

# Annual Report for WIL Nutrient Discharge Consent: Year Ending 30 November 2022

✦ Prepared for

Waimakariri Irrigation Limited

✦ November 2022



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## 1.0 Introduction

Waimakariri Irrigation Ltd (WIL) operates an irrigation scheme between the Waimakariri and Ashley Rivers, as shown in Figure A1 (Appendix A). WIL were granted consent CRC184861 on 4 September 2018 to discharge nutrients from farming activities occurring within the WIL scheme.

Conditions 10 and 11 of CRC184861 requires an annual report to be prepared by 30 November each year. This report has been prepared by Pattle Delamore Partners (PDP) and Mātai Consultants on behalf of WIL to fulfil the reporting requirements of consent CRC184861.

## 2.0 Consent Requirements

The reporting requirements for consent CRC184861 are outlined below.

### Condition 10

- e. The consent holder shall prepare an annual report describing the results of the ASM programme and the audits that have been conducted each year. The report shall include:*
  - i. The name of the FEP auditor(s);*
  - ii. A summary of the audit performance grading;*
  - iii. A summary of the reasons for any farm receiving a C or D grade;*
  - iv. A summary of the actions taken to address C or D grades;*
  - v. A summary of farms that repeatedly received a C or D grade;*
  - vi. The progress achieved for previously identified issues, if applicable;*
  - vii. The total annual loss of nitrogen from all properties within the Irrigation Scheme or Principal Water Supplier over the reported year;*
  - viii. The annual average nitrogen loss to water for each property listed in Schedule CRC184861A and Schedule CRC184861B, as calculated in accordance with Appendix CRC184861;*
- f. A copy of the annual report shall be provided to the Canterbury Regional Council, by 30 November each year.*

### Condition 11

*The consent holder shall:*

- a. Prepare an annual report which describes:*
  - i. The number of properties and the total area of irrigated land and unirrigated land of those properties listed in the Schedules;*
  - ii. The results of the ASM, which includes the audits that have been undertaken each year in accordance with Condition 10;*
  - iii. A record of the annual loss of nitrogen for the preceding 12-month period (being from the 01 August until the following 31 July) for all properties listed in the Schedules;*
  - iv. Any incidence of non-compliance with the requirements set out within the individual Farm Environment Plans;*
  - v. The actions taken by both the consent holder and (as necessary) the landowner(s) in the Schedule to remedy or mitigate non-compliance identified in accordance with Condition 10.*
- b. Provide a copy of the report to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager by the 30 November every year.*

### 3.0 Irrigated and Unirrigated Land

Table 1 below shows the irrigated and unirrigated land within the WIL scheme. The irrigated and total farm areas were obtained from the individual farm environment plans (FEPs). Schedule A properties are those that utilise the WIL nutrient discharge consent to authorise the nitrogen losses from their farming activity. Table 1 shows that the properties within Schedule CRC184861A (Schedule A) had a combined irrigated area of 22,856 ha and a combined total farm area of 30,758 ha.

Properties listed in Schedule CRC184861B (Schedule B) hold their own consents that specify the nitrogen discharge allowance for their farm. Five properties are currently listed in Schedule B (see section 6.2 of this report).

Table 1: Irrigated and unirrigated area within WIL scheme as at November 2022				
Area	Irrigation area (ha)	Dryland area (ha)	Non-effective area (ha)	Total area (ha)
Schedule A - FEP	22,605	6,502	997	30,105
Schedule A - Lifestyle	251	403	0	654
<i>Schedule A - Total</i>	<i>22,856</i>	<i>6,905</i>	<i>997</i>	<i>30,758</i>
Schedule B	1,253	103	27	1,383
<b>Total</b>	<b>24,109</b>	<b>7,008</b>	<b>1,024</b>	<b>32,141</b>

## 4.0 Results from Audited Self-Management Programme

Condition 10 of CRC184861 requires WIL to implement and adhere to an audited self-management (ASM) programme. The ASM document was developed by PDP and WIL and was submitted to ECan on 1 July 2016. A copy of the ASM document is included in Appendix B.

### 4.1 ASM Reporting Requirements

The ASM reporting requirements are outlined in Condition 10e of CRC184861, as outlined in section 2.0 of this report.

### 4.2 FEP Auditors

All FEP Auditors have completed the Advance Sustainable Nutrient Management Course from Massey University and had been registered as accredited FEP Auditors by Environment Canterbury (ECan). Shareholders who have achieved Synlait's *Lead with Pride* accreditation were not audited through the WIL FEP audit programme, but their equivalent grades are reported here.

In the 2021-22 season, the WIL farm environment plans (FEPs) were audited by three auditors, as listed in Table 2.

Table 1: FEP Auditors		
Name	Organisation	Certification
Leah Gorman	EnviroPlan Limited	Certified FEP Auditor
Amelia Wood	The Agribusiness Group	Certified FEP Auditor
Emma Brand	Independent	Certified FEP Auditor

### 4.3 Summary of FEP Audit Grades

The ASM programme administers a total of 113 FEPs. This is made up of 103 WIL FEPs and 10 Ngāi Tahu FEPs. Ngāi Tahu Farming Limited are WIL shareholders. All Ngāi Tahu properties at Te Whenua Hou have been included and are managed under the WIL ASM programme. Three of these farms use WIL water and the remainder receive water from water take consent CRC172924 held by Ngāi Tahu Farming Ltd. Ngāi Tahu reports nitrogen discharge compliance for all their properties that do not receive WIL water.

In the 2021-22 season, 33 FEP audits were completed by the auditors, as detailed in Table 2. Because of the Covid lockdowns during 2020 and 2021, audits had been deferred and this has meant that some audits were audited outside of the stated ASM time frames. WIL is still catching up on audit completions.

The results of the 2021-22 FEP audits are shown in Table 3 below. 94% of the grades awarded were A or B grades. The C and D grades are discussed in sections 4.4 and 4.5 of this report, respectively.

Table 2: 2021-22 FEP Audit Results		
Grade	Audits Completed	Percentage
A	17	51.5%
B	14	42.4%
C	1	3.0%
D	1	3.0%
<b>Total</b>	<b>33</b>	<b>100.0%</b>

Table 4 shows the current FEP Audit grades for all WIL FEPs.

Table 3: Summary of all Current FEP Audit Grades		
Grade	Number	Percentage
A	51	49.5%
B	49	47.6%
C	2	1.9%
D	1	1.0%
<b>Total</b>	<b>103</b>	<b>100.0%</b>

#### 4.4 Reasons for C Grades and Actions Taken

During the last year, five properties have been improved from C grade to B grade. There are currently two C grade properties, comprising of one dairy farm and a small deer farm, which represent 399 ha (less than 1.5% of the scheme area). The deer farm is currently for sale and this audit has been delayed until the sale has progressed.

All C grade properties are individually managed to improve their environmental performance.

#### 4.5 Reasons for D Grade and Actions Taken

The one D grade property is a dairy farm with a history of poor environmental performance. There are some challenging environmental aspects to manage on this property with multiple issues.

The property was previously audited during 2019 with a C grade. Due to the Covid lockdowns, it was not audited during 2020 or 2021. Since the 2019 audit, improvements have been made to the effluent liquid and solids management and irrigation scheduling.

Although there remains more than one area for improvement on the property, the main reason for the D grade was the effluent application depth exceeding the effluent consent conditions. The effluent system is a manually operated sprinkler system and the response to remedy the issue is to shift the sprinklers more often to lower the application depth.

Two other key issues remaining are the waterway management and the effluent collection. Table 5 shows the audit actions against the different management areas.



**Table 4: Summary of D grade reasons and actions**

Management Area	Actions
Irrigation	<ul style="list-style-type: none"> <li>• Establish a system of recording irrigation management incidents (i.e. what happened, actions taken &amp; preventative measures taken).</li> <li>• Undertake application depth and distribution uniformity assessments (bucket tests) on those irrigation systems that have not been tested since the last audit.</li> <li>• Ensure formal irrigation management training is provided for those staff that are actively involved in the operation of the system.</li> </ul>
Nutrient	<ul style="list-style-type: none"> <li>• Review &amp; update where necessary, the current system of nutrient management record keeping to ensure adequate records are kept for future audits.</li> <li>• Develop a plan showing high risk sediment and nutrient loss sites on the property. Plan to include options for managing the identified risks.</li> <li>• Adjust nitrogen fertiliser applications to the effluent blocks to take into account N in the effluent.</li> </ul>
Cultivation and soil structure	<ul style="list-style-type: none"> <li>• Identify high risk soil compaction areas on the property and put in place plans for the management of these areas to minimise the compaction risk.</li> <li>• Put in place measures to address soil compaction issues identified on the property.</li> </ul>
Animal effluent & solid waste	<ul style="list-style-type: none"> <li>• Undertake a bucket test on effluent irrigator and adjust if necessary to ensure it is applying the correct amount for the soil type.</li> <li>• Adjust effluent application rates and depth to ensure that applications do not lead to ponding or runoff.</li> <li>• Upgrade effluent management records to ensure sufficient records are available at the time of next audit.</li> <li>• Ensure that the 'holding area' is contained and captured.</li> </ul>
Waterbody	<ul style="list-style-type: none"> <li>• Ensure that all waterway crossings for cattle are either bridged or culverted.</li> </ul>

WIL has escalated the urgency of the response and involved the milk supply company to enlist support and resource for the shareholder.

WIL and the milk supply company are in discussions and are actively aiding the shareholder to make infrastructure and management improvements.

#### 4.6 Farms that have Repeatedly Received C or D Grades

There has been one C grade regressing to a D. This is discussed in section 4.5 of this report.

All C and D grade properties are actively managed with one-on-one interventions by the WIL scheme environmental manager and other advisors as recommended.

#### 4.7 Incidences of Non-Compliance with FEP Requirements

The D grade property does not meet the FEP requirements of the scheme. This response has now been escalated as discussed in section 4.5 of this report.

### 5.0 Progress Achieved by the Scheme

#### 5.1 Implementation of Industry Articulated Good Management Practice

The FEP and audit programme is into the sixth year. Since auditing began during the 2017 reporting year, all properties have been audited twice, 71 have been audited three times and 10 have had a fourth audit, as shown in Table 6 below.

Table 5: Results for 1st, 2nd, 3rd and 4th FEP Audits				
Grade Received	Audit #1	Audit #2	Audit #3	Audit #4
<b>A</b>	5%	21%	39%	40%
<b>B</b>	63%	65%	55%	50%
<b>C</b>	27%	12%	6%	0%
<b>D</b>	5%	2%	0%	10%

Progressively as the number of audits per farm grow, the achievement of meeting good management practice (A and B grades) improves.

The current FEP audit grades for the scheme are listed in section 4.3 of this report. The improvement in audit grades is most notable with the percentage of A and B grades improving from 68% during the first audit (2017) to 97% in 2022.

The progression in audit grades is shown in Figure 1 below.

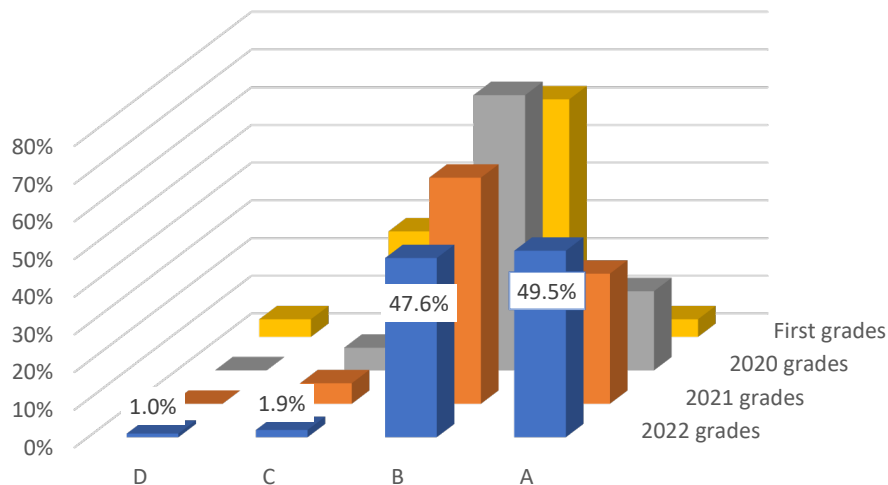


Figure 1: Progression of FEP Audit Grades From 2017 to 2022

## 5.2 On-farm Improvements

There are a number of on-farm irrigation infrastructure improvements that have been driven by the audit process and water use efficiency. Over the years, there has been a steady replacement of less efficient irrigation systems (gun, Rotorainer, K-line, long line) to more efficient irrigation systems (pivot, linear and fixed grid). Pivots now make up over 74% of the irrigated area, in comparison to 70% in 2020. There has been 1,031 ha of less efficient systems replaced since 2020.

## 5.3 Lifestyle Block Holders

There are 60 shareholders with irrigated area of less than 20 hectares. This represents approximately 250 ha of irrigation. All lifestyle block holders have a lifestyle block management plan in place.

During 2022, a survey of all lifestyle blocks was undertaken to ensure the information WIL held was correct and management practices were meeting GMP. A follow up information and networking evening was held for the lifestyle block owners.

## 5.4 Nutrient, Environmental and Water Management System (NEWMS)

The Nutrient, Environmental and Water Management System (NEWMS) project has been in place for four years with REGEN as the original provider of the irrigation management service (IMS). This has been instrumental in implementing GMP and progressing all irrigators to using daily soil moisture information with recommendations based on soil moisture status and forecasted weather data.

The IMS is now provided by Waterforce. The same soil moisture and weather data is provided with irrigation application recommendations.

Further investment in five weather stations across the scheme has occurred as part of the transition to the new provider.

## 5.5 Training

The irrigation scheme continues to resource environmental management services including GMP, biodiversity and policy advice available to all shareholders. Dedicated resources are provided to support farmers with interpreting and prioritizing actions following audits. These are provided by external contractors Matai Consultants in conjunction with Dairy NZ and Environment Canterbury staff. Biodiversity and ecology advice is provided by TerraCentric and PDP.

Through the audit process, areas that require improvement are identified and training is targeted at owners and key staff.

Details of various training, workshops and field days undertaken during the last 12 months are listed below.

### 5.5.1 Mahinga Kai and Biodiversity Workshop

A visit to a wetland and biodiversity area was carried out with rūnanga representatives and Environment Canterbury staff in November 2021.

### 5.5.2 Irrigation Manager Training

A series of two irrigation manager training workshops were held during October 2021. Due to Covid restrictions and other circumstances, workshops planned in early 2022 were postponed. Two workshops for the upcoming year during December 2022 are being held in their place. Depending on demand, these will be replicated during early 2023. The training is a series of two workshops covering different topics to provide a suite of complete knowledge for those that attend.

### 5.5.3 Waimakariri Landcare Trust

WIL contributes financially and is on the steering committee of the Waimakariri Landcare Trust. The Trust has a number of project initiatives, including integrated farm plans, future land use options through the 'Our Land and Water' project and other wellbeing, good management practice, soils and other training days.

### 5.5.4 Lifestyle Blocks

A comprehensive review of all lifestyle block management plans was undertaken during 2022. A follow up information evening and workshop provided GMP and operational advice for shareholders.

## 5.6 Biodiversity Projects

The aim of the biodiversity projects is to enable indigenous planting and ecological restoration projects to occur across the WIL scheme, with a specific focus on enhancing the health and connectivity of indigenous flora and fauna at catchment scale across the network and beyond. WIL's approach is to inspire positive action primarily amongst WIL shareholders, but also non-WIL shareholders, by providing guidance, planning and technical input where required to give landowners and community groups the confidence and direction to lead this in their own right, with the ultimate outcome being widely adopted, non-regulatory uptake of such initiatives that are consistent with both regional and national objectives for biodiversity.

There is currently a mixture of projects at different stages with a number of different shareholders across the scheme. These are summarised in Appendix C.

Going forward, WIL's main objective is to leverage the tangible progress that has been made as an example of what can be achieved in order to showcase this to other prospective shareholders and non-shareholders, with one of the overarching outcomes being the establishment of catchment groups to continue the momentum and lead future restoration work.

## 6.0 Annual Nitrogen Loss

### 6.1 Schedule A Properties

Table D1 (Appendix D) shows the annual nitrogen loss for the period 1 August 2021 – 31 July 2022 for all properties listed in Schedule A of consent CRC184861.

Table 7 below provides a summary of the nitrogen losses for properties listed in Schedule A for each of the three nutrient allocation zones (NAZs). As shown in Table 7, the current nitrogen losses are less than the consented limits for the Ashley-Waimakariri (red), Ashley (orange) and Waimakariri (green) zones.

**Table 6: Summary of nitrogen losses for Schedule A for the period 1 August 2021 – 31 July 2022 (v6.4.3)**

	Nutrient Allocation Zone		
	Ashley - Waimakariri (red)	Ashley (orange)	Waimakariri (green)
Consented limit (kg/yr)	2,493,341	131,220	5,632
Aug 2021 - Jul 2022 (kg/yr)	1,291,869	85,580	3,852
% of limit	52%	65%	68%

## 6.2 Schedule B Properties

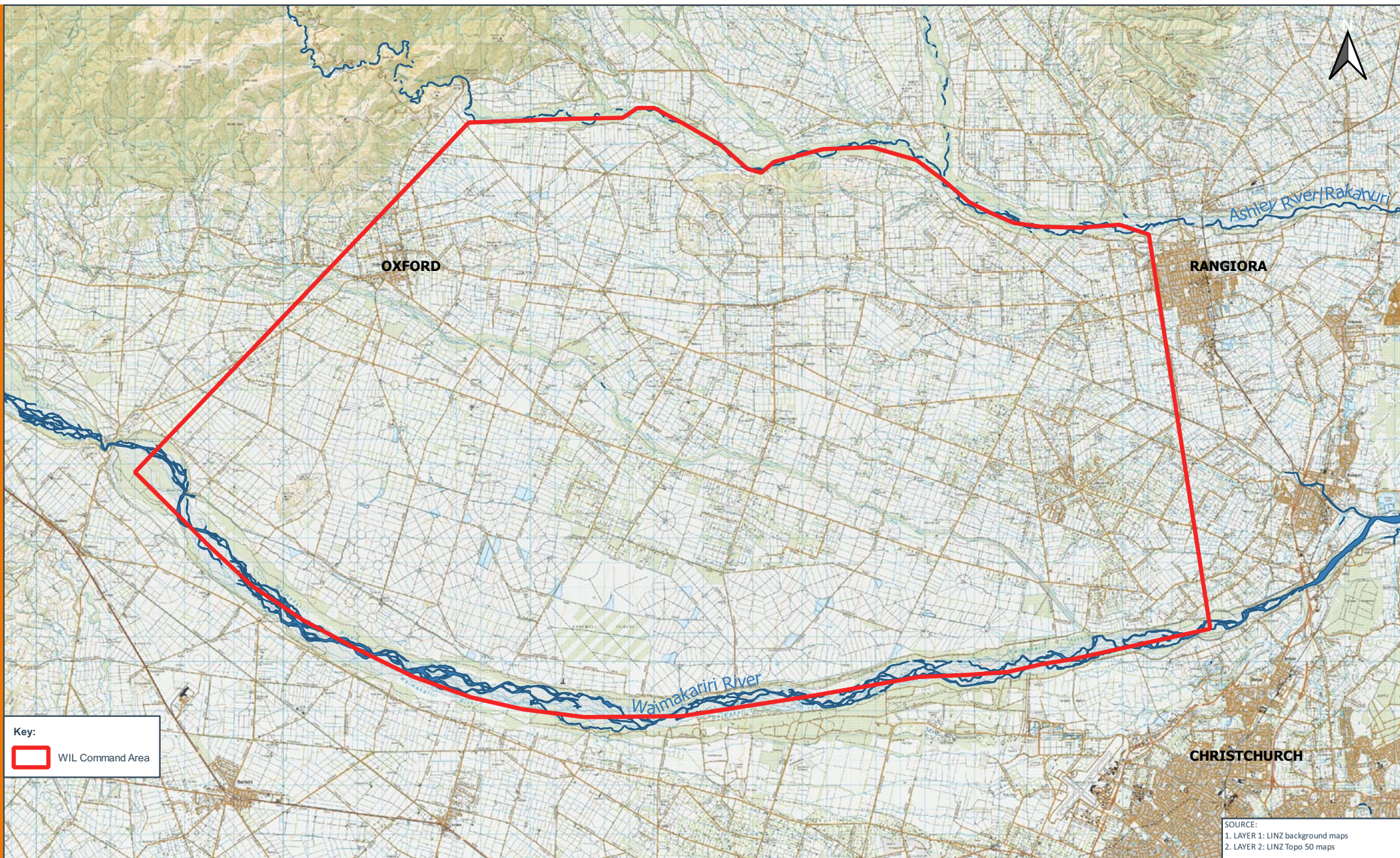
At present, there are five properties in Schedule CRC184861B (Schedule B). Details of these resource consents and consented Nutrient Discharge Allowances (NDAs) are shown in Table 8 below. Based on the 2021-22 Overseer modelling, all of the properties list in Schedule B were compliant with their individual NDAs.

**Table 7: Summary of properties and nutrient discharge allowances in Schedule B**

Consent Holder	Resource Consent Specifying NDA	Consented NDA (kg N/ha/yr) (v6.4.3)	2022 N loss (kg N/ha/yr) (v6.4.3)
Eyrewell Dairy Ltd	CRC160478	164	42
Keswick Farm Dairies Ltd	CRC169538	Red: 36; Orange: 43 (6.3.2)	Red: 27; Orange: 32
Carleton Dairies Ltd	CRC174943	124	62
Beauhill Trustee Ltd	CRC175785	39	29
Schouten Dairies Ltd	CRC180289	45	34







Key:  
 WIL Command Area

SOURCE:  
1. LAYER 1: LINZ background maps  
2. LAYER 2: LINZ Topo 50 maps



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SCALE : 1:200,000 (A4)

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FIGURE

## FIGURE A1: WAIMAKARIRI IRRIGATION SCHEME

PROJECT

WAIMAKARIRI IRRIGATION LIMITED



## **Appendix B: Audited Self-Management Programme**

# Waimakariri Irrigation Limited

## Audited Self-Management Programme

### 1.0 Introduction

#### 1.1 Resource Consent

This Audited Self-Management Programme (ASM) has been prepared to satisfy the requirements of WIL's consent CRC184861 (condition 10).

The requirements for the ASM are as follows:

*An Audited Self Management Programme (ASM) shall be implemented as follows:*

- a. *The consent holder shall implement and adhere to an audited self-management programme (ASM), which is developed by a suitably qualified person and approved by the Canterbury Regional Council. The ASM document shall include but not be limited to:*
  - i. *Environmental targets and objectives for the scheme and its shareholders;*
  - ii. *The proposed monitoring and reporting regime including but not limited to a description of the:*
    - a. *FEP audit process and the frequency used to assess individual on-farm progress with the content of any FEP and Appendix CRC184861;*
    - b. *Methods used to follow up with shareholders who are not achieving the environmental objectives identified during individual on-farm audits;*
    - c. *The proposed data to be collected and reported to the Canterbury Regional Council;*
    - d. *Independent annual review of the FEP audit process;*
    - e. *How nutrients from all land subject to the scheme or principal water supplier will be accounted for;*
- b. *The consent holder shall provide a report to the Canterbury Regional Council describing the performance of the scheme in meeting its environmental targets and objectives by 30 November each year.*
- c. *Any significant changes to the ASM document shall be implemented only after approval confirmed in writing by the Canterbury Regional Council.*
- d. *FEP audits shall be undertaken by a suitably qualified person at the frequency determined by Appendix CRC184861, with the exception of the first audit, which shall be completed within 12 months of the FEP being completed.*
- e. *The consent holder shall prepare an annual report describing the results of the ASM programme and the audits that have been conducted each year. The report shall include:*
  - i. *The name of the FEP auditor(s);*
  - ii. *A summary of the audit performance grading;*
  - iii. *A summary of the reasons for any farm receiving a C or D grade;*
  - iv. *A summary of the actions taken to address C or D grades;*
  - v. *A summary of farms that repeatedly received a C or D grade;*
  - vi. *The progress achieved for previously identified issues, if applicable;*

- vii. The total annual loss of nitrogen from all properties within the Irrigation Scheme or Principal Water Supplier over the reported year.*
- viii. The annual average nitrogen loss to water for each property listed in Schedule CRC184861A and Schedule CRC184861B, as calculated in accordance with Appendix CRC184861;*
- f. A copy of the annual report shall be provided to the Canterbury Regional Council, by 30 November each year;*
- g. The FEP audit records and reports for each property undertaken in accordance with condition 5. shall be kept and supplied to the Canterbury Regional Council upon request.*
- h. The consent holder shall notify Canterbury Regional Council within 20 working days of any exclusion of a shareholder(s) from the ASM programme.*

Figure 1 (Appendix A) shows the extent of the Scheme.

## 2.0 Environmental Targets

WIL's primary environmental target (in regards to this ASM document) is:

- All shareholders will be at GMP by 1 September 2020

To achieve this target, all farms supplied with WIL water will have an initial FEP by 1 September 2016. By 1 September 2017 the FEPs will include definitive timelines as to how individual farms will be at GMP by 1 September 2020.

Some further environmental targets are:

- All FEPs prepared prior to 1 September 2016 will be audited by 1 September 2017
- All FEPs prepared after 1 September 2016 will be audited within 12 months of being completed
- There will be no D grade audits by 1 September 2018
- There will be no C grade audits by 1 September 2019

## 3.0 Farm Environment Plans

Farm Environment Plans (FEPs) are the principal tool for the delivery of the good management practice (GMP) outcomes, combined with an auditing process that encourages implementation of GMP measures.

WIL are using two ECan approved FEP templates:

1. All properties larger than 20 ha will complete the WIL online FEP.
2. For properties less than 20 ha in size<sup>1</sup> the ECan developed 'Lifestyle Block Management Plan' (LBMP) is being used. Although discretion is being used if the property warrants a full FEP due to the intensification of land use.

### 3.1 WIL Online Template

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<sup>1</sup> This approach has been endorsed and approved by ECan (see correspondence with PDP and ECan April 2016) as a pragmatic implementation of consent conditions

- The FEP template that is being used is a joint venture between Opuha Water Ltd (OWL) and WIL and a third party technical provider. WIL and OWL jointly own the IP and each scheme have individual access to their program.
- It is an online version that has been approved by ECan for the delivery of the FEPs for the WIL Scheme. All Scheme FEPs must use this template to guarantee consistency.
- It is accessible through the WIL website <http://www.wil.co.nz>
- Each shareholder/farmer is given a unique username and password to be able to access and manage the FEP for themselves. It is a facilitated process controlled by the Scheme environmental manager or contractor to firstly draft and then finalise the FEP. The final versions are held centrally and will be updated at each audit.
- Copies of all farm plans will be held on file including future iterations of plans to enable monitoring of progress made on individual farms and across the Scheme area as a whole.

### 3.2 Lifestyle Block Management Plan (LBMP)

- This is an ECan developed template for small scale, low intensity properties that are required to complete a Farm Environment Plan.
- It is available through the ECan website <http://ecan.govt.nz/publications/Plans/Lifestyle-block-management-plan-Mar2015.pdf> or on request from WIL

WIL have set themselves a target of having all shareholder farms operating at GMP by 1 September 2020. The implementation of this progression towards GMP will be implemented through the FEPs.

### 3.3 FEP Process

#### 3.3.1 Existing shareholdings

##### **Step 1**

Identify the properties where WIL water is used.

##### **Step 2**

Categorise the landholding for plan type (FEP or LBMP)

##### **Step 3**

Complete a FEP or LBMP - to complete the plan there is no specific requirement as to who carries this out; either land manager, owner, consultant, or with Scheme support. However it must involve the land manager or the person who is designated as the person responsible for implementing the plan.

It must be accompanied by:

- a. An “actual” nutrient budget (Overseer® or ECan approved alternative) for the previous production year
- b. Farm map in accordance with ECan LWRP Schedule 7

All FEPs and LBMPs must include:

- a. All land owned, leased or managed, that is associated with the farming operation both dryland and irrigated. Blocks that are not contiguous and within the WIL command area must also be included
- b. All water entitlements associated with any land associated with the operation. For properties that have both WIL water and other consented water takes (groundwater and surface takes), the WIL FEP must include all land area and water sources associated with the

property using WIL water whether it is dryland, irrigated via consented water or irrigated by WIL water.

#### **Step 4**

Submit the final<sup>2</sup> FEP/LBMP to WIL

### 3.3.2 New shareholdings or inclusion of new land area or properties into CRC184861 Schedule A

Before any water movement or transaction is approved by the WIL board of directors, they must first be satisfied the inclusion of new land area and the intended land use and management does not risk making the consents non-compliant.

#### **Step 1**

Identify the properties where WIL water is used

#### **Step 2**

Categorise the landholding for plan type (FEP or LBMP)

#### **Step 3**

Complete a FEP or LBMP (prior to submitting the proposal to the WIL board)

The FEP must include:

- a. Provide a predictive nutrient budget (Overseer® or ECan approved alternative) to demonstrate their N losses will be within modelled expectations of the nutrient loss below the root zone.
- b. An explanation and management plan of how management practices are going to meet GMP

#### **Step 4**

Submit the final FEP/LBMP to WIL

## 3.4 Overseer Modelling

All shareholders must do annual Overseer modelling, except for properties less than 20 ha in size.

## 3.5 FEP Review

At the completion of a FEP audit the FEP will be reviewed to monitor progress and ensure improvement towards, or beyond GMP. The reviewed and altered document will be submitted to WIL for recording and reporting purposes. The review is under the expectation that measurable steps are being taken to meet GMP and they will be included into the FEP under the continuous improvement objective.

## 3.6 Variations

1. When any 'significant'<sup>3</sup> changes are made on-farm, the FEP must be updated within three months of the change. All 'significant' changes must be notified to the Scheme.

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<sup>2</sup> As at 10<sup>th</sup> February 2016 all existing shareholdings and associated properties must have a completed FEP or LBMP before 1<sup>st</sup> September 2016.

<sup>3</sup> "Significant" changes definition includes change in management personnel, land use, increase in irrigated area, infrastructure upgrades.

2. All water movements whether it is leased, sold, bought or changed use locations must be notified to the Scheme. All new areas must have a new FEP or be included into an existing FEP within three months of change.
3. Those properties less than 20 ha completing a LBMP will not be required to complete a nutrient budget<sup>4</sup> (unless they are associated with a larger operation or by discretion on a case by case basis dependent on land use intensification).

### 3.7 Guarantees

Shareholders will agree, by signing a commitment statement, that the actions and management practices contained within the FEP suit the nature of their property and land uses, to give a high confidence of achieving the specified objective within an agreed timescale.

## 4.0 Auditing

### 4.1 Auditors

WIL will select auditors who meet the definition of a 'Certified Farm Environment Plan Auditor' in proposed Plan Change 5 of the LWRP, which is as follows:

*means a person that either (a) is approved by the Chief Executive of Environment Canterbury as meeting the following criteria and is registered on the Environment Canterbury website as a Certified Farm Environment Plan Auditor or (b) is a member of an International Standards Organisation accredited audit programme that has been approved by the Chief Executive of Environment Canterbury as including audit criteria equivalent to that set out in Part C of Schedule 7; and*

1. *has at least 5 years' professional experience in the management of pastoral, horticulture or arable farm systems; and*
  - a. *holds a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University; or*
  - b. *holds a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture from Massey University; or*
  - c. *holds a tertiary qualification in agricultural science or demonstrates an equivalent level of knowledge and experience; and*
2. *is a current member of a Professional Institute that requires members to subscribe to a Code of Ethics and has a procedure in place for dealing with complaints made against members; and*
3. *demonstrates, to Environment Canterbury, proficiency in the auditing of Farm Environment Plans against the matters set out in Part C of Schedule 7.*

### 4.2 Auditing of Lifestyle Blocks

The Scheme recognises that all land associated with the use of Scheme water needs to be treated equally with the same GMP expectations.

Due to the predominantly low intensity nature of the lifestyle blocks they pose a significantly lower risk to the environment than a commercial property. There are however some small blocks that are farmed more intensively.

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<sup>4</sup> Nutrient losses from the smaller properties will be accounted for in WIL reporting to ECan based on a predetermined categorisation.

WIL therefore reserves the right to consider what level of investigation is appropriate on a case by case basis.

### **Requirements**

To have an on-site inspection of the property at least once every four years on a rotation. The investigation will look specifically (but not exclusively) at:

- Irrigation management
- Grazing management
- Fertiliser management

This will be carried out by the WIL Environmental Manager or appointed person. The inspection will provide a grade A to D similar to the FEP grading based on a Level of Confidence (LOC) approach.

The LOC approach involves an assessment of the likelihood that each objective and associated targets have been met based on:

- Information provided at the time of audit (actual data, photographs, records, reports)
- Stated practice, provided it can be reasonably justified with other information or evidence
- Observation of actual GMPs
- Stated GMPs supported by evidence
- Nutrient budgets
- Field observation

All grades other than an 'A' will trigger some advice and support from WIL to rectify the issues identified.

This direct approach recognises that often the owners of the lifestyle blocks do not have the skills or knowledge of how to fix a problem or who to ask to help. The expectation will be that once advice is given on how to fix or who to ask for support the owner will follow it up independently of the Scheme.

## **4.3 Auditing of Other WIL Shareholders (Excluding Lifestyle Blocks)**

### **Requirements**

Audits must be undertaken by a suitably qualified person, as defined in section 4.1 of this ASM document.

Audits must be undertaken in accordance with the most recent version of the 'Canterbury Certified Farm Environment Plan (FEP) Auditor Manual'. They will be given a grade A to D based on a Level of Confidence (LOC) approach.

The LOC approach involves an assessment of the likelihood that each objective and associated targets have been met based on:

- Information provided at the time of audit (actual data, photographs, records, reports)
- Stated practice, provided it can be reasonably justified with other information or evidence
- Observation of actual GMPs
- Stated GMPs supported by evidence
- Nutrient budgets
- Field observation

Figure 2 (Appendix A) shows a flow chart of the audit process.

All new FEPs will be audited within one year of completion.

In the subsequent years depending on the grade achieved in the audit the interval between audits shall be no greater than four years. Figure 3 (Appendix A) shows a diagram of the audit interval.

Audit grade	Audit Return interval
A	4 years
B	2 years
C	12 months
D	6 months

For A and B grade audit results, the interval will revert to within 12 months if there is a change in management or a significant change in farm systems. A significant change in farm systems is defined as: “a change in the farm system means whole farm operation conversions, including but not limited to, converting between dairy support, dairy platform, sheep & beef and cropping; and also any introduction of a new stock type to the farm, e.g. deer or wintering dairy cows. Changes such as, varying the type of crop grown or varying the relative proportions of stock types do not constitute a farm system change.”

Audit reports must be submitted to WIL within 14 days of completion.

Following the initial audit round finishing on 1 September 2017, the Scheme will select ¼ of ‘A’ grades and ½ of ‘B’ grades to begin the next round of audits. The selection of the properties each year until 2020 will be at the discretion of the Scheme and will form the basis of the audit rotation for the following years. This will ensure that all FEPs are reviewed at least twice before the expiry of consent CRC142754.

To determine the selection priority the following criteria may be considered:

- Ability of current infrastructure to meet targets
- Costs and time required to meet GMP
- Staff turnover and training
- Robustness of current management systems
- Current nutrient losses
- Areas of high environmental risk

#### 4.4 Independent Annual Review of the FEP Audit Process

An independent review of the FEP audit process will occur annually.

### 5.0 Post Audit Process

Following each audit the shareholder/land manager will receive an audit report culminating in a grade. This report will record progress against FEP actions. It can highlight areas where progress against identified actions has not been made and identify any new operational risks that were not recorded in the original FEP or have developed over the preceding time. The audit report will set out any problems that must be acted upon within a specific timescale.



All audit reports and updated FEPs will be kept on file and made available to the shareholder/land manager. These must be retained by the shareholder/land manager and will be used as the basis of future inspections.

The FEP and Audit report will be assessed by the Scheme. Depending on the grade the following responses will occur.

### 5.1 Farms Achieving 'A' Grade

Shareholders/land managers whose farms that have achieved an 'A' grade will be recorded as making excellent progress toward, or have met, GMP.

Farms in this category will be scheduled for the next audit in four years following the audit, unless there has been a change in management or a significant change in farm systems, in which case the interval will revert to within 12 months.

### 5.2 Farms Achieving 'B' Grade

Shareholders whose farms have achieved a 'B' grade will be recorded as making good progress.

For those environmental management areas where there is medium level of confidence that the FEP objectives can be achieved the Scheme will assess:

- a. Whether the actions in the FEP are specific, measureable, achievable in the timescale and realistic in terms of the level of risk and resources available;
- b. If the shareholder/land manager is on-track to implement the actions identified in the FEP; and
- c. If what has already been achieved and future actions will lead to a high confidence that the objective is being met.

The assessment on the above criteria will provide a second check and balance to the audit. The Scheme will provide a 'high' 'medium' or 'low' confidence rating that the subsequent audit grade will improve. No further action will be taken but the shareholder /land manager will be recorded as being 'on track', 'static' or 'deteriorating' to achieve the objectives in the FEP.

They will be scheduled for the next audit in two years, unless there has been a change in management or a significant change in farm systems, in which case the interval will revert to within 12 months.

### 5.3 Farms Achieving 'C' Grade

Shareholders whose farms have achieved a 'C' grade will be recorded as making some progress.

For those environmental management areas where there is moderate confidence that the FEP objectives can be achieved the Scheme will assess:

- a. Whether the actions in the FEP are specific, measureable, achievable in the timescale and realistic in terms of the level of risk and resources available;
- b. If the shareholder/land manager is on-track to implement the actions identified in the FEP; and
- c. If what has already been achieved and future actions will lead to a high confidence that the objective is being met.

The assessment on the above criteria will provide a second check and balance to the audit. The Scheme will provide a 'high' 'medium' or 'low' confidence rating that the subsequent audit grade will improve.

The Scheme will work with or facilitate the shareholder/land manager to identify what improvements can be made toward meeting the objectives in the FEP. They will be required to formulate a management plan within 2 months of the audit with clear timelines and actions they will undertake to meet the FEP objectives and move the audit grade into a 'B' category.

They will be scheduled for a further farm inspection within 12 months.

## 5.4 Farms Achieving 'D' Grade

A 'D' grade is unacceptable to the Scheme.

Shareholders whose farms have achieved a 'D' grade will be recorded as making poor progress.

All management areas which record a low confidence that the objective is being met will be highlighted as in need of urgent attention. Action will be required immediately to mitigate the risk.

For those environmental management areas where there is low confidence that the FEP objectives can be achieved the Scheme will assess:

- a. Whether the actions in the FEP are specific, measureable, achievable in the timescale and realistic in terms of the level of risk and resources available;
- b. If the shareholder/land manager is on-track to implement the actions identified in the FEP; and
- c. If what has already been achieved and future actions will lead to a high confidence that the objective is being met.

The Scheme will work with or facilitate the shareholder/land manager to identify what improvements can be made toward meeting the objectives in the FEP. They will be required to formulate a management plan within 1 months of the audit with clear timelines and actions they will undertake to meet the FEP objectives and move the audit grade into a 'C' or 'B' category.

They will be scheduled for a further farm inspection within 6 months.

## 5.5 Repeat 'C' and 'D' Grades

The Scheme wishes to see improvement to be able to meet GMP across all water users. If there are continuous underperforming shareholders/land managers then the following actions will occur.

Discuss and implement constructive options with the shareholders and farm manager to improve performance.

Impose additional charges to recover costs of extra audit management requirements and/or a penalty water charge.

Restrict water supply before other better performing shareholders face restrictions

Longer term water shut off

Terminate Water Supply Agreement

## 6.0 Exclusion from ASM Programme

If exclusion of any shareholder/land manager from the ASM programme occurs for whatever reason the Scheme will notify ECan within 20 working days from the date the exclusion took effect.

## 7.0 Non-cooperation or Non-compliance

Different levels can occur. The different levels need to be recognised with appropriate actions. The examples below do not provide an exhaustive list but gives an indication of the sort of non-cooperation or compliance that could occur and the possible sanctions.

Level	Example	Possible Action
<b>One</b>	Failing to provide information	Request for information
<b>Two</b>	Continued non-provision of information following request	Further request
	Nutrient budget not completed	Request completion
	Partial FEP deterioration within an audit interval	Request management plan to rectify
<b>Three</b>	Repeatedly abstracting more water than allowed	Restrict or cease water supply exclusion from program Terminate WS agreement
	Breach of water supply agreement	Restrict or cease water supply exclusion from program Terminate WS agreement
	Repeat C & D audit grades	Restrict or cease water supply exclusion from program Terminate WS agreement
	continued non-provision of nutrient budget	Restrict or cease water supply exclusion from program Terminate WS agreement

## 8.0 Methods to Assist Environmental Performance Improvements

The Scheme will adopt a pragmatic and supportive approach to enabling improvement. The majority of shareholders/and managers are willing and able to comply with the FEP and audits.

The Scheme and this ASM document place emphasis on improving environmental outcomes through greater resource use efficiency, with the aim of encouraging shareholders/land managers to engage with the Scheme not only for environmental reasons but also to improve the efficiency and economic performance of their businesses.

Being proactive and focusing on the on-farm activities which farmers can control will lead them to being empowered to improve. The compliance aspect will follow as a natural consequence of good practice. Setting up the expectations and making farmers aware of what they need to be doing, recording, working toward, is the first step. Providing information, using good communication to promote awareness of the need and providing accessible templates, guidance and information to enable improvement. Appendix B provides a list of the support being provided.

A successful compliance model is fair, reasonable, consistent and transparent in the process. Where it is appropriately implemented, shareholders/land managers are more likely to make the permanent changes required to consistently perform at a higher standard. There is a fall-back position of sanctions if needed but the preferred approach is to work proactively with shareholders and land managers sympathetically with their businesses.

The aggregation of data and actions needed from the FEPs will provide steer on what management actions need to have resources, support and training developed or sourced to improve the issue.

The Scheme has made ongoing provision and has contracted an environmental manager to manage the delivery of the ASM and the FEP programme. This direct and dedicated contact point has not been available in the past.

## 9.0 Reporting

WIL will prepare an annual report describing the performance of the Scheme in meeting its environmental targets and objectives.

The report shall include:

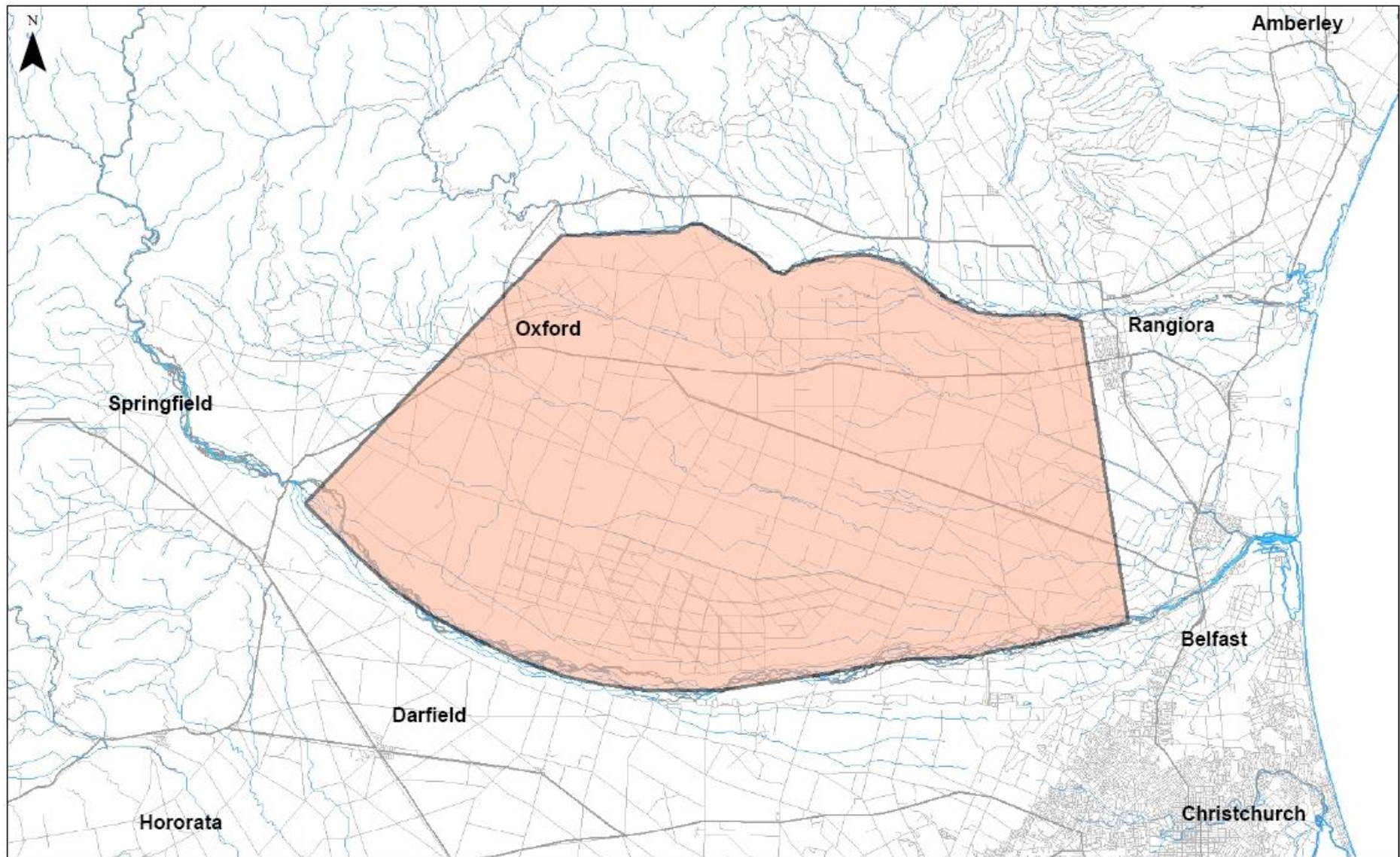
- i. The name of the FEP auditor(s);
- ii. A summary of the audit performance grading;
- iii. A summary of the reasons for any farm receiving a C or D grade;
- iv. A summary of the actions taken to address C or D grades;
- v. A summary of farms that repeatedly received a C or D grade;
- vi. The progress achieved for previously identified issues, if applicable;
- vii. The total annual loss of nitrogen from all properties within the Irrigation Scheme or Principal Water Supplier over the reported year.
- viii. The annual average nitrogen loss to water for each property listed in Schedule CRC184861A and Schedule CRC184861B, as calculated in accordance with Appendix CRC184861;

This report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by the 30 November each year.

## 10.0 Changes to this ASM Document

Any significant changes to this ASM document shall only be implemented after approval confirmed in writing by the Canterbury Regional Council.

## Appendix A: Figures



**Figure 1: Waimakariri Irrigation Scheme**



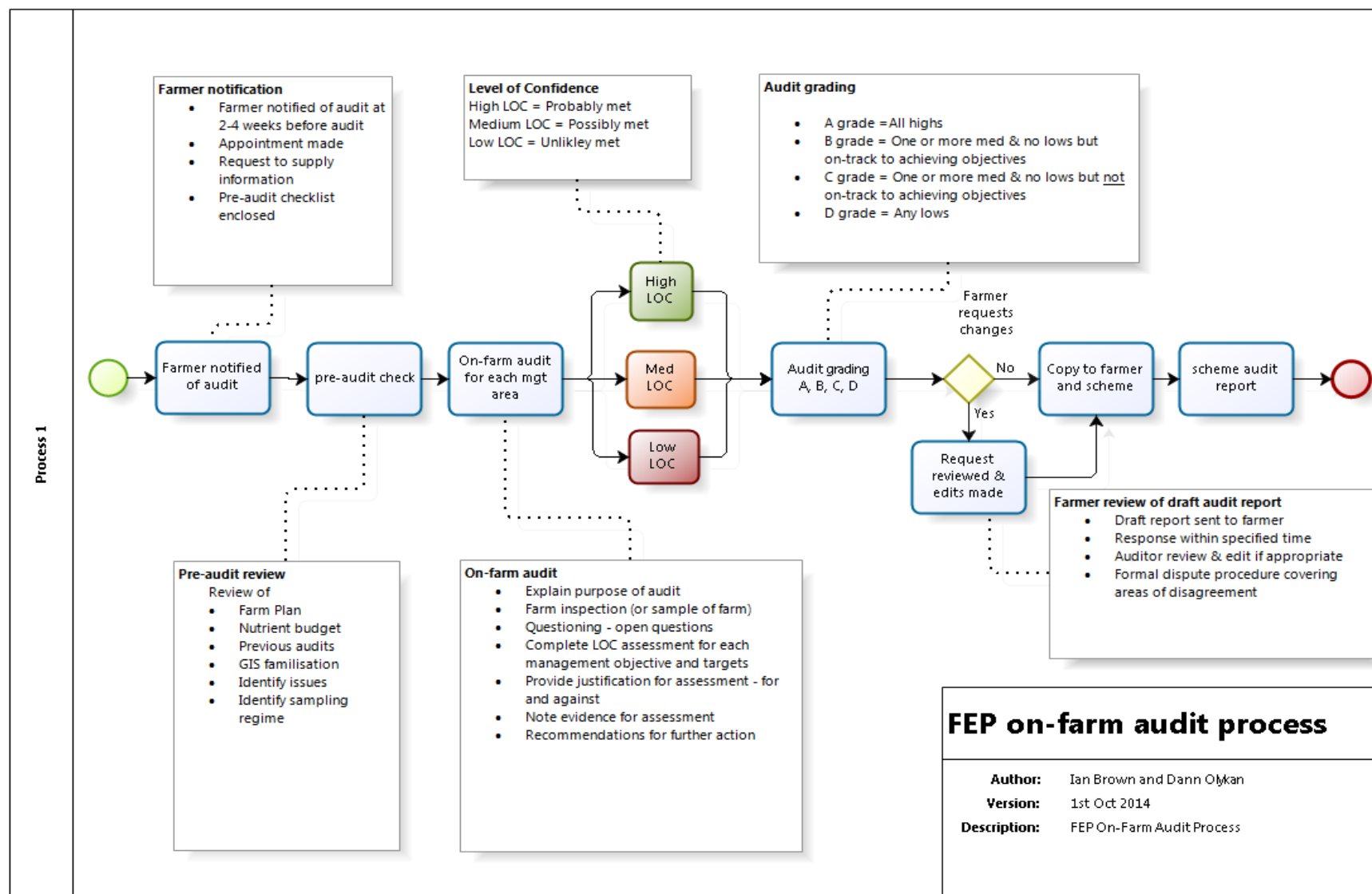


Figure 2: FEP on-farm audit process



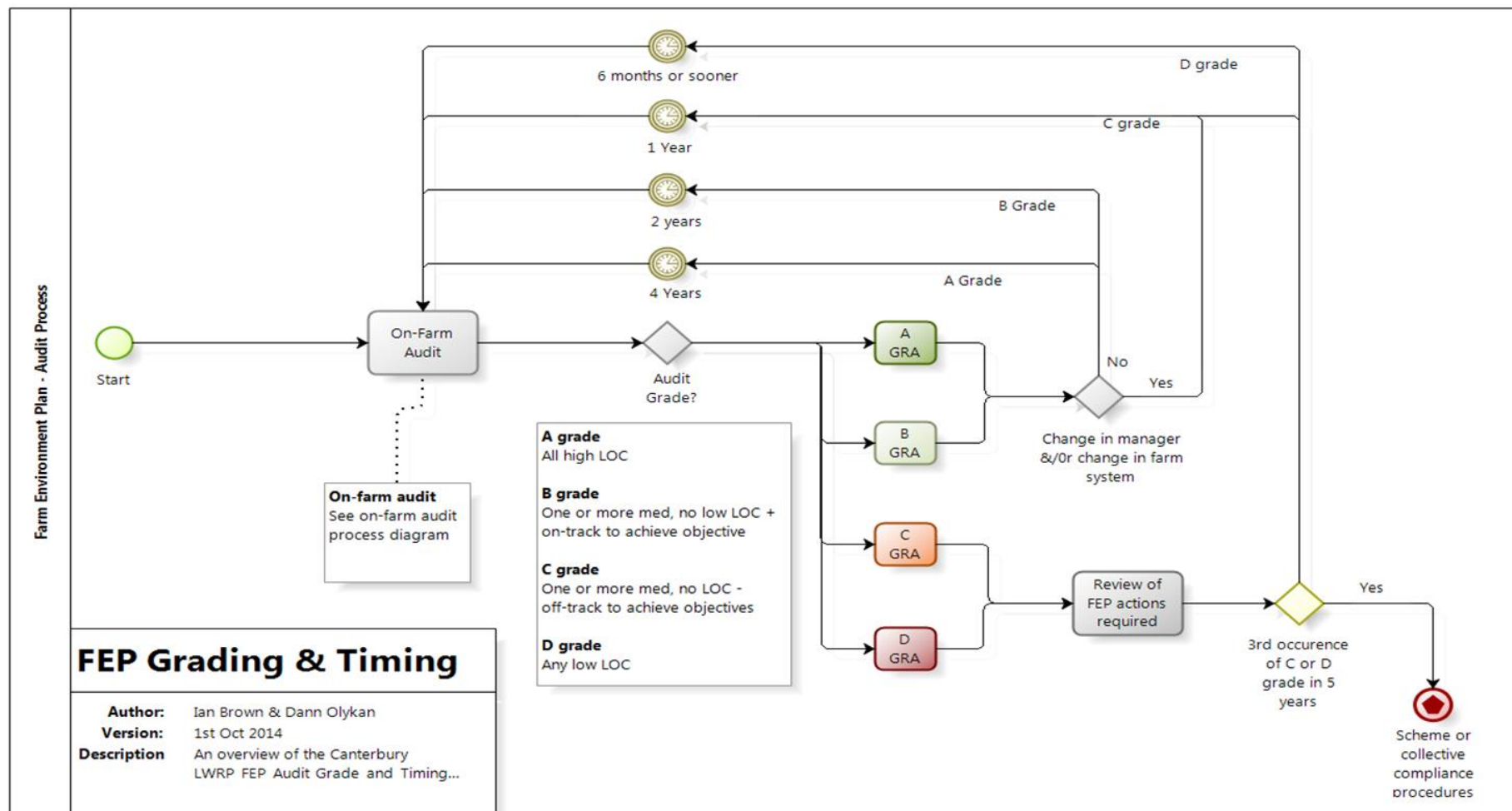


Figure 3: FEP grading and timing

## Appendix B: Support for WIL Shareholders

### Systems

- Simple online systems
- Provide user-friendly and useful templates
- Provide checklists and record sheets

### Support

- Collate and make available useful information, especially from other industry bodies
- Simplifying and communicating GMP
- Be available for one on one advice
- Translate requirements into actions

### Facilitation

- Facilitate learning through sharing information with others, such as farm focus days
- Enable sharing of research
- Work with other industry bodies to be consistent

### Research

- Communicate latest research to interested Shareholders
- Invest and support research initiatives

### Communicating Success

- Celebrate success
- Communicate progress and meeting of milestones

## Appendix C: Summary of Biodiversity Projects

Project Name	Project Summary	Location	Status
Cust River catchment enhancement	1,300 m <sup>2</sup> of native filtration planting + 500 m of riparian planting at strategic points along on-farm waterways to enhance biodiversity and help mitigate risks to freshwater.	Cust River catchment, Summerhill	No change
	8.4 ha of wetland, riparian & indigenous forest planting (proposed - subject to final decision by landowner). On property immediately adjacent to the above project.	Cust River catchment, Summerhill	Shareholder has opted to pause plans for native afforestation planting to first focus efforts on home farm waterway planting.
	1.2 ha of riparian planting to enhance a waterway corridor with an estimated 2,569 seedlings + a further 1 ha of constructed wetland to enhance water quality with an estimated 4,718 seedlings. Discussions being undertaken with neighbouring farm around possible further cross-boundary planting.	Cust River catchment, Oxford	No change
Burgess Stream Headwaters Restoration & Protection	Approximately 1 ha wetland & riparian restoration planting with an estimated 2,517 native seedlings to be planted. Landowners are dairy farmers straddling a natural lowland waterway who have made clear they are keen to continue planting along their section of the stream and to involve other landowners in the area.	Burgess Stream, Mandeville/West Eyreton	Monitoring of planting continues. Approximately 15% attrition due mainly to some parts of the site being inundated for an extended period of time after weed growth clogged parts of the stream. Most of the planting completed by the school appears to be doing well. Last aerial survey completed September 2022.
	2.6 ha along 3 natural waterways & 4 Springs identified for future native planting.	Burgess Stream, Mandeville/West Eyreton	No change
	7,500 m <sup>2</sup> of indigenous planting along 750 m of riparian margin.	Burgess Stream, Mandeville/West Eyreton	13 month programme to grow 1,000 native riparian seedlings on-farm established in June 2022. Monthly support visits being undertaken to check progress. Shareholder has been very engaged in the process. At the most recent count there were 1,159 seedlings growing, which are expected to be ready for planting mid 2023, but will likely be held until the following spring.
Burnt Hill Native Afforestation	14.4 ha of hillside country earmarked for indigenous forest planting with an estimated 39,000 native seedlings over 10 years for emissions offsetting & erosion control.	Burnt Hill, Oxford	No change
Hunters Stream restoration & protection	2 ha of on-farm indigenous wetland & riparian planting on a mixture of springs and natural waterways in the headwaters of Hunters Stream consisting of approximately 12,300 seedlings. Both the landowners (WIL shareholders) and their neighbours (non-WIL shareholders) have indicated they are keen to undertake adjoining riparian & wetland planting across their property boundaries, and to take up roles in a proposed future catchment group to improve & further mitigate risks to water quality.	Hunters Stream, Cust	No change
	Creation of 2.8 ha of riparian margin & indigenous forest patch through the planting of approximately 11,400 native seedlings to enhance water quality, in-stream ecological values & indigenous biodiversity.	Hunters Stream, Springbank	Planning completed. No further actions planned.
	4,000 m <sup>2</sup> forest patch within springhead area of Hunters Stream. Further riparian planting TBC.	Hunters Stream, Springbank	No change
Springvale wetland protection & enhancement	Approx. 500 m <sup>2</sup> of riparian stock exclusion & planting of WIL-fed waterway entering the wetland.	Springvale Wetland, Summerhill	Planning completed & reporting on recommended programme for implementation on hold. Site mapped as SNA in proposed district plan. Further clarification needed before proceeding.
Eyre River tributaries restoration & protection	Collective farmer-led action on waterway enhancement through riparian planting & wetland creation to enhance water quality, in-stream ecological values & indigenous biodiversity.	Eyre River, Oxford/Starvation Hill	The focus has shifted to a site known as Bennetts diversion, which is where the same waterway flows into ECan land around the Eyre River. A new site was identified, and planning and site visits were completed. A subsequent partnership with ECan has resulted in an initial donation of 500 native riparian seedlings from ECan, as well as an agreement to maintain these during the establishment phase. Around 200 of the seedlings were planted in early November with help from Swannanoa School and ECan staff.
Race 3D freshwater biodiversity	Eels & a range of examples of other freshwater species living in race on non-shareholder property.	West Eyreton	Group of Swannanoa School students to visit in November to learn about freshwater biodiversity in the race network (eels, invertebrates & their roles in the food chain).
Native seedlings in schools	3 local schools with close ties to the WIL farming community to grow around 3,000 native seedlings collectively over the course of the next year with technical & educational support from WIL, with a view to then establishing these on shareholder farms or around other local waterways to enhance freshwater habitats.	Central Waimakariri	x3 specially designed greenhouses assembled at each school early November with automated irrigation to enable a mixture of around 3,000 native seedlings to be propagated. Seeds currently being sown with help from students who will lead their growth & maintenance. Schools have shown huge appreciation for WIL's support with the programme and are very keen to partner. Early indications are that the seedlings may be planted on WIL shareholder farms with whom the schools already have close relationships.



**Table D1: Annual Nitrogen Losses for the Period  
1 August 2021 - 31 July 2022**

Property number	Nutrient Allocation Zone Mass Nitrogen Loss (kg/yr)		
	Ashley-Waimakariri	Ashley	Waimakariri
1	2,625	0	0
2	1,790	0	0
3	1,006	0	0
4	12,453	0	0
5	1,978	0	0
6	3,225	0	0
7	4,794	0	0
8	364	0	0
9	45,710	0	0
10	2,758	0	0
11	103	0	0
12	7,873	0	0
13	207	0	0
14	9,665	0	0
15	520	0	0
16	518	0	0
17	1,883	0	0
18	1,859	0	0
19	115	0	0
20	10,872	0	0
21	1,994	0	0
22	11,259	0	0
23	158	0	0
24	17,701	135	0
25	14,321	0	0
26	9,247	0	0
27	21,919	0	33
28	278	0	0
29	5,054	0	0
30	3,775	0	0
31	0	16,038	0
32	2,331	0	0
33	4,406	0	0
34	3,051	0	0
35	2,036	0	0
36	3,781	0	0
37	13,706	0	0
38	6,423	0	0
39	7,674	0	0
40	626	0	0
41	5,969	10,255	0
42	10,857	0	0
43	1,867	0	0
44	19,225	0	0

45	14,011	0	0
46	106	0	0
47	3,521	1,631	0
48	619	0	0
49	1,592	0	0
50	1,279	0	0
51	5,185	0	0
52	10,231	0	0
53	517	0	0
54	5,262	0	0
55	15,440	0	17
56	7,634	0	0
57	2,533	0	0
58	1,363	0	0
59	637	0	0
60	104	0	0
61	10,371	0	0
62	5,149	0	0
63	16,908	0	0
64	2,237	0	0
65	3,717	0	0
66	9,297	0	0
67	2,098	0	0
68	266	0	0
69	140	0	0
70	611	0	0
71	670	0	0
72	333	0	0
73	488	0	0
74	500	0	0
75	0	599	0
76	1,676	3,254	0
77	236	0	0
78	116	0	0
79	12,864	0	0
80	13,216	0	0
81	345	0	0
82	6,243	0	0
83	214	0	0
84	184	0	0
85	4,565	0	0
86	112	0	0
87	8,144	0	0
88	12,054	0	0
89	2,369	0	0
90	13,291	0	0
91	8,138	0	0
92	628	0	0
93	7,025	0	0
94	923	0	0

95	2,971	0	0
96	16,751	0	0
97	16,977	0	0
98	14,578	0	0
99	45,925	0	0
100	20,861	0	0
101	4,486	0	0
102	13,639	0	0
103	583	0	0
104	2,203	0	0
105	9,864	0	0
106	405	0	0
107	1,672	0	0
108	2,126	0	0
109	12,489	0	0
110	1,412	0	0
111	14,056	6,942	0
112	0	16,844	0
113	412	0	0
114	24,855	0	0
115	4,507	0	0
116	1,172	0	0
117	0	479	0
118	197	0	0
119	395	0	0
120	5,888	0	0
121	5,735	0	0
122	2,293	1	0
123	20,184	0	0
124	18,598	0	0
125	18,764	0	0
126	17,507	0	0
127	4,761	0	0
128	103	0	0
129	515	0	0
130	5,936	0	0
131	0	159	0
132	19,825	0	0
133	25,370	0	0
134	2,004	0	0
135	12,317	0	0
136	12,026	0	0
137	11,402	0	0
138	1,516	0	0
139	682	0	0
140	0	309	0
141	0	3,010	0
142	99	0	0
143	15,066	0	0
144	52	0	0



145	8,828	0	0
146	15,892	0	0
147	22,520	0	0
148	0	1,159	0
149	726	0	0
150	1,124	0	52
151	14,733	0	0
152	15,725	0	0
153	384	0	0
154	799	0	0
155	593	0	0
156	5,931	0	0
157	231	0	0
158	107	0	0
159	128	0	0
160	124	0	0
161	129	0	0
162	0	998	0
163	15,515	0	0
164	2,398	0	0
165	16,832	0	0
166	1,522	0	0
167	5,028	0	0
168	1,367	0	0
169	1,473	0	0
170	1,178	0	0
171	244	0	0
172	380	0	0
173	4,152	0	0
174	107	0	0
175	824	0	0
176	105	0	0
177	682	0	0
178	517	0	0
179	1,579	0	0
180	850	0	0
181	7,068	0	0
182	4,529	0	0
183	1,076	0	0
184	4,426	0	0
185	18,636	0	0
186	9,257	0	0
187	0	177	0
188	10,072	0	0
189	443	0	0
190	5,991	0	0
191	5,449	0	0
192	741	0	0
193	1,178	0	0
194	421	0	0

195	744	0	0
196	231	0	0
197	206	0	0
198	1,395	4,532	0
199	10,684	0	0
200	206	0	0
201	338	0	0
202	1,451	0	0
203	24,282	0	0
204	400	0	0
205	3,826	0	0
206	3,513	0	0
207	8,368	0	0
208	2,012	0	0
209	11,730	0	0
210	447	0	0
211	4,709	0	2,328
212	2,877	0	1,422
213	17,721	0	0
214	274	0	0
215	4,358	0	0
216	557	0	0
217	15,216	0	0
218	2,750	0	0
219	2,705	0	0
220	351	3,251	0
221	0	2,143	0
222	0	11,962	0
223	103	0	0
224	103	0	0
225	12,656	0	0
226	234	0	0
227	2,999	0	0
228	0	408	0
229	1,502	0	0
230	22,017	0	0
231	103	0	0
232	0	372	0
233	361	0	0
234	320	0	0
235	1,433	0	0
236	310	0	0
237	6,925	927	0
238	1,609	0	0
239	1,519	0	0
	<b>1,291,869</b>	<b>85,580</b>	<b>3,852</b>