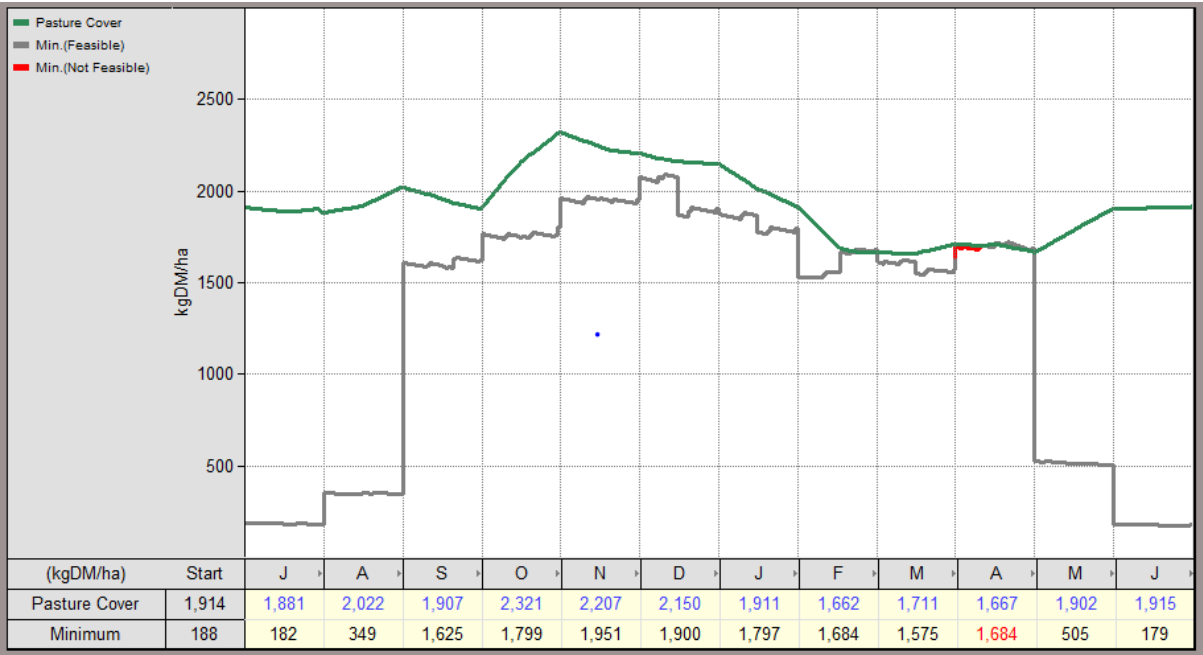


**Budget Summary**

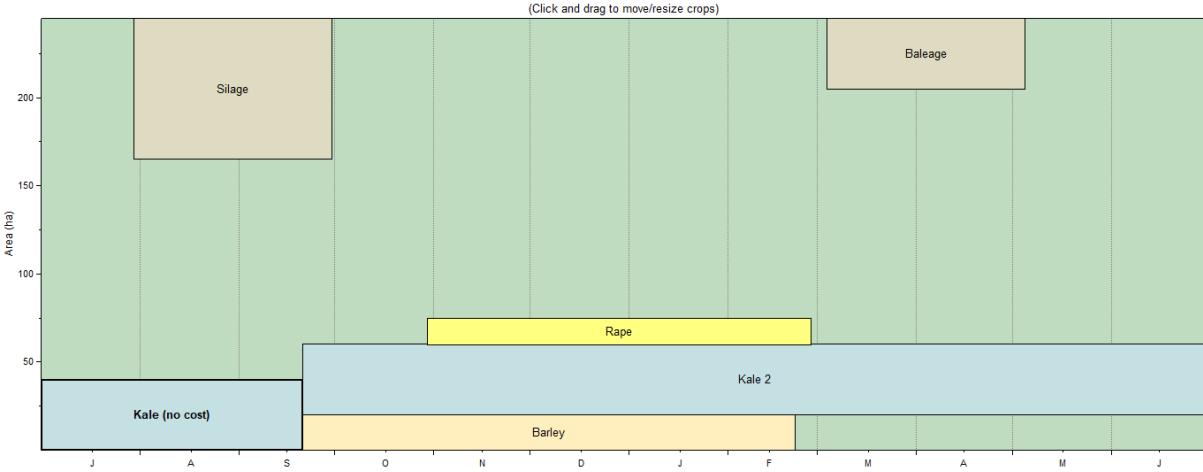
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		350 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	138,307	395.2	SHEEP	465,370	
VETERINARY AND ANIMAL HEALTH	38,276	109.4	WOOL	6,469	
STOCKFEED - Grazing			CATTLE	774,180	
STOCKFEED - Domestic	17,750	50.7	MILK		
STOCKFEED - Imported			DEER	115,940	
OTHER STOCK EXPENSES	3,000	8.6	VELVET	4,688	
STOCKFEED - Conservation	36,816	105.2	GRAIN AND PULSE PRODUCE		
CONTRACTING	8,151	23.3	Previous Yr Sales	30,020	
FREIGHT	17,640	50.4	Current Yr Sales	30,020	
FERTILISER - Product	123,845	353.8	Unsold At Year End	30,020	
FERTILISER - Cart and Spread	13,587	38.8	SMALL SEED PRODUCE		
SEED	22,097	63.1	Previous Yr Sales		
CERTIFICATION AND DRESSING	500	1.4	Current Yr Sales		
AGRICHEMICAL - Product	33,293	95.1	Unsold At Year End		
AGRICHEMICAL - Application	8,360	23.9	MISCELLANEOUS INCOME	63,676	
REPAIRS & MAINTENANCE	25,000	71.4			
VEHICLES - Fuels	12,200	34.9	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	12,000	34.3	Sheep	-364,150	
ELECTRICITY	27,009	77.2	Cattle	-256,060	
OTHER WORKING EXPS	3,500	10.0	Deer	-59,150	
ADMINISTRATION	24,700	70.6	Other		
STANDING CHARGES - Rates	18,963	54.2			
STANDING CHARGES - Insurance & ACC	15,424	44.1			
STANDING CHARGES - Other	14,570	41.6			
<b>CASH FARM WORKING EXPENSES</b>	<b>614,987</b>	<b>1,757.1</b>	<b>CASH FARM INCOME</b>	<b>811,003</b>	<b>2,317.2</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>196,016</b>	<b>560.0</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	12,915	36.9			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>627,902</b>	<b>1,794.0</b>	<b>CASH OPERATING INCOME</b>	<b>811,003</b>	<b>2,317.2</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>183,101</b>	<b>523.1</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	33,000	94.3			
PLANT REPLACEMENT	63,000	180.0	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>723,902</b>	<b>2,068.3</b>	<b>TOTAL CASH INCOME</b>	<b>811,003</b>	<b>2,317.2</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>87,101</b>	<b>248.9</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>87,101</b>	<b>248.9</b>			

Farmax Summary

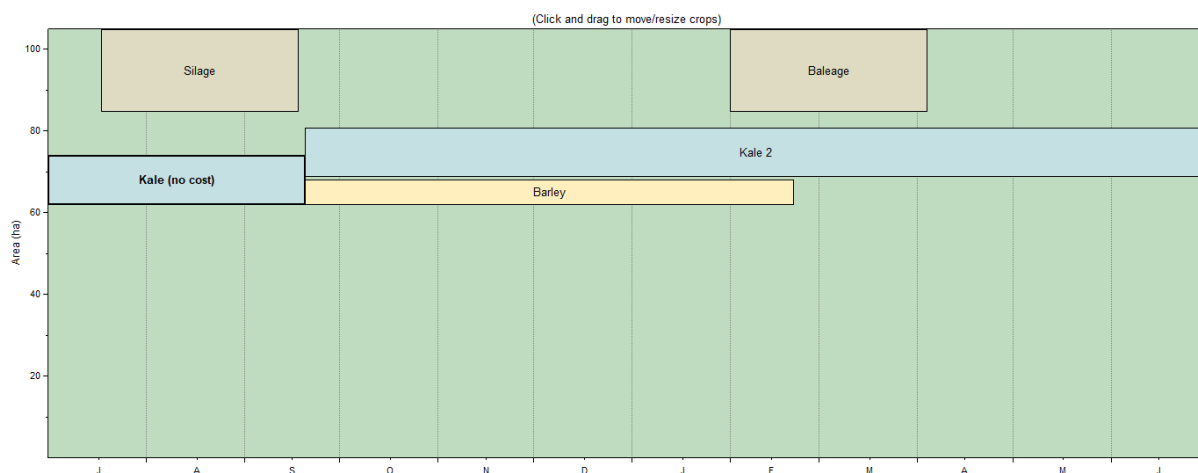
Pasture Covers



Crops by Block (Dryland)



Crops by Block (Irrigated)



## Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Kale			568		560	8.00
Straw	29.8	52.1			52.1	29.8
Baleage	135		180		180	135
Wheat			158	126		32.0
Rape			67.5		67.6	-0.050
Silage			72.6			72.6
<b>Total</b>	<b>165</b>	<b>52.1</b>	<b>1,046</b>	<b>126</b>	<b>859</b>	<b>277</b>

## Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Beef Weaners					620	618	618	616	616	614	614	614
R1 Beef	614	614	614	614	522	365	274	183	42	15		
<b>Total</b>	<b>614</b>	<b>614</b>	<b>614</b>	<b>614</b>	<b>1,142</b>	<b>983</b>	<b>892</b>	<b>799</b>	<b>658</b>	<b>629</b>	<b>614</b>	<b>614</b>

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs					945	1,643	2,017	1,033	1,575	1,570	1,565	1,213
Mixed Hoggets	1,208	55										
<b>Total</b>	<b>1,208</b>	<b>55</b>			<b>945</b>	<b>1,643</b>	<b>2,017</b>	<b>1,033</b>	<b>1,575</b>	<b>1,570</b>	<b>1,565</b>	<b>1,213</b>

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Fawns								250	249	249	248	248
R1 Mixed Deer	248	248	83									
<b>Total</b>	<b>248</b>	<b>248</b>	<b>83</b>					<b>250</b>	<b>249</b>	<b>249</b>	<b>248</b>	<b>248</b>

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand

 **OverseerFM**

Ovr - Sheep & Beef 2\_AM2\_2035.21

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	27 May 2021, 2:00PM
Model version	6.3.5

Farm details

N:	6,931	N/ha:	19	P:	28	P/ha:	0.1	GHG/ha:	5,001	NCE:	35%
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Total area	360 ha
Productive block area	350.00 ha
Nitrogen conversion efficiency (NCE)	35%
N Surplus	82 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	633	Beef / dairy grazing stock rate (RSU)	3352
Total liveweight reared (kg/ha grazed)	818	Deer stock rate (RSU)	235
Total liveweight sold (kg/ha grazed)	1626	Sheep stock rate (RSU)	755
Percent male beef animals	50		



**8.11.      Appendix 11: Viticulture**

**Farm System Summary**

Area:

Total	22ha
Effective	200ha

Irrigated balance:

100% irrigated with drip

Labour Policy:

Contractors for all tasks and part managed under contract.

Crop:

- 15 ha white varieties
- 5ha red varieties

## Budget Summary

Note this budget is contingent on a local processor establishing in the region to enable savings on freight. If product has to be shipped to Marlborough then freight would become \$350/t.

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		22 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	162,680	7,395	SHEEP		
VETERINARY AND ANIMAL HEALTH			WOOL		
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES			VELVET		
STOCKFEED - Conservation			GRAIN AND PULSE PRODUCE		
CONTRACTING	14,600	664	Previous Yr Sales		
FREIGHT	3,350	152	Current Yr Sales	367,750	
FERTILISER - Product	8,370	380	Unsold At Year End		
FERTILISER - Cart and Spread			SMALL SEED PRODUCE		
SEED			Previous Yr Sales		
CERTIFICATION AND DRESSING			Current Yr Sales		
AGRICHEMICAL - Product	9,300	423	Unsold At Year End		
AGRICHEMICAL - Application	12,000	545	MISCELLANEOUS INCOME		
REPAIRS & MAINTENANCE	18,000	818			
VEHICLES - Fuels	5,540	252	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	2,140	97	Sheep		
ELECTRICITY	4,600	209	Cattle		
OTHER WORKING EXPS	5,000	227	Deer		
ADMINISTRATION	19,000	864	Other		
STANDING CHARGES - Rates	3,240	147			
STANDING CHARGES - Insurance & ACC	9,230	420			
STANDING CHARGES - Other	3,180	145			
<b>CASH FARM WORKING EXPENSES</b>	<b>280,230</b>	<b>12,738</b>	<b>CASH FARM INCOME</b>	<b>367,750</b>	<b>16,716</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>87,520</b>	<b>3,978</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	5,885	267			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>286,115</b>	<b>13,005</b>	<b>CASH OPERATING INCOME</b>	<b>367,750</b>	<b>16,716</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>81,635</b>	<b>3,711</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	9,000	409			
PLANT REPLACEMENT	47,000	2,136	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>342,115</b>	<b>15,551</b>	<b>TOTAL CASH INCOME</b>	<b>367,750</b>	<b>16,716</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>25,635</b>	<b>1,165</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>25,635</b>	<b>1,165</b>			

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



ADC - Viticulture, 2021

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 4:24AM
Model version	6.3.5

Farm details

Total area	22 ha
Productive block area	20.00 ha
Nitrogen conversion efficiency (NCE)	14%
N Surplus	46 kg/ha
Region	Canterbury

N: 117 N/ha: 5 P: 1 P/ha: 0.1 GHG/ha: 1,592 NCE: 14%

**8.12.     Appendix 12: Forestry**

**Farm System Summary**

Area:

Total	270ha
Effective	260ha

Irrigated balance:

100% dryland

Labour Policy:

Contractors for all tasks.

Crop Rotation:

Forestry radiata 28 years repeating.

## Budget Summary

Note there is no provision for income from carbon as it can only be sold once. This forestry is assumed to operate in perpetuity for logging purposes.

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		260 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES			SHEEP		
VETERINARY AND ANIMAL HEALTH			WOOL		
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	1,500	6	VELVET		
STOCKFEED - Conservation			GRAIN AND PULSE PRODUCE		
CONTRACTING	291,974	1,123	Previous Yr Sales		
FREIGHT	102,143	393	Current Yr Sales		
FERTILISER - Product			Unsold At Year End		
FERTILISER - Cart and Spread			SMALL SEED PRODUCE		
SEED	2,835	11	Previous Yr Sales		
CERTIFICATION AND DRESSING			Current Yr Sales		
AGRICHEMICAL - Product	2,682	10	Unsold At Year End		
AGRICHEMICAL - Application	2,088	8	MISCELLANEOUS INCOME	574,089	
REPAIRS & MAINTENANCE					
VEHICLES - Fuels			STOCK PURCHASES		
VEHICLES - Repairs and Maintenance			Sheep		
ELECTRICITY			Cattle		
OTHER WORKING EXPS			Deer		
ADMINISTRATION	52,100	200	Other		
STANDING CHARGES - Rates	4,860	19			
STANDING CHARGES - Insurance & ACC	12,000	46			
STANDING CHARGES - Other	500	2			
<b>CASH FARM WORKING EXPENSES</b>	<b>472,681</b>	<b>1,818</b>	<b>CASH FARM INCOME</b>	<b>574,089</b>	<b>2,208</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>101,408</b>	<b>390</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	9,926	38			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>482,608</b>	<b>1,856</b>	<b>CASH OPERATING INCOME</b>	<b>574,089</b>	<b>2,208</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>91,482</b>	<b>352</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	25,000	96			
PLANT REPLACEMENT			INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>507,608</b>	<b>1,952</b>	<b>TOTAL CASH INCOME</b>	<b>574,089</b>	<b>2,208</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>66,482</b>	<b>256</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>66,482</b>	<b>256</b>			

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



ADC - Forestry

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 2:20AM
Model version	6.3.5

Farm details

Total area	310 ha
Productive block area	0 ha
Nitrogen conversion efficiency (NCE)	-
N Surplus	2 kg/ha
Region	Canterbury

N: 751 N/ha: 2 P: 42 P/ha: 0.1 GHG/ha: X NCE: -

8.13.      **Appendix 13: Arable 5 - Forecast**

**Farm System Summary**

Area:

Total	320ha
Effective	300ha

Irrigated balance:

100% Irrigated with centre pivots

Stock policy:

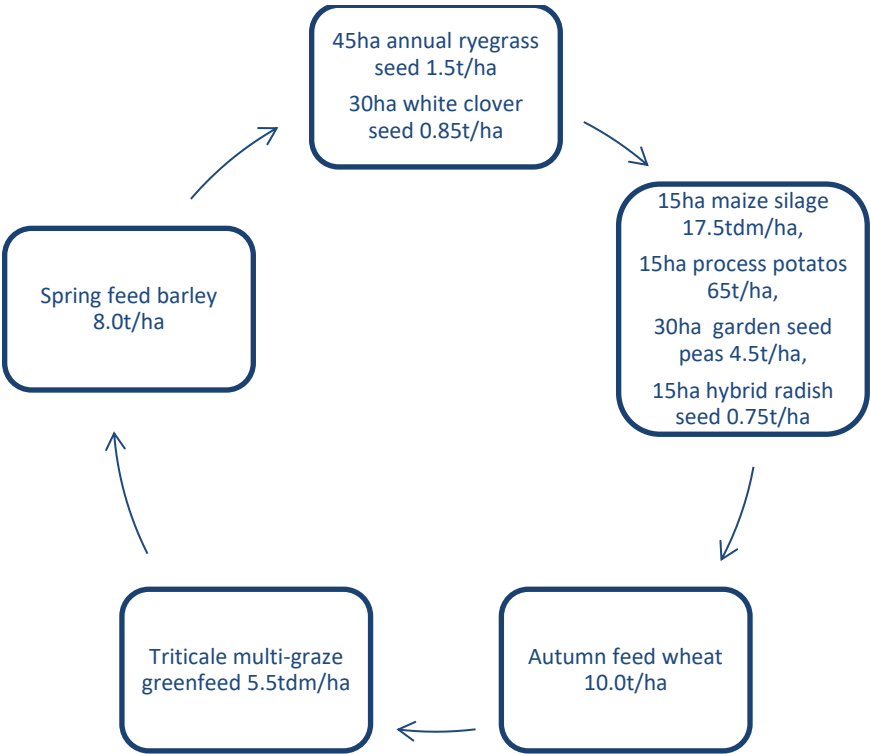
350 winter trade lambs

Labour Policy:

Waged:

Three full time plus casual labour, most of required machinery is owned to undertake farm activities.

Crop Rotation:



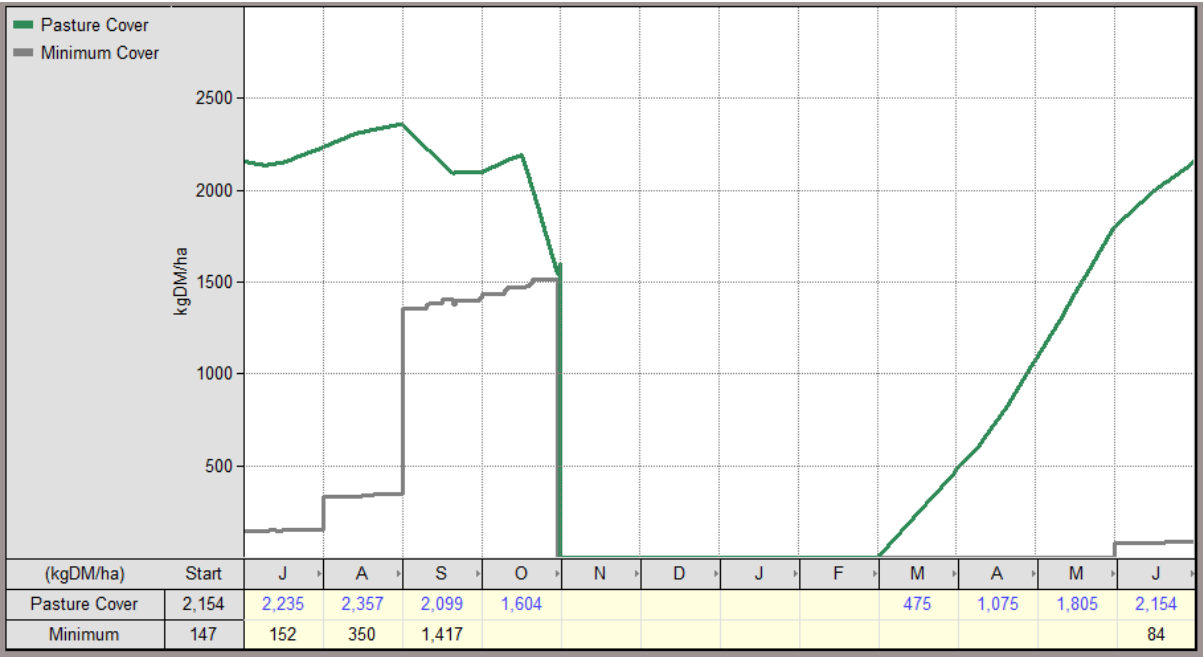
**Budget Summary**

MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		320 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	251,938	787	SHEEP	508,640	
VETERINARY AND ANIMAL HEALTH	10,500	33	WOOL	23,625	
STOCKFEED - Grazing			CATTLE		
STOCKFEED - Domestic			MILK		
STOCKFEED - Imported			DEER		
OTHER STOCK EXPENSES	1,500	5	VELVET		
STOCKFEED - Conservation	15,000	47	GRAIN AND PULSE PRODUCE		
CONTRACTING	51,078	160	Previous Yr Sales		
FREIGHT	46,652	146	Current Yr Sales	957,375	
FERTILISER - Product	120,899	378	Unsold At Year End		
FERTILISER - Cart and Spread	42,057	131	SMALL SEED PRODUCE		
SEED	117,975	369	Previous Yr Sales		
CERTIFICATION AND DRESSING	50,699	158	Current Yr Sales	412,125	
AGRICHEMICAL - Product	220,474	689	Unsold At Year End		
AGRICHEMICAL - Application			MISCELLANEOUS INCOME	45,000	
REPAIRS & MAINTENANCE	54,300	170			
VEHICLES - Fuels	81,500	255	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	26,000	81	Sheep	-319,725	
ELECTRICITY	63,400	198	Cattle		
OTHER WORKING EXPS	25,410	79	Deer		
ADMINISTRATION	32,740	102	Other		
STANDING CHARGES - Rates	6,912	22			
STANDING CHARGES - Insurance & ACC	19,730	62			
STANDING CHARGES - Other	40,600	127			
<b>CASH FARM WORKING EXPENSES</b>	<b>1,279,363</b>	<b>3,998</b>	<b>CASH FARM INCOME</b>	<b>1,627,040</b>	<b>5,085</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>347,677</b>	<b>1,086</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	26,867	84			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,306,230</b>	<b>4,082</b>	<b>CASH OPERATING INCOME</b>	<b>1,627,040</b>	<b>5,085</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>320,810</b>	<b>1,003</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION					
PLANT REPLACEMENT	240,000	750	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,546,230</b>	<b>4,832</b>	<b>TOTAL CASH INCOME</b>	<b>1,627,040</b>	<b>5,085</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>80,810</b>	<b>253</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>80,810</b>	<b>253</b>			

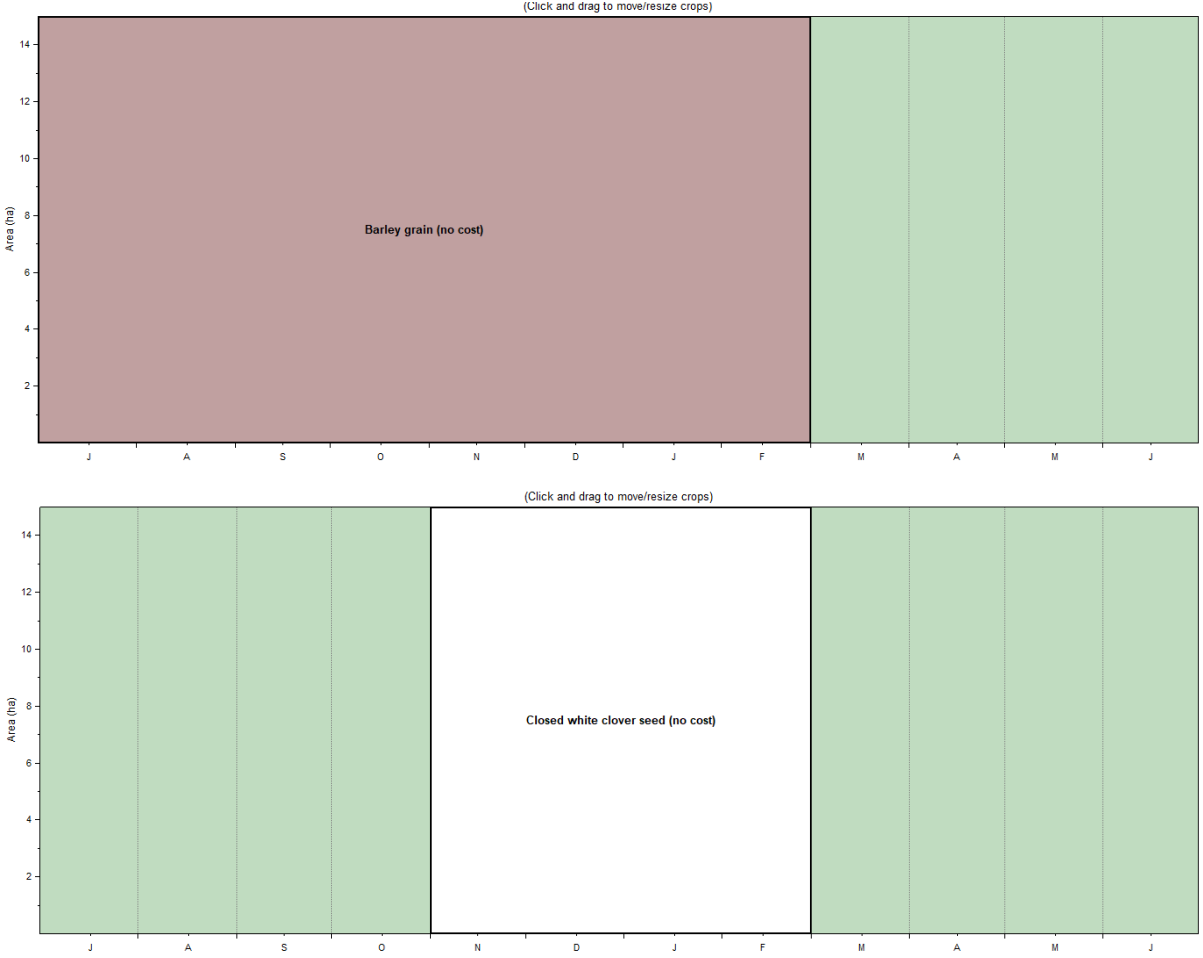


Farmax Summary

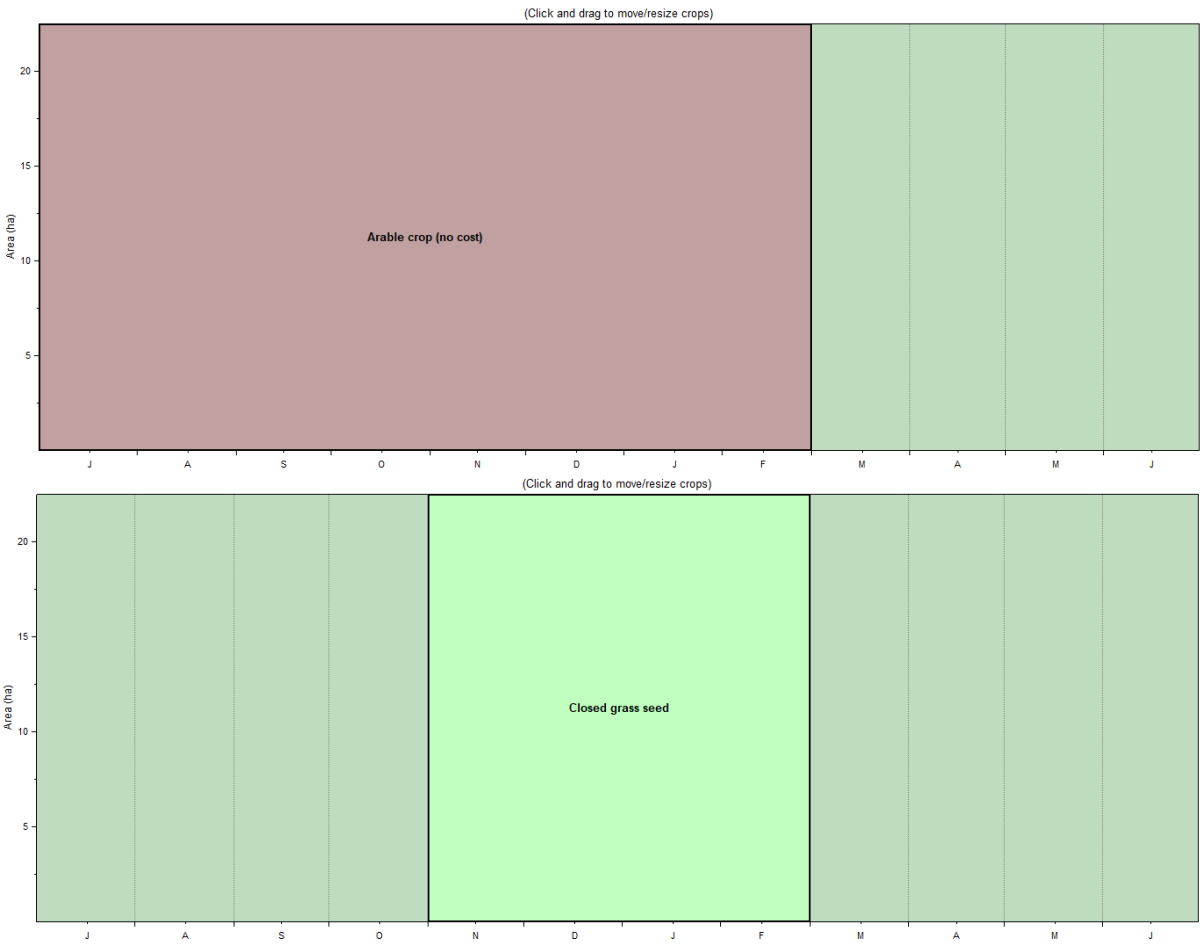
Pasture Covers



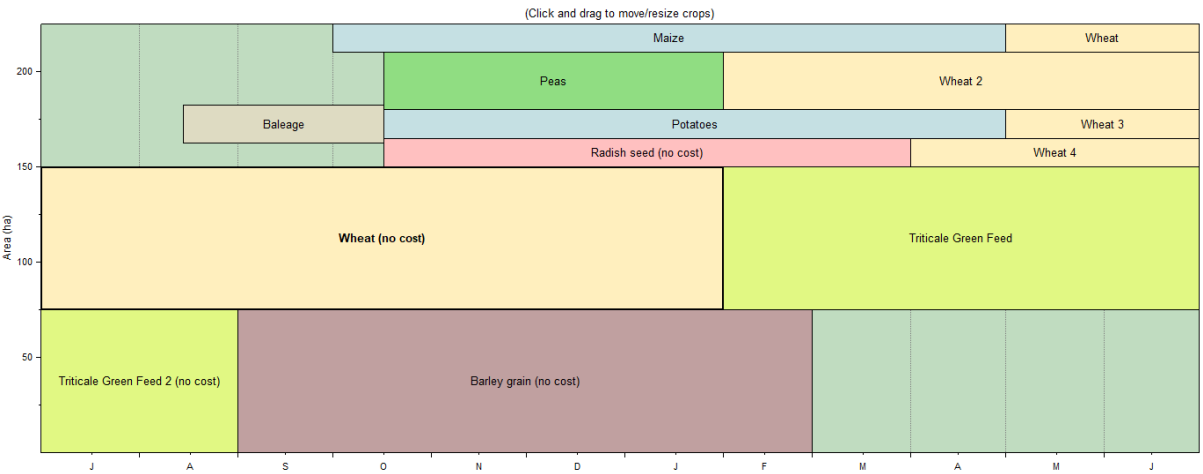
Crops by Block (Clover Seed)



Crops by Block (Post Grass Seed Block)



Crops by Block (Main Crop Block)



Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Wheat grain			900			900
Rape	156					156
Peas - Seed						
Maize						
Greenfeed Oats	150					150
Grass Seed			22.5			22.5
Triticale Green Feed			413		413	-0.50
White clover seed			13.5			13.5
Radish seed						
Barley grain						
Baleage			59.8			59.8
<b>Total</b>	<b>306</b>	<b>0.00</b>	<b>1,408</b>	<b>0.00</b>	<b>413</b>	<b>1,301</b>

## Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs											3,480	3,460
Mixed Hoggets	3,440	3,420	2,321									
<b>Total</b>	<b>3,440</b>	<b>3,420</b>	<b>2,321</b>								<b>3,480</b>	<b>3,460</b>

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



ADC-Arable 5-NPS

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 4:36AM
Model version	6.3.5

Farm details

Total area	320 ha
Productive block area	300.00 ha
Nitrogen conversion efficiency (NCE)	65%
N Surplus	53 kg/ha
Region	Canterbury
Sheep stock rate (RSU)	1084

N: 5,032 N/ha: 16 P: 148 P/ha: 0.5 GHG/ha: 3,435 NCE: 65%

## 8.14. Appendix 14: Dairy 4 - Forecast

### Farm System Summary

#### Area:

Total	220ha
Effective	210ha

#### Irrigated balance:

100% Irrigated with centre pivots

#### Stock policy:

581 peak cows

2.8 cows/ha

600kgMS/cow

Winter barn in use with cows fed indoors from 1 April to 1 September. Cull cows sold in March and April to provide room for the replacement heifers to arrive on 1 April.

#### Labour Policy:

##### Waged:

Four full time plus casual labour over calf rearing.

##### Contractors:

Specialist contractors employed for all cultivation, drilling and forage making or freight.

#### Crop Rotation:

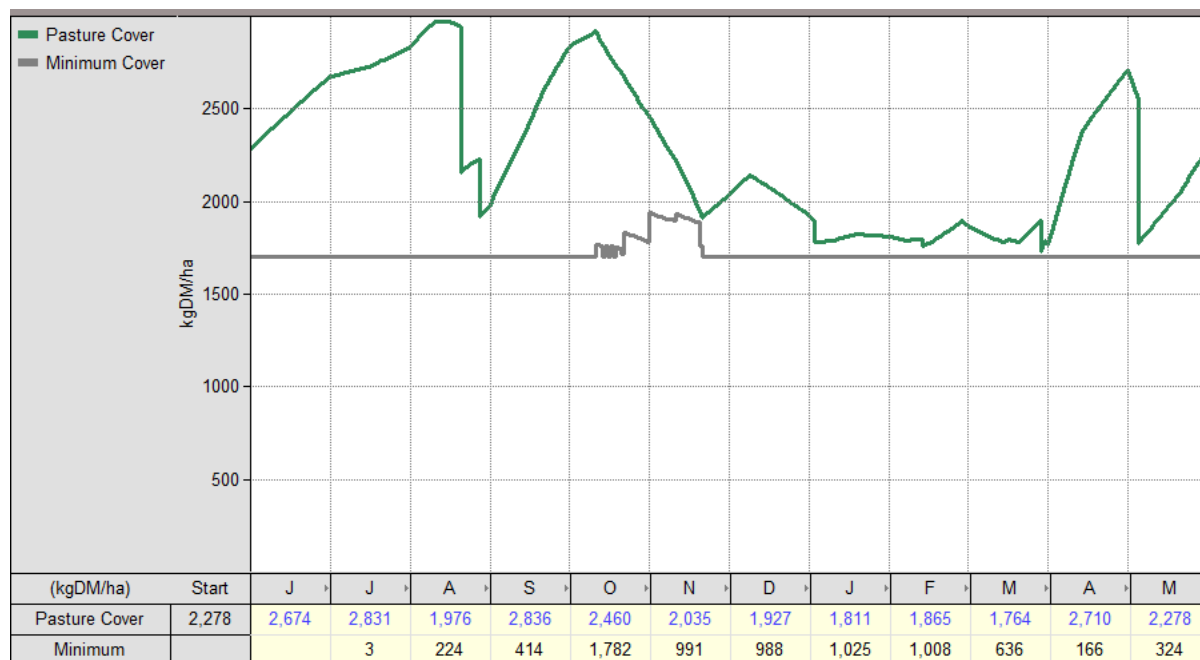
Regrassing only (no forage or feed crops grown). All grasses are Italian and plantain pasture so there is high winter growth to try and manage leaching risk further.

**Budget Summary**

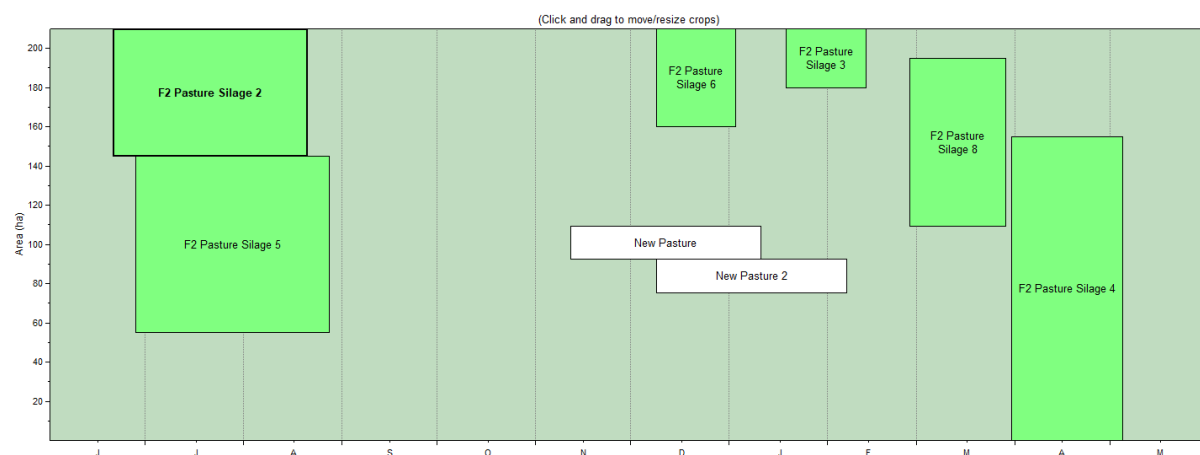
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY	
		220 Su or Ha	
	TOTAL \$	Income	TOTAL \$ Income
WAGES	248,700	1,130.5 SHEEP	
VETERINARY AND ANIMAL HEALTH	146,896	667.7 WOOL	
STOCKFEED - Grazing	102,938	467.9 CATTLE	114,195
STOCKFEED - Domestic	605,778	2,753.5 GRAZING	
STOCKFEED - Imported		MILK	2,420,902
OTHER STOCK EXPENSES	14,400	65.5 DEER	
STOCKFEED - Conservation	190,000	863.6 VELVET	
CONTRACTING	4,760	21.6 GRAIN AND PULSE PRODUCE	
FREIGHT	3,308	15.0 Previous Yr Sales	
FERTILISER - Product	141,275	642.2 Current Yr Sales	
FERTILISER - Cart and Spread	23,524	106.9 Unsold At Year End	
SEED	8,568	38.9 SMALL SEED PRODUCE	
CERTIFICATION AND DRESSING	500	2.3 Previous Yr Sales	
AGRICHEMICAL - Product	6,862	31.2 Current Yr Sales	
AGRICHEMICAL - Application	2,992	13.6 Unsold At Year End	
REPAIRS & MAINTENANCE	126,200	573.6 MISCELLANEOUS INCOME	5,800
VEHICLES - Fuels	42,000	190.9	
VEHICLES - Repairs and Maintenance	46,400	210.9 STOCK PURCHASES	
ELECTRICITY	67,260	305.7	Sheep
OTHER WORKING EXPS	10,360	47.1	Cattle
ADMINISTRATION	25,935	117.9	Deer
STANDING CHARGES - Rates	17,160	78.0	Other
STANDING CHARGES - Insurance & ACC	62,680	284.9	
STANDING CHARGES - Other	48,756	221.6	
<b>CASH FARM WORKING EXPENSES</b>	<b>1,947,251</b>	<b>8,851.1 CASH FARM INCOME</b>	<b>2,519,297 11,451.3</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>572,046</b>	<b>2,600.2</b>	
DEBT SERVICING			
Mortgage			
Term Interest			
Current Account	40,892	185.9	
Rent			
Other			
<b>CASH OPERATING EXPENSES</b>	<b>1,988,143</b>	<b>9,037.0 CASH OPERATING INCOME</b>	<b>2,519,297 11,451.3</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>531,153</b>	<b>2,414.3</b>	
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION	84,000	381.8	
PLANT REPLACEMENT	229,500	1,043.2 INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
<b>TOTAL CASH EXPENDITURE</b>	<b>2,301,643</b>	<b>10,462.0 TOTAL CASH INCOME</b>	<b>2,519,297 11,451.3</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>217,653</b>	<b>989.3</b>	
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation			
<b>TRUE SURPLUS/DEFICIT</b>	<b>217,653</b>	<b>989.3</b>	

## Farmax Summary

### Pasture Covers



### Crops by Block



### Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
F1 Meal and Grains bought		1,009			1,009	
F2 Pasture Silage	600		951		953	599
New Pasture						
F3 Maize/barley Silage bought		641			641	
<b>Total</b>	<b>600</b>	<b>1,650</b>	<b>951</b>	<b>0.00</b>	<b>2,603</b>	<b>599</b>

### Stock Numbers by Month

<b>Mob</b>	<b>30 Jun</b>	<b>31 Jul</b>	<b>31 Aug</b>	<b>30 Sep</b>	<b>31 Oct</b>	<b>30 Nov</b>	<b>31 Dec</b>	<b>31 Jan</b>	<b>28 Feb</b>	<b>31 Mar</b>	<b>30 Apr</b>	<b>31 May</b>
Cows at home	600	598	586	581	581	581	581	579	579	579	458	458
Cows Grazing												
2011 Born Heifers at Home											135	135
2011 Born Heifers Grazing	135	135	135	135	135	135	135	135	135	135		
2012 Born Heifers Grazing							135	135	135	135	135	135
2012 Born Heifers at Home		11	135	135	135	135						
Bobby Calves		7	64	8								
<b>Total</b>	<b>735</b>	<b>751</b>	<b>920</b>	<b>859</b>	<b>851</b>	<b>851</b>	<b>851</b>	<b>849</b>	<b>849</b>	<b>849</b>	<b>728</b>	<b>728</b>



## Overseer Summaries


**MRB**

189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand


**OverseerFM**

### ADC-Dairy4-NPS

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 2:20PM
Model version	6.3.5

### Farm details

N: **2,534** N/ha: **12** P: **102** P/ha: **0.5** GHG/ha: **22,783** NCE: **39%**

Total area	215 ha
Productive block area	210.00 ha
Nitrogen conversion efficiency (NCE)	39%
N Surplus	213 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	407
Total liveweight reared (kg/ha grazed)	118
Total liveweight sold (kg/ha grazed)	489
Default calving date	06 August
Milk production per cow (kg milk solids / cow)	651.4

Milk solids (kg/ha grazed)	2221
Milking herd size (peak cows/ha grazed)	3.4
Dairy stock rate (RSU)	8113
Dairy replacements stock rate (RSU)	193

8.15.      **Appendix 15: Dairy Support 4 - Forecast**

**Farm System Summary**

Area:

Total	270ha
Effective	260ha

Irrigated balance:

100% Irrigated with centre pivots

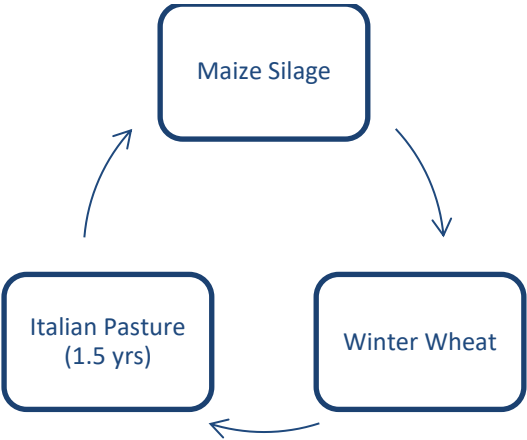
Stock policy:

- 600 R1 dairy grazing heifers
- 600 R2 IC dairy grazing heifer (depart 1 April to winter in the barn as an R2 at the dairy farm)
- Feeding maize silage over summer to balance surplus protein from pasture.
- All cattle wintered in a straw based barn from 1 April to 1 September.

Labour Policy:

- Waged:
  - Two full time plus casual labour, completing cultivation and drilling of wheat and grass but not maize.
- Contractors:
  - Specialist contractors employed for all silage making and manure spreading.

Crop Rotation:

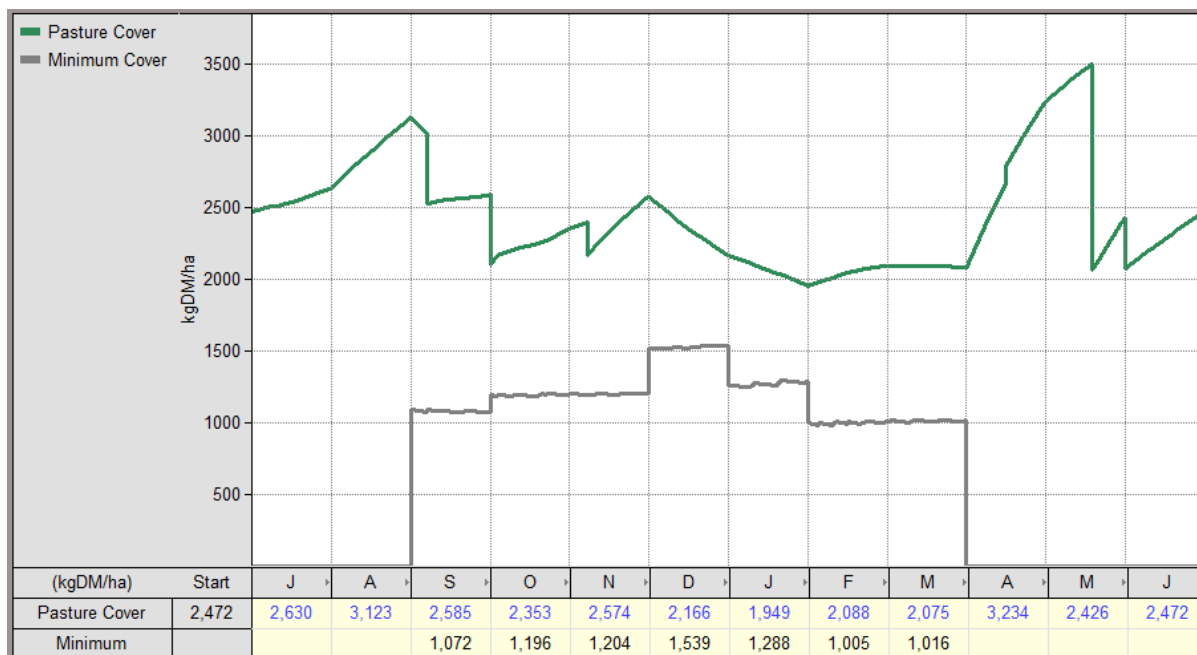


**Budget Summary**

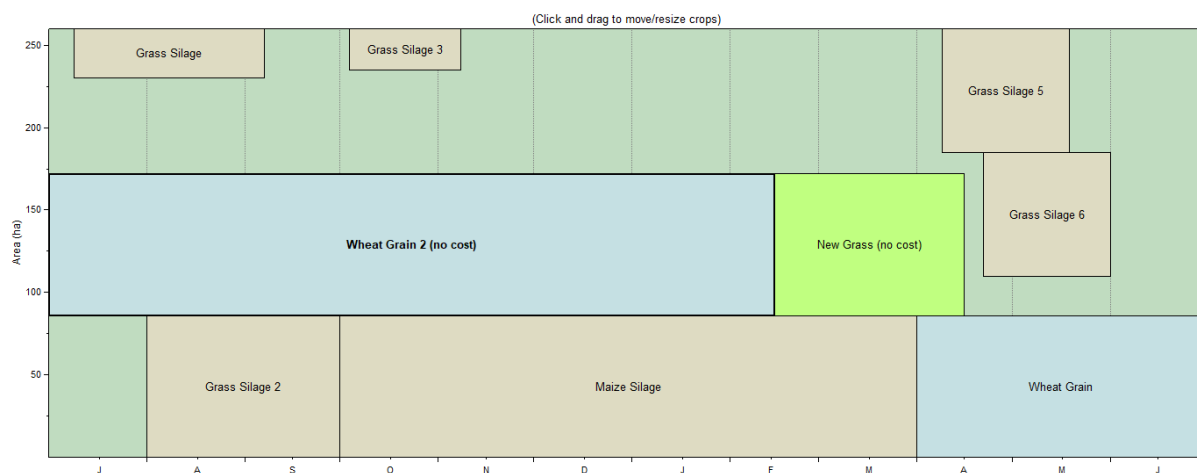
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		270 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	127,000	470.4	GRAZING	452,215	
VETERINARY AND ANIMAL HEALTH	9,105	33.7	SHEEP		
STOCKFEED - Grazing			WOOL		
STOCKFEED - Domestic			CATTLE		
STOCKFEED - Imported			MILK		
OTHER STOCK EXPENSES			DEER		
STOCKFEED - Conservation	102,760	380.6	VELVET		
CONTRACTING	43,700	161.9	GRAIN AND PULSE PRODUCE		
FREIGHT	19,620	72.7	Previous Yr Sales		
FERTILISER - Product	80,845	299.4	Current Yr Sales	536,580	
FERTILISER - Cart and Spread	18,176	67.3	Unsold At Year End		
SEED	83,764	310.2	SMALL SEED PRODUCE		
CERTIFICATION AND DRESSING	500	1.9	Previous Yr Sales		
AGRICHEMICAL - Product	56,354	208.7	Current Yr Sales		
AGRICHEMICAL - Application	30,822	114.2	Unsold At Year End		
REPAIRS & MAINTENANCE	44,500	164.8	MISCELLANEOUS INCOME	26,880	
VEHICLES - Fuels	33,973	125.8			
VEHICLES - Repairs and Maintenance	20,500	75.9	STOCK PURCHASES		
ELECTRICITY	58,480	216.6	Sheep		
OTHER WORKING EXPS	3,500	13.0	Cattle		
ADMINISTRATION	24,900	92.2	Deer		
STANDING CHARGES - Rates	7,020	26.0	Other		
STANDING CHARGES - Insurance & ACC	21,346	79.1			
STANDING CHARGES - Other	23,950	88.7			
<b>CASH FARM WORKING EXPENSES</b>	<b>810,815</b>	<b>3,003.0</b>	<b>CASH FARM INCOME</b>	<b>1,015,675</b>	<b>3,761.8</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>204,860</b>	<b>758.7</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	17,027	63.1			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>827,842</b>	<b>3,066.1</b>	<b>CASH OPERATING INCOME</b>	<b>1,015,675</b>	<b>3,761.8</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>187,833</b>	<b>695.7</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	16,000	59.3			
PLANT REPLACEMENT	129,000	477.8	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>972,842</b>	<b>3,603.1</b>	<b>TOTAL CASH INCOME</b>	<b>1,015,675</b>	<b>3,761.8</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>42,833</b>	<b>158.6</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>42,833</b>	<b>158.6</b>			

## Farmax Summary

### Pasture Covers



### Crops by Block



### Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Grass Silage	189		582		574	197
Maize Silage	163		1,548		262	1,449
Wheat Grain			832		303	530
New Grass						
<b>Total</b>	<b>352</b>	<b>0.00</b>	<b>2,962</b>	<b>0.00</b>	<b>1,139</b>	<b>2,176</b>

## Stock Numbers by Month

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Heifer Calves						607	607	607	607	607	607	607
1-Year Heifers	607	607	607	607	607	607	607	577	577			
<b>Total</b>	<b>607</b>	<b>607</b>	<b>607</b>	<b>607</b>	<b>607</b>	<b>1,214</b>	<b>1,214</b>	<b>1,184</b>	<b>1,184</b>	<b>607</b>	<b>607</b>	<b>607</b>

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



ADC-Dairy Support 4-NPS

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 12:43PM
Model version	6.3.5

Farm details

Total area	270 ha
Productive block area	260.00 ha
Nitrogen conversion efficiency (NCE)	108%
N Surplus	-10 kg/ha
Region	Canterbury
Dairy grazing stock rate (RSU)	3332

N: 6,432 N/ha: 24 P: 21 P/ha: 0.1 GHG/ha: 7,201 NCE: 108%

## 8.16. Appendix 16: Red Meat 3 - Forecast

### Farm System Summary

#### Area:

Total	360ha
Effective	350ha

#### Irrigated balance:

- 50% Irrigated with centre pivots
- 50% dryland

#### Stock policy:

- 200 Dairy based Friesian bulls purchased at 100kg and finished before second winter.
- 250 head of angus weaner steers bought in March and sold as forward stores to Five Star the following December.
- 400 Dairy cross beef steers and heifers bought at 100kg as weaners and finished (mostly) before the second winter.
- 250 R2 steers wintered.
- 750 weaner deer traded.
- 2500 summer traded lambs.
- 2800 winter traded lambs.
- All cattle in winter barn from 1 April to 1 September.

#### Feeds:

- Maize silage fed as 25% of diet over summer period to balance the surplus pasture protein.
- Wheat grain and barley silage fed over winter in feed barn (straw bedding).
- All straw from wheat is retained for shed bedding.

#### Labour Policy:

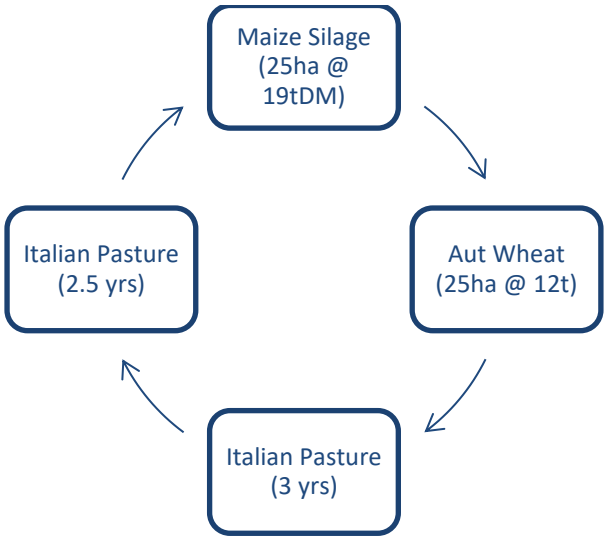
##### Waged:

- Four full time plus casual labour over calf rearing.

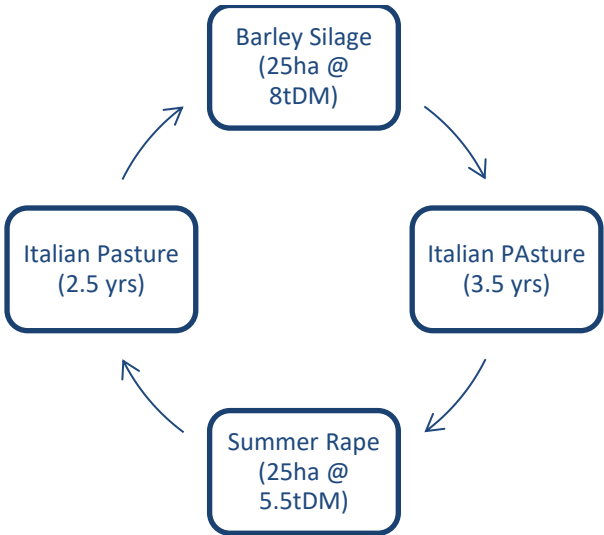
##### Contractors:

- Specialist contractors employed for all cultivation, drilling and forage making or freight.
- Solid manure spread by contractors with spreader wagon.

Crop Rotation (Irrigated):



Crop Rotation (Dryland):



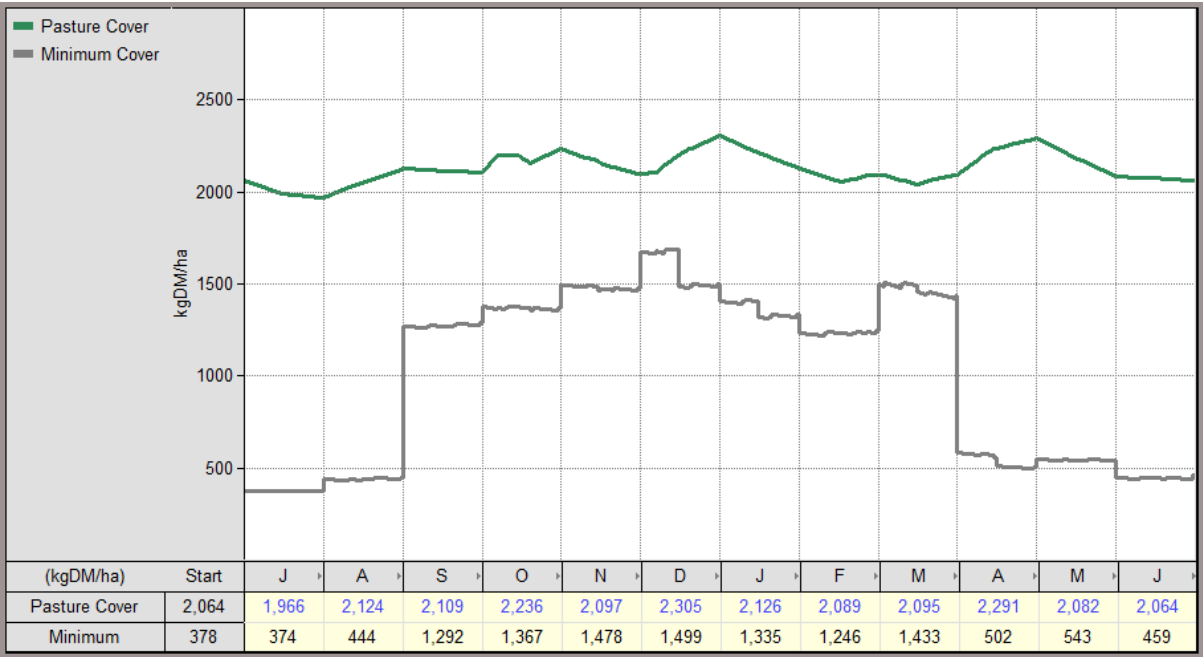


**Budget Summary**

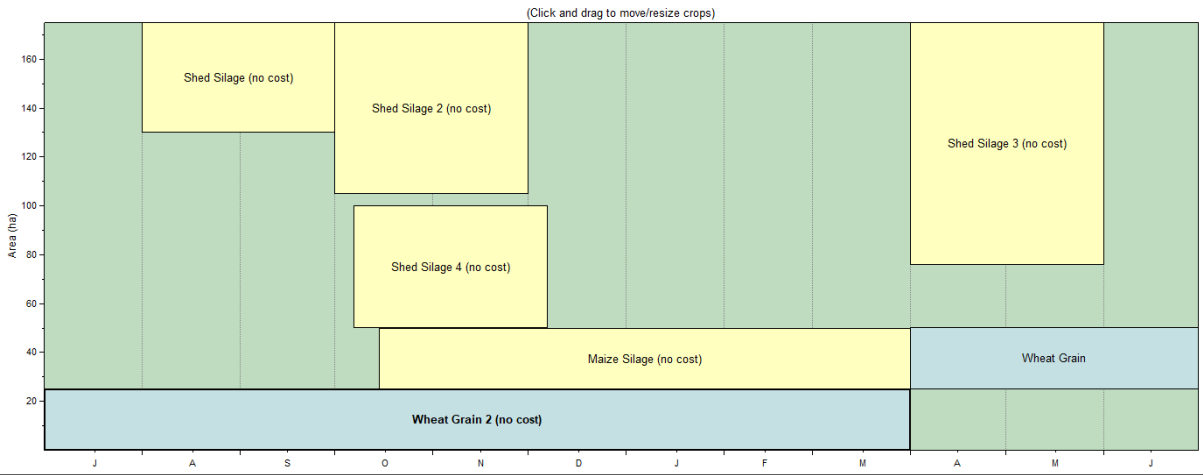
MACFARLANE RURAL BUSINESS LTD		BUDGET SUMMARY			
		360 Su or Ha			
	TOTAL \$	Income		TOTAL \$	Income
WAGES	167,089	464.1	SHEEP	626,586	
VETERINARY AND ANIMAL HEALTH	59,143	164.3	WOOL	21,465	
STOCKFEED - Grazing			CATTLE	1,626,349	
STOCKFEED - Domestic	26,644	74.0	MILK		
STOCKFEED - Imported			DEER	358,046	
OTHER STOCK EXPENSES	4,959	13.8	VELVET	9,219	
STOCKFEED - Conservation	151,020	419.5	GRAIN AND PULSE PRODUCE		
CONTRACTING	52,125	144.8	Previous Yr Sales		
FREIGHT	38,128	105.9	Current Yr Sales		
FERTILISER - Product	128,191	356.1	Unsold At Year End		
FERTILISER - Cart and Spread	21,128	58.7	SMALL SEED PRODUCE		
SEED	48,100	133.6	Previous Yr Sales		
CERTIFICATION AND DRESSING	500	1.4	Current Yr Sales		
AGRICHEMICAL - Product	28,625	79.5	Unsold At Year End		
AGRICHEMICAL - Application	14,300	39.7	MISCELLANEOUS INCOME	3,500	
REPAIRS & MAINTENANCE	46,750	129.9			
VEHICLES - Fuels	40,487	112.5	STOCK PURCHASES		
VEHICLES - Repairs and Maintenance	28,000	77.8	Sheep	-468,380	
ELECTRICITY	41,650	115.7	Cattle	-741,500	
OTHER WORKING EXPS	3,500	9.7	Deer	-187,688	
ADMINISTRATION	27,500	76.4	Other		
STANDING CHARGES - Rates	9,450	26.3			
STANDING CHARGES - Insurance & ACC	28,068	78.0			
STANDING CHARGES - Other	23,950	66.5			
<b>CASH FARM WORKING EXPENSES</b>	<b>989,306</b>	<b>2,748.1</b>	<b>CASH FARM INCOME</b>	<b>1,247,598</b>	<b>3,465.5</b>
<b>EBIT (Earnings Before Interest and Tax)</b>	<b>258,292</b>	<b>717.5</b>			
DEBT SERVICING					
Mortgage					
Term Interest					
Current Account	20,775	57.7			
Rent					
Other					
<b>CASH OPERATING EXPENSES</b>	<b>1,010,082</b>	<b>2,805.8</b>	<b>CASH OPERATING INCOME</b>	<b>1,247,598</b>	<b>3,465.5</b>
<b>CASH OPERATING SURPLUS/DEFICIT</b>	<b>237,516</b>	<b>659.8</b>			
PERSONAL DRAWINGS			NON OPERATING INCOME		
OTHER PERSONAL					
TAXATION	22,000	61.1			
PLANT REPLACEMENT	158,137	439.3	INVESTMENT INCOME		
INVESTMENTS					
UNPAID ACCOUNTS					
<b>TOTAL CASH EXPENDITURE</b>	<b>1,190,219</b>	<b>3,306.2</b>	<b>TOTAL CASH INCOME</b>	<b>1,247,598</b>	<b>3,465.5</b>
<b>TOTAL CASH SURPLUS/DEFICIT</b>	<b>57,379</b>	<b>159.4</b>			
Change in value of stock on hand					
Change in value of produce on hand					
Depreciation					
<b>TRUE SURPLUS/DEFICIT</b>	<b>57,379</b>	<b>159.4</b>			

Farmax Summary

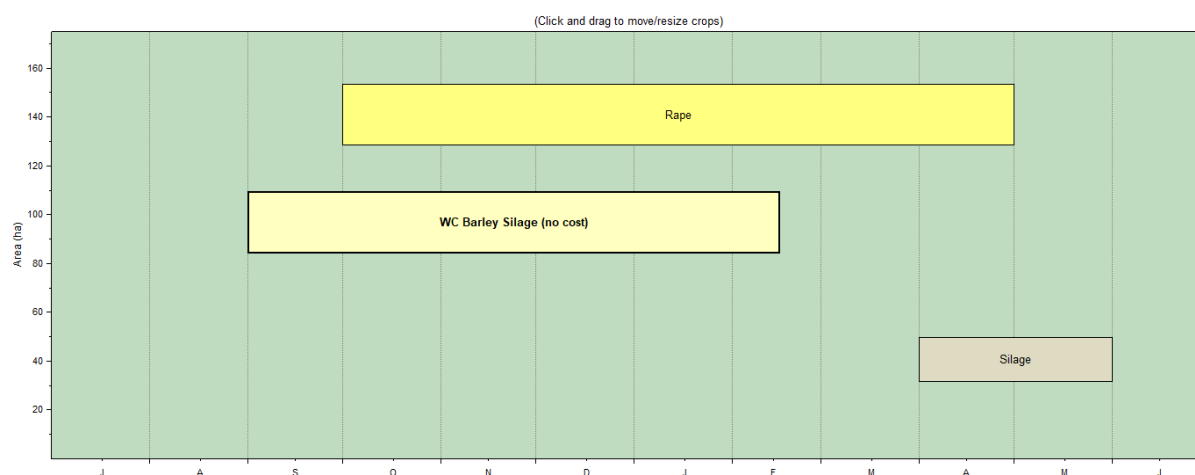
Pasture Covers



Crops by Block (Irrigated)



## Crops by Block (Dryland)



## Supplements

tonnes DM	Open	Buy	Produce	Sell	Feed	Close
Maize Silage	475		475		475	475
WC Barley Silage	200		200		200	200
Fallow						
Shed Silage	384		792		792	384
Wheat Grain			264		264	
Silage	60.0		54.0		54.0	60.0
Rape			138		138	-0.50
<b>Total</b>	<b>1,119</b>	<b>0.00</b>	<b>1,923</b>	<b>0.00</b>	<b>1,923</b>	<b>1,119</b>

## Stock Numbers by Month (Bull Calves)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Beef Weaners					200	199	199	198	198	198	198	198
R1 Beef	198	198	198	198	198	197	197	132	66			
<b>Total</b>	<b>198</b>	<b>198</b>	<b>198</b>	<b>198</b>	<b>398</b>	<b>396</b>	<b>396</b>	<b>330</b>	<b>264</b>	<b>198</b>	<b>198</b>	<b>198</b>

## Stock Numbers by Month (Lambs)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Lambs						1,300	2,418	1,766	1,533	2,848	2,843	2,024
Mixed Hoggets	2,019	1,511										
<b>Total</b>	<b>2,019</b>	<b>1,511</b>				<b>1,300</b>	<b>2,418</b>	<b>1,766</b>	<b>1,533</b>	<b>2,848</b>	<b>2,843</b>	<b>2,024</b>

## Stock Numbers by Month (Deer)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Mixed Fawns								750	749	748	747	747
R1 Mixed Deer	746	745	596	447	299	149						
<b>Total</b>	<b>746</b>	<b>745</b>	<b>596</b>	<b>447</b>	<b>299</b>	<b>149</b>		<b>750</b>	<b>749</b>	<b>748</b>	<b>747</b>	<b>747</b>

## Stock Numbers by Month (Five Star Beef Steers)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Steer Calf										250	249	249
R1/R2 Steers	249	248	248	185	93							
<b>Total</b>	<b>249</b>	<b>248</b>	<b>248</b>	<b>185</b>	<b>93</b>					<b>250</b>	<b>249</b>	<b>249</b>

## Stock Numbers by Month (Finishing Beef Heifers)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Heifer Calf					200	200	200	199	199	199	198	198
R1/R2 Heifer	198	197	197	197	197	197	100	59	18			
<b>Total</b>	<b>198</b>	<b>197</b>	<b>197</b>	<b>197</b>	<b>397</b>	<b>397</b>	<b>300</b>	<b>258</b>	<b>217</b>	<b>199</b>	<b>198</b>	<b>198</b>

## Stock Numbers by Month (Finishing Beef Steers)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
Steer Calf					200	200	200	199	199	199	199	198
R1/R2 Steers	198	197	197	197	197	197	197	122	72	26	26	26
2-Year Steers	26	26	13									
<b>Total</b>	<b>224</b>	<b>223</b>	<b>210</b>	<b>197</b>	<b>397</b>	<b>397</b>	<b>397</b>	<b>321</b>	<b>271</b>	<b>225</b>	<b>225</b>	<b>224</b>

## Stock Numbers by Month (Finishing R2 Beef)

Mob	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun
1-Year Steers										250	250	250
2-Year Steers	250	249	249	59								
<b>Total</b>	<b>250</b>	<b>249</b>	<b>249</b>	<b>59</b>						<b>250</b>	<b>250</b>	<b>250</b>

Overseer Summaries



**MRB**  
189 Alford Forest Rd, Allenton, Ashburton 7700, New Zealand



ADC-Red Meat 3-NPS

Analysis type	Predictive
Is publication	No
Application version	3.4.1.3
Printed date	21 Jun 2021, 2:24PM
Model version	6.3.5

Farm details

N: 6,371 N/ha: 18 P: 37 P/ha: 0.1 GHG/ha: 13,709 NCE: 31%

Total area	360 ha
Productive block area	350.00 ha
Nitrogen conversion efficiency (NCE)	31%
N Surplus	142 kg/ha
Region	Canterbury

Total liveweight brought (kg/ha grazed)	1940	Beef / dairy grazing stock rate (RSU)	5463
Total liveweight reared (kg/ha grazed)	1596	Deer stock rate (RSU)	726
Total liveweight sold (kg/ha grazed)	3481	Sheep stock rate (RSU)	1162
Percent male beef animals	80		

## 8.17. Appendix 17: Mitigation Tools in the Forecast Models

- Italian pastures (for winter activity)
- Plantain in all pastures at 30% unless arable farming.
- No grazing pastures or forages with cattle between 1 April and 1 September to minimise N leaching risks from urine patches (cattle in a barn).
- No winter forages (only oats for lambs) to minimise fallow period exacerbating leaching risks.
- Planting not later than April and not earlier than September (maintain leaf cover and rooting depth over winter to intercept any potentially mobile nitrogen).
- Centre pivots or drip tape irrigation only.
- Variable rate irrigation where required.
- Soil moisture monitoring, 1 per 30ha.
- Deficit irrigation in shoulders more so than at peak to capture more potential rainfall and therefore reduce the risks of drainage.
- Diet balancing with high carbohydrate supplements.
- Regular tissue and ANM testing to ascertain nitrogen application requirements.
- Coated urea's only.
- No August or May N
- More frequent and lower volume N applications to pastures and crops
- Nitrification inhibitors where applicable.
- Gibberellic acid use on pastures.
- Within paddock and individual paddock testing.
- Variable rate fertiliser spreading.
- Yield mapping, sensor technology and target timing.
- Fallow periods set to 0 days.
- Full farm nutrient budgeting and considering N cycles and manure contributions.

## 8.18. Appendix 18: Commodity Inputs

Category	Item	Note	Rate				
Lamb	Spring/winter		\$6.80				
	Summer		\$5.70				
	Prime Lamb	A/S/O	\$6.80				
		J/F/M	\$5.40				
		A/M/J	\$5.70				
	Store lamb	N/D	\$3.00				
		J/F/M	\$2.70				
		A/M/J	\$2.90				
	Cull ewe		\$90				
	Winter margin		\$55 (calculate)				
	Summer margin		\$16 (calculate)				
Wool	Ewe		\$4.00				
	Lamb/hogget		\$4.50				
Crop	Wheat - Feed		\$410	del (less \$10 commission; \$20 freight)			
	Wheat - Premium Milling		\$445	del (less \$10 commission; \$20 freight)			
	Barley - Feed		\$390	del (less \$10 commission; \$20 freight)			
	Barley - Malting		\$430	del (less \$10 commission; \$20 freight)			
	Peas - Vining		\$320				
	Peas - Garden seed		\$1,000	del (less \$10 freight)			
	Potatoes		\$240				
	Onions		\$300				
	Sweet Corn		\$190	(nett of bypass pool)			
	Maize		\$230				
	PRG Ryegrass seed - Proprietary		\$2,300	del (less \$10 freight)			
	IRG Ryegrass seed - Proprietary		\$2,100	del (less \$10 freight)			
	White clover seed - Proprietary		\$5,750	del (less \$10 freight)			
	OP Cabbage		\$2.50	del (less \$10 freight)			
	Linseed		\$940	del (less \$10 freight)			
	Sunflower		\$820	del (less \$10 freight)			
	Hemp		\$4,000	del (less \$10 freight)			
	Lucerne /kgDM		\$0.20	/kgDM			
	Baleage (sell baled 250kgDM)	285kgDM	\$57	royalty (20c/kgDM)			
	Straw buy /bale						
	Straw wheat sell /kgDM (sell 500kg fresh; 90%DM)		\$36	/bale royalty (plus \$20 baling; \$7 freight cost to buyer)			
	Straw barley sell /kgDM (sell 500kg fresh; 90%DM)		\$43	/bale royalty (plus \$20 baling; \$7 freight cost to buyer)			
	Straw ryegrass/Pea Vine se 500kg fresh; 86%DM		\$74	/bale royalty (plus \$20 baling; \$7 freight cost to buyer)			
Grazing	R1 Calf (\$/head/week)		\$7.75	gross (less \$0.50 commission)			
	R2 Heifer (\$/head/week)		\$12.75	gross (less \$0.50 commission)			
	R2 I.C. Heifer (\$/head/week)		\$24.00	gross (less \$0.50 commission)			
	Cow winter (\$/head/week)		\$30.00	gross (less \$0.50 commission)			
	Standing winter feed		\$0.290	nett with no commission			
Dairy	Cull cow		\$638				
	Bobby calf		\$35				
	Milk solids base		\$6.20				
	Cull Heifer		\$816.75				
Beef			Works Price	100kg	230kg	330kg	450kg/18 mth
	Prime beef - Winter/Spring		\$5.60	\$4.50	\$3.20	\$3.00	\$2.80
	Prime beef - Summer kill		\$4.95	\$4.32	\$3.07	\$2.88	\$2.69
	Manufacturing - Winter		\$5.20	\$4.30	\$2.90	\$2.80	\$2.55
	Manufacturing - Summer kill		\$4.60	\$4.13	\$2.78	\$2.69	\$2.45
	Cull cow		\$900				
Deer	Store		\$4.55				
	Prime Oct-Dec average		\$8.50				
	Velvet - Spiker		\$125				
Dairy feed buy	Barley/Wheat average		\$400	landed	(average of wheat and barley)		
	Silage (incl chopped & landed)		\$340	landed	(\$120/t making on farm)		
	Baleage	285kgDM	\$113	landed	(20c/kgDM; \$52 mow/rake/bale/wrap; \$10 can)		
	Maize silage		\$310	landed in pit	(\$230/tDM to grower)		
	PKE (landed)		\$280				
	Calf meal		\$850				

Fertiliser	Superphosphate		\$350				
	triple Super		\$720				
	Sulphur Super 15		\$355				
	Sulphur Super 20		\$370				
	Sulphur Super 30		\$385				
	Moly S Super		\$410				
	10% Pot S Super		\$390				
	15% Pot S Super		\$400				
	20% Pot S Super		\$410				
	30% Pot S Super		\$460				
	Nitrophoska Select		\$890				
	CAN		\$750				
	Cropmaster 15		\$720				
	Cropmaster 20		\$675				
	DAP		\$850				
	DAP + B		\$940				
	DAP 13S		\$700				
	Sulphate of Ammonia		\$500				
	Ammo31		\$575				
	Ammo36		\$600				
	Urea		\$675				
	N Protect		\$743				
	Potassium sulphate		\$1,100				
	Potassium chloride		\$740				
	Lucerne mix + TE		\$530				
	Sulphur90		\$615				
	Magnesium oxide		\$570				
	Kieserite		\$570				
	Borate46		\$1,590				
	Sodium chloride		\$200				
	Molybor		\$17				
	Lime		\$32	\$50 supply, cart, spread			
	Cartage/tonne		\$18				
	Spreading/ha say		\$8				

Crop costs	Change as per budgets						
Repairs & maint	Change as per budgets						
Vehicles	Change as per budgets						
Electricity	Irrigation		198	based on sheme 57,000 supplied under pressure, 48,000ha s			
	Electricity		25c/kwh	includes lines charges off peak			
Water charges	Operating cost only		134	based on \$280/ha for scheme management on 105,000ha of			
Livestock capital	Stock unit		\$170				
	Dairy cow		\$1,850				
	Heifer		\$850				



Term debt interest rate		5.50%				
Current account		7.00%				
Wages	Dryland D Stock Manager	\$70,000	(cash only)			
	Dryland D Stock Staff/Head Shepherd	\$56,000	(cash only)			
	Dairy Manager	\$78,000	(cash only)			
	Dairy Assistant Manager	\$60,000	(cash only)			
	Dairy Assistant	\$52,000	(cash only)			
	Arable Manager	\$70,000	(cash only)			
	Arable Senior	\$62,000	(cash only)			
	Arable Junior	\$52,000	(cash only)			
	Casual per hour	\$28.50	(cash only)			
	+ Kiwisaver @ 3.5%					
	ACC	2.60%	total wages incl KS			
	Shearing	\$5.50	ewes/full shear			
		\$4.70	lambs			
		\$2.80	crutching sheep			
		\$1.50	crutching lambs (assumes trailer)			
Agwork	Harvest	\$310				
	Windrow	\$170				
	Drilling	\$110	std			
		\$140	Direct			
		\$175	planter	Precision?		
		\$140	maize planter			
	Full Cultivation	\$380				
	Spraying	\$22				
	Inter-row spraying	\$120				
	Dressing - Grass	\$350				
	Dressing - Small Seed	\$500				
An Health	Ewes	\$5.50				
	Lambs	\$2.60				
	Weaners	\$7				
	100kg Calf	\$25				
	FSB Steer	\$15				
	R2	\$10				
Freight	Lambs	\$3.00				
	Ewes	\$5.00				
	Wool bale	\$15				
	Cow	\$18				
	Heifer	\$15				
	Calf	\$6				
	Grain	\$20				
	Seed	\$28				

## 9. References

Scott, L. (2013); ***Hinds Plains water quality modelling for the limit setting process***; Report No. R13/93; (pp 34-35)

Everest (Macfarlane Rural Business Ltd) *et.al* (2013); ***Hinds catchment nutrient and on-farm economic modelling***; Report No. R13/109

Horticulture NZ (2019); ***Fresh Facts***; ISSN 1177-2190

Kerr+Partners (2020); ***Hekeao/Hinds Managed Aquifer Recharge Scheme, Detailed Business Case***; Version D, Final Issue

# Appendix 2

# Economic impact of freshwater environmental standards in Ashburton District

**for Ashburton District Council**

July 2021



## Authorship

This report has been prepared by Nick Brunsdon, with the input of Dirk van Seventer.

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## 3 Economic impact of freshwater environmental standards in Ashburton District– July 2021

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## 5 Economic impact of freshwater environmental standards in Ashburton District– July 2021

## Executive summary

Ashburton District Council (ADC) sought to understand how new National Environmental Standards for Freshwater (NES-F) will affect the District's farmers and community at large. ADC commissioned Mcfarlane Rural Business (MRB) to carry out detailed modelling of the economic impact of achieving the NES-F requirement of a maximum 2.4ppm nitrogen in ground and surface water. MRB have forecast how the District's land uses could be changed to achieve the requirement, and estimated the resulting changes in farm expenditure and profitability.

Infometrics were commissioned by ADC to model the economic impact of land use change as modelled by MRB. We have used an input-output multiplier approach to model these effects, considering direct, indirect and induced effects.

### Large scale changes in land use, \$277m decline in farm profit

The MRB report indicates large scale changes in land use, as dominant existing land uses in Ashburton such as arable and dairy either reduce their intensity or change to forestry. Forestry is forecast to grow substantially; however, it requires very little in the way of inputs and has a far lower level of profitability. This leads to a \$277.3m decrease in gross profit (EBIT), and a \$65.6m decrease in wages and salaries.

### Direct effect is \$343m decline in agriculture and forestry GDP...

The direct effect of the changes, as modelled by MRB, is for a \$343m (2020 dollars) decline in GDP across Ashburton's agriculture industries. This amounts to 51% reduction from 2020 levels. This is driven by a \$291m decline in dairy cattle farming GDP, followed by an \$93m decline in sheep, beef cattle and grain farming. This is only partially offset by GDP growth in forestry and logging of \$40m.

### ...and 1,176 decline in agriculture jobs

The direct effect on agriculture, forestry and fishing industry employment is a decrease of 1,176 jobs, a 26% decrease from 2020 employment. This is a result of a 1,258 decline in dairy industry employment, which is barely offset by an increase of 82 jobs in sheep, beef cattle and grain farming.

### Overall negative effect on GDP and employment.

The total effect of the land use changes is estimated as a \$409m reduction in Ashburton's overall GDP, including negative indirect and induced effects which add to the direct effect of a decline in agricultural GDP. This represents a 16.3% decrease to Ashburton's GDP level in 2020. Similarly, the negative effect on employment is more pronounced once indirect and induced effects are considered, with an estimated total decrease in employment of 1,735 or a 9.1% reduction on 2020 employment.



## 6 Economic impact of freshwater environmental standards in Ashburton District– July 2021

### Total effects concentrated in agriculture

The direct effect of the forecast land use changes is felt by the agriculture industry, so logically total effects are concentrated in that industry too. Agriculture, forestry and fishing GDP is estimated to decline by \$297m or 44.1%, and employment to decline by 1,475 or -32.6%.

### Total earnings estimated to fall 8.7%

Total earnings across the Ashburton District are estimated to fall \$97.6m or 8.7% as a result of the reduction in employment, assuming average earning rates remain the same in each industry.

### Changes unwind previous growth

Ashburton's economy has experienced sustained growth over the past two decades, with employment 35% higher in 2020 than 2000, and real GDP 63% higher over the same period. The forecast land uses changes effectively drive overall employment and GDP down to levels last seen in 2013. Within Ashburton's agriculture, forestry and fishing industry specifically, the decrease in employment represents a return to pre-2000 levels of employment and GDP.

### Change in agriculture and forestry employment amounts to 8 years of replacement of lost workers

Infometrics forecasts that on average a net 187 workers will be required per year over the next five years across Ashburton's agriculture, forestry and fishing industry to replace workers that leave the industry due to retirement, leaving the country etc. This indicates that if the forecast land use changes were implemented over a period of at least eight years, then the decrease in agriculture, forestry and fishing industry employment could be accommodated within usual rates of net replacement. The effect on specific subindustries or communities may be more pronounced.

### Ashburton's economy will adapt

The land use changes modelled by MRB represent a substantial shift to Ashburton's economy, however the effect on the community is highly sensitive to the length of time over which the land use changes take place. A transition over an extended period of time will give Ashburton's residents and businesses – their economy – a chance to adapt. The loss of jobs and reduction in farm values does present an opportunity for different industries to expand using the resources freed up by the changes. We would not expect the negative effects to persist over the long term; however, they may persist for several years if land use change is rapid.

### One-off boost from MAR construction

The MRB report estimates that construction of Managed Aquifer Recharge (MAR) will cost \$23.5m over an unspecified period, which will create a one-off boost to the Ashburton economy. We expect the construction of MAR to contribute \$23m to the Ashburton economy and create the full time equivalent of 40 jobs.

## 7 Economic impact of freshwater environmental standards in Ashburton District– July 2021

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### **Environmental benefits not quantified**

We have not made an allowance for any positive economic benefits which may result from improved water quality in Ashburton District, nor the costs from not improving water quality.

## 8 Economic impact of freshwater environmental standards in Ashburton District– July 2021

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# Introduction

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Ashburton District Council (ADC) sought to understand how new National Environmental Standards for Freshwater (NES-F) will affect the District's farmers and community at large.

ADC modelled the effects at a high level in late 2020, and Infometrics peer reviewed this work. ADC commissioned Mcfarlane Rural Business (MRB) to carry out detailed modelling of the economic impact of achieving the NES-F requirement of a maximum 2.4ppm nitrogen in ground and surface water. MRB has considered how the District's farmers may achieve the requirement by forecasting land use changes, and estimated the resulting changes in in farm expenditure and profitability.

We have taken the changes in farm expenditure and profitability from the MRB report and applied a regional input-output multiplier analysis to model the effects on Ashburton's economy.

# Key assumptions and limitations

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## Land use changes

We have drawn upon the work of MRB<sup>1</sup> to understand how land uses may change as a result of NES-F, taking their assumptions and modelling at face value. We have mapped the land use types from the MRB report to the Stats NZ ANZSIC 54-industry framework.

## Uncertainty around timing

Given uncertainty around the timeframe for implementation of the nitrogen requirement, the MRB work makes no assumption around timeframes, simply calculating the difference between the current state and the final future state, which could be 5-40 years away. This report therefore does the same – its results should be interpreted as applying to a non-specified future year in which Ashburton District fully achieves nitrogen loss requirement. In reality, the effects may be sensitive to timing, particularly given the strong role for forestry in land use change. If large areas of forestry are planted over a concentrated period, then the economic effects of forestry may be lumpy in future, with, for example, harvesting activity concentrated over a limited period in future as the trees reach maturity together.

We have assumed that the costs of land use change will take place over an extended period of time in order to coincide with scheduled on-farm asset renewals. Accordingly, we have not quantified the economic impact of land use changes as this capital expenditure would have occurred regardless.

## Input-Output multiplier approach

We use a regional input-output (IO) multiplier model to estimate the impact of the construction and operating phases of the proposed facility. The IO model is based on inter-industry relationships within an economy, mapping how economic activity in one industry flows through to other industries and ultimately households.

Note that as part of this approach, we do not consider the impact on asset values, although this is covered in the MRB report. This is because we do not know where the owners of the assets reside – it is likely that many of Ashburton's farms have owners residing out of the District.

Our multiplier approach is described in more detail in the appendix. All dollar figures referred to are in 2020 prices.

## Direct, indirect and induced economic effects considered

We consider the direct, indirect and induced economic effects as a result of changes to achieve the nitrogen target, as modelled by MRB. Direct effects include the direct effects on the agriculture industry, such as the reduction in profit and employment on dairy farms from reduced production. Indirect effects include effects on supplying industries,

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<sup>1</sup> Mark Everest, *Economic Impacts of Achieving 2.4ppm N in Ashburton District Surface Water Draft 2.2*, 18 July 2021: Macfarlane Rural Business Ltd

## 10 Economic impact of freshwater environmental standards in Ashburton District– July 2021

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such as dairy support farms, rural contractors and irrigation scheme operators. Induced effects include the effect of changes in wage earnings – such as lower spending in retail and hospitality businesses as a result of the decrease in agriculture employment.

### Only net effects are modelled

This report is focused on the community-level impact; therefore, we only consider the net effect on the economy. This is a composite of the positive and negative effects felt by various individuals and groups within the community. This means that the effect could be far more pronounced for some than these net figures suggest. For example, the net effect for the agriculture, forestry and fishing industry is a composite of negative effects on dairy farming and positive effects on forestry (among others). Dairy farm workers who lose their jobs as a result of the reduction in dairying activity may struggle to gain employment in forestry contracting on similar terms.

### Impact on rates

The MRB report includes a \$10m reduction in rates payable by farms due to a reduction in farm capital values, which has a flow on effect to farm profitability as it represents a net change in costs. While farm capital values are likely to decline if the forecast land use changes take place, ADC advises that the impact of this on the distribution of rates is yet to be determined, and expects that they will maintain a similar level of rating income and expenditure. As a result, the effect of the \$10m reduction in rates payable is not included in this EIA, and has been deducted from the farm earnings before interest and taxation (EBIT) estimated by MRB. This effectively assumes that farms continue to pay the same rates as they did under previous land uses.

### Costs of Managed Aquifer Recharge

The MRB report models the use of Managed Aquifer Recharge (MAR) as a key element to achieving the nitrogen concentration requirements of NES-F. Given this, we have assumed that MAR takes place despite no clarity on how it will be funded. If these costs were borne by the farming community, then this would reduce farm EBIT and therefore direct GDP contribution by the same amount. On the advice of MRB, it is assumed that irrigation providers can provide water for MAR while reducing their costs overall, as there would be less work involved in farm-specific administration such as metering or dispatching water.

### Economic benefit of environmental improvements not quantified

We have not made an allowance for any positive economic benefits which may result from improved water quality in Ashburton District. These may exist but would be challenging to quantify in economic terms.

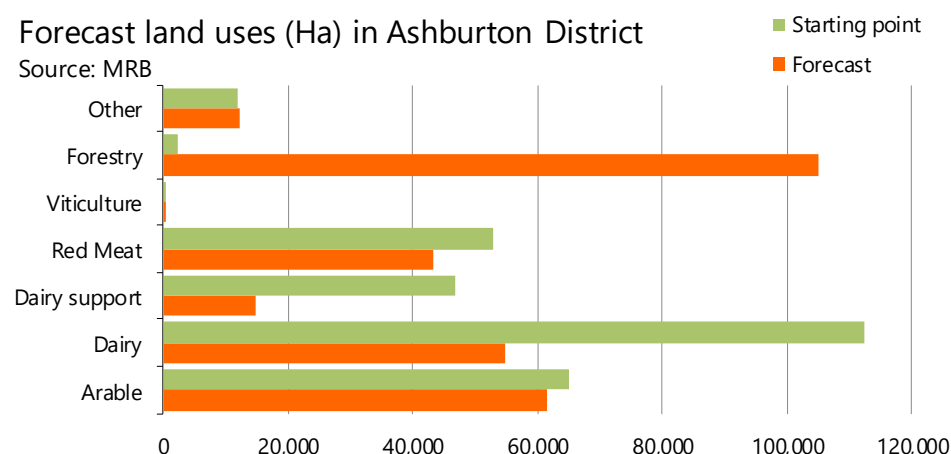
## 11 Economic impact of freshwater environmental standards in Ashburton District– July 2021

# Findings

## Large scale changes in land use

The MRB report indicates large scale changes in land use, as dominant existing land uses in Ashburton such as arable and dairy either reduce their intensity or change to forestry. This has a multitude of impacts. Arable and red meat farm types are forecast to increase their expenditure, while dairy and dairy support substantially reduce expenditure. Forestry is forecast to grow substantially; however, it requires very little in the way of inputs and has a far lower level of profitability. Graph 1 shows the current and forecast land use from the MRB report, including a 56% decrease in the area of land used for dairy or dairy support, and an extremely large increase in forestry.

Graph 1



## Decline in farm profit of \$277.3m

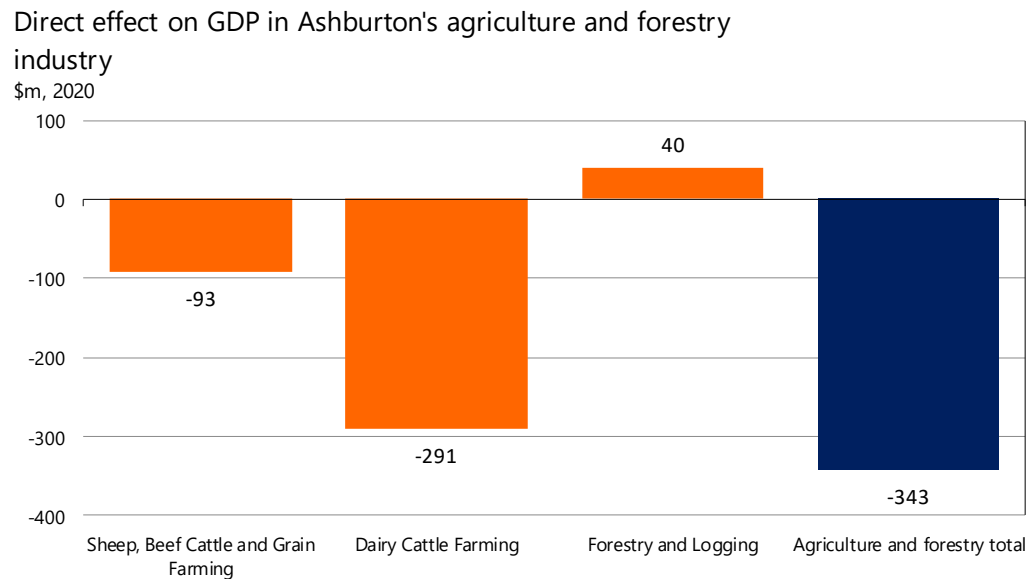
The MRB report forecasts a \$277.3m decrease in gross profit (EBIT), and a \$65.6m decrease in wages and salaries. We have reversed the reduction in local body rates payable from the MRB report, which decreases farm profit by \$10m.

## Direct effect is \$343m agriculture and forestry GDP decrease

The direct effect of the forecast land use changes is a \$343m (2020 dollars) decline in GDP across Ashburton's agriculture industries. This amounts to 51% reduction from 2020 levels. This is driven by a \$291m decline in dairy cattle farming GDP, followed by a \$93m decline in sheep, beef cattle and grain farming. This is only partially offset by GDP growth in forestry and logging of \$40m, shown in Graph 2.

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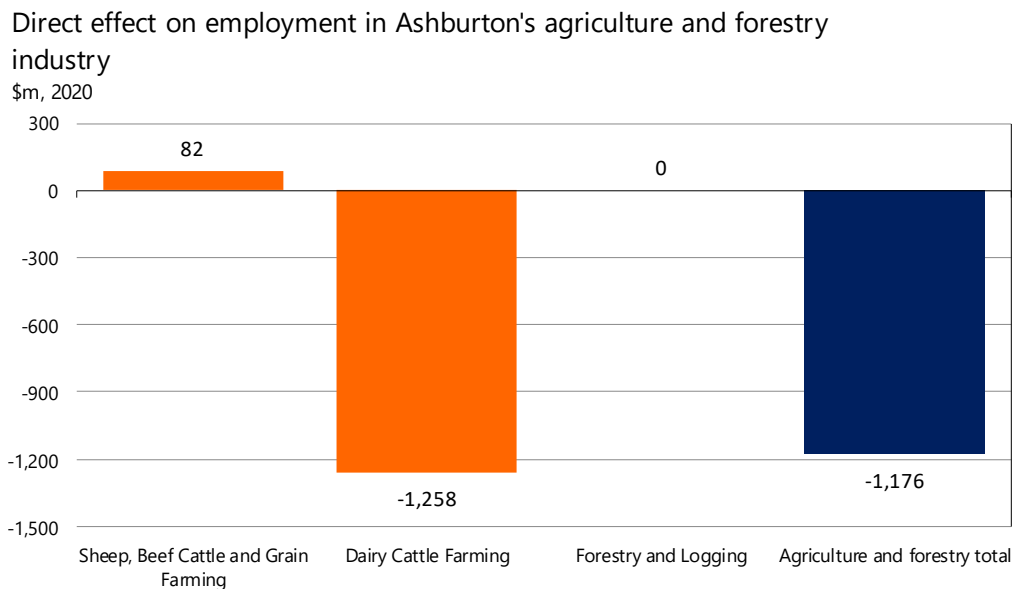
Graph 2



Direct employment effect is negative overall

The direct effect of the forecast land use changes on agriculture industry employment is a decrease of 1,176 jobs, a 26% decrease on 2020 levels. This is a result of an employment increase of 82 in sheep, beef cattle and grain farming, which barely offsets the 1,258 decline in dairy industry employment. No direct increase in forestry employment is expected as forestry management and operations are typically outsourced to other industries – this is an indirect effect.

Graph 3



## 13 Economic impact of freshwater environmental standards in Ashburton District– July 2021

## Overall negative effect on GDP and employment

The total economic effect of the land use changes is estimated as a \$409m reduction in Ashburton's overall GDP, with negative indirect and induced benefits adding to the direct effect of a decline in agricultural GDP. This represents a 16.3% decrease to Ashburton's GDP level in 2020. Similarly, the negative effect on employment is more pronounced once indirect and induced effects are considered, with an estimated total decrease in employment of 1,735, or a 9.1% reduction on 2020 employment.

The indirect and induced effects are negative overall for both GDP and employment; however, this net effect does mask the positive indirect and induced effects in some industries resulting from land use changes. Notably, the agriculture, forestry and fishing support service sub-industry are estimated to gain a net 121 jobs, or an \$87m increase in GDP. This is largely driven by a greater need for contractors to service the expanded area of forestry.

## Industry effects concentrated in agriculture

The direct effect of the forecast land use changes is felt by the agriculture industry, so logically total effects are concentrated in that industry too. Agriculture, forestry and fishing GDP is estimated to decline by \$297m or 44.1% compared to 2020 levels, and employment to decline by 1,475 or -32.6%. Table 1 details the effect on each industry, with industries beyond agriculture affected through changes in demand for their products and services by the agriculture industry and its workers.

Electricity, gas, water and waste services is hit by a reduction in demand for water for irrigation and electricity, leading to a 20.7% reduction in GDP and 7.8% reduction in employment. Rental, hiring and real estate services are affected by a reduction in overall incomes in the community, leading to a 13.0% reduction in GDP and 0.7% reduction in employment. Transport, postal and warehousing are largely affected through a reduction in demand for road transport services from the agriculture industry, leading to a 25.9% reduction in GDP and 15.0% reduction in employment. Other services, which includes vehicle and equipment maintenance, is affected through reduced demand for maintenance from the agriculture industry, leading to a 37.0% reduction in GDP and 11.4% reduction in employment.

Notably, all industries except one are estimated to experience a negative effect from the land use changes overall. The only exception is mining, which is expected to experience a fractional increase in GDP and employment as a result of quarried materials needed for maintenance of MAR.



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Table 1

**Total effect on GDP and employment**

Includes direct, indirect and induced effects. % change from 2020

Industry	GDP (\$m)		Employment	
	Level	% change	Level	% change
Agriculture, Forestry and Fishing	-297.1	-44.1%	-1,475	-32.6%
Electricity, Gas, Water and Waste Services	-27.8	-20.7%	-18	-7.8%
Rental, Hiring and Real Estate Services	-19.1	-13.0%	-3	-0.7%
Transport, Postal and Warehousing	-13.2	-25.9%	-70	-15.0%
Other Services	-12.5	-37.0%	-72	-11.4%
Financial and Insurance Services	-6.8	-10.7%	-8	-2.4%
Retail Trade	-6.2	-5.5%	-22	-1.3%
Wholesale Trade	-5.8	-4.8%	-7	-0.7%
Professional, Scientific and Technical Services	-4.5	-5.1%	-5	-0.7%
Manufacturing	-4.0	-1.5%	-2	-0.1%
Administrative and Support Services	-1.9	-6.8%	-6	-1.0%
Accommodation and Food Services	-1.9	-5.3%	-15	-1.6%
Information Media and Telecommunications	-1.7	-5.8%	-3	-1.4%
Health Care and Social Assistance	-1.6	-1.9%	-6	-0.5%
Education and Training	-1.6	-2.7%	-13	-1.3%
Arts and Recreation Services	-1.5	-4.9%	-5	-1.2%
Construction	-1.3	-0.9%	-5	-0.3%
Public Administration and Safety	-0.5	-1.1%	-1	-0.3%
Mining	0.1	5.3%	0	1.2%
<b>Total</b>	<b>-409</b>	<b>-16.3%</b>	<b>-1,735</b>	<b>-9.1%</b>

**Earnings estimated to fall 8.7%**

Earnings across the Ashburton District are estimated to fall \$97.6m or 8.7% of the 2020 level as a result of the reduction in employment, assuming average earnings remain the same in each industry. This reduction is less than the decline in employment of 9.3% because average earnings in agriculture, forestry and fishing are lower than the average earnings across all industries.

**Changes unwind previous growth**

Ashburton's economy has experienced sustained growth over the past two decades, with employment 35% higher in 2020 than 2000, and real GDP 63% higher over the same period. The forecast land uses changes effectively drive overall employment and GDP down to levels last seen in 2013. Within Ashburton's agriculture, forestry and fishing industry specifically, the decrease in employment represents a return to pre-2000 levels of employment and GDP.

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## **Change in agriculture and forestry employment amounts to 8 years of worker net replacement**

Infometrics forecasts the number of net number of workers required in each industry to replace workers that leave due to retirement, emigration etc. Within Ashburton's agriculture, forestry and fishing industry, Infometrics forecasts average of 187 replacement job openings per year over the next five years. This indicates that if the forecast land use changes were implemented over a period of at least 8 years, then the decrease in agriculture, forestry and fishing industry employment could be accommodated within usual rates of workers leaving the industry.

## **Ashburton's economy will adapt**

The land use changes estimated by MRB represent a substantial shift to Ashburton's economy, however the effect on the community is highly sensitive to the length of time over which the land use changes take place. A transition over an extended period of time will give Ashburton's residents and businesses – their economy – a chance to adapt. The loss of jobs and reduction in farm values does present an opportunity for different industries to expand using these resources. As a result, we would not expect the district wide effects of a 16.3% reduction in GDP and 9.1% reduction in employment to persist over the long term. However, these effects may persist for several years if land use change occurs more quickly than the economy can adapt.

## **One-off boost from MAR construction**

The MRB report estimates that construction of Managed Aquifer Recharge (MAR) will cost \$23.5m over an unspecified period, which will create a one-off boost to the Ashburton economy.

We have assumed that a third of the construction cost of MAR will go towards the professional services industry and, two thirds to heavy and civil construction. Based on these assumptions, we expect the construction of MAR to contribute \$23m to the Ashburton economy and create the full time equivalent of 40 jobs. This includes indirect and induced effects. The economic effect of MAR construction by industry is not specified, as it is highly sensitive to the estimate of MAR costs, method of construction and industry apportionment.

The positive economic effect of MAR construction has not been included in the overall economic analysis, which reflects the annual, enduring effects of land use change, although it should be considered in developing a view on the overall impact of land use change.

# Appendix

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## Multiplier analysis

We use input-output (I-O) multiplier analysis to estimate the impact land use changes. The IO model is based on inter-industry relationships within an economy, understanding how economic activity in one industry flows through to other industries and ultimately households.

For earnings and employment, we also apply marginal output-employment ratios based on econometrically estimated employment-output elasticities because when faced with changes in demand at the margin, many businesses will continue to operate with the same level of employment.

Our IO model uses regional multipliers estimated by Infometrics for each territorial authority in New Zealand. These are derived from the 2013 New Zealand Input-Output from Stats NZ. The 2013 Input-Output Table is the latest table available.

The IO model estimates the direct, indirect and induced effects of the project.

**Direct effect.** This is the effect associated with increased spending directly in each industry associated with the project. For example, if a dairy farm reduces its herd size and its profit (EBIT) reduces by \$10,000, then GDP (or value add) in the dairy farming industry will decrease by \$10,000.

**Indirect effect.** The indirect effects are the second round of economic effects associated with the direct effect. For example, a dairy farm which reduces its herd size may require less maintenance of its dairy shed. This in turn will lead to a reduction in demand for services from the repair and maintenance (other services) industry – this is an indirect effect.

**Induced effect.** The induced effect arises from changes in spending from changes in employment. For example, if a dairy farm worker works less hours due to their employer having a smaller herd, then will lead to a reduction in their spending, for example at local retailers or bars. The change in activity in retail and hospitality industries would be an induced effect.

**Total effect.** The total effect is the sum of direct, indirect and induced effects. Due to the small magnitude of induced effects, and for ease of reading, we only refer to the direct and total effect.

The various effects outlined above are measured in terms of value added (or GDP) and employment.

## Earnings

Changes in the earnings are estimated based on the estimated change in employment by industry (described above), and mean earnings by industry across the Canterbury region in the 2020 calendar year.



# **ESSENTIAL FRESHWATER SOCIAL IMPACT REPORT**

## **ASHBURTON DISTRICT**

**A report prepared for the Mid-Canterbury  
Rural Support Trust**

**By Rachael Inch.**

**2021**



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**Disclaimer:**

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## Acknowledgements

I would like to express gratitude to Dr Heather Collins for her constructive suggestions during the planning and development of this research report. Her expert guidance in working through the intricacies of the research data has been appreciated.

The data presented and analysed in this report was made possible through the participation of many people living and working in the Ashburton District. I would like to acknowledge all those who participated and sincerely thank them for freely giving me their time to share their stories.

I also give a special thank you to my mentor who has provided me the support and encouragement needed to work consistently through many hours of interviews, researching and writing this report.

## Executive Summary

The National Policy Statement for Freshwater Management and associated legislation came into force in August 2020. The legislation intends to address water quality issues in New Zealand by providing a national objectives framework for freshwater management. The legislation affects all farming types. Given that water is a vital resource underpinning the socio-economic development of the Ashburton District, it is essential to understand the impacts of the rules and regulations on the people of the district.

The Mid Canterbury Rural Support Trust commissioned research to explore the social impact of the new Freshwater rules and regulations on the Ashburton District. A qualitative research method was chosen to enable a wide range of individuals and groups to share their ideas and experiences. The field work was completed between April and May 2021. This research also adds to the Essential Freshwater Economic Impact Report, produced in 2020 by the Ashburton District Council.

The research suggests that there has been an increasingly adverse impact on farmers and their families. Farmers were already struggling to cope with the pressures they were experiencing. Participants described multiple events, such as; Mycoplasma Bovis, banking reforms, Covid-19, and drought, as causing stress to farmers. The new rules and regulations then compounded the existing pressures, adding even more anxiety and tension to farmers.

According to the research, the initial engagement process for the freshwater rules, specifically the consultation seminar held in Ashburton, created anxiety, stress, and uncertainty for the agri-sector. The consultation seminar did not provide attendees a clear pathway; or a reassurance that there had been a thorough investigation into different farming systems' impact. Attendees also felt there was insufficient acknowledgment for the positive progress completed by farmers in the District under the Canterbury Water Management Strategy. There was little clarity about what the changes meant or how to implement the changes. The lack of clarity created confusion, distrust, and uncertainty.

Uncertainty has increased as time progressed. As the uncertainty filtered out to the Ashburton community, it impacted both farmers and agri-professionals. One of the critical impacts for agri-professionals was the increasing stress and tension when interacting with farmers. The uncertainty hindered their ability to plan, provide practical advice, and progress forward with projects. Simultaneously, banks and lending organisations were taking a more conservative stance with farm lending, restricting the ability of some farmers to access capital and stalling progress. In the absence of clarity, banks and agri-professionals took a more conservative approach to advising farmers, often referring farmers back to Environment Canterbury (ECAN). However, ECAN could not provide certainty around the required targets and limits or whether the CWMS still stood, resulting in more confusion and tension for farmers.

The research also explored the impact of the new rules and regulations on farm businesses. The findings suggested that the new rules and regulations could negatively affect farm sustainability indicators in several ways. Some farms would need to reduce production, limit diversification options, and increase capital and compliance maintenance and costs. In some cases, particularly in the Hekeao/Hinds area, participants felt the rules and regulations could mean losing many farming operations in the area. The findings suggested that the rules and regulations could mean an early exit from farming for some farmers. The investment required to meet the current rules and regulations

and the increased compliance and capital investment needed to change farm systems could exceed the capability of some farms. Some participants felt that there could be an impact on land value. However, it was speculative to say whether it would be positive or negative.

The decreased confidence in farming was a theme for young farmers as they described how the new freshwater rules impacted them. One of the concerns for young farmers was the way that the public viewed them. While many farmers use social media, the younger farmers reported having greater exposure to the negative public views on social media. Many young farmers felt that public view was so negative that it had begun to impact how they felt about themselves and what they do. Many reporting that they no longer saw a future in farming. Fewer young farmers willing to enter the sector could impact traditional family farm ownership in New Zealand, potentially shifting ownership towards corporatisation.

The research also explored the impact on the broader community. The findings suggested that the flow-on impact from a loss of farms and reduced spending in the district could affect the viability of some rural supply businesses increasing unemployment. Families could relocate away from the district, searching for work.

The research investigated the impact of the rules and regulations on the community and found that there could be an increased demand for social services. Smaller community groups and clubs have traditionally relied on sponsorship, donations, and volunteers from the rural community. The findings suggest that they could also see an indirect impact from the rules and regulations, with an increasing reliance on community funding to stay viable.

Participants of the research mentioned that there could also be a negative impact on smaller rural schools. For example, reduced school rolls as families move away from the district and the prevalence of increasingly negative interactions between urban and rural children discussing water quality in the classroom.

Mid-Canterbury Rural Support Trust continues to provide free and confidential support to rural people living in the Ashburton District. The Trust has a vital role in strengthening relationships with stakeholders in the Ashburton District. It is a recommendation that the Trust continues collaborating with key community stakeholders to provide support, tools, and resources to improve rural well-being and resilience in the district as farmers continue improving water quality on farm.



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## Introduction

Land and water are important natural resources which underpin the socio-economic development of the Ashburton District. The Ashburton District is considered a rich agricultural region that relies on the use of these resources to provide economic growth. In 2020, several pieces of legislation were passed into law that form the new essential Freshwater Package and have changed the way land and water is managed in New Zealand (Ministry for the Environment, 2020). Including:

- The National Environmental Standards for Fresh Water Regulations (NES-F),
- The National Policy Statement for Fresh Water Management (NPS-FM),
- Stock Exclusion Regulations,

The NES-F is intended to provide an immediate, short-term response to prevent any further degradation or loss of streams and wetlands. The NPS-FM provides a longer-term framework for improving freshwater quality. The fresh water package rules affect all types of farming with a greater impact on more intensive land uses. Feedlots, stockholding areas, winter grazing practices, nitrogen use and agricultural intensification are all outlined in the NPS-FM as being activities that will need to comply with the rules. These regulations could change the way a number of these farms are structured and how they operate. How different farming types are impacted by the rules depends on the way that the farming system operates and makes use of the land and resources.

In December 2020, the Ashburton District Council released a Land and Water Management Economic Impact Report detailing the freshwater reform's expected impact on agricultural productivity and the flow-on effects on the Ashburton economy (Fitzgerald, 2020). The report outlined the possible economic impact of the NPS-FM and associated legislation. The Economic report used conservative modelling data based on the current Canterbury Water Management Strategy; specifically, Plan Change 2, to estimate the economic impact of the new legislation. To date, there has been a limited evaluation of the potential social impact of this legislation. It is essential to identify how the rules and regulations may affect the people of the Ashburton District, and to determine whether the intervention will lead to any adverse effects on the way that people live, work, play and interact with each other.

This social impact report outlines the potential impacts of the NPS-FM and associated legislation on communities in the Ashburton District. It contributes to the Economic Impact Report that Ashburton District Council undertook. It also explores the potential effects on; farmers and their families, farm businesses, rural supply services, and the wider Ashburton community.

## Methodology

A qualitative research method was chosen to explore the potential impacts of NPS-FM and associated legislation on people and communities in the Ashburton District, New Zealand. This strategy enabled participants to share their stories, and enabled a deep and richer exploration of the complexity and connections between the rules and regulations and the unintended social consequences of the planned intervention.

### Ethical considerations

This research follows Massey University's Code of Ethical Conduct for Research Involving Human Participants (Massey University, 2017).

Research integrity and ethical responsibility underpinned the research process. In this research, integrity involved reaching conclusions that are not affected by bias or error, acting within the law, recognising and balancing any subjectivities or personal influences that a researcher may have, and ensuring the rights and well-being of participants are protected at all times. Ethics is about protecting the research participants. Ethics involves researchers showing respect for cultural beliefs, treating participants in an equitable manner, obtaining informed consent from participants, doing no harm during the research, and ensuring participant's confidentiality of private information.

### Data Collection

The purpose of the research and the information sheet were sent to participants before each interview, permission was obtained to audio record interviews, and confidentiality issues were discussed before the participants gave their informed and voluntary consent. The information sheet prepared for this research is located in Appendix A of this report.

Community meetings and semi-structured interviews were the primary data collection methods used. Participants were selected using snowball sampling. The interviews lasted approximately 25 minutes each.

At the beginning of each interview, participants were each given a short background description that defined the purpose of the research and some key facts. A copy of this can be found in Appendix B of this report. Research participants were then asked for permission to record their interview and their answers were formalised by note-taking, voice recording with consent and by transcribing the recordings. Two interviewees preferred not to be recorded but gave permission to use notes from their interview. Street intercept interviews were recorded by note taking only. Two participants chose to be interviewed via telephone. Both agreed to recording the conversation. Those participants were sent the same information sheets via email prior to the interview and participants were asked for confirmation that the information had been read prior to starting. Confirmation was received on both occasions.

After reading the background introduction paragraph, participants were asked six key questions which can be found in Appendix C. The first three questions were used to determine the level of understanding of the participants and which intervention they were responding to. This information has been integrated into the findings section of this report.

The community engagement phase of the data collection occurred between 12 April 2021 and 5 May 2021. The interviews were completed in a range of locations using a variety of methods. In total 39 participants were interviewed either individually or as a group including:

- Semi-structured interviews via telephone with 2 participants;
- A short workshop with rural professionals in Ashburton;
- Semi structured street intercept interviews with randomly selected Ashburton residents;
- A drop-in session at the Rakaia pub – young farmers, farmers, pub staff, community members;
- An informal discussion with Ashburton District Council and Environment Canterbury staff;
- Face-to-face semi-structured interviews in various locations with;
  - A Spokesperson for Hakatere Marae,
  - A rural contractor,
  - Seed merchant,
  - Filipino Dairy Worker,
  - Farmers,
  - Urban and rural business owners,
  - Agri-bankers,
  - Representative for a local meat processing company,
  - Representative who works in the social wellbeing space,
  - Real estate agent,
  - Water zone committee representatives,
  - Irrigation scheme representatives,
  - Environmental interest groups.

Other individuals and groups were contacted via email with an invitation to participate, including;

- Local veterinarians,
- Co-operative businesses,
- Federated Farmers,
- A representative at Arowhenua marae.

Given the importance of ensuring Tangata Whenua is included, a representative of Arowhenua Marae was approached via telephone, and a pre information sheet was sent via email. A follow up call was made and the representative forwarded the information to Aoraki Environmental Consultancy – who are a part of Te Rūnanga o Arowhenua (the environmental consultancy associated with the marae). Aoraki consulted with their team and declined to participate.

## Data Analysis

Interviews and workshops that were recorded were all transcribed by the researcher. Consent was given by all interviewees except one. One participant was approached via telephone for further clarification of the data.

An inductive thematic analysis strategy was used to analyse the data from the recorded interview transcripts, discussion notes and documents. This method was chosen to help identify common themes – topics, ideas and patterns of meaning that were repeated in the responses. The data collection questions have not been used as themes.

Data saturation was used as an indicator of the point where the interviews produced little or no new information relative to the purpose of the report. Data saturation is reached when the ability to obtain additional new information has been attained ([Guest et al., 2006](#)). This meant that a robust and valid understanding of the research was achieved.

## Limitations

This research was completed over a three-month period. This is generally a short time frame to complete the research and measure change over time, and this may have placed constraints on the availability of some data. There may be a case for a further Social Impact Assessment to be completed of the findings. With the exception of the random street interviews, sample bias may be present. The use of snowball sampling was used to determine participant selection. While every effort was made to include a cross representation of people from different backgrounds, it may mean that it is not a truly random sample of participants as it could be influenced by the potential bias of participants.

Although the research team are not located within the Ashburton District, one of the researchers resides in a neighbouring district and is familiar with the agricultural industry and was carefully monitored throughout the study by the senior social researcher who designed the methodology.

Another limitation is the presence of existing stress in the community. The participants of this study outlined adverse factors and events which have occurred prior to the research resulting in negative attitudes. It is possible that this could have contributed to how positively participants responded to the research. There was a strong negative response to the freshwater package, and as a result the findings reflect that the participants did not highlight many positive impacts.

## Background

### The Ashburton District

The Ashburton District is located in the centre-east of the South Island of New Zealand and spans from the Southern Alps to the Pacific Ocean. The district is also sometimes referred to as Mid-Canterbury. The district is bordered by two large braided rivers; the Rakaia and the Rangitata. The district also contains two other rivers which are referred to by locals by the English or Māori name for the river: the Hakatere (Ashburton) and Hekeao (Hinds) rivers. The district contains six rural townships: Ashburton; Methven; Rakaia; Mayfield; Mt Somers; and, Hinds. All of these townships are considered rural servicing towns for the surrounding farming enterprises (Ashburton District Council, 2021).

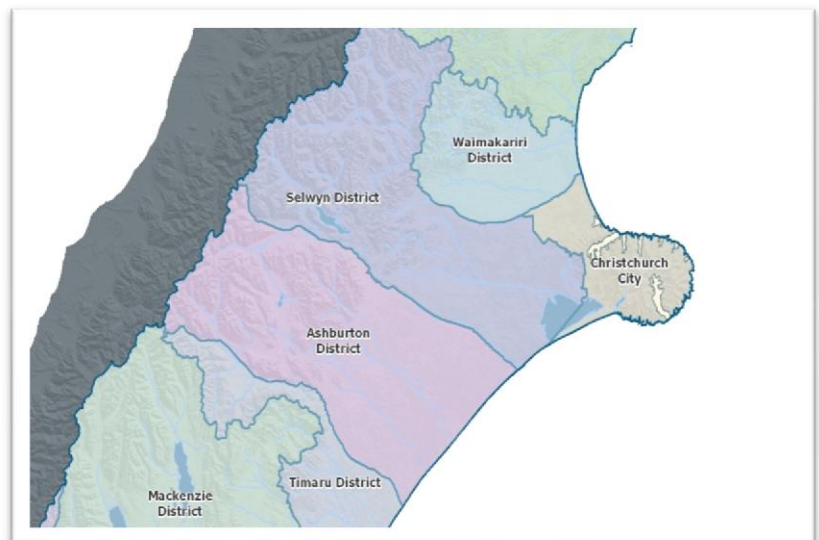


Figure 1: Location of the Ashburton District in the South Island of NZ

## History of the Ashburton District

The history of the Ashburton District provides context as to how the district became a strong agricultural area. During the research, agriculture was referred to by some people as *‘the pillar that held the district up’*. People described the importance of agriculture through the years and referred to the township as being originally a *‘trading town’*. There was limited availability of historic information on Māori in Ashburton, however according to the Ashburton District Council website, Māori travelled through Ashburton District as early as 850AD. Before colonisation, the district was a vast tussocky grassland with few trees and large braided rivers to the north and south which made crossing the river difficult. (Ashburton District Council, 2018)

The Hakatere Marae website [www.hakateremarae.weebly.com](http://www.hakateremarae.weebly.com) displays some information from various sources, that provide a short history of Māori in Ashburton. It states:

*‘It is recorded that early canoe travellers used Hakatere<sup>1</sup> as a resting point and food gathering place. These included Rapuwai, Hawea, Waitaha moa hunters and Ngāi Tahu.<sup>2</sup>’* The Deed of Recognition for Hakatere between The Queen and Te Rūnanga O Ngāi Tahu states – *“the Hakatere was a major kai provider for Canterbury Ngāi Tahu, particularly those based at Kaiapoi Pa. The main foods taken from the river were tuna (eels), inaka (whitebait) and the giant kōkopu. Rats, weka, kiwi and waterfowl such as pūtakitaki (paradise duck) were also hunted along the river’.*

The website further describes how the Māori population was involved with agriculture in Ashburton and further states:

*‘The Māori population of Ashburton district has never been large, though a small and transient population was encouraged by the Fairfield Freezing Works and in shearing gangs. A Māori Women’s Welfare League and a Youth Club were established in the 1960’s. In 1970 the Canterbury Māori Committee obtained a lease from the Government for the disused Fairton school building and established the Hakatere Marae’.*

The first building in Ashburton was an accommodation house that was built on the north bank of the Ashburton River in 1858. Ashburton town was surveyed in 1863, and transport through a coach service opened up the next year. Farming was the founding industry of the area with John Grigg of Longbeach recognised as a leading farmer of the time. Mr Grigg later established the Canterbury Frozen Meat Company. Ashburton’s population slowly grew and the first school was built in 1872. The Canterbury Flour Mills



Figure 2: Historic Photograph of East Street Ashburton

<sup>1</sup> Hakatere – The Māori name for Ashburton

<sup>2</sup> Earliest peoples to inhabit Te Waipounamu were tribal groups known as Hāwea, Rapuwai and Waitaha who inhabited the island for centuries before the arrival of more recent tribal migrations of Ngāti Māmoe, Ngāti Wairaki and Ngāi Tahu. – source <https://my.christchurchcitylibraries.com/ti-kouka-whenua/tribal-history/>



was built the same year. Shortly after the establishment of the Canterbury Flour Mill, the Rakaia River was bridged connecting Ashburton with the fast-growing Christchurch just under 90kms to the north (Ashburton District Council, 2018).

## Present Day

Today, the Ashburton District is considered one of the most productive agricultural regions in New Zealand. Total agricultural land in the Ashburton District equates to 395,658 hectares located in the high country and 281,505 hectares in the plains. (Fitzgerald, 2020)

Currently, land used for dairy farming in the Ashburton district equates to 25.5% of the district with a further 6.4% devoted to dairy support giving a total dairy footprint of 31.9% of the district's agricultural land. Arable farming covers 20.6% of land, with sheep, beef and deer using a further 45.6%. This includes high country farming which makes up two thirds of that area (Fitzgerald, 2020). The district is described in this research by farmers and some industry representatives as having three areas of agricultural land. The Hekeo/Hinds zone, the hill country and the northern zone. This is further explored in the background section under the regional information.

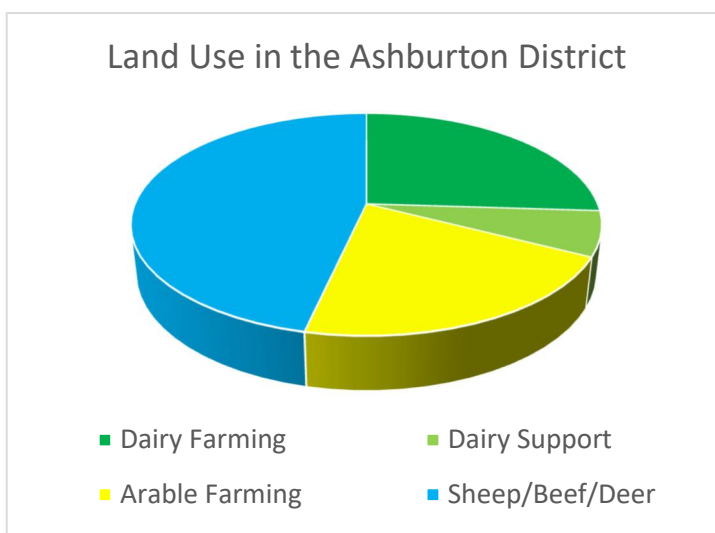


Figure 3: Land Use in the Ashburton District

The Ashburton District is of mainly European decent with approximately 10% of people identifying as Māori. According to the 2018 census (Statistics New Zealand, 2018), 83.8% of the population in Ashburton District identified their ethnicity as European, 3,333 people or 10.0% of the population in Ashburton District identified themselves as having Māori descent. Agriculture continues to be the

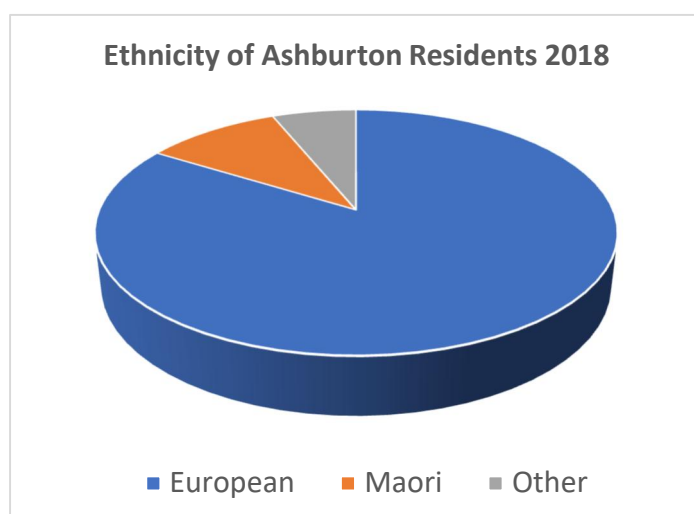


Figure 4: Ethnicity of Ashburton Residents

strength of the district's economy. The Infometrics New Zealand Regional Economic Profile (Infometrics NZ, 2020) highlights that agriculture and food processing accounted for 32.9% of Ashburton's employment in 2020. Primary industries accounted for the largest proportion of GDP (27.0%) in Ashburton District, which is higher than in the national economy (6.2%).

In 2015 the Ashburton District Council made a decision to attract migrant workers to the district in an effort to combat the aging populations and

economic decline of small rural townships. As a result, there are many migrant workers of different



nationalities who are employed in the district. Many of these workers are employed by the agricultural industry.

## Environment Canterbury

Environment Canterbury (ECAN) is the regional council responsible for managing Canterbury's natural resources (air, soil, water), and how land use affects the environment. The Ashburton District Council is responsible for looking after local roads and reserves, sewerage, building consents, the land use and subdivision aspects of resource management, and other local matters. ECAN has a legal responsibility under the Local Government Act 2002, the Resource Management Act 1991 (RMA), and within the resource consent process to account for Tangata Whenua<sup>3</sup> concerning the management of natural resources. ECAN works with and informs local authorities within the region in the nine districts of: Christchurch; Ashburton; Hurunui; Kaikoura; Mackenzie; Selwyn; Timaru; Waimakariri; Waimate; and Waitaki. The Ashburton District Council's work is guided by national and local legislation (for example, the National Statement for Freshwater Management, The Canterbury Water Management Strategy, the Ashburton District Plan).

## Water Management in Canterbury

During the research, people refer to the work of Environment Canterbury in improving freshwater environmental outcomes through the Canterbury Water Management Strategy (CWMS). The following section provides some background information as to what the CWMS is and its relevance to sustainable water management in the Ashburton District.

Prior to the Freshwater Package, Environment Canterbury (ECAN) had adopted a collaborative, community-led approach to sustainable water management under the Canterbury Water Management Strategy (CWMS). The CWMS is a statement of shared values and outcomes for water resource management in Canterbury. Targets of the CWMS are set for: 2015; 2020; 2040 and provide long-term environmental, social, economic, cultural outcomes reflecting a sustainable development approach to achieve the goals.

To achieve the outcomes of the CWMS, the wider community was able to have input via water zone committees. A zone committee was established for Ashburton District. The water zone committee recommend actions and tactics to the Ashburton District Council which are recorded in Zone Implementation Programmes (ZIPs). Regional and sub-



Figure 5: Canterbury Water Management Strategy Zones

<sup>3</sup> Tangata Whenua - used to describe the Maori people of a particular locality, or as a whole as the original inhabitants of New Zealand.

regional implementation plans and addendums were then adopted for each of those zones under the Canterbury Land and Water Regional Plan (Environment Canterbury, 2013).

The Ashburton District water zone committee consists of representatives from the Ashburton Community, Te Rūnanga o Tūāuriri, Te Rūnanga o Arowhenua, Te Rūnanga o Taumutu, Environment Canterbury and the Ashburton District Council. The Ashburton water zone committee, informed the subregional plan, known as 'Plan Change 2 of the Canterbury Land and Water Management Plan. Plan Change 2 included rules around irrigation schemes in the Ashburton District, guiding how they would and would not operate within the zone and provided targets for freshwater Nitrate – Nitrogen attribute levels for rivers. Under Plan Change 2, 6.9mgN/L or less is required. On 10 May 2018, ECAN announced that the Council had resolved to make the Hinds Plan Change (Plan Change 2) to the Canterbury Land and Water Plan. Further information on Plan Change 2 can be found located in Appendix E.

The NPS-FM requirements brought into force in 2020 are similar but different from Plan Change 2. For example, one of the new baseline nitrogen levels is for the Nitrogen attribute level to be reduced even further to a level of 2.4mgN/L per litre or less. The work for regional councils and communities to implement the new Freshwater Package is significant because the new regulations will supersede the current regional plan being the Canterbury Water Management Strategy. As a result, ECAN is now required to rewrite existing plans.

## The Ashburton District Council Economic Impact Report

During this research, there were many references to the impacts in the Hekeao/Hinds catchment and community. To provide context the following section refers to the Ashburton District Councils Essential Freshwater Economic Report (Fitzgerald, 2020) and highlights the significance of the NPS-FM rules and regulations to the Hinds area. According to the Economic Impact Report from the Ashburton District Council:

*'The Hinds Plains Catchment represents nearly half (47%) of all the plains area of the Ashburton District and is one-third of the entire agricultural land-use, including the high country. The natural resources (soils, rainfall, topography), geography, and community infrastructure are broadly similar but not the same as the rest of the district. The variation within the catchment is reasonably representative of the variation across the remaining plains area of the district' (Fitzgerald, 2020, p. 4)*

Fitzgerald's report identified a significant change in land use as farm businesses responded to the freshwater legislation. The impact assessment completed by the council used modelled data on current nitrogen targets of 6.9 mgN/l of dissolved nitrogen. The report estimated farm profitability across the district would decline by \$57.9 million/year (or 83 %), while farm expenditure within the district was estimated to decline by \$139.9 million/year (or 23%). Other impacts outlined included: impacts to all farming types, impact to service and support businesses, and employment impacts. An estimated 1,233 fewer people will be employed on farm or across the district because of the potential decreases in farm income. It was identified that farm businesses could move away from intensive, high input systems to less intensive, lower input farm systems. Complete system changes and land use changes were predicted to occur as the regulations became more stringent.

## Freshwater Reforms Announcement

In 2018 the New Zealand Government announced freshwater reforms that proposed a range of new rules and standards that set out a national direction for freshwater management. New regulations included:

- A new National Policy Statement on Freshwater Management (NPS-FM);
- National Environmental Standards for Freshwater (NES-F);
- Stock exclusion regulations; and
- Regulations in the measurement and reporting of water takes.

The requirements for the essential freshwater rules and requirements are set out on the Ministry for Environment website ([www.environment.govt.nz](http://www.environment.govt.nz)). A summary of some of the requirements are located in Appendix D of this report.

The Government opened public submissions to the proposed changes to the freshwater policy package in September 2019. An update on consultation presented to the Minister for Environment outlined details of a two-hour consultation workshop held in Ashburton in September 2019 (Denny, 2019). The document stated that:

- 340 attended this session – twice the capacity of the room booked;
- People engaged constructively with the proposals; however, there was much cynicism that they would be listened to;
- Attendees were concerned about nitrate bottom lines and potential impacts on peoples' mental health and the future viability of rural communities; and
- Attendees also expressed concern that the science behind the proposals was not robust enough and that there was a lack of supporting economic analysis.

## Other Interrelated factors

This report looks at the potential social impacts of the freshwater legislation; however, other factors were mentioned during the research and interrelate with the findings. These factors include unforeseen events that have occurred in the Ashburton district, and other legislative reforms released at the same time as the freshwater reforms which have impacted the Agri-sector; such as:

- The 2019 banking reforms,
- The Mycoplasma Bovis outbreak and eradication program in the Ashburton district,
- The 2021 Canterbury Drought.

In some cases, the above factors have either had a knock-on effect or compounded the reported impacts. The following section provides some context for these events in participant responses.

### The 2019 banking reforms

The way that banks have been interacting with their agricultural clients has reportedly changed in recent years, some of the changes are attributed to banking reforms which were happening around the same time as the freshwater reforms were announced. Under its mandate to maintain our economy's financial stability, the Reserve Bank of New Zealand (RBNZ) has been reported as

expressing repeated concerns about agribusiness. In an article published by DairyNZ (DairyNZ, 2020) the RBNZ expressed concern over the growth of agri-business debt and the effect of volatile commodity prices on how this borrowing is managed. As a result, lending rules have changed. Giving a background about the changes that the RBNZ have made provides context for how some farmers have described the impact of the freshwater requirements on their ability to meet costs; and the way that some banks are describing the interaction with their clients around this legislation.

The RBNZ's changes to bank capital requirements mean banks will need to hold additional capital against lending. The higher the risk profile of the business, the more capital banks must hold against each loan. A media report published on Stuff News quoted the Minister of Agriculture, Hon. Damien O'Connor; as being aware of this issue, saying; *'that the banks were already coming down hard on pretty much all farmers to reduce their debt and limit their access to working capital and were generally being bloody difficult to farmers'* (Anthony, 2020).

### Ashburton's Mycoplasma Bovis Eradication Programme

Mycoplasma Bovis (M. Bovis) is a common cattle disease in overseas dairy countries but had not been detected in New Zealand until July 2017. The Ministry for Primary Industries (MPI) announced a national eradication program on 28 May 2018. MPI reports that Canterbury, including Ashburton, had the largest number of outbreaks in New Zealand and has recorded 132 cases of the disease. Of these, eight properties are still affected with active cases (Ministry for Primary Industries, 2021).

During the research M. Bovis was mentioned by some respondents as having an impact on the Ashburton community. Some interviewees were directly involved in the M. Bovis response either through providing social support, or on farm. Those interviewed who provided social support were not currently connected with the Rural Support Trust but described the pressure on availability of counselling. M. Bovis depopulation orders were placed on some farms that tested positive for the disease, which meant whole herds of cows had to be culled. The culling had a reported economic impact on farms and reportedly placed farmers under mental distress. A spokesperson for a beef farm described ongoing stress for farmers dealing with M. Bovis and believed that the freshwater package rules and regulations have added an extra layer of financial and emotional burden on some of those farmers.

### The 2021 Canterbury Drought

The region has also experienced extreme weather events that have impacted farmers. On 28 April 2021, the government announced support for the drought-stricken areas of New Zealand. The Ashburton District was included in this announcement. The drought is recorded as the second consecutive year of drought where low groundwater levels have not been able to recharge.

Some respondents in the research spoke about the drought as having an impact on their stress levels and spoke about the need for farmers to be resilient in times like these. Respondents referred to the impact of the freshwater legislation changes resulting in increased financial pressure and additional stress.

## The Findings:

### Introduction to Findings

The findings of this research are presented in three sections and written in an order that takes into consideration the timeline and importance of some events related to the National Policy Statement for Freshwater Management and associated legislation. The first section begins when the NPS-FM was introduced, specifically, the consultation meeting where some participants of the research attended in Ashburton in September 2019. The first section gives context to the introduction of the rules and regulations, and describes the environmental work that had been already completed as part of the Canterbury Water Management Strategy.

The second section of findings describes the uncertainty that was generated following the NPS-FM consultation meeting and explores how the participants responded to the uncertainty.

The third section of findings describes the potential impacts of the freshwater package. The findings look more closely at the ways that the freshwater rules and regulations could impact farm businesses, farmers and their families, and the community.

## Section 1.

### The NPS-FM consultation seminar

When the government announced the freshwater reforms, Environment Canterbury (ECAN) and some farmers were engaged with the Canterbury Water Management Strategy (CWMS). During the research participants reported that ECAN have already *'spent a considerable amount of time and money'* to oversee the CWMS. According to a spokesperson for ECAN, *'there are still onerous targets for farmers to meet in those plans.'*

During the research, farmers and industry representatives described attending a seminar in Ashburton introducing the new NPS-FM in September 2019. Attendees represented different backgrounds, including; farmers, Agri professionals, Agri-sector groups, environmental groups, and urban people. Some research participants described what it was like to be at the seminar. A few participants mentioned that they saw the farming community expressing stress, upset and anger. For example, a spokesperson for an environmental group described:

*'I went to the seminar in Ashburton where the National Policy Statement was introduced. The seminar was well attended by the farming community. There was a lot of upset and anger with what was produced. I cannot comment on the financial impact, but there was definitely mental stress. There was a lot of yelling and comments made on the impact of the rules.'*

She also commented on the mixture of rural and urban attendees and made mention that she believed the urban attendees to be more supportive of the legislation, but felt the legislation did not impact them the same way as farmers who may experience more financial impact from the rules. She explained:

*'There were not as many people there from the more township areas, but those who attended were perhaps a little more supportive of the legislation coming down. They were looking at it in terms*

*of water quality and a recreational view. However, they would not be required to make the rural industry changes, so it is probably unfair to say that they were coming at it from the same angle'.*

A spokesperson for a different environmental group mentioned that the turnout to the consultation seminar was 'quite massive' and felt that the government representatives were unprepared and unable to answer the concerns raised. She said that this created uncertainty for the industry. She commented:

*'The representatives of Ministry for Environment were unprepared and could not answer the questions, so they went to a minister who was better able to answer questions. One of the ladies answered the initial questions, but as soon as people tried to pare back what it meant at ground level, they were left entirely wanting. So, all that did was raise concerns again because these guys had no idea'.*

An agri-banker also recalled attending the meeting and described seeing people in attendance displaying heightened anxiety, anger, and a 'sense of hopelessness' at the changes. He said that there was a 'strong negative vibe in the room' and felt that it was due to the lack of acknowledgment for work already done. He further explained:

*'The obvious thing was that there were some questions asked, and the guy that was presenting could not answer them. He came across as unprepared and with the attitude of 'well, I did not deal with that, so it is not my problem'. He delivered someone else's message and did not know the basis behind the message'.*

The Agri banker also indicated that the attendees were told that the work of ECAN as part of the CWMS had to be re-written. He described the anger that he saw his clients displaying, citing a waste of time and resources. He said that farmers were worried about their ability to continue farming. He commented:

*'The district has done much work around environmental change over the last decade, and then the government presents a lot of new rules that meant what we had all done had to be thrown out and start again. Clients are saying they have done all this work and spent money around environmental plans, set limits, done their research, come to understand what operations are doing and doing their best, and now they have to add another level of cost. What underpins all of what they are saying is them questioning what impact it will have on their ability to continue to farm'.*

The following responses describe the work that Canterbury farmers and ECAN had done as part of the Canterbury Water Management Strategy, giving context to why there was a strong negative reaction to the introduction of the freshwater rules and regulations.

## Water Management pre NPS-FM

Many of the farmers interviewed reported contributing resources and manual labour for collaborative projects that improved environmental outcomes on-farm. Farmers described their contribution in different ways. Several respondents spoke about the work with ECAN as 'working very well as it worked with individual agribusiness systems and farmers' but also made statements like 'the government had ignored them as farmers, and ignored the positive work of ECAN in Canterbury'.



There were a number of non-farming participants who also gave recognition for the work that farmers had done. These participants recognised the work was in a primarily voluntary capacity but expressed concern that other areas of the country might not be as far along in the journey as the Ashburton District. An agri-consultant felt that progress that has been made was not recognised in the *'One-size-fits-all approach'* from government. He stated:

*'Many people throughout Canterbury have made changes on-farm; some of it has been voluntary. Farmers have nutrient budgets and farm environment plans in place. Many are on the journey doing lots of good stuff nationally, but they have not got the same teeth in the environment plans and budgets as Canterbury does'.*

One sheep and dairy farmer spoke about contributing land through partnerships with environmental groups such as QEII trust and proudly explained how he had contributed to improving environmental outcomes. He said that he had spent thousands of dollars to plant and fence. He also said that he was proud of his wife, who had completed much of the planting and acknowledged the many hours of labour that she had contributed. He explained:

*'We donated 6.5 hectares to the QEII Trust and probably spent about \$30,000 on planting and more on fencing. We have probably spent about \$80,000 over the year. My wife does a lot of the planting. She works two or three hours a day just planting and weeding'.*

The sheep and dairy farmer's demeanour changed when he finished his description of the work that had been done with a comment about the lack of recognition from the government and New Zealand. He added:

*'People don't realise what has been done for them. People need to realise that we farmers have been helping them. Maybe then they will recognise that we have done a lot instead of calling us bad farmers'.*

A young fifth generation intensive cropping farmer wearily spoke about how he felt about the lack of acknowledgement for the work that had been done by farmers. He gave a personal account of how he felt the country had forgotten about farmers. He added:

*'It costs ECAN about \$25 million to overwrite the plans, yet we have spent to get to that standard. There's no acknowledgment of what we have all done to get here and get their targets done. It makes me feel disappointed and completely over it. It feels like the country has forgotten about us'.*

## Section 2

This section of findings describes the impacts of the uncertainty generated following the NPS-FM consultation meeting. Uncertainty was a major theme of the research. Initially, uncertainty emerged in response to the NPS-FM seminar in Ashburton, then, as time has progressed, and the rules have become clearer, the participants responded to the new freshwater rules and regulation changes. Specifically, participants were uncertain about how to implement the required changes and what the potential impacts could be on farms.

## Uncertainty emerges

Uncertainty was a key impact of the announcement and consultation process of the freshwater rules and regulations. According to participants, the NPS-FM consultation held in Ashburton in 2019 created a great deal of uncertainty around what farmers are and are not allowed to do, when they must meet targets; and what will be involved to reach those targets. At the time of the NPS-FM coming into force in 2020, some participants described how Environment Canterbury still had not provided Canterbury farmers with clarity about what the NPS-FM will mean to the existing timeframe and targets of the Canterbury Water Management Strategy.

An agri-professional described the emerging uncertainty as *'affecting the entire agri-sector'*. She believed this was because ECAN had not indicated whether the existing CWMS would continue its current targets or whether it would immediately cease and a new strategy written. She explained:

*'ECAN has not indicated whether they are having to start again with these planning processes or allowing the current planning processes of the Canterbury water management strategy already in place to run out their term. Then another one comes out after that. There is a great deal of uncertainty that has generated for the agri-sector'.*

## Impact of uncertainty on Agri Professionals

After hearing about the uncertainty about what the rules will mean for the district, agri-professionals described how the uncertainty impacted the way that rural professionals and banks interacted with their farmers and in some case with ECAN. The following sections describe the impact of this emerging uncertainty on rural professionals.

Several rural professionals described a range of ways the uncertainty affected them. These impacts, included: affecting their ability to plan with and advise their clients; changing how clients interact with professionals; and making their roles more stressful.

Agri bankers described how the uncertainty impacted their ability to support farmers with budgeting and planning. One agri-banker said the uncertainty was widespread and felt that it caused an inability to create environmentally and economically sustainable plans with clients. A key concern for him was that farmers were unable to provide banks with proof of future income. This was because the freshwater rules and regulations could decrease productivity, resulting in a difficulty for farmers to satisfy the banks' lending criteria. He explained:

*'At the moment, the lack of clarity creates much uncertainty. From an environmental perspective, there are many things that we are unsure about. Our farmers are unsure; our trusted advisors outside the bank are also unsure. When we are trying to create a sustainable strategy, both environmentally and financially, which is essential to a bank, there is no certainty around what the rules may look like for everyone.'*

Other agri-professionals also responded to the uncertainty as affecting their ability to support their clients properly. One advisor who works closely with farmers on farm summed up how difficult it was to do his job and advise farmers on the rules. He said that it affected his ability to advise on the next steps to take as a business. He appeared frustrated and animated when describing how the uncertainty had hindered farmers ability to make operational change. He commented:



*'Our job is to know these sorts of rules and regulations and know-how to point farms in the right direction to get help, but if I still do not fully understand then how are these farmers expected to understand it and plan for it? If rural professionals like me cannot provide the support and clarity that a farmer needs to make an operational change, how can they change?'*

Another group of rural professionals who work with farmers are the private irrigation schemes. There are a number of irrigation schemes within the Ashburton District, operated by private irrigation companies. A spokesperson for one of the Ashburton based irrigation schemes felt that being able to represent their shareholders and understand the approach of local authorities gave them a broader perspective on the current and potential impacts of the legislation change. She felt that one of their roles is to work closely with farmers and provide information on what legislation changes mean from a *'practical perspective'*. The spokesperson said that the uncertainty had changed parts of her job because the company was *'busy having to be a change management company'*. She recalled how the uncertainty had meant that she was unable to provide farmers with guidance during this *'really volatile, uncertain and ambiguous time.'* In her view the irrigation scheme had taken an approach to protect the entire scheme and had been directing farmers towards the more stringent rules of the CWMS in the absence of clarity. She further explained:

*'ECAN is not sure what the legislation means. They take a very cautious approach in needing to do what they already have in place and dealing with what the central government wants. We cannot tell our shareholders what ECAN wants. So, when a farmer comes to us wanting to make a change, we cannot give them any answers. Usually, it would fall under the discharge consent that we hold for land use activities, but we do not hold consents under the freshwater legislation, which controls the same thing, so we have to send them to ECAN. Then there is a potential confusion that arises because ECAN advises that a farmer can do something when we are firmer to protect our global discharge as a whole'.*

The uncertainty about what the rules mean was highlighted as a key issue for an environmental group working on current environmental projects. A spokesperson for an environmental group expressed that she was pleased that there was some action around improving water quality, but had concerns about the way that the freshwater package had been announced. She described the collaborations she had with farmers prior to the NPS-FM being announced as being upbeat. She happily described her work with farmers and said that she enjoyed focusing on finding *'wins between environment and agriculture'*. She became serious when speaking about the uncertainty generated in response to the NPS-FM seminar. One of her concerns was the shift in the willingness of farmers to collaborate. She felt that the uncertainty was *'creating tension, thwarting progress, and disengaging the more proactive farmers.'* She further explained:

*'When the draft NPS landed here, there were many unknowns. It had a rippling effect, people dived into the bottom lines, and that shock and concern grew. The change coming from top down concerned me as there was no recognition for work already done. I saw it disengaging those that we had already engaged on the journey, and their attitudes shifted from being along the journey to feeling that there was no bloody point because now they were being lumped in with the guy down the road who was not doing anything to improve environmental outcomes. There was a large volume of people who were seeing opportunities around community or farmer led change and now people were saying things were being imposed like a blunt instrument. Everything has now slowed down and what we*

*have to do has beefed up considerably, but our ability to do it has stopped and that feels quite paralysing'.*

## Section 3

The third section explores the potential impacts of the freshwater package on: farmers; their families; their businesses; rural supply services; the community and the wider district. The data presented also describes some key findings about Hekeo/Hinds; and describes some of the ways that the freshwater rules and regulations affect some key sustainability indicators of farming businesses.

### The Impact on Hekeo/Hinds Area

During the research, people repeatedly referred to the area that includes Hinds and all land surrounding the Ashburton River. This is an area that participants believed would experience the biggest impacts from the Freshwater rules and regulations.

According to a spokesperson for an irrigation scheme, Plan Change Two of the CWMS involves a target of 30% reduction in Nitrogen levels in rivers and waterways by 2035. He explained that the new freshwater rules and regulations requiring a level of 2.4mgN/l could mean that there would be no farming in the Hekeo/Hinds area. He went on to describe people as feeling afraid that their 'community would be decimated'. Participants in the research reported feeling apprehensive that there may be an expectation set for everyone to achieve the same level as Hinds across the district. The irrigation scheme spokesperson also felt that although there were hotspots that needed to be addressed, the blanket approach of the rules and regulations could mean there would be a mass loss of farms to achieve the targets. He explained:

*'Everyone is apprehensive to say what they can achieve; bear in mind that we have just talked about getting to 6.9 mg/l People are saying they are not even getting to 6.9 mg/l and at a loss at how we can as a farming community achieve 2.4mg/l. For many people, that is unimaginable, and that is our community decimated. It would be better if that were required to be done in the next 10 to 15 years after the current targets. However, if these levels were required now, we are looking at a huge impact. So that is the concern that's starting to percolate out there. Whether you like it or not, there are hotspots around Canterbury, and in those hotspots, stuff will have to be done. However, the concern is, what happens in those hotspot areas then gets to set the expectation for everywhere else'.*

According to a different irrigation scheme spokesperson, a modelling report has been completed and showed that at a target of 2.4mgN/L, 'farms in Hekeo/Hinds including viticulture could not achieve the necessary reductions in leaching required.' She explained:

*'At the moment, that is impossible to achieve 2.4 mg/l in the drains at the bottom of the Hinds Plain. Farms need to be at 3.8mgN/L without irrigation, and when viticulture leeches a level of 10mgN/L, then there would effectively be no farming on the plains at all'.*

Other Agri-professionals echoed the concern about the potential loss of farms in Hekeo/Hinds. One spokesperson described the possible situation in some farming areas by comparing it to a similar situation in another Canterbury Water Management Scheme area – Waimakariri. He said that in

Waimakariri, farmers have been required to make changes and the farms had become unsaleable. He described a current situation where farmers were now exiting in that area and he felt that this situation could occur in Hinds. He further explained:

*'Farmers were required to make six tranches of 15% reduction over the next 50 years, which is a 90% reduction after getting to good management practice. I believe 24 farmers are in that catchment now, even though the plan is still going through the hearing process. Those farms today are unsaleable. You cannot bank them, you cannot attract staff, so effectively, those farms are changing land use. The farmers will do whatever they can now to exit those farms because now they are tarnished. Now initially, I thought that was incredibly unfair; that is like someone dying not over five years, but over 50 years; you would not wish that on your worst enemy, but that is the consequence of what we are seeing play out at the moment'.*

### Impact on farms and farm businesses

The following data relates to how the freshwater rules and regulations could impact farms and farm business and provide a deeper insight into the frustration and stress that farmers were reporting. One of the major concerns that farmers repeatedly mentioned was economic viability of their farms and for other businesses in the Ashburton District. Farmers also described how the freshwater rules and regulations could affect factors such as: productivity; stability; equity; and resilience of their farm. Such as:

- The rules would reduce the amount of productive land available to use,
- The nitrogen limits would mean that they had to limit the number of livestock, resulting in reduced income
- The cost of upgraded technology, consents, fencing and consultants would cause economic strain on the farm, with some farmers saying that it would be unviable to continue to farm
- The restriction on diversification, limited productivity options which affected the resilience of the farms to cover input costs in times of market fluctuations
- The capital value of their farm could change if there were fewer effective areas and diversification options because the land could be unattractive to buyers.
- The ability to service debt could be impacted by the change in production
- The changes that needed to be made in order to remain productive would require new irrigation systems, and that could mean removing several hectares of fencing and trees used as shelterbelts.

An example of how farm productivity could be affected was commented on by a rural professional. He described the impact that the freshwater rules had on reducing the farm's ability to increase production and feared that some farm businesses would not survive. He said:

*'The ability to increase production has gone. For as long as I can remember, farming has survived from increased productivity. Every year the farmers have improved what they do and get better at it. However, it only holds them in the same place financially; Not everyone will be able to decrease production and still stay viable, and people will fall off the ladder'.*

A hill country sheep, beef, and deer farmer described the requirements to fence waterways and the winter grazing rules from the freshwater package and what it meant for his farm. He felt that there were limited alternative options available to work with. He commented:

*'The rules dictate where we can and cannot graze stock. What it means is that we have to find alternative water sources for our livestock. By fencing off land we lose the ability to graze land. The reduced grazing area means we would have to increase the intensity of how we use the land. That increases our input costs. The way the land is, it is virtually impossible to fence every waterway. It is unviable to complete the fencing in just a couple of years. Economically we think we will be finished. The cost of compliance to meet the regulations exceeds our profitability. We also have an impossible task of trying to reticulate water up the back of the farm for stock to survive, let alone find the money at a cost of \$25 odd dollars a metre. Planting trees for carbon is not going to work for us either because; if we plant pines, 30% of the existing moisture will be sucked up to feed the trees, it is going to leave even less for animals and you can't earn enough from credits to stay farming'.*

According to a real estate agent, one of the restrictions around planting winter feed is centred on how much land can be used for winter grazing without consent. He gave an example of a client who has found it challenging to change his farming system because of the reduced options available to him. He described a situation of the client wanting to change operations to reduce leaching, but the halt on intensive dairy practices by the irrigation schemes meant that he was unable to make the change. He explained:

*'One example is the 10% of winter grazing rule which means no intensification. I have a client who runs a 200-hectare block of intensive bull finishing. He wants to convert to dairy, and his N leaching will drop almost half, but he cannot change because that is considered an intensification. Now tell me what is the difference between a bulls\*\*t and a cows\*\*t? It doesn't make sense. Surely if there is a 50% reduction in N loss then common sense would say that's better than what he is doing now?'*

Some farmers spoke about how the freshwater changes have meant there has been a move by irrigation companies and the council towards more stringent water takes for irrigation. One farmer said that restrictions on water allocation would have many consequences to his farm, for example, removing shelterbelt trees, upgrading an irrigation system, removing his flood protection set up, and drilling a well. The costs of making the changes would mean that he would be forced into either going dryland, which meant losing two-thirds of his income or selling the land. He explained:

*'From November to March, we will not be allowed to take the water we need. The only way around that for me is to put a well down, and I would need irrigating setups. I would have to remove all the shelterbelts on the farm except for the boundary ones. At present, every paddock has at least one or two shelterbelts of trees on it. I would have to remove all of that, and I would have to take out all my flood irrigation set up. So, the short and long of it is that it is going to cost about 3.4 million. Until the council comes up with their final decisions, there is no guarantees. According to my consultant, this farm will go dryland, which means our income returns will reduce by two-thirds. So at my late stage of life we just walk off farm, we will not be able to stay here, we just cannot do it'.*

The rules to fence waterways was also a concern to a young farmer. She wanted to highlight what the rules meant for the way that land is managed. She spoke about working on a high-country station and believed that the beef cows behaved differently to dairy cows. She described how farmers would graze the land on the river's edge to help manage weeds. In times of flood risk, the farmers would shift the stock. The rules to fence these areas meant that there would be an ongoing cost to farmers to re-fence the area every time there was a flood. She commented:

*'The stock exclusion rules are out in place all wrong. I worked on a high-country station; the animals did not even care about the water because it is just part of their natural landscape; dairy cows are a bit different because they do not see water much, and when they do, they all want to get in it. I have a friend that works on a farm up the back there it is on the banks of the river, runs 12km, now that gets flooded at least twice a year, he will be refencing it twice a year – it is just the way rivers run, and there is a creek at the front of it. He grazes it, but if there is a flood due, he moves all his stock out. Are you telling me that he needs to fence that every time it has gone underwater? It is just mad. Anyone knows that it's rough land up there, grazing it keeps the weeds down, but this new rule will kill his farm, and that means less stock, fewer lambs bought onto the plains for winter grazing, another job gone. It's just another roll-on effect to create two jobs that tick boxes. Sheep hate water, and beefies do not look at it twice. Dairy cows, I agree, should be fenced off'.*

## Increased Compliance

A key tool for farmers to prove the improved environmental outcomes on farm is the Farm Environment Plans (FEP). A FEP was required by ECAN to gain consent to farm under the CWMS. This compliance required farmers who did not understand the rules to engage with consultants. The costs involved were reported as being 'significant'. Increased compliance costs were identified as a potential impact, some farmers having to re-write existing farm plans to account for the new rules and regulations. According to many of the farmers and some professionals interviewed, the effects of implementing the new rules on the farm may also mean higher expenditure on capital in order to meet the requirements. One spokesperson for a beef operation said that *'there would also be higher costs in maintaining and monitoring the capital cost, which would then be passed onto shareholders.'* He said that shareholders are seeing increasing overhead costs and compliance costs which decreased profit margins. He explained:

*'We have the same amount of cattle, same kgs produced and our overheads are increasing. The shareholders ultimately pay for that, and they are questioning why they are investing in NZ when they can earn more money elsewhere like overseas and do really well'.*

An increase in compliance over more recent times has impacted some farmers more than others. Some farmers described the increasing paperwork requirements as *'stopping them being able to do the farm work'*. Many farmers reported feeling *'overwhelmed with paperwork'*, feeling *'farming has become something different and not what they signed up for'*. A few participants said that the freshwater package would mean that they had *'another level of paperwork to deal with'*. One spokesperson for an agri-business reflected on this increased compliance, and added:

*'The farmers are spending too much time with compliance issues than farming, which is probably the more significant impact on many of them. Farmers are fed up with time in the office when they need to be out making the farm work'.*

An agri-professional highlighted that the compliance requirements would increase technology use and felt that the legislation would increase the requirement for farmers to adopt technology such as Overseer, and monitoring equipment. He believed that the monitoring and measurement requirements had not been the same across agriculture. As a result, he felt that farmers who were not previously up to speed with compliance requirements perhaps were impacted differently to those who had already adopted some change. He described how some farmers may be affected by the compliance more than others. He commented:

*‘Some farmers, particularly those towards the hills, are less likely to have irrigation like the plains; it is a different style of farming. The monitoring and measurement processes have not been adopted quite the same. There is a lag in technology and skills, which has left many farmers suddenly in a panic, not understanding what is required’.*

### Impacts on farmers’ ability to access bank support

A few of the farmers interviewed reported feeling pressured by the banks to repay debt. This was a common theme with some farmers who said that it has impacted the way that they could farm.

Some of the farmers were worried that their ability to make changes to meet new freshwater rules and regulations would be hindered because they were *‘just trying to make ends meet’* and thought that they may not be able to access the funds that they needed to make the changes on farm. This is because they couldn’t prove their future income through diversification such as dairy support, and production with a change in stocking rates.

An Agri-banking advisor explained the way that the freshwater rules could impact on some farms and their productivity from a bank’s perspective. He spoke about the bank’s requirements for an agribusiness to have financial resilience to meet fluctuations in income. He expressed concern for clients who may be experiencing challenging times such as a drop in market price or drought, and acknowledged that the freshwater rules would impact the financial stability of some farms. He also noted that banks were now questioning the viability and value of some agribusiness customers. He explained:

*‘We know that one of the rules is 190kg N/ha/year which is blunt from an operative view. What that means is that farms will need to reduce stock, and that has two effects – income and productivity. So now we are saying, what is your farm worth now that it is less able to produce and you have less ability to generate income? So absolutely that has an impact on what we can lend and, in some respects, we have to take a more conservative approach’.*

A sheep/beef farmer displayed a multitude of emotions when describing the impacts of the legislation and its meaning for his ability to farm. Putting his head in his hands, he described feeling *‘backed into a corner’* with his recent dealings with his bank and described feeling *‘too much pressure.’* He described some of the increased costs to his farming system and compounded existing requirements from banks. He commented:

*‘The bank will not finance us properly now, so I do not know how we can afford to do any of it; they have pulled back their support, removed our ability to access cash flow in rough times, and have been pressuring us to reduce debt. It is not just the cost of fencing and other water systems, but also the increased cost of compliance paying for advisors, then changing our stocking rates. We are already tight in the cost of genetics and meeting the increasing costs of breeding stock. I feel that we are being squeezed in every direction, and there is no relief in the money we get in from the markets – we have to pay more and earn less, and if you do not, then you are considered a bad farmer. Some days I think what’s the point?’*



## Impacts on land value

Some participants mentioned that the freshwater package was having an impact on the value of the land but they were not sure if the impacts would be more positive or negative in the long run. A real-estate agent spoke about land values changing because of the new freshwater rules. He said that the issues around environmental legislation was a *'hot topic'* for his clients. He felt that the impact of the freshwater legislation is unclear because the impact on farming profitability had not been fully realised yet. He added:

*'There would not be a day go by where these issues do not come up. The freshwater package is the number one topic for purchasers and vendors. It is hard to know the true impact because, on the one hand, it could increase the value of the land. After all, there is no more supply, but then, depending on how these issues affect farm profitability, it will become less attractive to go farming and reduce the value.'*

An agri banker described seeing a reduction in dairy sales from a banking perspective and felt that it was a direct impact of the uncertainty about the profitability of farms under the new legislation. He commented:

*'We went through 12 months of very few sales after the announcement of the freshwater rules because the dairy industry was unsure where they sat. This had an impact on both value and confidence, and this is happening across the board.'*

## The impacts on farmers and their families

Farmers shared stories about the deep connection to the land. Some identified with farming as *'who they are not just what they do'*. Many farmers who were interviewed said that they had been farming for their entire lives, and some young farmers were from a line of inter-generational farmers. Older farmers expressed their commitment and dedication to farming with pride. Overall, farmers passionately described a *'sense of responsibility'* to provide for their family, the district, and New Zealand. One older farmer shared memories of the early years of farming and the pathway to building a better life for his family under some challenging times. He described working many jobs to be able to survive the 1980's and the involvement of his family to build the farm. He said he felt that the freshwater rules *'undoes all the hard work done'* because he had to invest so much money into making changes to the water system on farm. He had tears in his eyes as he described the pressure that he felt.

Some farmers described the pressure that they were feeling from the media and government. One farmer said *'I'm shutting down because of it all'* and another commented that the freshwater issues had increased the *'negative perception of farmers in the public.'* Some participants believed that *'people don't really understand what's going on, you just feel forgotten about.'* One farmer commented that the pressure around public views was coming from both the government and the media. He said:

*'The pressure is not just coming from the government. It is the media as well. I think everything you read is negative, and it is all about how bad we are. Nobody gets up in the morning and says, we are going to screw over the environment today because we all know if we do not have clean water, then we all suffer, but people treat us that way as if we do.'*

A common theme from farmers was that they were feeling increasingly unable to participate properly in the decisions about things that affected their lives. One dairy farmer cited the freshwater package process as *'another example of people making decisions without talking to farmers properly'*. She also thought that there was not enough time given to farmers to help people understand the way farms work. She explained:

*'I guess that people do not understand what's going on. They make these decisions based on numbers and do not think about how it will work. They don't give you enough time to work it out and they don't talk to us about how it will work either. You just feel forgotten about'.*

A sheep and dairy farmer shared his story. He described feeling constantly stressed since the freshwater package was announced. He felt that the relationship between farmers and environmental groups had changed since the rules were announced. He gave an example of donating 6.5 hectares of land and fencing it off to protect it for future generations. He said that he felt *'incredibly upset'* because the same environmental group opposed his recent resource consent for water takes, he believed that it was because of the new rules and regulations. He said that he was *'struggling to keep up'* with the requirements of the regulations. He further commented:

*'When we came to our consent hearing the other day, I thought we had everything signed off and all right. Our irrigation take was already registered with the council, it was ok, we have had it since we bought the place, and before that, there was consent to take water from the river for the last owner. And the environmental trust objected to it because we are taking water? I'm still upset about that. I went to the doctor because I was getting a bit stressed from all of this stuff about the rules, measuring our water and the costs of consents'.*

Farmer's wellbeing and stress levels were a concern of many non-farmers. Comments were made about a *'shared concern for farmer's wellbeing'* by agri-professionals, industry representatives, and members of environmental groups. Some participants mentioned that the farmers who were living in more isolated areas would be more vulnerable to the negative change in mental health because the new rules would cause extra stress and worry, and there was less opportunity for farmers living in more remote locations to talk about it with others. One agri-professional described his interactions with farmers and what he was hearing from them:

*'It is quite a lonely existence for some of those farmers. They might not get off the farm for over a week and the only contact they have is with their wife, so they are sitting there thinking about it themselves and people like us as reps will come up the drive and will hear it all because they don't have anyone else to talk to. It concerns me because it's all we hear – its constant. Farmers are pretty stressed and worried about the new rules and regulations. So, I know that it is having an effect on their health just in listening to them'.*

A local community connector who works alongside the rural community, highlighted a concern for the growing number of people experiencing wellbeing issues in the district. She responded to the potential impact as being *'really concerning'* for farmers and how they would cope. She said that she was worried that the farmers would *'either not show how they were feeling or admit to needing help'*. She described pressures that farmers and Ashburton community members were experiencing as not just coming from the introduction of the new freshwater rules and regulations, but also from several concurrent events such as; Mycoplasma Bovis, Covid-19, and the Canterbury drought (refer to context section of the report). She was concerned about the resources available in the district to support the



rural community and described them as being *'already stretched'* she felt that there would be an impact on wellbeing services if farmers continued to be affected by the changes:

*'There are many farmers experiencing stress already and as a community we are actually under a lot of pressure as it is from the knock-on effects of covid-19 and things like M-Bovis in the community. So, I am thinking – how much more can we take -and wondering - is there going to be funding put into resourcing these services? With farmers and men in particular, it's really difficult for them to admit when they are not coping. When farm owners are under a huge amount of stress or when business owners who rely on the farming industry come under a huge amount of stress, then it becomes this knock-on effect and can become an even bigger problem to everyone around them, such as their staff.'*

A spokesperson for an environmental group had a concern for the stress and tension that she saw some *'good'* high country farmers displaying. She explained that the freshwater package required hill country farmers to fence off waterways and some of the farmers were saying to her that it could be virtually impossible given the way that the water runs on their property. The spokesperson mentioned feeling sad for those farmers who were doing everything they could to meet the rules and said that one of the farmers she worked with had begun to lose confidence for their future generations to be able to farm. She explained:

*'When I hear environmentally responsible farmers say to me – well we might as well shut the gates with the way it is legislated, I think it's sad. Here I am, seeing people who have done such a good job, and they are now asking what the future is for their children'.*

During the street intercept interviews, some urban residents commented about the potential impacts of the freshwater package on farmers and families. Some of these comments drew a comparison to the agriculture reforms of the 1980's. One resident used her memories of the past to describe what happened in the 1980's to farmers and believed that the current freshwater package was going to place farmers and their families in similar positions. She said she was worried for the farmers suicide rates could increase. She commented:

*'I can see farms crumbling as they did in the 80s. I heard stories in the 80s, where people just walked off their farms, and the suicide rates went up from the stress. I can see the stress on families around Ashburton now, and dare I say it, but I think there will be an increase of suicides. If the farmers feel stressed about money they have to find to pay for consents and try to keep it from their families, it is not a good situation'.*

A spokesperson for an irrigation scheme also expressed a deep concern for farmers. She cited the angst, disengagement, and shifts in wellbeing that they were seeing since the introduction of the freshwater rules and regulations. She said that there was a rise in the number of farmers expressing *'they may not be good enough to continue to farm.'* She mentioned that she was worried for the mental health of farmers and was concerned because one of the shareholders had ended their life a few years back. She said that she was worried that a potential impact could be that the pressure that farmers were already facing could compound with the stress around making changes under the freshwater package, and was worried that there could be an increase in suicide rates. She explained:

*'There are already pressures on farmers, we lost someone in our scheme a few years ago, and I do not even think we have seen the rubber hit the road yet. I am really worried about people's mental*

*health. It's not my area of expertise, but it is something that I am apprehensive about. I see that farmers have been doing everything that they possibly can do within their farming systems to make them better. We see improvements in groundwater quality, but now an arbitrary limit put on everything without considering the features of these drains, and people are saying - what more can I possibly do - how can I do this? I do not think I can do this - what is left for me? do I even want my children to get involved in the farm anymore? There is definitely great concern out there'.*

The pressure to exit farming was highlighted by some participants as a potential impact of the freshwater package on farmers and their families. Some participants suggested the increased exits were attributed to an aging generation of farmers who no longer had the desire to farm through the changes. Other participants said that it was due to the pressure farmers were under. According to a spokesperson for an irrigation scheme, some farmers are currently facing an '*unbelievably daunting decision*' to make in light of the freshwater package. Farmers who did not feel confident, or could not afford to make changes to their business to meet the rules may have to make a decision to sell their farm. One of the types of farmers he thought would be most affected was the older generation who were looking to retire. He commented:

*'It is unbelievably daunting for them, so if they are looking at that and saying, geez, this is a whole new world and their decision, do I sell today or sell in 5 years? They have already decided that they are selling; they are more than likely to make that call earlier'.*

The irrigation spokesperson further explained that if there were not enough young people with confidence in the future of farming then there would be an issue with the value of farms and exiting farming would be difficult for the older generation. He added:

*'The challenge is when that young farming couple loses confidence in the future. Then the older couple cannot get out and have golden handcuffs with the farm, and that is when you have got values that will drop, properties will become unmarketable, but that is the extreme position once you hit that you only go there once. Currently, we are not seeing enough good young people stepping up to buy the neighbours because we are going through a reset in our economy'.*

An agri-professional spoke about the increasing number of people selling their farms since the freshwater package was announced. He said that many farmers who were selling were saying that they did not see a future in farming anymore. He felt that farmers were now saying that they did not want the children to continue farming. He said that he could see this trend continuing as the freshwater requirements come into force. He further explained:

*'We have seen many people who have come onto the market and had to sell, saying we don't enjoy this anymore. How can we possibly do this? I do not think I can do this. What's left for me? I don't even want to get my children involved on the farm anymore'.*

## Impact on young farmers

Young farmers who were interviewed reported many potential impacts for them and their families in response to the freshwater legislation. Most of the young farmers interviewed spoke about the freshwater package creating extra compliance and costs. A few young farmers made comments that indicated that they had begun to lose interest in continuing to farm such as; the freshwater rules were '*adding to the reasons why I don't feel like going farming anymore.*'

One fourth generation young arable and vegetable farmer spoke about how the future is often discussed in the family. She spoke about the need for farmers to hire consultants to understand the freshwater package. She felt that the freshwater package was another level of paperwork that would disadvantage farmers who might not be able to keep up with paperwork. She used her brother as an example, and how she felt the new requirements could '*disadvantage him*' because he might not be able to meet the compliance requirements (complete the paperwork). She mentioned that it frightened her to think about the costs to meet the freshwater rules and felt that farming was moving towards corporatisation and family farming would end soon. She explained:

*'I reckon unless you corporatize, farming and family farming is finished here in New Zealand. Dad and I stay up all night debating this sort of stuff. You are going to have to go pay big bucks for someone else to do it and it's just another person on the gravy train isn't it and we just can't afford that. Some of those bigger farms pay someone to do the overview of the farm they are big enough to do it and we can't do it. I see the historic culture of family owning farms in NZ is getting less and less.*

A young fifth-generation crop and dairy farmer running their family farm spoke with a great deal of heaviness in his voice about what the freshwater legislation could mean for their agribusiness. He spoke about the modelling undertaken by their farm consultants to meet the required changes for reducing nitrogen limits, and their solution was a reduction in stock numbers. The young farmer and his family had played around with different farming system scenarios to see if they could reach the targeted levels without reducing their ability to repay debt and stay a viable business, but did not see a possibility. He described the stress of getting to a financial surplus after converting to dairy nine years ago and said that he had hoped to continue farming this way but was worried because he was not seeing a great future, especially as he saw people leave the industry. He explained:

*'We are in the 9th season since we converted to dairy and only just set ourselves up. It is a tough one because we do not know what we can do for our system, we might have to change between crop and dairy, but then it takes more than that to grow a paddock of wheat. It makes you so nervous because it is all unknown, and you feel so stressed about how to make it work. You can't see these things coming and do not know what is coming next. You sort of wake up one day and get slapped in the face with more rules. It is a drain on everything you do and gets you down a lot. My old man is getting sick of trying to make things work so that I can take over. I hope I can farm in the future, but I do not know. It has driven people out of the industry. My brother is a perfect example; he is working in town and does not want the stress of farming. He tells me there is no point in working 70 hours for nothing when he can earn a better living in town earning wages'.*

## Impacts on the community

The socio-economic impact created from the freshwater rules and regulations could impact the wider Ashburton district. One of the key concerns of participants was the economic viability of farms and how that affected the districts businesses and smaller townships. Many participants described the potential impacts on the community, such as:

- Rural and urban businesses closing due to an economic downturn on farms;
- Increased unemployment;
- Less spending in the district resulting in less support to community;
- Families relocating out of the district looking for employment;

- Negative impact on school rolls and interactions between rural and urban children;
- Reduced volunteers, sponsorship and donations in the district; and
- Increased demand for rural wellbeing services.

A resident living in the Ashburton township described feeling worried for the survival of some of the district's smaller townships. She felt that the changes farmers needed to make to meet the new freshwater rules and regulations would be too burdensome financially. She believed that there was a real possibility of forcing an early exit from farms, businesses in rural areas closing, and the family farms becoming corporate. She explained:

*'I am worried that the little communities will not survive as a result of the economic impact from the rules. It is the little stores like Mt Somers that will suffer the most because people will walk off the farm, and it will turn to corporate-owned – they do not support local like family farmers do'.*

An Agri-banker who works with farmers in smaller townships spoke about the potential knock-on effect of economic challenges from the costs of meeting freshwater rules. He felt that families could relocate out of the district, which could mean fewer children in rural schools, which would either affect the ratio of teachers to students as schools lost funding or could mean that attracting quality teachers to roles could be more challenging. He explained:

*'Our district is driven on agriculture around here. So, if these freshwater rule changes have the impact that I think they will, then there will be fewer people on farms. Fewer people mean fewer families at schools, families move out of the district, and that has an on-flow effect to teachers' jobs'.*

An agri-professional recalled her conversation with an owner of an Ashburton service business. She explained that the owner had done some budget modelling after the Ashburton District Council Economic Impact Report was released. The result of the economic impact caused by the freshwater rules and regulations was that his business would need to close, and 35 staff could lose their jobs. She explained:

*'Ashburton itself, as a service town to the rural sector, will fold. There was a local business who did some work on projected figures released by the council and found that it decimated his electronics business. So, he has 35 staff that he would lose. Thinking about that as a minimum impact - that's 35 families so it's a whole of community. Maybe you would still have Methven servicing the ski-fields'.*

Donations and sponsorship could also be impacted by the changes in farm incomes as farmers try to meet the freshwater rules and regulations. An agri-professional could see an impact on the availability of money for donations and sponsorship for local community events and activities. He felt worried as he believed that these are important for small communities that often rely on volunteers, donations, and sponsorship to stay viable. He further explained:

*'Anytime that you see money from farming draw back out of the community, then all of a sudden you have lost your clubs or donations to clubs. Whether you are into horse racing, the brass band the hockey club, the kids school fundraiser for their camp or whatever, it will draw out. You also won't get the parents fundraising for the kids for the local Christmas party to do catering and you think because businesses like ours will have to cut costs'.*

## Employment

Employment was raised as a potential impact of the changes that farms would have to make to meet the freshwater package rules. Those who mentioned employment were referring to the potential reduction in farm production and economic impact. An Agri-banker explained:

*‘Stocking rates will drop, production will drop, then there is less money into businesses, less into the community that lives and breathes off the income. By default, less intensity means fewer resources, and given that labour is a resource – displacement of jobs will happen’.*

Another participant said that the rules and regulations could mean the district has a big change in farming types which would affect employment. She reflected on memories of the 1980’s and believed that similar things could happen as a result of the rules and regulations. She added:

*‘There used to be heaps of sheep, and now you hardly see a sheep at all. My husband was a shearer, so the reduction in sheep means a reduction in work that he has and was available, which meant he had to go further and further away to get the same amount of work as there was in our district. It meant he had to leave his family for long periods and that had a strain on us. I think you will see people begin to move further away from families looking for work if there are big changes in farming types’.*

A seed merchant said that there could be a ‘huge impact on the district’ from the freshwater rules and regulations. He described what impact the freshwater rules and regulations would have on his own company. He said that the staffing numbers of his company could halve. He highlighted the winter feed requirements and the nitrogen limits as an example of how his business was affected. He explained:

*‘One of the worst-case scenarios is if farmers can’t graze dairy cows to the extent that they were. Obviously, that impacts their business, and if that impacts profitability, then it impacts on us. If they keep going down the track with the nitrogen levels, we are going to be virtually decimated. We have 18 employees throughout the company and seven reps on the road, so if this goes off the way it is I would say that we would be cut in half. I know that the Main Street is struggling now. If this continues the way it is, we would see a huge number of jobs lost’.*

## Schools

Schools were mentioned by some community members, as potentially being affected. Some participants felt that the economic impact from the freshwater rules would mean there could be less employment and cause families to move away from the district looking for alternative employment. A community member said that there was already an issue with sustainability of small rural schools and was concerned that schools in the smaller area would struggle and people’s sense of belonging to the area could be affected as a result. She explained:

*‘We look at the physical health but do not look at the social context. There will be an effect on the schools, especially up our way. There are already not enough kids going in and out, so it will be hard for schools to stay open and sustainable. People’s whole sense of belonging will be affected, and I think people who are affected by the changes need to have somewhere to go’.*

Early indications of tension between urban and rural children have begun to emerge in some local schools since the freshwater package had been announced. A representative for an environmental group explained that she had heard about teachers having difficulty managing the interactions between children from rural and urban backgrounds. She further explained:

*'I hear of tension in terms of everyone being a part of the community and having an interest in water. We have heard of different incidents where there is an impact on different schools or families. When you have children from a farm environment and those from an urban environment, it can be difficult for the teachers to manage those interactions. Trying to move forward with environmental changes as a community can be quite challenging because there is such a stark disagreement between the two different views'.*

An Agri-professional working with farmers spoke about how farmers' work regimes had increased through extra compliance and environmental work on top of what they already have to do on farm. He felt that this had already begun to impact the availability of volunteers at schools. He stated that he could see the freshwater package placing further financial strain on farmers and their families and felt that it would have an on-flow impact on the schools. He said that there could be a further reduction in volunteers, sponsorship, and donations. He commented:

*'Farmers will have a bigger financial strain and because of that you will see fewer and fewer volunteers at the school and that will flow on to fewer volunteers and community sponsorship is suddenly not available, donations from the farm businesses dry up.'*



## Discussion

This study examined the potential social impacts of the National Policy Statement for Freshwater Management (NPS-FM) and associated legislation on the Ashburton District.

The data suggested that the initial engagement process for the freshwater rules, and the consultation seminar held in Ashburton, created anxiety, stress, and uncertainty for the agri-sector. This consultation seminar held in Ashburton did not provide attendees a clear pathway, or a reassurance that there had been a thorough investigation of the way that the rules and regulations would impact farming systems. However, it was felt there was insufficient acknowledgment for the positive progress completed by farmers in the district under the Canterbury Water Management Strategy. While it was acknowledged that the current targets had to be rewritten, there was little clarity as to what the changes meant or how to implement change. This lack of clarity created confusion, distrust and uncertainty. This uncertainty increased as time went on, and Environment Canterbury were unable to clarify what the changes mean to the current CWMS targets. This resulted in a decreased confidence in the sector on top of the uncertainty and confusion.

The confusion and increasing uncertainty about the rules and regulations also impacted on agri-professionals. These agri-professionals experienced added stress and tension in their interactions with farmers because they were also unclear about how the rules would affect agribusinesses. The lack of clarity meant that agri-professionals were unable to provide effective support and advice to farmers. Banks and lending organisations took a more conservative stance with farm lending, restricting the ability of some farmers to access capital and stalling progress.

There is an overwhelming indication that the introduction of the freshwater rules and regulations are having an increasing adverse impact on the well-being of farmers. The findings indicate that farmers were already struggling to cope with the pressures that they were under, caused by a series of events such as M.Bovis, and drought; and are now experiencing extra stress and anxiety from the introduction of this new legislation. The result of this is an increased need for wellbeing support and resources for the rural sector in the district.

The potential impacts of the freshwater rules and regulations on farm agribusinesses were analysed in depth. The data suggested that there could be a negative impact on all four sustainability indicators of an agribusiness which are: Productivity; Stability; Resilience; and Equity. The potential reduction in farm productivity from the rules and regulations coupled with increased compliance, and increased capital costs, could mean that some farms may become unviable, particularly in the Hekeao/Hinds area. Older farmers could be most impacted by the impacts, as they could struggle more with meeting the financial investment required to meet the rules and regulations; and they could struggle with the increased paperwork requirements forcing an early exit from farming for some.

The flow-on effects of the reduced farm productivity could also impact on the agricultural supply businesses. It is feared that some agricultural supply businesses may close. Closures could result in a rise in unemployment fewer jobs for farm workers and some supply business employees, a dislocation of families from the area, and an impact on schools through reduced rolls, and increased tensions between urban and rural children.

It was unclear if there would be a long-term decrease in value of farmland, however in the interim, the rules and regulations have created a stall in land sales and a decreased confidence for buyers. The restriction on diversification may negatively affect the value of some land types more than others, it was highlighted that this could include high and hill country farms.

Smaller townships could see a decrease in land value. The Hekeo/Hinds area would see the greatest impact with mass loss of small business and farms making the area unattractive to people to live.

There was a negative correlation between young farmers, the rules and regulations and their hope for the future. Some young farmers had lost confidence in agriculture and this may create a shortage of young farmers willing to purchase land, a decrease in family farming and increase corporate farming.

The economic changes to farms could impact on community organisations such as local clubs. The data indicated that there could be less participation and support from the farming community as the economic changes in response to the freshwater rules and regulations begin to affect farms. Farmers would have less financial ability to support local and this reduced community support from agriculture could create an increased need for these groups to rely on alternative funding sources, such as; The District Council and external community funders. The reduction in volunteer participation could reduce community connectedness and increase social isolation for rural families.

## Conclusion

The new freshwater rules and regulations have wide social implications for people in the Ashburton District. In the past, water quality issues have been addressed through a community led approach to water management. The new rules and regulations have been introduced in a way that has accelerated the urgency of achieving improved water quality; but fails to take into consideration the on-flow socio-economic impacts of such an intervention on some rural communities such as the Ashburton District.

It was evident during the research that the people of the Ashburton District are proud of their agricultural sector and work together to strengthen the community in which they live. A shared commitment to tackle the complex environmental issues, including a willingness from government to work with farmers to create a time appropriate pathway for water quality improvements would result in a more effective and sustainable change in the way that land and water is managed and could achieve more positive social outcomes.



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# Appendices

## Appendix A

### Social Research

#### Information for interview participants

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##### Background

This social research is funded by the Mid-Canterbury Rural Support Trust. The Trust want to explore the potential social impact of legislation on people and communities in the Ashburton District, including the impact of:

- The National Policy Statement for Fresh Water Management (NPS-FM)
- The National Environmental Standards for Fresh Water Regulations
- Stock Exclusion Regulations

##### Social Research Purpose

- To explore the potential social impacts of the NPS-FM, and associated legislation, on communities in the Ashburton District; and
- To inform and contribute to the Economic Impact study being undertaken by Ashburton District Council.

##### Research methodology

This qualitative research will include workshops, community meetings and semi-structured interviews. A range of individuals will be involved, including: farmers, rural professionals, rural industry representatives, interest groups, council staff, urban people and business owners.

##### Research team

The research team comprises Rachael Inch and Dr Heather Collins.

##### Research ethics and participant's rights

All answers will be confidential and anonymous. Your name and identity will not be stated in the report.

With your agreement, the interview will be tape recorded to ensure your ideas are captured accurately. The taped interviews will be transcribed. Either the researcher, or a transcriber who is bound by a confidentiality agreement, will transcribe the interviews.

If you agree to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- ask for the audio tape to be turned off at any time during the interview; and
- be given access to a summary of the project findings when it is concluded.

## Appendix B

### **Background information given to participants prior to interview.**

Land and water are an important resource which forms the basis of how people in the Ashburton District live, work, play and interact with each other.

Several pieces of legislation were passed into law in 2020. These include:

- The National Policy Statement for Fresh Water Management
- The National Environmental Standards for Fresh Water Regulations
- Stock Exclusion Regulations

This legislation is intended to address a range of issues associated with freshwater quality and land management.

This legislation could impact on farm businesses in the Ashburton District. Economic impact research conducted by the Ashburton District Council suggests that these regulations could:

- Have more impact on intensive land uses.
- Reduce farm productivity and profitability.

## Appendix C

### **Research questions presented to all participants.**

The research questions asked were:

1. Have you heard about this legislation?
2. Where did you hear about it?
3. What have you heard?
4. How do you think this legislation might impact on farmers and their families?
  - a. On farmer's businesses?
  - b. On rural service and supply firms?
  - c. On rural communities?
5. How do you think this legislation might impact on you and your business?
6. How do you think this legislation might impact on the towns? On the wider District?

## Appendix D

The Freshwater requirements listed below have been directly sourced from the Ministry for Environment website:

<https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-freshwater-management/>

Prioritise the health and wellbeing of water bodies, then the essential needs of people, followed by other uses.

- Designed to improve degraded water bodies, and maintain or improve all others using bottom lines defined in the Freshwater NPS-FM.
- Give an expanded national objectives framework with two additional values - threatened species and mahinga kai<sup>4</sup> - join ecosystem health and human health for recreation, as compulsory values
- Direct councils to develop plan objectives that describe the environmental outcome sought for all values
- Provides new attributes, aimed specifically at providing for ecosystem health, include fish index of biotic integrity (IBI), sediment, macroinvertebrates (MCI and QMCI), dissolved oxygen, ecosystem metabolism and submerged plants in lakes;
- tougher national bottom lines for the ammonia and nitrate toxicity attributes to protect 95% of species from toxic effects (up from 80%)
- Avoid any further loss or degradation of wetlands and streams, map existing wetlands and encourage their restoration.
- Identify and work towards target outcomes for fish abundance, diversity and passage and address in-stream barriers to fish passage over time.
- Set an aquatic life objective for fish and address in-stream barriers to fish passage over time.
- Monitor and report annually on freshwater (including the data used); publish a synthesis report every five years containing a single ecosystem health score and respond to any deterioration.

Local authorities are also required to give effect to:

- National Environmental Standards for Freshwater
- Stock exclusion regulations
- Water measurement and reporting regulations.

The Freshwater NES-F set requirements for carrying out certain activities that pose risks to freshwater and freshwater ecosystems. Anyone carrying out these activities will need to comply with the standards. The standards are designed to:

- protect existing inland and coastal wetlands
- protect urban and rural streams from in-filling
- ensure connectivity of fish habitat (fish passage)

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<sup>4</sup> Mahinga kai/mahika kai literally means 'to work the food' and relates to the traditional value of food resources and their ecosystems, as well as the practices involved in producing, procuring, and protecting these resources.

- set minimum requirements for feedlots and other stockholding areas
- improve poor practice intensive winter grazing of forage crops
- restrict further agricultural intensification until the end of 2024
- limit the discharge of synthetic nitrogen fertiliser to land, and require reporting of fertiliser use.

Under the stock exclusion rules from 2023 (regardless of slope):

- All dairy cattle must be excluded from lakes and rivers more than 1 metre wide and all dairy support from 2025.
- All cattle and deer must be excluded from lakes and rivers more than 1 metre wide, where land is used for fodder-cropping, break feeding or grazing on irrigated pasture.
- Wetlands (regardless of slope) already identified in a regional or district plan must have cattle, deer and pigs excluded by 1 July 2023. Otherwise, cattle, deer and pigs must be excluded by 1 July 2025.
- On land mapped as low slope (which is supposed to be “less than 10 degrees slope”) beef cattle and deer must be excluded from lakes and rivers more than 1 metre wide by 1 July 2025.

## Appendix E.

### Key features of the Plan Change 2

As referenced in the following source - (Environment Canterbury, 2018)

Restrictions on further land use intensification until nitrate levels are at or below an average annual groundwater concentration of 6.9 milligrams per litre (the national bottom line).

Properties will still be able to develop under the Rangitata Diversion Race Management Ltd (RDR) and Barrhill-Chertsey (BCI) irrigation scheme discharge permits until their expiry. The plan change provides a pathway (through a resource consent) for the continuation of the RDR and BCI schemes, but there are limits on the amount of nitrogen leaching that is allowed.

Good management practice is required for all farming activities. Land users are permitted to increase nitrogen losses up to 15 kilograms per hectare per year without requiring consent.

Properties exceeding 20 kilograms of nitrogen per hectare per year will be required to progressively reduce their discharge beyond good management practice levels by:

15% by 2025

25% by 2030

36% by 2035

They will not be required to reduce nitrogen losses below 20 kilograms per hectare per year.

Switching of surface water takes and hydraulically connected groundwater takes to deep groundwater is enabled. No overall increases in takes will be allowed and water surrendered must be left in the river.



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Stefanie Rixecker, Environment Canterbury

## Canterbury Water Management Strategy update

### Purpose

1. This paper provides an update on region-wide progress of Canterbury Water Management Strategy (CWMS) partners' work towards implementing the CWMS for the July to September 2021 period.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **receive the CWMS update report**
2. **note councils will need to approve an extension for some CWMS community representatives by December 2021.**

### Update on region-wide progress towards implementing the CWMS

2. The CWMS is implemented throughout the Canterbury region by the CWMS partners through a range of statutory and non-statutory obligations and working with a number of agencies and community groups.
3. Following the work undertaken by CWMS partners to develop the Fit for the Future work programmes, future CWMS updates will focus on reporting on the delivery of actions by CWMS partners to meet the 2025 goals.

### Zone and Regional committee updates

4. The timing of CWMS Zone Committee Refresh has been adjusted to take place between April and July 2022, so it better aligns with councils' LTP planning cycles and avoids future conflicts with local body elections (conducted over September and October 2022). Consequently, each council will need to approve an extension for those community representatives whose three-year term concludes at the next CWMS Zone Committee Refresh. This extension will need to be sought by December 2021. The CWMS Facilitation team will provide support to councils with this process.
5. This extension, from 31 December 2021 to 31 August 2022, will allow those community representatives to continue to participate fully through to the conclusion of the next CWMS Zone Committee Refresh which will be conducted between April and July 2022.

6. Following the completion of the CWMS Zone Committee refresh in August 2021, zone committees have all advanced Action Plans to guide their focus and implementation priorities over the next three years. To support implementation of these Action Plans, a new budget has been provided through Environment Canterbury's Long-Term Plan 2021-31.
7. The Hurunui Waiau Uwha Zone Committee was formally discharged by Hurunui District Council and Environment Canterbury, with a new Hurunui Water and Land Committee being established in its place. This new committee is being co-designed by representatives from the Hurunui District Council, Ngāti Kurī and Ngāi Tūāhuriri Rūnanga, and Environment Canterbury.
8. Zone managers and facilitators have summarised the focus for the CWMS Zone Committees from July to September 2021 (refer attachment 1). Note that the COVID-19 Level 4 lockdown and restrictions under Levels 3 and 2 have impacted on the delivery of some aspects of work programmes.
9. The refresh of the CWMS Regional Committee commenced this quarter. Environment Canterbury, with endorsement from Te Rūnanga o Ngāi Tahu, approved the appointment of Jane Demeter as the independent Co-Chair. The appointment processes for the Te Rūnanga o Ngāi Tahu and Papatipu Rūnanga representatives, and Ngāi Tahu Co-Chair, are under way with Te Rūnanga o Ngāi Tahu. Appointments for the community representatives will likely be approved by Environment Canterbury in the second quarter.

### **CWMS Targets Progress report 2019-2021**

10. The CWMS Targets Progress report is online ([ecan.govt.nz/cwms-progress](https://ecan.govt.nz/cwms-progress)) and provides links to a range of information on the work undertaken by zone committees, Environment Canterbury, Canterbury's city and district councils and other agencies.
11. The report provides a high-level regional assessment of progress on the CWMS 2020 goals and is intended to report on outcomes rather than only reporting on activities. The report measures results strictly against the goals set for 2020 and shows that, as a region, not all the goals have been achieved, partly because some of those goals were too ambitious, and some leave no room for nuance.
12. This is not an indication that progress has not been made but rather a guide to where CWMS partners need to focus in the future. This may mean a greater focus on data collection and sharing of data by CWMS partners to enable a better demonstration of how the progress made provides measurable results.
13. Useful feedback from partners and stakeholders regarding the online targets report has been provided to Environment Canterbury. This includes some concern around how the report was released and how sub-regional highlights are captured, and positive comments around the shift to monitoring progress against outcomes rather than outputs. In light of this feedback, work is under way to improve how efforts across the region are captured within the online report, and ensuring future updates are well communicated with key CWMS partners.

## **RMA planning and implementation**

14. In August MPI and MfE released the 'Scientific Advisory Panel Overseer model peer review' and the Government's response and recommendations. Environment Canterbury is working with Papatipu Rūnanga to co-design the interim approach to implementing parts of the regional planning framework that use Overseer.
15. The independent hearing commissioners have delivered their recommendations on proposed Plan Change 7 (PC7) to the Canterbury Land & Water Regional Plan and proposed Plan Change 2 (PC2) to the Waimakariri River Regional Plan. Both PC7 and PC2 were informed by recommendations from the Orari Temuka Opihi Pareora and the Waimakariri CWMS Zone Committees and seek to achieve previously established water zone outcomes.
16. The Minister for the Environment has granted an extension, until 9 December 2021, for the Council to make its decisions on PC7 and PC2. The extension was granted so the Council could understand the Overseer review outcomes and any implications before making its decisions on PC7 and PC2.
17. The commissioners' recommendations will be made public as part of the meeting agenda (scheduled for November 2021) when the Council decides whether to adopt the recommendations on PC7 and PC2.
18. Environment Canterbury is exploring the development of a more integrated planning framework, which would combine regional plans (Land and Water Plan, Coastal Environment Plan, Air Plan and various catchment plans) into a simpler and more cohesive single plan – ki uta ki tai. This is consistent with the Planning Standards and will help prepare for the likely requirements of the Natural Built and Environments Act for a single plan per region.
19. Environment Canterbury is working with Papatipu Rūnanga to build an understanding of Te Mana o te Wai in Canterbury. On 8 October Tuia Partners (Canterbury Regional Council and Papatipu Rūnanga) held a governance wānanga to discuss the co-design of an integrated planning framework.
20. The Tuia Partners instructed staff from Environment Canterbury, Mahaanui Kurataio, Aoraki Environmental Consultancy, Aukaha and the Kaikōura Environmental Entity to work with Tokona Te Raki to co-develop a model for Council and Papatipu Rūnanga to consider. Once developed it will be considered at the second Wānanga due to be held at Te Rōpū Tuia on 10 December. The Chief Executives Forum will continue to be updated as this work progresses.

## **Key regional projects/campaigns**

21. Environment Canterbury is developing a number of campaigns (including key messages, factsheets and resources) for wetland protection, synthetic nitrogen cap and intensive winter grazing to help landowners understand the requirements of the Essential Freshwater National Environmental Standards.

22. The Wilding Conifer Control programme continues to be a significant region-wide workstream to control infestations of wilding conifers which pose a serious threat to indigenous ecosystems. Over 5000 ground control hectares and more than 3000 aerial control hectares were covered in the first quarter of FY2021. Three new management units in south and north Canterbury are the focus this year: Hunter Hills, Albury and Waiau.
23. Braided river revival strategies are progressing for the Ashley River/Rakahuri and Rangitata River. Environment Canterbury has committed to working with Papatipu Rūnanga and other parties to complete nine strategies. The strategies' purpose is to seek landscape scale alignment of the Papatipu Rūnanga, agencies and communities involved in braided river management – reviving the critical ecological link, ki uta ki tai, from the mountains to the sea and the connections between people and rivers, key to maintaining the natural character of braided rivers.
24. Braided river environments are a major beneficiary of the Jobs for Nature funding with LINZ and DOC implementing multi-million-dollar projects on the ground in Canterbury to improve braided river health. These include landscape scale pest control operations and habitat protection and enhancement involving Papatipu Rūnanga, Environment Canterbury and other parties across the region. Specific projects include sites in the Mackenzie Basin, Waitaki, Rangitata, Ashburton / Hakatere, Opihi and Rakaia rivers. Projects are also underway in the Waimakariri, Hurunui and Waiau Toa / Clarence Rivers.
25. Environment Canterbury is evaluating the monitoring and reporting requirements of the Water Services Act 2021 and is progressing an in-depth programme of compliance monitoring of territorial authorities' and industrial wastewater and stormwater discharge consents. Environment Canterbury staff are working closely with key territorial authority and industry staff and provided an update to the Operations Forum in March 2021.
26. Key aspects of the ongoing Fish Screens Improvement project include execution of the Irrigation NZ led "fish screen design knowledge gaps" project and identification of future compliance needs, including developing a process to support industry and consent holders seek engagement with Papatipu Rūnanga and treaty partners to agree designs to address native fish requirements.
27. Water modelling of large river catchments, such as the Rakaia and Rangitata, are in progress to improve understanding of the interactions between the river, the natural environment and human activities. A draft report for a water balance model of the Rakaia has been made available to key stakeholders to help validate the model.
28. A number of projects to improve biodiversity outcomes and land management practises are taking place across the 10 water management zones:
  - in North Canterbury the Soil Conservation and Revegetation (SCAR) programme is well known and received by the community. There is ongoing interest for information on grants and advice on improving land management on erosion prone land

- in Central Canterbury ongoing work with a range of community groups is supporting riparian planting and pest control work
- the South Canterbury Environment Canterbury team is working with Ahuriri catchment consent holders to implement actions required as a result of lake Trophic Level Index consent triggers being exceeded.

29. The following projects to improve water quality, increase river flows and groundwater levels continue to be trialled in the region:

- repairs to the Selwyn/Waikirikiriri Near River Recharge (NRR) scheme (from the 29-31 May flooding event) were completed during the winter months. In September, high winds toppled approximately 20% of the trees in the surrounding pine plantation. Site access is currently restricted until the windfall can be cleared
- year 5 of the Hekeao Hinds Managed Aquifer Recharge (MAR) trial concluded on 31 May. The Year 5 summary report is available at [www.hhwet.org.nz](http://www.hhwet.org.nz)
- remedial and enhancement activities (following the 29-31 May flooding event) to the upper Hekeao Hinds Near River Recharge site (including new recharge basins and an extended Kōwaro / Canterbury mudfish wetland) were completed by late September. A community planting day was held on 3 October
- Broadacres TSA Kōwaro / Canterbury mudfish habitat construction is temporarily halted due to high spring flows through the site. The wet winter has extended the planting season, enabling the planting of over 3,300 seedlings.

## Central government policy

30. The Water Services Act 2021 (which received royal assent on 4 October) will significantly extend and strengthen the drinking water regulatory framework that Taumata Arowai will administer and provide oversight and national-level reporting functions for wastewater and stormwater.
31. Taumata Arowai will take over from the Ministry of Health as the national drinking water regulator in November 2021, while wastewater and stormwater-related provision will be implemented on a longer track, likely two years. 'Acceptable Solutions' have been drafted for spring and bore drinking water supplies, rural agricultural water supplies, and roof water supplies with public consultation scheduled for early in the new year. Acceptable Solutions are prescribed requirements prepared by Taumata Arowai which a water supplier can adopt to demonstrate compliance against some of the legislative requirements set out in the Water Services Act 2021.
32. Environment Canterbury is evaluating the monitoring and reporting requirements of the Water Services Act 2021 from a regional council perspective.
33. Submissions on the Natural and Built Environments Bill: Parliamentary Paper and Exposure draft closed on 4 August 2021 and the select committee is due to report back to Parliament with its findings on 1 November.

34. The current reforms will impact on how the CWMS partners deliver on the outcomes of the CWMS. CWMS partners continue to engage with central government to improve understanding of the impacts of these reforms. Recent interactions include the Mayoral Forum meeting with Minister Parker on 8 October and the ongoing work through a number of regional sector groups providing advice on Essential Freshwater, Overseer and resource management reforms.

### **Essential Freshwater implementation**

35. Environment Canterbury continues to develop its approach to implementing the new requirements of the Essential Freshwater package and provides regular updates on Environment Canterbury's website<sup>[1]</sup>.
36. Environment Canterbury has commissioned Lincoln University's Agribusiness and Economics Research Unit (AERU) to undertake a Canterbury regional economic model to help inform the economic implications of future plans.
37. Ashburton District Council is leading the Resilient Business project to understand and identify opportunities and risks faced by the farming sector in adapting to climate change. This project builds on previous reports by Ashburton and Waimate District Councils on the economic impacts of the Essential Freshwater package.
38. Consultation closed on 7 October on the Government's freshwater farm plan regulations discussion document; stock exclusion regulations: proposed changes to the low slope map discussion document; and managing intensive winter grazing discussion document. Consultation on the managing our wetlands discussion document closed on 27 October.

### **Attachments**

- Attachment 1: Zone overview from July to September 2021

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<sup>[1]</sup> <https://www.ecan.govt.nz/your-region/your-environment/water/essential-freshwater-package>

## Attachment 1: Zone overview from July to September 2021

<b>CWMS Committee</b>	<b>Focus of the Zone Work Programme</b>	<b>Highlights of practical work underway</b>
<b>Kaikōura</b>	<b>Lyell Creek/Waikōau Kaikōura Flats</b>  <b>Clarence/Waiau toa</b>	<ul style="list-style-type: none"> <li>Working with all adjacent landowners of creeks, streams and significant drains on the Kaikōura Flats to identify priorities and projects for the Flats.</li> <li>Lyell Creek Connectivity space is being prepared for community/school planting.</li> <li>Working with LINZ (who have also provided funding) to manage the Clarence/Waiau Toa work programme.</li> </ul>
<b>Hurunui Waiau</b>	<b>Waiau/Uwha River</b>  <b>SCAR</b>  <b>Community group engagement</b>	<ul style="list-style-type: none"> <li>Strengthening partnerships through supporting and combining initiatives with the Hurunui District Landcare Group to assist landowners to improve water quality.</li> <li>\$60k has been allocated for Fonterra Catchment programme for fencing/stock exclusion on three farms adjacent to Waiau/Uwha.</li> <li>Third year of poplar planting is completed; farms maps and land reversion targets on track. One year remaining of contract with MPI.</li> <li>\$60k in funding has been allocated to community weed control projects undertaken by Jed River and Waipara River Care groups.</li> </ul>
<b>Waimakariri</b>	<b>Arohatia te Awa (Cherish the River) project</b>	<ul style="list-style-type: none"> <li>\$60k Fonterra Catchment Program has been allocated across four farms in the lower Ashley for fencing, native planting and willow control to reduce run off.</li> <li>Additional \$40k funding has been allocated to plant maintenance along Silverstream loop.</li> <li>Watercress promotion on the Cam River upstream of Bramleys Road. Waimakariri District Council, rūnanga and Environment Canterbury are working together to create access points, weed control and information panels.</li> <li>\$10k provided to the Saltwater Creek working group for weed control and fencing.</li> </ul>
<b>Christchurch-West Melton</b>	<b>Working with community/catchment groups</b>	<ul style="list-style-type: none"> <li>Working with the Water &amp; Wildlife Trust on a long-term partnership for Otukaikino catchment.</li> <li>Supporting multi-year Avoca valley restoration project.</li> <li>Working with industry, community and councils to co-design the Nor-West Christchurch Dust project co-design.</li> </ul>
<b>Banks Peninsula</b>	<b>Kaitiakitanga projects</b>	<ul style="list-style-type: none"> <li>Kaitiakitanga projects with Ōnuku rūnanga on Kekewai and Takapuneke progressing well.</li> </ul>
<b>Selwyn-Waihora</b>	<b>Kaitiakitanga projects</b>	<ul style="list-style-type: none"> <li>Kaitiakitanga projects with Taumutu rūnanga on Muriwai/Coopers Lagoon progressing well.</li> </ul>



<b>CWMS Committee</b>	<b>Focus of the Zone Work Programme</b>	<b>Highlights of practical work underway</b>
<b>Ashburton</b>	<b>Ashburton Lakes/Ō Tū Wharekai</b>  <b>May/June Floods</b>  <b>Hekeao/Hinds River and Drains</b>  <b>Ashburton / Hakatere River</b>	<ul style="list-style-type: none"> <li>• Further hui focused on Good Management Practices, working with landowners have been held regarding the Ō Tū Wharekai project.</li> <li>• The May/June floods created significant additional work for Environment Canterbury, alongside ADC, rural stakeholder and advocacy groups across stopbank protection, flood recovery and land management, community resilience and welfare.</li> <li>• Community catchment groups in the Hinds catchment are forming and working together under a collective model. Conversations are being held with a range of agencies regarding opportunities to initiate riparian planting, biodiversity and water quality initiatives.</li> <li>• Further implementation of the Ashburton/Hakatere Rivermouth Strategy commenced September, including work to repair damage to infrastructure caused by the winter floods.</li> </ul>
<b>Orari-Temuka-Opihi-Pareora</b>	<b>Saltwater Creek</b>  <b>Biodiversity projects</b>	<ul style="list-style-type: none"> <li>• Working with Timaru District Council to monitor industries that have an impact on Saltwater Creek.</li> <li>• Priority actions identified to support Te Ahitrahahi Stream project – an area of significant cultural values.</li> <li>• Assessing water quality and Giant Kokopu protection requirements at Horseshoe Lagoon.</li> <li>• Remediation works taking place at the inaka spawning area in the Lower Seadown Drain.</li> </ul>
<b>Upper Waitaki</b>	<b>Ahuriri Catch Collectives</b>  <b>Biosecurity Compliance monitoring</b>	<ul style="list-style-type: none"> <li>• Focus on supporting Ahuriri Catchment Collectives work programme to improve understanding of stream health and additional work required to mitigate impacts of land use.</li> <li>• Ongoing weed control in the Upper Ōhau.</li> <li>• Compliance, monitoring and enforcement programme finalised for the Upper Waitaki/Mackenzie Basin area in line with the Regional Initiatives.</li> </ul>
<b>Lower Waitaki</b>	<b>Waihao Wainono Community Catchment project</b>  <b>Wainono Lagoon</b>  <b>Upper Hakataramea Bio Security measures</b>  <b>Supporting biodiversity values on private land</b>	<ul style="list-style-type: none"> <li>• Waihao Wainono Community Catchment Group leading a biodiversity, access and amenity project at McCulloch's Bridge and the Black Hole.</li> <li>• Continuing to work with farmers in catchment to reduce sediment, nutrient leaching, undertaking weed control and supporting GMP on the margins of the lagoon.</li> <li>• Threatened plants, flax and sedgeland on the Wainono gravel bar and wetlands areas have responded positively to weed control of lupins, broom and willows.</li> <li>• Macrophyte restoration continues to show signs of long-term establishment. Developing a project to monitor macrophyte restoration.</li> <li>• Advice and support provided to landowners through farm consents and farm environment plans to protect grey scrub and significant wetlands.</li> </ul>



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach, Chair

## COVID-19 Vaccines

### Purpose

1. The purpose of this paper is to support a discussion on how councils are proposing to manage their health and safety responsibilities, in the context of COVID-19, and whether vaccinations may be required for some roles within councils.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. receive the report.

### Background

2. The Government is encouraging everyone aged 12 and over to get vaccinated against COVID-19. It has mandated vaccines for workers at NZ borders, managed isolation and managed quarantine facilities. In the education sector only staff and support people who are vaccinated can have contact with children and students from 1 January 2022. Health and disability sector workers must be fully vaccinated by 1 December 2021.

### COVID-19 Protection Framework

3. On 22 October the Government announced a new COVID-19 Protection Framework to provide a pathway out of lockdown and ability for businesses and events to re-open to vaccinated New Zealanders. The COVID-19 Protection Framework will come into force once 90% of eligible New Zealanders are fully vaccinated.
4. The framework introduces a traffic light approach to managing COVID-19 in the community.
5. The use of vaccination certificates will allow businesses previously considered high-risk to fully open to vaccinated customers at the green and orange stage and continue to operate with some restrictions at the red stage. Businesses that choose to open to the unvaccinated will face restrictions in order to suppress the virus amongst those most likely to have it.
6. The initial announcement of the COVID-19 Protection Framework did not contain any further vaccination mandates for workplaces or industries, but rather focuses the

vaccination requirements on customers entering businesses (except essential health services and supermarkets) or attending events and gatherings<sup>1</sup>.

7. On 26 October the Government has announced that vaccination will be required for all workers at businesses where customers need to show COVID-19 Vaccination Certificates, such as hospitality and close-contact businesses<sup>2</sup>. The timing of this mandate coming into force will depend on when New Zealand moves to the COVID-19 Protection Framework.

## **Vaccination status**

8. Subject to vaccine mandates referenced in paragraph 7 a worker does not need to disclose (or prove) their vaccination status to a business, however if certain work cannot be done by an unvaccinated worker, a business can ask a worker about the worker's vaccination status. If the worker does not disclose (or provide evidence about) their vaccination status, the business may assume the worker has not been vaccinated for the purposes of managing health and safety risks.
9. Businesses should inform workers of this assumption and what will happen if the worker is not vaccinated or does not disclose their vaccination status.
10. Employees cannot be redeployed or disadvantaged for refusing to disclose their vaccination status, unless particular work cannot be done by unvaccinated workers.

## **COVID-19 exposure risk**

11. A high rate of vaccinations will help to protect staff from getting sick and passing COVID-19 onto others.
12. Some companies such as law firm Russell McVeagh and consultant company PwC have introduced a compulsory COVID-19 vaccination policy for all staff and visitors to its offices. The assumption is that staff and visitors of these organisations have the ability to continue to work and engage remotely if they are not vaccinated or chose to not disclose their vaccination status<sup>3</sup>.
13. Local government is not in the same position for all workers to be able to work remotely, as some tasks must be undertaken at the workplace, particularly those that have direct interaction with members of the public. There may be a risk to vaccinated workers and members of the public from unvaccinated workers that local government needs to consider.

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<sup>1</sup> <https://www.beehive.govt.nz/release/new-covid-19-protection-framework-delivers-greater-freedoms-vaccinated-new-zealanders>

<sup>2</sup> [Govt backs business to vaccinate workforces | Beehive.govt.nz](#)

<sup>3</sup> [Vaccinated staff required? Worksafe issues advice | Stuff.co.nz](#)

14. Local government also has staff who interact with both the education and health and disability sectors, which are both subject to mandatory vaccinations.
15. Local Government New Zealand is in the process of receiving legal advice on vaccine mandates to get a clearer picture of the obligations on councils<sup>4</sup>.

## Risk assessments for vaccinations

16. Employers can require work to be done by a vaccinated worker if a risk assessment identifies this is necessary for work health and safety purposes.
17. Risk assessments must be undertaken with employees and their representatives.
18. If a workplace's risk ratings tend toward higher risk and you are not able to reduce that risk by implementing more controls, you and your employees should consider whether the work should be performed by a vaccinated employee.
19. If your risk assessment is clear that the risk of COVID-19 infection and transmission through a particular work task is no higher than outside work, you may decide not to require the role to be performed by a vaccinated employee.
20. WorkSafe has developed some questions for workplaces to consider in completing a risk assessment, which are included in the table below. There may be further questions specific to local government that should also be considered.
21. Businesses must involve workers, unions and other representatives in the risk assessment process, and when deciding how to eliminate or minimise risks.

How many people does the employee carrying out that work come into contact with?	very few = lower risk many = higher risk
How easy will it be to identify the people who the employee comes into contact with?	easy to identify, such as co-workers = lower risk difficult to identify, such as unknown members of public = higher risk
How close is the employee carrying out the tasks in proximity to other people?	2 metres or more in an outdoor space= lower risk close physical contact in an indoor environment = higher risk
How long does the work require the employee to be in that proximity to other people?	brief contact = lower risk lengthy contact = higher risk
Does the work involve regular interaction with people considered at higher risk of severe illness from COVID-19, such as people with underlying health conditions?	little to none = lower risk whole time = higher risk

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<sup>4</sup> <https://www.nzherald.co.nz/nz/covid-19-delta-outbreak-ministers-message-for-sandra-goudie-no-exception-for-mayor-vaccinations/YSKGMFS6TY7HJD23MUE4UTK3TQ/>

What is the risk of COVID-19 infection and transmission in the work environment when compared to the risk outside work?	equal to outside work = lower risk higher than outside work = higher risk
Will the work continue to involve regular interaction with unknown people if the region is at a higher alert level?	no = lower risk yes = higher risk
RECORD YOUR RESULT	

22. Along with the questions businesses also need to consider other controls, identifying any further infectious disease controls you and your employees could put in place to reduce the risk. The Ministry of Health has developed detailed information about how to prevent the spread of COVID-19 at work.
23. Current advice is that reasons for requiring vaccination other than health and safety are unlikely to be sufficient, for example, requiring vaccination to promote the workplace as being fully vaccinated.

## Information sources

24. The information provided in this paper has been sourced from the following:
- [Vaccines and the workplace » Employment New Zealand](#)
  - [How to decide what work requires a vaccinated employee | WorkSafe](#)
  - [Education sector vaccinations | Unite against COVID-19 \(covid19.govt.nz\)](#)
  - [Health and disability sector vaccinations | Unite against COVID-19 \(covid19.govt.nz\)](#)
  - [www.beehive.govt.nz](http://www.beehive.govt.nz) (22 & 26 October announcement)

# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Bede Carran, Chair, Canterbury Corporate Forum

## **Short-term working party on flexible working report**

### **Purpose**

1. The purpose of this paper is to report the findings from the short-term working party on flexible working to the Chief Executives Forum.

### **Recommendations**

**That the Canterbury Chief Executives Forum:**

1. **receive the report of the short-term working party on flexible working**
2. **note that with the completion of the working party's work, the People and Capability Working Group will commence as a permanent working group, reporting to the Corporate Forum**
3. **request the working group to consider whether, as a result of its findings, there are policy changes and/or potential changes to employment agreements that may be useful to recommend to councils.**

### **Background**

2. In November 2020 the Chief Executives Forum established a short-term working party to look at the impacts of flexible working following the 2020 lockdown period. The working party was to gather information from councils and share learnings on flexible working, reporting its findings to the Chief Executives Forum.
3. The working party focused on establishing what can be learned to improve the environments we work in and to accommodate different demographics / ways of working, whilst remaining well, productive, effective and efficient.
4. Human resource management practitioners from Waitaki, Mackenzie, Waimate, Timaru, Ashburton and Selwyn District Councils, Environment Canterbury, and the Christchurch City Council are all represented on the group.
5. This paper provides a summary of the data and qualitative findings of this research. The working party's full report is provided at attachment 1.

## Flexible working

6. While there is no universally agreed definition on “Flexible work” it is commonly understood as covering a wide range of arrangements outside of the traditional working week and can be tailored to suit each employee’s needs. Common examples include:
  - working a different number of hours or within different timeframes
  - working remotely
  - job sharing
  - purchasing additional leave
  - taking additional unpaid leave.
7. Under part 6AA of the Employment Relations Act 2000 (ERA), all employees have the right to request a variation of their working arrangements at any time.
8. Essentially, it is about giving employees the opportunity to make changes to the hours they work and where they work from, in an effort to harmonize commitments to their employer with those in their personal lives.
9. Naturally, this took a more reactive direction as a result of the pandemic, which required employees to remain at home, unless essential services required them to work from the usual office/headquarters.
10. For the purposes of the working party, flexible working means all forms of variation to the usual work practice, as a result of the pandemic. This will most likely take the form of a change in hours worked (both numbers and timeframes), working remotely and/or a combination of these options.

## Working party approach

11. The working party met and collaborated virtually throughout the data-gathering and analysis phase.
12. To gather the necessary information, a data gathering tool was developed by the group and distributed to each of the participating councils in the form of a questionnaire.
13. This tool sought information on the flexible / remote working activities during the lockdown levels of COVID-19, how these were managed, the impact of the activities, and the practices that have carried through to the post-pandemic situation.
14. Progress reports were provided to the Corporate Forum in March, June and September.

## Summary of findings

15. A summary of the working group's findings is set out below. For context, attachment 2 provides the questionnaire that was used to gather data.

### Councils' flexible working situation pre-pandemic

16. Three of the participating councils had formal flexible working policies in place prior to the pandemic, with less than 5% of their employees operating under these policies. Two further councils indicated that they had informal arrangements in place.

### Councils' flexible working situation during the 2020 lockdown period

17. For the purposes of this research, the lockdown period refers to the initial Alert Levels 4 and 3 lockdowns during 2020.
18. All participating councils continued to pay their employees during the lockdown period, with one council indicating that this was only for permanent and fixed term employees, i.e. it did not include casual employees.
19. Three of councils remunerated via a mixture of remuneration and providing special leave for those that were unable to undertake part or full duties, whilst the remaining councils paid full remuneration as usual i.e. ordinary pay.
20. Of the seven councils that were able to provide an answer to this question, 72% of council employees were able to work at home for between 51%-100% of usual contracted hours; with a further 14% able to do between 26%-50% and only 14% only able to do approximately 25% of usual contracted hours.
21. More than half of the participating councils carried out redeployments for employees who could not undertake part or full duties. The redeployment opportunities included working in civil defence emergency management, assisting community groups with COVID-19 related requirements, deliveries in the community to support vulnerable members, reassignment to support other areas of council, supporting national agencies with local support (e.g. Ministry of Social Development calls to vulnerable members of the community) and training and development.
22. The councils highlighted a number of key operational changes that they implemented during the pandemic period, including but not limited to the following:
- more online communication
  - technology advancements
  - increase in electronic processing e.g. invoicing, mail, accounts payable, timesheets etc
  - pandemic response plans and electronic sites
  - increased hygiene protocols and access protocols.

23. Councils also identified a range of opportunities and challenges experienced during this period, which included the following:

Opportunities	Challenges
Demonstrated organisational capability and agility to respond with supporting all / most staff to work remotely in a rapid timeframe	Initial working from home adjustment e.g. adapting to new online systems
Positive experience with responsive and support IT departments	Availability of IT equipment and limited internet quality (particularly in rural areas)
Growth opportunities for employees reassigned to alternate duties	Some employees do not understand why they have to return to the workplace at all having proved that remote working worked for them
Reported flexibility of most employees with a 'can do' attitude	Compiling the initial pandemic response was time consuming
Higher levels reported of work-life balance	Some employees worked excessive hours, particularly balancing the CDEM response as well as business as usual requirements
Increased focus periods when working from home	Those who didn't thrive in the remote working environment struggled e.g. juggling home and work commitments was challenging for some, some became isolated from work and from people in general if living alone
Increased informal team communication via electronic means	"Zoom Fatigue"
Normalisation of virtual meetings	Challenging to measure productivity
	Difficult to redeploy some part time employees during their normal hours of work
	Managing the changes between alert levels, particularly with the 'fear of the unknown'

### Councils' flexible working situation after the 2020 lockdown period

24. Apart from one council who indicated that all employees had returned to work from the office, seven (87.5%) of councils highlighted that they have employees (approximately 7-30%) continuing to work flexibly following the initial alert level 4 and 3 lockdown periods.
25. Employees with formal arrangements are commonly working from home one day per week (20% of their contracted hours). The introduction of a compressed fortnight has also seen positive results.



26. Since returning to the office five councils highlighted the following key changes:
- review of core competencies of what it means to be a leader in a more agile environment
  - requiring all employees to be in the office for at least 2 days per week for team synergy
  - post lockdown “Drop in chat with your peers” sessions to encourage leaders to learn from each other’s experiences, discuss challenges, ask questions and get advice. These sessions were supported by a number of human resource, organisational development and health, safety and wellbeing professionals.
  - intranet pages developed for greater ongoing information sharing on the pandemic.
27. All councils highlighted the following:
- more agile and open to the benefits of flexible working for both the employer and employee
  - now offer more laptops to employees to increase flexibility, encourage managers to provide support and encouragement to those employees who do wish to work remotely and remove barriers where possible to support employees
  - more regular use of video calling, recently introduced Office 365 and Microsoft Teams
  - greater awareness of the spread of illness and taking more precautions within the workplace to prevent this from occurring (distribution of QR codes and sanitizer bottles etc.)
  - IT teams have invested time identifying current and future remote working requirements, to ensure that an appropriate remote working solution is selected for the organisation
  - introduction of flexible working arrangements and corresponding policies / guidelines.
28. The final comments provided by councils highlighted the insight that the lockdown periods gave into the employees of the councils, particularly around behaviours (both positive and negative) and the need to be mindful of employee wellbeing as much as safety.

## Next steps

29. The Chief Executives Forum agreed in May that once the short-term working group had completed this project, its members would form a permanent People and Capability Working Group, reporting to the Corporate Forum. The agreed terms of reference for this group is appended at attachment 3 for information.
30. Now that the flexible working research is complete, the People and Capability Working Group can include a review of the learnings into its work programme and update the research as a result of subsequent pandemic lockdown periods. This will provide an

opportunity for this group to more formally collaborate on initiatives that can improve the environments we work in, and to accommodate different ways of working going forward.

31. Subject to chief executives' agreement, a recommended next step is to request the working group to consider whether, as a result of its findings, there are policy changes and/or potential changes to employment agreements that may be useful to recommend to councils.

## **Attachments**

- Attachment 1: The impacts of flexible working on Canterbury councils: a qualitative review – data and summarised findings
- Attachment 2: The impacts of flexible working on Canterbury councils: a qualitative review – questionnaire.
- Attachment 3: Agreed terms of reference for People and Capability Working Group.

## **Attachment 1**

# **Impacts of flexible working on Canterbury councils: a qualitative review**

## **Data and Summarised Findings**

The findings of this qualitative research are categorised into 4 sections:

**1. Council Pre-Pandemic Situation**

**1.1 Flexible Working**

**2. Council Pandemic Situation**

**2.1 Remuneration & Duties**

**2.2 Key Operational Changes**

**2.3 Overall Benefits & Challenges**

**2.4 Cohesion, Productivity & Wellbeing**

**2.5 Key Learnings**

**3. Council Post-Pandemic Situation**

**4. Additional General Comments**

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**1. Council Pre-Pandemic Situation**

[Did you have a Flexible Working Policy in place prior to the pandemic?](#)

Three of the eight participating councils had formal Flexible Working Policies in place prior to the pandemic. In addition, two councils had some employees working flexible hours/locations, however this was under an informal arrangement between the parties.

[What % of employees had flexible working variations in place prior to the pandemic?](#)

Of the councils that had flexible working arrangements in place prior to the pandemic, approximately 5% or less of their employees were operating under formal flexible working variations.

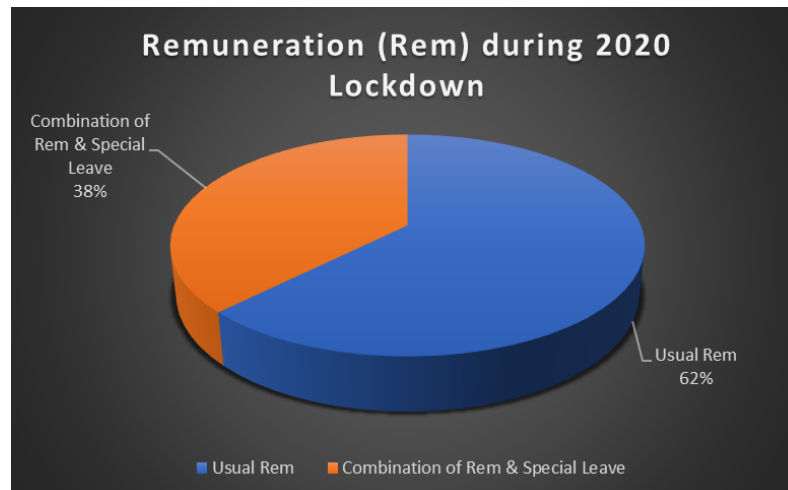
**2. Council Pandemic Situation**

Councils were asked to provide an account of their journey from the start of the pandemic to the period ended June 2021. It was suggested that this account include the immediate response/experience, short term (lockdown) experience and the experience immediately following lockdown.

Much of the data gathered was anecdotal and qualitative, however the following is a summary of the key data and themes provided in the areas of remuneration and duties; overall benefits and challenges; and cohesion, productivity and wellbeing.

## 2.1 Remuneration & Duties

How did you handle remuneration for employees who were unable to carry out their full or part of their usual duties/hours?



All councils continued to pay their employees during the lockdown period – one council indicated this only applied to its permanent and fixed-term employees.

Three councils reported that in cases when employees were unable able to undertake their normal job from home (during level 4 and 3 lockdowns) these employees where redeployed to work in other areas of the organisation or provide support to external agencies associated with council.

Three councils granted employees special leave in cases when employees could not work their normal hours from home or were unable to be deployed and work elsewhere.

Which positions could not work during the lockdown periods?

Councils have acknowledged that some of the positions which could not operate under lockdown conditions included an assortment of:

- facilities employees - those working at cafés, libraries, and aquatic centers, as well as other recreational facilities
- field-based roles, including gardeners and some employees responsible for parks maintenance
- property and planning related roles
- specific regulatory services positions, along with building inspectors and parking wardens
- customer service employees

It was also noted that as councils transitioned into lower Alert Levels, some positions (such as public facing employees like Building Control Officers and Parking Wardens) were required to work under additional precautions and procedures.

Did you carry out redeployments? If so, what type of work etc?

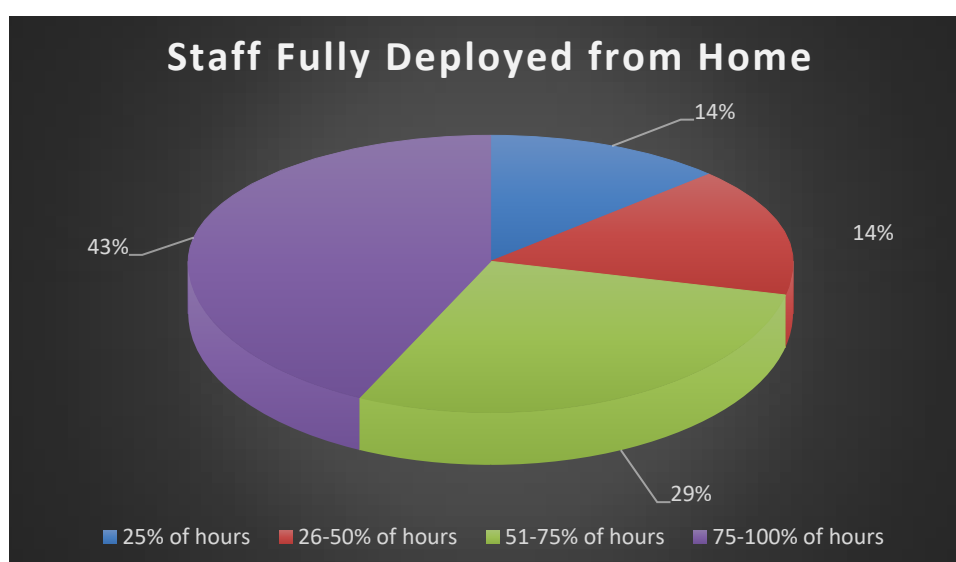
More than half of the councils involved redeployed employees in varying ways.

To assist with redeployment / reallocating work during lockdown, one council established a 'Reallocation of resources due to COVID-19' framework, to set out its processes and approach to reallocating work. This initiative was managed by this council's human resources unit to ensure health, safety and wellbeing, privacy of data, and contractual matters were all dealt with appropriately.

The types of work highlighted for redeployment options included:

- Civil Defence Emergency Management support
- Assisting community groups to operate COVID-19 testing facilities (District Health Boards), deliver Meals on Wheels, prescription medicines and groceries to elderly residents/community housing tenants, and make contact with vulnerable people on behalf of MSD.
- Data entry involving council assets
- System testing (eg SharePoint)
- Training (outstanding or newly introduced)

What percentage of employees could work from home and complete all duties during the level 4 and 3 lockdown periods?



The percentage of employees who could work from home and complete all duties/work their usual contracted hours, during the initial level 4 and 3 lockdowns varied. Only seven of the eight participating councils were able to provide an answer to this question.

For one council this was as little as 25% of employees, whilst for another it was as high as 95%.

Based on the responses given, three councils had approximately 5% or less of employees who could only partially complete their duties under the level 3 and 4 lockdowns. Alternatively, one council reported that this was applicable to approximately 30-40% of its employees.

Were you able to meet statutory obligations across the business units of council during the lockdowns?

Only one council reported that it was not able to meet some of its statutory obligations during the first lockdown periods – specifically due to a lack of IT capability, some of its building consent statutory deadlines could not be met.

All remaining councils indicated that that they were able to meet their statutory obligations, however, did acknowledge that in some cases a number of statutory processes were paused due to inactivity.

## 2.2 Key Operational Changes

What, if any, operational changes did your council make during the level 4 and 3 lockdown periods?

The councils reported making the following key operational changes during this period to improve the operational experience:

- more online communication – increase in virtual meetings via Zoom / Teams / Skype, including more ‘social’ online meetings eg coffee catch ups, Friday social drinks after work etc
- IT advancements – one council implemented a whole new remote access software system to enable more employees to access internal networks and systems allowing employees to work remotely
- increase in online and electronic processing to maintain levels of business continuity, many of which have remained in place following the lockdown:
  - invoicing and mail
  - accounts payable and timesheet procedures were made electronic
- established pandemic response sites and plans
- customer services – one council rerouted phones to an alternative contact number
- extra precautions implemented:
  - regular sanitising and increased cleaning regimes at council properties (including vehicles)
  - stricter kitchen etiquette limiting use of communal cutlery, utensils, tea towels etc
  - established zoned areas for employees returning to work who were considered essential employees and a booking system set-up to confirm employee whereabouts.

## 2.3 Overall Benefits & Challenges

What were the positives and negatives/challenges during each of these stages?

### **Positives / Benefits**

Councils identified a number of positive elements, or benefits, that arose out of these stages, which have been organised into the following themes:

(a) Organisational capabilities / productivity

- councils demonstrated that they were agile enough to have an entire workforce working from home
- in most cases, Information technology worked well, which resulted in a high turnout at online meetings
- the positive work undertaken by the IT unit was recognisable as they worked hard to support and enable employees to work from home
- there were growth opportunities for entry level employees who were deployed into other work e.g. deliveries into the community, contacting the community's vulnerable people, exposure and experience in the Civil Defence Emergency Management function.

(b) Employee wellbeing / productivity

- there was reported a general flexibility of employees (mostly) and a positive 'can do' attitude
- some employees were observed thriving in the remote environment, resulting in high work performance
- there was the opportunity to look after our people, to work hard to stay in touch with them and support them
- some employees felt that there was a better work-life balance as they could factor in healthy activities into their days e.g. daily walks, as well as delivering their work requirements. Also, some employees valued the isolation
- not having to prepare and travel to work gave some employees more time which positively contributed to their sense of wellbeing
- when completing work that required focus, many employees reported that they felt that they could concentrate more and were often more productive.

(c) Communication

- many teams created their own ways and channels of keeping in touch that suited their needs
- communication between teams and managers increased in some cases
- as alert level restrictions (to level 3 and 2) reduced and employees began returning to the office, the main benefit was the collegiality amongst employees, as it was a lot easier and enjoyable interacting with others in person (from a distance) after only being able to communicate online and/or over the phone for so long
- normalisation of virtual communication mediums.

## **Negatives/Challenges**



Councils also identified a number of negative elements, or challenges, that arose out of these stages, which have been organised into the following themes:

(a) Working from home adjustment

- IT support / equipment distribution was initially a challenge, as well as getting everyone set up with the correct technology in time
- adapting to new online systems
- some communication issues due to difficulty contacting some employees, as some had poor internet quality or limited access to work networks, particularly initially
- when employees were required to collaborate, the digital environment meant that the work took longer and was more difficult in comparison to meeting face-to-face
- there is the challenge that currently remains for some councils, where some employees view that working from home can be done while also caring for children (as it was in Level 4). These particular councils have clearly outlined this is not according to organisational policy, which has caused some disquiet.

(b) Technical issues

- there were a number of digital issues with systems due to quantity of people working remotely, including internet connection difficulties
- some had poor internet quality or limited access to work networks, particularly initially
- challenging accessing the employee intranet in one particular council, which was the primary source for all COVID-19 communications and information relating to employees and the Council during the lockdown. This council is working on solutions to this issue to avoid similar issues in future lockdown situations.

(c) Pandemic response

- compiling the initial pandemic response took time
- many employees worked additional hours due to the nature of COVID-19 and additional work that was required due to EOC or disruption of business as usual duties
- it was challenging for employees juggling their EOC role whilst trying to deliver business as usual functions as well. This came with consequences and the prolonged nature of the EOC activation exacerbated some problems that did impact on employee wellbeing for some councils.

(d) Employee wellbeing / productivity

- some employee welfare issues were experienced for those isolating alone
- by choice, some employees became 'invisible' (inactive) and had low productivity when working remotely
- some employees struggled with remoteness and isolation
- 'Zoom fatigue' was a very real issue for many
- some employees lived alone and found the lockdown and working from home physically difficult. Councils tried to keep in regular contact with these people
- some individual employee's family and/or health situations made working from home and or redeployment impossible
- for some employees it was a struggle to manage daily childcare/elder care, home schooling etc. and fulfil their work objectives

- it was identified that work-life balance became compromised for some, as it was easy to not take breaks and / or work longer hours
- some employees wanted to come back to work and struggled being away from office and their colleagues.

(e) Maintaining work levels

- the ineligibility for the work subsidy was a bone of contention, especially for community facilities who could show greater than a 30% drop in profit. It was felt that this should have been financially acknowledged by the Government as it was applied to others within the same industry – e.g. gyms received the subsidy. This was also difficult for some employees to understand e.g. casuals who were no longer getting work at some of the external facilities
- inability of part-time employees to be redeployed during their normal hours of work
- difficulty recognising which employees should be considered 'at risk' (personally or another household member) and therefore should be considered unavailable for redeployment.

(f) Communication

- there were some communication issues due to delays initially e.g. difficulty getting contact with some employees
- manager / employee engagement - some tier 3 managers / team leaders failed to check in with their employees as per the protocols that were established.

(g) Changes in Alert Levels

- Level 3 was the most challenging from a workforce perspective, as this enabled bubbles to be extended and children to return to school, however, the Ministry of Education and local schools were very strongly advocating for children to stay at home, which then meant Council had lower productivity for some employees for alert level 4 and 3
- as alert level restrictions reduced (to level 3 and 2), it became more challenging to provide cohesive messaging - had to ensure all employees received key messaging (one way of achieving this was through posters and catch-phrases to reinforce consistent ideas)
- a number of employees found themselves reluctant to come back into the office due to medical reasons or concerns. Had to work through these on a case-by-case basis to support the employees involved
- challenge that currently remains is that employees view that working from home can be done while also caring for children (as it was in level 4)
- whilst at risk of stereotyping, some more extroverted employees were very keen to get back into the office building, while the more introverted employees had to be coaxed back into the office.

## 2.4 Cohesion, Productivity & Wellbeing

Councils were asked a number of questions relating to the management of cohesion and connectedness of employees, employee productivity and the management of this, employee morale and wellbeing, and health and safety. The following sections provide the general themes of these responses.

## How did you manage cohesion and connectedness of employees during this time?

### Communication

- regular team and one-on-one meetings online
- one point of communication from management
- communication was key, along with regular messaging through a variety of means (Zoom, phone calls, emails, and intranet posts). People leaders had to make time to regularly catch up with teams to ensure they felt supported and engaged through this time
- regular video updates from the CEO which were sent out via different methods (the intranet, email, etc.)
- in-house employee newsletter went from fortnightly to weekly, and an in-house social media platform was implemented, where employees were encouraged to post
- releasing daily COVID-19 updates via email that covered the need to know, good to know and nice to know. Included reminders on keeping well at home and wellbeing initiatives, and also information from our key units – Finance, HR, IT, Health & Safety, Facilities and messages from our Chief Executive
- employees responded well to these updates with a 94% satisfaction score when surveyed on the effectiveness of internal communication during the lockdown.

### Employee wellbeing

- focus on wellbeing as well as operational matters
- regularly circulated light-hearted emails and pointers for working from home / keeping fit and staying healthy during lockdown
- video meetings provided a visual way for employees to engage with each other – supporting the need to connect, work collaboratively and feel a part of the team from home.

### Manager responsibility

- people leaders were asked to check in with each of their team members each day (via phone, Zoom etc.) and then complete a spreadsheet to log the details of that conversation. This was also a wellness check and to ensure that people had support, felt okay mentally etc
- people leaders had to make time to regularly catch up with teams to ensure they felt supported and engaged through this time
- regular team and 1 on 1 meetings online
- we also brought together People leaders on zoom at least once weekly and asked them to connect with their teams frequently.

## Were employees productive during the lockdowns?

The majority of councils perceived that employees were productive during the lockdown periods.

Those working within the Emergency Operations Centre (EOC) were required to be very productive due to the high workload which they were managing. It was however noted that there were no measures in place to accurately judge individual or team productivity levels.

Three councils indicated employee productivity levels varied depending on the role an individual was undertaking, and one council estimated that levels dropped 30-60% during Alert Level 4. On some occasions customer-facing roles experienced a reduction in

productivity because facilities were closed (including aquatic and recreation centers) and regulatory functions were limited.

There was a common understanding across the Canterbury councils that employees were juggling work and family life challenges during this time and therefore the expectation of completing their full role was less. Employees typically communicated this with their manager and focused their time on things that were immediate. They also worked flexibly in order to work around their home needs e.g. starting work earlier or later and finishing accordingly; or taking an extended break in the middle of the day and then working on a little later.

### How was productivity managed during the lockdowns?

It was highlighted by all councils that this was challenging to measure, at least in any way more than anecdotally. This was operated in a very high trust environment, with a number of approaches taken to attempt to verify, including:

- regular check-ins (1:1, whole team) and all employees meetings (online) – built trust by keeping communication channels open between the Manager and their teams
- employee surveys
- managers have undertaken performance development plans where they must meet with employees to track success against KPIs - helped to keep track of what was/was not being achieved and provide support so they could achieve what was required
- managers would discuss with their employees what they were working on and set tasks to fully engage employees
- anecdotal feedback from managers and team leaders was discussed and raised in management forums
- working remotely intranet page - provided tips on working remotely, as well as support for team leader and managers running effective meetings and managing teams remotely
- to assist with monitoring busyness / individual workload, took note of commitments in calendars / Skype for Business status ('Available' verse 'Do Not Disturb').

### What was the impact on employee morale and wellbeing of the lockdowns?

All but two councils undertook employee engagement surveys during the lockdown periods. These aimed to measure a range of factors including the impacts that COVID-19 had on employees, employee wellbeing and advantages / disadvantages of working remotely.

Councils highlighted the following impacts:

- small number of employees faced challenges when isolating alone. In some cases, employees were able to work from the office
- morale and employee wellbeing was mostly positive
- measured via surveys (AskYourTeam)
- one council reported, via their survey, a 2% increase in respondents who would enthusiastically recommend Council as an Employer
- an increase in the number of employees reporting workplace change as a positive matter in March and April 2020 – the main change during this period being the move to remote working as a result of the lockdown.
- changes to annual leave approach – managers started to encourage and remind employees to use their annual leave, as very few are booking holidays due to no international travel and also uncertainty surrounding the effects of COVID-19. This has since picked up as employees appear to be taking annual leave more frequently and willingly.

Changes in employee performance:

- three councils identified that there was no major impact on absenteeism
- most councils noticed an increase in sick leave (some of which have increased by 15-43% when comparing 2020 rates with previous year). This is not unexpected given employees are encouraged to stay at home if they are unwell
- multiple councils highlighted a significant increase in employee assistance programme usage and costs, some as high as 40-60% when comparing this with the year prior, while another Council found that there was a slight decline (possibly due to a reduced capacity / lack of availability for employee assistance).

### How did you manage health, safety and wellbeing during the pandemic?

- regular online meetings
- key messaging and updates were regularly sent out from Executive Team, CE, H&S Advisor or member of the pandemic response team
- reinforced messaging regarding EAP / OCP programmes
- many councils allowed employees to return to work to retrieve office equipment from the main work building to ensure they could make their home set-up more comfortable
- one council arranged educational sessions run by a physiotherapist to provide ergonomic advice / support, and resiliency sessions for those who wished to attend. Another Council organized wellbeing and motivational webinars
- one council highlighted a new suite of processes and procedures were implemented for various levels and tasks which were circulated to all employees. Eg, a 'Health Safety and Wellbeing Organisation COVID-19 Plan' which aimed to ensure everyone is in the best possible position to avoid the spread of

COVID-19 in the workplace. As well as this, a 'COVID-19 Preparedness Assessment' was created to ensure associated risks have been identified and effective management strategies considered / implemented to minimise the likelihood of transmission. It included designated human resources employees who acted as welfare monitors and remained in regular contact with vulnerable employees. This COVID-19 Preparedness Assessment was created in line with the Health Safety and Wellbeing Organisation COVID-19 Plan and was completed to ensure risks associated with COVID-19 were identified and effective management strategies considered and implemented to minimise the likelihood of COVID-19 transmission.

### What demographic of employees appeared to thrive during the flexible working arrangements and those that didn't?

#### Those that **thrived**:

- flexibility to work when they could work well for most – particularly those with family commitments
- rather than a particular demographic thriving, it really seemed to come down to personality and the ability to adjust, or not, to remote working. It does not suit everybody (or every position)
- self-motivated and tech-savvy employees with a constant workload managed the best
- one Council felt that those between the ages of 30 – 50 years thrived the most when working remotely
- naturally those in non-customer facing roles could work from home a lot more easily
- a number of employees found being able to work from home was a positive thing which they could also benefit from in future. They felt that it provided them the opportunity to focus on certain tasks more effectively and/or ability to work around family life.

#### Those that **struggled**:

- those juggling childcare / school children with work commitments during lockdown meant some employees could not work their full hours
- employees with younger children at home found it difficult to juggle the dynamics of home/schoolwork and work
- one Council felt that those over 50 years or in their mid to late 20s, struggled the most with working remotely.

## 2.5 Key Learnings

### What were the key learnings for your council as a result of this experience?

It was highlighted that most councils have introduced Flexible Working Policies / Procedures post-lockdowns 4 and 3. One council already had this in place and two others are yet to create these policies.

The key learnings identified by councils focused on flexibility, outputs, business continuity and the all-important communications.

#### (a) Flexibility

- agility - many roles can be worked remotely
- can quickly mobilise workforce into a remote working situation – employees are resilient and able to make situations like this work well
- can adapt, be agile, and in almost all cases deliver services remotely
- people adapted and used Zoom / Teams / Skype regularly and continue to do so with various meetings reducing travel time and costs on an ongoing basis
- lack of flexibility in some cases - the time it took to propose and get employees (who couldn't work from home during Alert Level 3) to accept an alternative arrangement, (e.g. redeployment, taking leave) was significant
- pretty well-adaptative to new technologies and delivering essential services.

#### (b) Work outputs

- many employees can work from home effectively and efficiently
- some employees / positions worked harder than normal during lockdown, whereas others had a 'stay-cation' during lockdown. There were inequities across and between teams
- the National Emergency Management Agency (NEMA) directive to have local council call centres open 7am to 7pm, 7 days a week, increased our cost to no benefits. Call volume was down compared with normal, however we increased employee levels to satisfy the directive
- the exception and constraints arose with frontline employees who were unable to continue their duties for the majority of the time. Some units who experienced these constraints were innovative and changed how they delivered service to our customers e.g. fitness classes which would been taught in the sports facilities were delivered live online, so customers could continue to work out from home
- some libraries already have a digital platform which they use to carry out day-to-day tasks. Having this platform in place enabled them to continue to interact with their customers during the lock down period.

#### (c) Business continuity

- capable of maintaining services under pressure of COVID-19
- need to review Business Continuity Plans
- need to increase technical ability of some employees
- ongoing work to enable employees to be able to work effectively from home with IT capability is necessary for the future
- systems could cope with all computer-based employees working remotely.

#### (d) Communication



- important to have regular contact with all employees - Zoom meetings provided everyone with the connectedness that the employees missed and information for Managers to confirm productivity
- one council reported that despite the increased functionality of the in-house social media platform (implemented during lockdown periods) employees have not continued to support this at the same rate. Sign up was strong, but ongoing usage has dropped, with the majority of employees preferring pre-existing communication methods
- text is the best way to quickly communicate short messages to employees, we continue to promote and build our text alert database for personal mobile numbers
- learnt to remain connected with employees as they can still partake in meetings and/or make numerous meetings by being able to use things like Zoom (cuts down travel).

### 3. **Post-Pandemic Experience**

What percentage of your employees are continuing to work flexibly? How? And for what proportion of their time?

One council indicated that all employees had returned to work from the office.

All other councils highlighted that they have employees (approximately 7-30%) which are continuing to work flexibly following the initial level 4 and 2 lockdown periods. Of these employees, the proportion of time they spend working flexibly varies significantly – some employees have set hours and days agreed to as part of their employment, others have set days with flexibility to change when needed or will work from home in a response to certain work duties and tasks.

Employees with formal arrangements are commonly working from home one day per week (20% of their contracted hours). The introduction of a compressed fortnight has also seen positive results.

It has been recognised that all flexible arrangements will be reviewed on a regular basis.

Did your council make any other operational changes as a result of the pandemic? E.g. to increase flexibility/agility?

Three councils indicated that they had not implemented any major operational changes as a result of the pandemic.

However, five councils highlighted the following changes:

- review of core competencies of what it means to be a leader in a more agile environment
- requiring all employees to be in the office for at least 2 days per week for team synergy
- post lockdown “Drop in chat with your peers” sessions to encourage leaders to learn from each other’s experiences, discuss challenges, ask questions and get advice. These sessions were supported by a number of human



resources, organisational development and health, safety and wellbeing professionals

- intranet pages developed for greater ongoing information sharing on the pandemic.

All councils also highlighted the following:

- more agile and open to the benefits of flexible working for both the employer and employee
- now offer more laptops to employees to increase flexibility, encourage managers to provide support and encouragement to those employees who do wish to work remotely and remove barriers where possible to support employees
- more regular use of video calling, recently introduced Office 365 and Microsoft Teams
- greater awareness of the spread of illness and taking more precautions within the workplace to prevent this from occurring (distribution of QR codes and sanitizer bottles etc.)
- IT team have invested time identifying current and future remote working requirements, to ensure that an appropriate remote working solution is selected for the organisation
- introduction of flexible working arrangements and corresponding policies / guidelines.

#### **4. Additional General Comments**

The final comments provided by councils highlighted the insight that the lockdown periods gave into the employees of the councils, particularly around behaviours (both positive and negative).

## Attachment 2

### Impacts of flexible working on Canterbury councils: a qualitative review - Questionnaire

#### Terms of Reference Key Questions:

1. What % of council your employees are continuing to work from home, and for what proportion of their time?
2. What are the demographics and council roles of people who thrive on working from home, and those who don't?
3. What policies and processes are councils using to formalize flexible working arrangements?
4. What impact did working from home during alert levels 3 and 4 have on productivity (and can this be measured)? Were your employees more productive, or did they just work longer hours?
5. What impacts are we seeing from flexible working arrangements in alert levels 1 and 2 on:
  - a. Measurable productivity and performance management (and what tools are councils using to monitor and manage this)?
  - b. Team cohesion and functioning?
  - c. Health and safety at work, and uptake of sick leave and employee-assistance programmes in 2020 compared to previous years?
  - d. Employee feedback on work-life balance (working from home, or living at work)?
  - e. Building occupancy, IT, and other business support (in consultation with the Chief Information Officers working group)?
  - f. Records management (in consultation with the Canterbury Records Information Management working group)?
  - g. Transport and patronage of CBD cafes/businesses?

#### Key Definitions

“Flexible work” covers a wide range of arrangements outside of the traditional working week and can be tailored to suit each employee’s needs. Common examples include:

- Working a different number of hours
- Working within different timeframes
- Working remotely
- Job sharing
- Purchasing additional leave
- Taking additional unpaid leave

Under part 6AA of the ERA 2000, all employees have the right to request a variation of their working arrangements at any time. Employers have an obligation to respond to requests as soon as possible, and not later than 1 month after receiving the

request. There is a limited, but broad, number of reasons employers can decline a request, such as an inability to recruit additional employees or to reorganize work.

Essentially, it is about giving employees the opportunity to make changes to the hours they work and where they work from, in an effort to harmonize commitments to their employer with those in their personal lives.

Obviously, this took a more reactive direction as a result of the pandemic, which required employees to remain at home, unless essential services required them to work from the usual office/HQ.

For the purposes of this Short-Term Working Party, **Flexible Working** will refer to all forms of variation to the usual work practice, as a result of the pandemic. This will most likely take the form of a change in hours worked (both numbers and timeframes), working remotely and/or a combination of these options.

.....

DRAFT Data Sourced from each of the councils involved in this STWP: *please feel free to edit this form as you need to, to provide the appropriate response for your Council.*

General demographics:

Council Name:	
Location of Office(s)	
FTE	
Head Count	

Pre-Pandemic Situation @ Your Council

1. Did you have a Flexible Working Policy in place prior to the pandemic? If yes, please attach a copy.
2. If so, what % and # of your employees had flexible working arrangements in place prior to the pandemic?

### The Pandemic Experience @ Your Council

3. Please provide an account of your council's journey from the start of the pandemic, to today? *(Suggest including the following: immediate response/experience; short term (lockdown) experience, immediately post lockdown experience.*
  - a. *How did you handle remuneration for employees who were unable to carry out their full or part of their usual duties/hours?*
  - b. *Which positions could not work during the lockdown periods?*
  - c. *Did you carry out redeployments? If so, what type of work etc?*
  - d. *What percentage of employees could work from home and complete all duties during the level 4 lockdown period and during level 3 lockdown period?*
  - e. *What percentage of employees could work from home and complete only partial duties during the level 4 lockdown period and during level 3 lockdown period?*
  - f. *What, if any, operational changes did your council make during the level 4 and level 3 lockdown periods? And were they successful or not?*
4. What were the positives and negatives/challenges during each of these stages?
5. How did you manage cohesion and connectedness of employees during this time?
6. What were the key learnings for your council as a result of this experience?
7. Were you able to meet statutory obligations across the business units of council during the lockdowns?
8. Were employees productive during the lockdowns?
9. How did you manage productivity during the lockdowns?
10. What was the impact on employee morale and wellbeing of the lockdowns? How do you know this? Have you seen any change in the uptake of sick leave, absenteeism, presenteeism, employee assistance programmes compared to previous years?
11. Did you carry out any surveys (eg engagement or wellbeing surveys) of employees during the lockdowns? If so, please provide the findings or a summary of the findings to support this data collection.

12. How did you manage health, safety and wellbeing during the pandemic?
13. What demographic of employees appeared/appear to thrive during flexible working arrangements and those that don't?

#### The Post-Pandemic Experience/Learnings @ Your Council

14. Have you introduced any policies/procedures since lockdown regarding flexible working? If yes, please attach a copy
15. What percentage of your employees are continuing to work flexibly? How? And for what proportion of their time?
16. Did you carry out any surveys (eg engagement or wellbeing surveys) of your employees post the lockdowns? If so, please provide the findings or a summary of the findings to support this data collection.
17. Did your council make any other operational changes as a result of the pandemic? Eg to increase flexibility/agility? If so, what were they and have they been successful to date?
18. What additional support, if applicable, has your Council provide to your people leaders to effectively manage flexibility within their teams and remote workers?

#### General

19. Is there anything else that you wish to add to speak to this experience? If so, please outline it.

### **Where to from here?**

Following the sourcing and collation of this data, it will be presented back to the STWP for consideration. A report will be prepared based on the experience and key findings.

From this point, the next stage of the STWP will commence, ie what can we learn about improving the environment we work in, to accommodate different demographics/ways of working, whilst remaining well, productive, effective, and efficient?

# Canterbury Chief Executives Forum

**Date:** 1 November 2021

**Presented by:** Hamish Dobbie, Bede Carran, David Ward

## Regional forums report

### Purpose

1. This report summarises outcomes from the regional forum meetings since the Chief Executives Forum last met on 2 August 2021.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. **receive the report on regional forum meetings between August and October 2021.**

### Background

2. The Operations and Corporate Forums met on 13 September 2021. The Policy Forum met on 24 September 2021.

### Operations Forum (chair Hamish Dobbie)

3. At its meeting on 13 September, the Operations Forum:
  - discussed three waters reform
  - approved the establishment of the Canterbury Wastewater Working Group, and agreed to develop terms of reference for the group and request chief executives confirm representatives to it
  - approved terms of reference for the Drinking Water Reference Group
  - received an update on the work of the Canterbury Solid Waste and Joint Waste Committees, and requested the development of a work programme summary and reporting line through to this forum
  - discussed the use of herbicides in and around Canterbury waterways
  - received an update from Environment Canterbury on progress with recovery on the May regional flooding event
  - received updates from the Canterbury Engineering Managers Group, the Regulatory Managers Group, the Stormwater Forum, and the Drinking Water Reference Group on their work programme and activities in the last quarter.

## **Corporate Forum (chair Bede Carran)**

4. At its meeting on 13 September, the Corporate Forum:

- discussed progress with the regional digitisation plan to digitise council records
- received an update from the working party formed to progress a regional approach to carbon footprint assessments, and agreed that the Christchurch City Council would explore which parts of its carbon footprint software could be shared across the region
- agreed a scope of work would be drafted, led by the chair of the Finance Managers Group, to engage a consultant to undertake the feasibility work assessing collaborative procurement opportunities, noting a report was required on this matter for the November Chief Executives Forum
- agreed the chair of the Chief Information Officers Group would look into government work on the Business Continuity Planning Disaster Recovery Database alignment and what this may mean for Canterbury
- received an update on the Mayoral Forum's work programme and recent activity
- received updates from the Finance Managers Group, Chief Information Officers Group, Canterbury Public Records Act Executive Sponsors Group, Canterbury Records and Information Management Support working group, and the short-term working party on flexible working on their work programme and activities in the last quarter.

## **Policy Forum (chair David Ward)**

5. At its meeting on 24 September, the Policy Forum:

- discussed resource management reform and agreed on a process to appoint a contractor to assist the Mayoral Forum in its engagement with the resource management reform process and develop future submissions on the Natural and Built Environments Bill, Strategic Planning Bill and Climate Adaptation Bill
- received an update on the short-term working party to explore opportunities for greater cross-Canterbury collaboration on building consents
- agreed a regional submission should be made on the Productivity Commission's consultation on a review of New Zealand's immigration system, and discussed how best to approach development of the submission
- discussed the impact of carbon forestry in Canterbury, and agreed the Planning Managers Group would report back on this issue to the Policy Forum's December meeting
- received updates on recent activities of the Planning Managers Group and Climate Change Working Group.

## Climate Change Steering Group

6. The Climate Change Steering Group hosted the second twice-yearly regional workshop with councillors on 1 October. The guest speaker was Dr Trevor Stuthridge, Research Director, AgResearch Limited, who discussed with the group how climate change science is supporting the agricultural sector to move to a lower-emissions future. The group then updated each other on progress with climate change initiatives at each council and received an update from Environment Canterbury on regional initiatives.
7. The Steering Group met on 15 October to discuss the regional climate change risk assessment. Refer agenda item 2.5 for more information on this matter.

## Review of regional forums and working groups

8. At the Chief Executives Forum in January of this year, chief executives agreed to review progress with the changes made as a result of the forum and working group review.
9. At the December meetings of the Corporate, Operations and Policy Forums, a paper will be prepared to discuss the review and seek feedback from forum members on how the changes have impacted the forums and working groups, as well as any other comments or ideas members have to further improve the effectiveness of these groups.

## Next meetings

10. Scheduled forum meetings for the remainder of the 2021 calendar year are:

18 November	Mayoral Forum working dinner
19 November	Mayoral Forum meeting
19 November	Mayoral Forum working lunch with Canterbury MPs
10 December	Policy Forum
13 December	Corporate and Operations Forums



# Canterbury Chief Executives Forum

**Date:** 8 November 2021

**Presented by:** Hamish Riach, Chair

## Review into the future for local government

### Purpose

1. This paper provides a high-level summary of the interim report published in October on the review into the future for local government.

### Recommendations

**That the Canterbury Chief Executives Forum:**

1. note the update and summary provided in the paper.

### Background

2. In October the Review Panel published its interim report to the Minister of Local Government.
3. The interim report is the result of the Panel's "early soundings" stage of the process. It reflects the results of early engagement with the sector and stakeholders and signals broad lines of inquiry for the next stage.
4. The next stage of the review will involve a broader public engagement about the future of local governance and democracy in New Zealand, alongside research and policy development. After completing that work, the Review Panel will report to the Minister of Local Government by 30 September 2022 with draft findings and recommendations.
5. The third stage will involve formal consultation about the Review Panel's draft recommendations. A final report will be submitted in April 2023.

### Interim report

6. The interim report is available on the Review Panel's website at this link:  
[https://futureforlocalgovernment.govt.nz/assets/Uploads/DIA\\_16724\\_Te-Arotake-Future-of-Local-Government\\_Interim-report\\_22.pdf](https://futureforlocalgovernment.govt.nz/assets/Uploads/DIA_16724_Te-Arotake-Future-of-Local-Government_Interim-report_22.pdf) .

### Summary of interim report findings

7. The interim report identifies the breadth of challenges facing local government and the wellbeing of communities over the next 30 years. The key challenges include climate

change, environmental degradation, economic performance, poverty and inequity, housing, health, mental wellbeing, natural hazards, demographic change, pandemics and technology advances.

8. The report makes it clear that local government is under pressure. It notes that the main pressures were the culture of mistrust between central and local government, the constant financial pressure to manage growing demand including infrastructure for housing and overlapping and conflicting responsibilities because the sector operated under a "complex web of legislation", according to the Productivity Commission.
9. Sustainability and relationships were at the core of the issues and local government also needed to strengthen iwi and Māori partnerships under Te Tiriti o Waitangi.
10. Representation and low engagement were also areas of concern, along with information and communications technology, which appears fragmented and, in some cases, not fit for purpose.
11. The report draws a distinction between local government and local governance, and that there is an opportunity to have "new and better systems of local governance" including "changes to representation and electoral arrangements should be considered in order to strengthen local democracy, decision making, and leadership".
12. The report noted any redesigned local governance would need to address current pressures - including breaking down mistrust, clearly defining functions and roles and at the most appropriate scale, having sufficient capability and financial capacity including potentially moving some functions to central government, greater collaboration, and better reflecting all interests including iwi and Māori.
13. The report makes the point that "any future system of local governance will need to move beyond existing structures and silos and consider governance as a shared endeavour in which many players contribute and deserve a voice. This will require new, more flexible ways of organising, and new ways of relating, in order to build trust, and act in common cause".

### **Priority questions for the next phase**

14. The report sets out the priority questions for the next phase of the review (p46-52 of the report). These are:
  - How should the system of local governance be reshaped so it can adapt to future challenges and enable communities to thrive?
  - What are the future functions, roles and essential features of New Zealand's system of local government?
  - How might a system of local governance embody authentic partnership under Te Tiriti o Waitangi, creating conditions for shared prosperity and wellbeing?

- What needs to change so local government and its leaders can best reflect and respond to the communities they serve?
- What should change in local governance funding and financing to ensure viability and sustainability, fairness and equity, and maximum wellbeing?

### **Early opportunities for change**

15. The report identifies some early opportunities for change in the interim period until the final report is completed (p53-57 of the report). These are:

- that regional and unitary councils temporarily host the committees intended to develop new resource management plans for each region
- a joint central-local government steering committee be established with input into the design of the country's new public health service
- a partnership funding model between central and local government to explore investment in unified ICT, including a stocktake of existing systems and a business case for transition
- using a portion of the planned Three Waters transitional funding to stimulate locally led collaborative and innovative approaches to wellbeing
- develop a national framework to build capacity for iwi and Māori to take part in the reforms
- use the Māori Committee of Local Government New Zealand or the Office for Māori-Crown Relations to provide national support to new Māori ward councillors at next year's elections
- jointly develop with central government statements that assess the impact of government decisions on local authorities.

16. The report also notes that existing reform programmes should take place in a coordinated and aligned manner that take account of potential implications for future local governance reforms.

### **Next steps**

17. The engagement programme for the next phase of the review is outlined on page 59 of the report. This can be summarised below:

Sep 2021 – Apr 2022	Broad exploratory kōrero about the priority questions through wānanga, workshops and online, with a range of groups and communities. In early 2022 an online tool will be released to help people share ideas and views
March/April 2022	Connect with local authorities to share our thoughts and get feedback on key ideas and opportunities
April – August 2022	Testing and refining key ideas and approaches for the future for local governance and democracy

18. The engagement will include online and in-person workshops and wānanga, webinars, online surveys and crowd sourcing opportunities, stakeholder conversations, and local government meetings.

# DRAFT AGENDA

## MAYORAL FORUM



<b>Name:</b>	Canterbury Mayoral Forum
<b>Date:</b>	Friday, 19 November 2021
<b>Time:</b>	9:00 am to 12:00 pm
<b>Location:</b>	Peppers Clearwater Resort, Clearwater Avenue, Harewood, Christchurch
<b>Board Members:</b>	Sam Broughton (Chair), Craig Rowley, Craig Mackle, Dan Gordon, Gary Kircher, Graham Smith, Jenny Hughey, Lianne Dalziel, Marie Black, Neil Brown, Nigel Bowen
<b>Attendees:</b>	Alex Parmley, Bede Carran, David Ward, Dawn Baxendale, Hamish Riach, Hamish Dobbie, Jim Harland, Stefanie Rixecker, Stuart Duncan, Suzette van Aswegen, Will Doughty, Amanda Wall, Maree McNeilly, Rosa Wakefield, Sean Tully

### 1. Opening meeting

#### 1.1 Mihi, welcome, introductions and apologies

9:00 am (5 min)

Sam Broughton

##### Canterbury Mayoral Forum mihi

Ko Ngā Tiritiri o te Moana ngā maunga

Ko ngā wai huka ngā awa i rere tonu mai

Ko Ngā Pākihi Whakatekateka o Waitaha te whenua

Ko Marokura, ko Mahaanui, ko Araiteuru ngā tai

Thei mauri ora!

The Southern Alps stand above

The snow-fed rivers continually flow forth

The plains of Waitaha extend out

To the tides of Marokura, Mahaanui and Araiteuru

Behold, there is life!

#### 1.2 Confirmation of agenda

9:05 am (5 min)

Sam Broughton

#### 1.3 Minutes from the previous meeting

9:10 am (5 min)

Sam Broughton

Supporting Documents:

1.3.a Minutes : Canterbury Mayoral Forum - 20 Aug 2021

**1.4 Action List**

9:15 am (5 min)

Sam Broughton

Supporting Documents:

1.4.a Action List

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**2. For discussion and decision****2.1 Climate Change Risk Assessment final report**

9:20 am (20 min)

Dan Gordon

**2.2 Biodiversity Champions update**

9:40 am (20 min)

Jenny Hughey

**2.3 Regional Economic Development group update**

10:00 am (5 min)

Marie Black

**2.4 Regional Economic Development Senior Official update**

10:05 am (20 min)

Paul Stocks

**2.5 Morning Tea**

10:25 am (15 min)

**3. For information****3.1 Ashburton Essential Freshwater paper**

10:40 am (5 min)

Neil Brown

**3.2 Canterbury Water Management Strategy update**

10:45 am (5 min)

Jenny Hughey

**3.3 Greater Christchurch Partnership update**

10:50 am (20 min)

update on Urban Growth Agenda and Spatial Planning engagement

**3.4 Resource Management Reform update**

11:10 am (5 min)

**3.5 Future for Local Government update**

11:15 am (10 min)

**3.6 Three Waters update**

11:25 am (10 min)

**3.7 CREDS update**

11:35 am (5 min)

**3.8 Chief Executives Forum report**

11:40 am (5 min)

Hamish Riach

**3.9 General Business**

11:45 am (15 min)

## 4. Close Meeting

### 4.1 Close the meeting

**Next meeting:** No date for the next meeting has been set.

Meeting close followed by lunch with Canterbury MPs

**Next meetings:**