



SCHEME MANAGEMENT PLAN

Barrhill-Chertsey Irrigation Scheme
Acton Farmers Irrigation Co-Operative Limited

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Contents

1	Introduction	1
1.1	Our Vision.....	1
1.2	Scheme Overview	1
1.3	Triggers to Review this SMP.....	1
1.4	Relevant Resource Consents.....	1
1.4.1	Scope of resource consent CRC162882	2
2	Roles and Responsibilities.....	3
2.1	Key Competencies and Training.....	5
3	Scheme Environmental Risk Identification	6
4	Aims and Objectives.....	8
5	Policies	9
5.1	Nutrient Expectations – Existing Shareholders.....	9
5.2	Nutrient Allocation – New Shareholders and Change of Land Use	9
5.3	Share Transfers	10
5.4	Overseer Nutrient Budget formats	10
5.5	Shareholder Farm Environment Plan and Audit Prioritisation	11
5.6	Joint Shareholder Registration.....	11
5.7	Privacy.....	11
5.8	Shareholder Environmental Performance Management	12
5.9	Good Management Practice	12
5.9.1	Definition of Good Management Practice	12
5.10	Farm Environment Plans.....	13
5.11	Farm Environment Plan Audits	13
5.12	Continuous Improvement	14
6	Procedures	15
6.1	Farm Environment Plan Audit Process.....	15
6.1.1	FEP Audit Prioritisation	15
6.1.2	Start of Season Audit Identification.....	15
6.1.3	FEP Audit Scheduling.....	16
6.1.4	FEP Audit Preparation	16
6.1.5	FEP Audit Procedures.....	16
6.1.6	FEP Audit Reports.....	16
6.1.7	FEP Audit Draft Report Correspondence to Shareholders.....	16
6.1.8	FEP Audit Final Report.....	16
6.1.9	FEP Audit Conflict Of Interest	19

6.1.10	Acceptance of Gifts or Gratuities from Shareholders	19
6.1.11	Process if Insufficient FEP Audits are Completed	19
6.2	Non-conforming Shareholder Procedures	19
6.2.1	Methods to encourage voluntary compliance	21
6.2.2	Programme of Continuous Improvement	21
6.2.3	BCI and AFIC Breach of Water Agreement Process	22
6.2.4	Farm Environment Plan Audit Grade	23
6.2.5	FEP Audit Cancellation	24
6.2.6	Farm Environment Plan, Nutrient Budget, Farm Manager Notification	25
6.2.7	Notification of non-compliance	25
6.2.8	Summary of Actions to be Taken	26
6.3	Nutrient Discharge Allocation	27
6.3.1	Principles of Nitrogen Cap Management	27
6.3.2	Overall BCI Nutrient Discharge Allocation and Irrigated Area Calculation	27
6.3.3	New Shareholder Nutrient Expectation Calculation	29
6.3.4	Existing Shareholder Nutrient Expectation	29
6.3.5	Application for change of land use for existing Shareholders	29
6.3.6	Annual Nutrient Budgets	29
6.3.7	Transfer of shares and nutrient load after property sale	30
6.3.8	Exceed Nutrient Expectation	30
6.4	Dispute Resolution Process	33
6.4.1	FEP Audit Disputes Process	33
6.4.2	Water User Agreement Disputes	34
6.5	Other Processes	34
6.5.1	New and Transferred Shareholder Scheme Induction	34
6.5.2	Farm Manager Notification Process	34
6.5.3	Annual Review of the SMP	35
7	Implementation	36
7.1	Timeline	36
7.2	Supporting Documentation	36
7.3	FEP and Nutrient Budget Communication Plan	36
7.4	Exceptions to Requirements	37
8	Reporting	38
8.1	Weekly Reporting	38
8.2	Monthly Reporting	38
8.3	Annual Reporting	38

8.4	Annual Management Review	39
9	Schedules	40
9.1	Water Agreement Warning Letter Template.....	40
9.2	CARD Water Agreement Letter Template	40
9.3	Farm Environment Plan Audit Template.....	40
9.4	Farm Environment Plan Audit Process Checklist	41
9.4.1	FEP Audit Preparation Checklist.....	41
9.5	Farm Environment Plan Audit Communication Documents.....	41
9.5.1	Confirmation of FEP Audit (email and letter template).....	41
9.5.2	FEP Audit Confirmation Checklist	42
9.5.3	Draft FEP Audit Report Email or Letter	43
9.5.4	FEP Audit Report Finalising Checklist.....	43
9.5.6	FEP Audit Report Cover Letter “A”	44
9.5.7	FEP Audit Report Cover Letter “B”	45
9.5.8	FEP Audit Report Cover Letter “C”	46
9.5.9	FEP Audit Report Cover Letter “D”	47
9.6	Farm Environment Plan Audit Checklist for Shareholders.....	48
9.7	Application for Additional Nutrients.....	49

Version Control

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1 Introduction

1.1 Our Vision

Barrhill Chertsey Irrigation Limited (BCIL) and Acton Farmers Irrigation Co-Operative Limited (AFIC) have a commitment to the community. Our vision is to provide positive economic, environmental and social solutions in response to the challenge of sustainably managing our community's water resource through employing a combination of outstanding technology, people and governance.

Our shareholders are leading the way of environmental management in Canterbury, demonstrating the community's faith in allowing us to use their water resource responsibly has been well founded.

1.2 Scheme Overview

Barrhill-Chertsey Irrigation Limited (BCI) is permitted to provide irrigation water to 40,000 ha between the Rangitata and Rakaia Rivers.

Currently, only 22,000 ha is irrigated by 185 Shareholders. The distribution of the water is managed between BCI and Acton Farmers Irrigation Co-operative Limited (AFIC).

Land use is primarily arable, dairy, and dairy support.

This Scheme Management Plan (SMP) has been prepared to provide guidance to BCI and AFIC on implementing the requirements of resource consents, CRC162882 and CRC143165.

1.3 Triggers to Review this SMP

The policies and procedures within this document have been developed to meet current targets, expectations and Good Management Practices (GMP) listed in Schedule 28 of proposed Plan Change 5 of the Land and Water Regional Plan (pLWRP – PC5) as well as meet the conditions of resource consent CRC162882.

Furthermore, significant changes are anticipated as the planning process progresses, consents are renewed and good management is defined through the Matrix of Good Management (MGM). As these changes are made, it is expected that our policies and procedures will be reviewed to ensure BCI and AFIC shareholders are still on track to exceeding environmental expectations.

This document, and the procedures in it, will be reviewed annually by the Environmental Manager and reviewed by the BCI General Manager. The updated plan and our internal processes will be reviewed by a suitably qualified external party. Recommendations for improvement through the annual review will be incorporated into future versions.

Any changes to this document following the annual review processes will be approved by the Monitoring and Compliance Manager of Canterbury Regional Council before being formally implemented.

1.4 Relevant Resource Consents

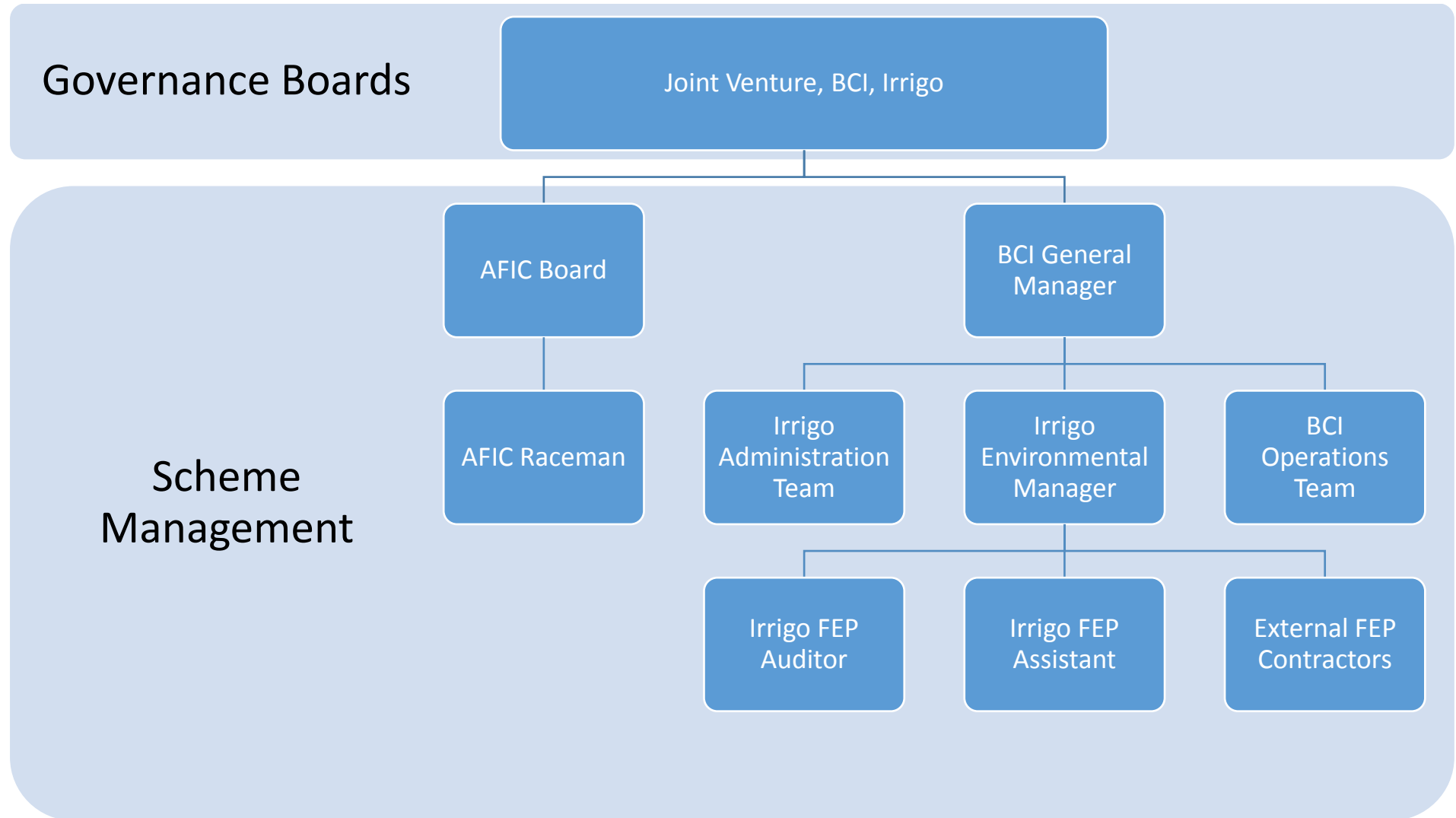
Consent	Description	Expiry Date
CRC143165	To divert, take, and use surface water from the Rakaia River	28 January 2035
CRC162882	To use land for purpose of farming and discharge nutrients to water	9 September 2018

1.4.1 Scope of resource consent CRC162882

Discharge to land resource consent CRC162882 will operate according to pLWRP – PC 5 Schedule 7 compliant Farm Environment Plans, which are to be completed for all Shareholders and audited. Schedule 7 requires all Shareholders to complete nutrient budgets annually.

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2 Roles and Responsibilities



BCI Scheme Joint Venture

The BCI Scheme is a joint venture between Barrhill Chertsey Irrigation Limited and Electricity Ashburton Limited. The joint venture is governed by a Joint Venture Committee representing the interests of the partner boards. The resource consents that enable the operation of the BCI Scheme are held in trust for the joint venture by Barrhill Chertsey Irrigation Limited, and managed by the Joint Venture Committee. The joint venture is managed by the BCI General Manager.

The Joint Venture Committee is responsible for employing the BCI General Manager, operations team, and overseeing the strategic direction for the joint venture. The Joint Venture Committee utilises the services of the Irrigo Environmental Manager for the implementation of the BCI Scheme Management Plan and management of compliance with the land use resource consent CRC162882.

Barrhill-Chertsey Irrigation Limited

Barrhill-Chertsey Irrigation Limited (BCI) represents its irrigating shareholders and raises capital from new irrigation connections to contribute to the joint venture. BCI is governed by a board of shareholder representatives and an independent board member and contributes to the strategic direction of the joint venture.

Irrigo Centre Limited

Irrigo Centre Limited (ICL) is a company formed to provide administrative and environmental management services to the Barrhill-Chertsey Irrigation Scheme (BCI), Acton Farmers Irrigation Co-Operative (AFIC), Mayfield Hinds Irrigation, Valetta Irrigation, Ashburton Lyndhurst Irrigation, and Greenstreet Irrigation.

The ICL Board consists of representatives of each contributing irrigation scheme. The ICL Board employs the services of the Environmental Manager and the Office Manager.

Acton Farmers Irrigation Co-Operative Limited

Acton Farmers Irrigation Co-Operative (AFIC) is governed by a board of shareholder representatives. The board manages the strategic direction of the AFIC scheme development and employs the raceman directly to manage the delivery of water.

The water supplied to AFIC shareholders is consented through the BCI water take and land use resource consents and made available under license arrangements. AFIC shareholders are therefore subject to the same requirements as all BCI shareholders and also utilise the services of the Irrigo Environmental Team to implement these requirements.

The BCI General Manager liaises with the Board of AFIC regarding changes to consent conditions and changes in strategy.

BCI General Manager

The BCI General Manager oversees the BCI Operations Team, and supports the Irrigo Administration Team and the Irrigo Environmental Team and reports to the relevant boards as required. The BCI General Manager is currently a Director of ICL.

BCI Operational Staff

The BCI Operational Staff implement all aspects of the construction and development of BCI, through to the ordering and delivery of water and management of the systems required.

All staff report to the BCI General Manager.

Irrigo Environmental Team Staff

The Irrigo Environmental Team consists of the Irrigo Environmental Manager, FEP Auditor and occasionally FEP Assistants.

The team develops and implements the Scheme Management Plan to comply with BCI's land use resource consent CRC162882 and works with the farmers to ensure these practices are implemented on farm.

The Environmental Manager reports to the BCI General Manager and oversees the management of the FEP Auditor, FEP Assistant and external contractors as required.

2.1 Key Competencies and Training

All training records relating the individual will be held in their personnel files.

Irrigo Environmental Manager and Internal or External FEP Auditors

- A minimum of five years professional experience in the management of pastoral, horticultural, or arable farm systems
- Completed the Advanced or Intermediate Sustainable Nutrient Management Course.
- Completed Environment Canterbury's preliminary Farm Environment Plan Auditor Training
- Maintain accreditation with professional body with ethical standards
- Obtain and maintain Farm Environment Plan Auditor accreditation, once available
- Complete professional competency development training as required to maintain accreditation.

All Other Positions

Key competencies to be assessed for each specific role at the approval of the relevant management body.

3 Scheme Environmental Risk Identification

Risk	Mitigation	Policy/Procedure
Exceed Scheme Nitrogen Loss Load	Manage uncertainties related to OVERSEER	5.4, 6.2.6
	Update Farm Environment Plan Annually	5.10, 6.2.6
	Review and approve N losses through changes in Land Use and New Shareholders	5.2, 6.3.5
	Support shareholder implementation of Good Management Practice on-farm	5.9.1, 0, 6.2.1, 6.2.2
	Follow up shareholders who increase N losses without authorisation	5.1, 6.4
Information not transferred to new or transferred shareholders	Share transfers not approved until all relevant nutrient management information provided to new owner	5.3, 6.3.7
	All newly transferred shareholders to be contacted by the scheme to induct them into our processes.	5.2, 5.3, 6.5.1
Shareholder Nutrient Budgets not prepared	Prepare a Memorandum of Understanding the all major providers of nutrient budgets to ensure they are completed in time.	5.4
	Set clear dates shareholder must provide information by and issue Yellow Cards until information is provided.	6.2.3, 6.3.6
Farm Environment Plans not prepared	Set clear dates shareholder must provide information by and issue Yellow Cards until information is provided.	6.2.6
FEP Audits not completed	Environmental Manager to arrange for external FEP Auditor to complete Audits	6.1.11
Repeated “C” or “D” grades in FEP Audit	Follow up all shareholders who receive: <ul style="list-style-type: none"> a “C” or “D” FEP audit grade Significant non-compliance with their resource consent 	5.11, 0, 6.1, 6.2.3, 6.2.4, 6.2.7
	Identify cause of issue and provide appropriate support or resources.	5.8, 6.2.1, 6.2.2, 6.2.3

Scheme Management Plan

Aims and Objectives

Policies

Nutrient
Expectation
Management

Overseer
Standards

Continuous
Improvement

Performance
Management

Privacy

GMP

FEPs and
Audits

Procedures

FEP Audits

Non-
Conforming
Shareholder

NDA
Calculation

Dispute
Resolution

Other

Implementation

BCI/AFIC
FEP
Template

FEP Audit
Template

Overseer NB
Checklist

Record
Templates

Shareholder
Support
Plan

Reporting

4 Aims and Objectives

- All Shareholders meet farm management targets
- Compliance with BCI land discharge and water use resource consents
- Improved groundwater quality within BCI and AFIC irrigated areas

Management Area	Objective
Nutrient Management	To maximise nutrient use efficiency while minimising nutrient losses to water
Irrigation Management	To operate irrigation systems efficiently and ensuring that the actual use of water is monitored and efficient
Soils Management	To maintain or improve the physical and biological condition of soils in order to minimise the movement of sediment, phosphorus and other contaminants to waterways
Collected Animal Effluent Management	To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year
Waterbody Management (wetlands, riparian areas, drains, rivers and lakes)	To manage wetlands, riparian areas and surface waterbodies to avoid damage to the bed and margins of a waterbody, and to avoid the direct input of nutrients, sediment, and microbial pathogens.
Point Sources (Offal Pits, farm rubbish pits, silage pits)	To manage the number and location(s) of pits to minimise risks to health and water quality
Other Water Use	To use water efficiently ensuring that actual use of water is monitored and efficient.

5 Policies

5.1 Nutrient Expectations – Existing Shareholders

Objective

- All Shareholders receiving water prior to 10 September 2015 (Existing Shareholders) are aware of their nutrient expectations and are on track to meet them
- All Existing Shareholders are aware that meeting their nutrient expectations is part of their individual Water User Agreement

Policy

- Scheme NDA updated annually into the most recent version of OVERSEER
- Shareholders may increase N loss from their property, provided prior approval is sought and Good Management Practice is achieved.
- Shareholders are to complete and submit OVERSEER© nutrient budgets as required
- All Shareholders will not intensify their land use beyond the limits set The Matrix stating the soil type and farm system expected for the property and used to calculate allocated scheme N loss, included in the Water User Agreement.

5.2 Nutrient Allocation – New Shareholders and Change of Land Use

Objective

- All shareholders receiving water after 10 September 2015 (New Shareholders) are allocated a fair N load, assuming Good Management Practices are implemented
- Existing Shareholders are permitted to change their land use, within limits

Policy

- New users, or applications to increase N loss, must provide a predictive OVERSEER nutrient budget to demonstrate their N losses will be within modelled expectations
- All predictive nutrient budgets must represent the proposed, fully-developed farm system, with Good Management Practices implemented.
- New users and changes of land use applications will complete a Farm Environment Plan prior to receiving water to demonstrate how Good Management Practice will be met.
- BCI will ensure applications for new water and N allocation is consistent with projected N losses
- All Shareholders will not intensify their land use beyond the limits set The Matrix stating the soil type and farm system expected for the property and used to calculate allocated scheme N loss, included in the Water User Agreement.

5.3 Share Transfers

Objective

- Shareholder property sale transactions to continue, while still ensuring continuity of data provided to BCI and AFIC
- New owners of Scheme-irrigated properties are familiar with the nutrient management requirements under their water user agreements

Policy

- Share transfers will not be approved until the Farm Environment Plan, Audit Reports and the OVERSEER nutrient budget is updated and provided to the new owner.
- All information relating to the property's historical OVERSEER nutrient budgets, FEPs and FEP Audits will be freely available to any new owner.
- New owners of existing scheme-irrigated properties to be contacted and provided with an opportunity to discuss their nutrient management requirements.

5.4 Overseer Nutrient Budget formats

Objective

- Nutrient budgets are robust and reproducible and completed on time.

Policy

- Nutrient budgets are prepared by a suitably qualified person
- Year-end nutrient budgets are prepared annually
- BCI will co-ordinate with providers of nutrient budgets to ensure nutrient budgets are prepared to the correct standard and provided to the scheme on time.
- All nutrient budgets are completed in general accordance with the most recent OVERSEER© Best Practice Data Input Standards with the best available information
- Deviation from input standards are recorded, with reasons and the original input .xml file provided
- All Year-End OVERSEER© nutrient budgets will be prepared using measured irrigation application depths or water usage data where possible
- Nutrient budgets are to be provided in electronic .xml format
- All records relating to OVERSEER© nutrient budgets are kept and made available upon request

5.5 Shareholder Farm Environment Plan and Audit Prioritisation

Objective

- Shareholders with the highest total nutrient loss or at risk of not meeting GMP targets are prioritised for completing Farm Environment Plan Audits

Policy

- Current practise nutrient losses per property and per hectare to be reported in FEP when created
- All Shareholders will be assessed for their ability to meet GMP targets and categorised as “high”, “medium” or “low” risk of achieving a C or D grade

5.6 Joint Shareholder Registration

Objective

- To ensure Shareholders are managed by one organisation or enterprise, where multiple may have an interest

Policy

- Primary organisation or enterprise responsible for ensuring shareholder meets obligations

5.7 Privacy

Objective

- Ensure sufficient information is provided to verify GMP targets are met, while limiting potentially sensitive information available to third parties

Policy

- Annual reports will summarise overall results of Farm Environment Plan Audits and progress by Shareholders on meeting GMP
- Individual Farm Environment Plans and annual nutrient budgets will be stored in a secure manner, with access limited to authorised personnel
- Farm Environment Plans, audit results and OVERSEER© nutrient budgets will not be provided to third parties without prior approval from the shareholder, unless legally compelled, or shares have been transferred.
- OVERSEER© nutrient budgets will only be able to be viewed by authorised scheme personnel, farm auditors and the Shareholder
- Any errors found are to be corrected by the individual who completed the original budget and re-submitted.
- Environment Canterbury will be notified when Shareholders no longer receive water from the scheme

5.8 Shareholder Environmental Performance Management

Objective

- Celebrate and recognise high-achieving Shareholders
- Non-conforming Shareholders are managed fairly and supported to achieve desired outcomes

Policy

- High-achieving Shareholders are recognised as leaders and supported to continue best practice
- Non-conforming Shareholders are managed using Volunteer-Assist-Direct-Enforce (VADE) Compliance Model
- Regular educational opportunities are available to all Shareholders

5.9 Good Management Practice

Objective

- All shareholders must have a plan to achieve Good Management Practice by 2018
- Shareholders within the Hinds-Princes zone must have a plan to

5.9.1 Definition of Good Management Practice

Good Management Practice (GMP) is defined in the Industry Agreed Good Management Practice Guide, Version 2 (September 2015) and subsequent variations.

The full document is available here:

http://ecan.govt.nz/publications/General/Industry_Agreed_GMPs_A5_Version2_Sept2015_FINAL.pdf

Properties bordering the Rakaia River are prohibited from altering river protection works or removing riparian vegetation without first obtaining prior approval from the Canterbury Regional Council River Engineer.

5.10 Farm Environment Plans

Objective

- All shareholders must have a FEP compliant with the most recent version of the LWRP Schedule 7
- Half of current shareholders to have FEP audited by 10 September 2016, half by 10 September 2017
- All new shareholders to have FEP audited within 12 months of completing FEP
- Shareholders are to advise of the individual responsible for day to day management of their property annually

Policy

- Provide clear guidance to Shareholders on content of FEPs
- Develop a Schedule 7 compliant online template, which incorporates dates for complying with GMP
- Enable Shareholders to complete and understand FEPs for themselves
- Provide education and support
- All FEPs to be reviewed and updated annually

5.11 Farm Environment Plan Audits

Objective

- FEP Audits are completed to comply with timeframes set out in CRC162882
- FEP Audits to assist shareholder with meeting GMP

Policy

- Audits will only be completed by suitably qualified individuals meeting the criteria for a FEP Auditor under the LWRP
- The FEP Auditor did not prepare, or assist in the preparation of the FEP they audit
- The FEP Auditor will not audit properties where there may be a conflict of interest
- All FEP Auditor(s) will become accredited as soon as practicable
- FEP Auditors are trained and knowledgeable in resources and information to assist shareholders with meeting GMP.
- Shareholders will have at least two week notice to prepare for FEP Audit
- Shareholders will receive a “C” grade if they defer or cancel their FEP audit more than once.

5.12 Continuous Improvement

Objective

- Encourage GMP through on-going education and support

Policy

- Collate and provide best farm practice information to shareholders
- Provide a series of workshops around similar environmental management practices
- Create “theme” seasons and focus education, newsletters and workshop around area

6 Procedures

6.1 Farm Environment Plan Audit Process

All Farm Environment Plan (FEP) Audits will be completed by the Irrigo FEP Auditor or other suitably qualified professional in accordance with the *Canterbury Certified Farm Environment Plan (FEP) Auditor Manual (February 2016)*.

All FEP Audits and their supporting information may be subject to review to demonstrate adherence to the correct processes.

6.1.1 FEP Audit Prioritisation

All Farm Environment Plans are to be audited to comply with resource consent CRC162882. Due to the time and resourcing constraints, the first FEP audits will need to be staggered in order to complete them all within the timeframes. Highest priority Shareholders will be audited first.

To determine Shareholder priority, Farm Environment Plans will be reviewed to assess potential risk of a shareholder not being on track to meet GMP targets. Matters to be considered include:

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

Shareholders will be assessed as “high”, “medium” or “low” risk of receiving a “C” or “D” grade in the FEP Audit when their FEPs are checked.

Shareholder Risk	Date first Audit to be Completed By
High	10 September 2016
Medium	10 September 2016
Low	10 September 2017
New Shareholders	Within 12 months of FEP being finalised

6.1.2 Start of Season Audit Identification

The FEP Auditor will identify the properties to be audited during the coming season each October. The FEP Auditor will consider the following in creating a list of properties to be audited:

- Existing shareholders not yet audited under CRC162882
- Any property due for an audit this coming season, based on their previous grade
- Any new shareholders (either transferred or recently joined)
- Any shareholder where a change of management was identified in the previous winter’s FEP Update
- Any shareholder who has applied for and accepted a change in land use
- Any shareholder property in development where the FEP Auditor felt it appropriate to audit them more frequently.

The FEP Auditor will report the final list to the Environmental Manager by the end of November each year, with a plan of who will be audited and when.

6.1.3 FEP Audit Scheduling

The Irrigo FEP Audit will notify shareholders of their FEP Audit with at least two weeks notice, unless the shareholder requested the audit is completed in less time.

The FEP Auditor will confirm the FEP Audit via email and post a hard copy in the mail (9.5.1) for each audit booked in. The email and hard copy confirmation will include the information in the FEP Audit Notification Checklist.

Where an independent auditor is required to complete the audit, the Environmental Manager will try to provide the shareholder with at least two weeks notice, but may be limited by the availability of the contractor. The Environmental Manager will complete the FEP Audit Confirmation Checklist.

6.1.4 FEP Audit Preparation

The Irrigo FEP Auditor will prepare for the FEP Audit, by collating the information listed in the FEP Audit Preparation Checklist (9.4.1).

Independent FEP Auditors will complete FEP Audit Preparation according to their own procedures, which will follow the requirements of the *Canterbury Certified Farm Environment Plan (Plan) Auditor Manual (February 2016)*.

6.1.5 FEP Audit Procedures

All FEP Audits will be completed in accordance with the *Canterbury Certified Farm Environment Plan (Plan) Auditor Manual (February 2016)*.

6.1.6 FEP Audit Reports

All FEP Audit Reports will be completed using the most recent FEP Audit Template available from Environment Canterbury, modified to include the diagram in 6.2.4.1.

6.1.7 FEP Audit Draft Report Correspondence to Shareholders

All draft FEP Audit reports will be completed within two weeks of completing the FEP Audit on-farm. The draft report will be emailed or posted to the shareholder with the cover letter described in 0, and provide the shareholder with two weeks to provide further information, query the content or correct any errors made.

External FEP audits should cc the Environmental Manager into all correspondence with shareholders.

6.1.8 FEP Audit Final Report

All Draft FEP audit reports will be finalised within 2 weeks of being sent to the shareholder. The report may be amended based on the following feedback from the shareholder:

- Factually incorrect information included in the original draft report
- Further information is provided

Changes will not be made because the shareholder disagrees with the grade.

The final report will be posted to the shareholder with the appropriate a cover letter from 9.5.6 to 9.5.9.

All information relating to the FEP Audit will be saved in each shareholder's QGIS FEP folder. The FEP Auditor or the Environmental Manager (where an external auditor was employed), with all internal information updated in accordance with the FEP Audit Report Finalising Checklist (9.5.4).

Figure 1: FEP Audit Frequency

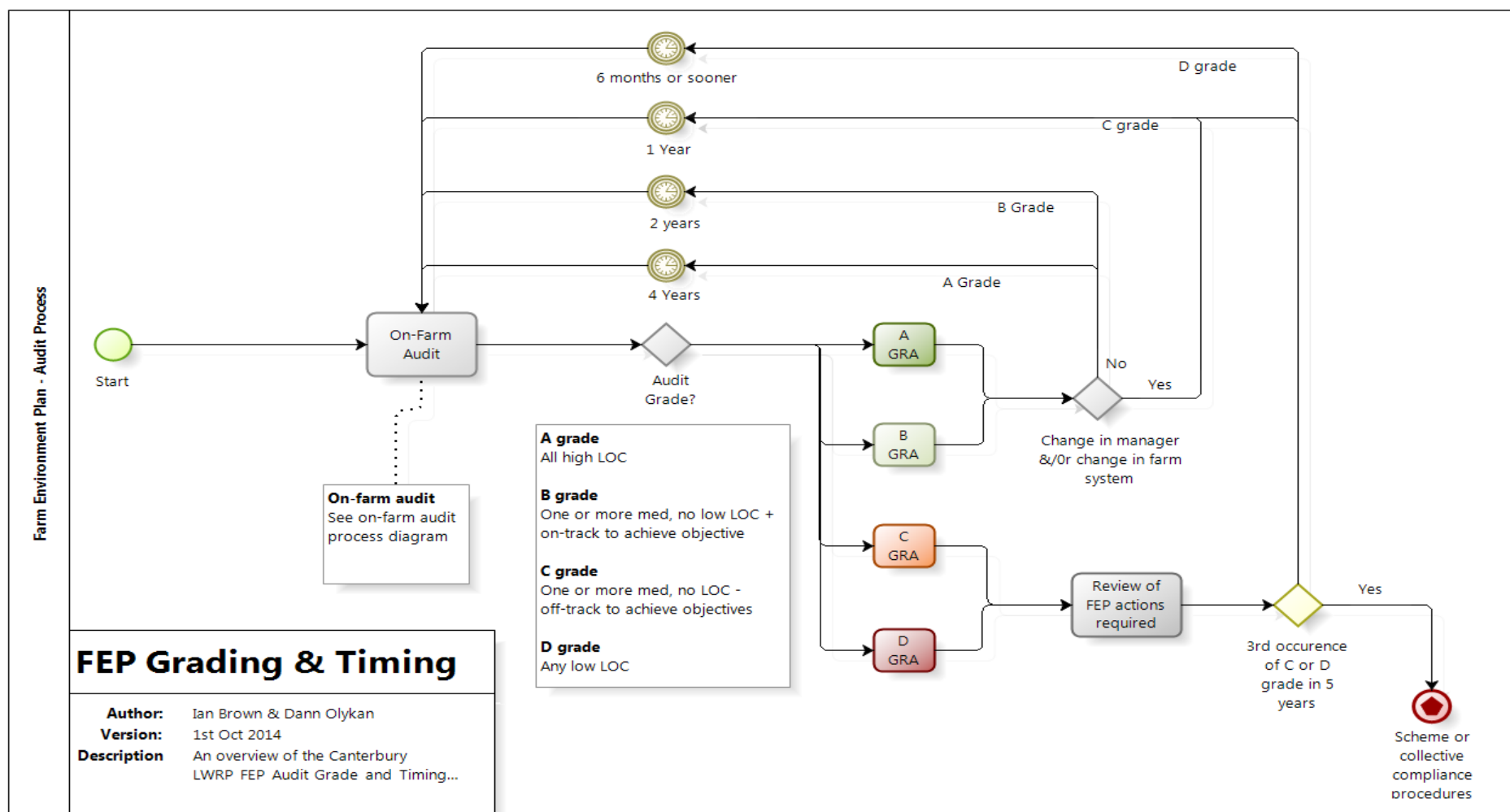
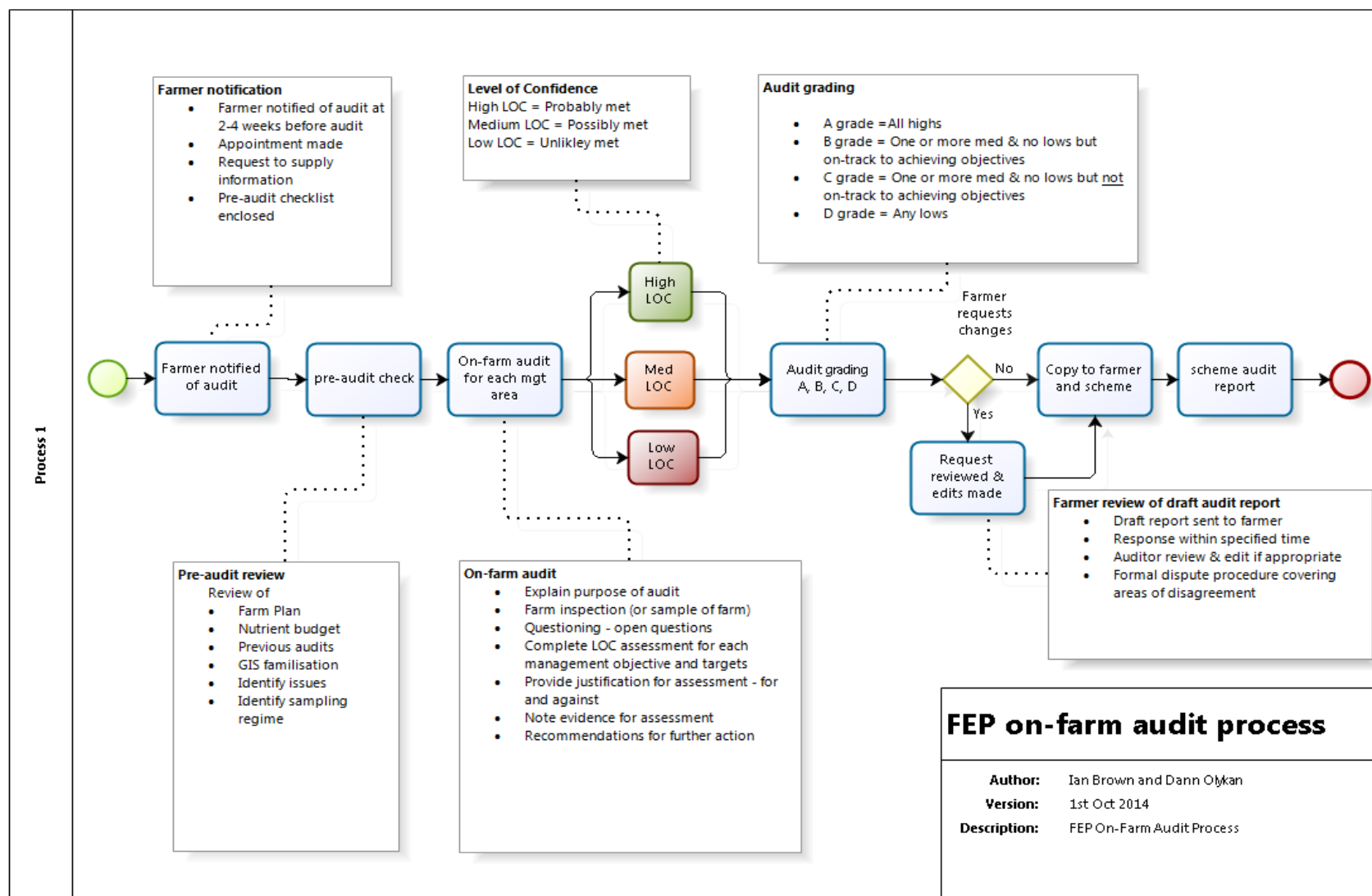


Figure 2: FEP On-Farm Audit Process



6.1.9 FEP Audit Conflict Of Interest

If the Irrigo FEP Auditor has any of the following relationships with the property to be audited:

- Personal relationship, kinship or business with any company, shareholder or staff being reviewed during the FEP audit
- Any other relationship which may compromise the integrity of the FEP Audit

The FEP Auditor will notify the Environmental Manager or BCI General Manager of the relationship once known, prior to the audit of the property.

The Environmental Manager will ensure either:

- The FEP Audit and Report is attended by and co-signed by either the Environmental Manager or other suitably qualified and independent auditor
- The FEP Audit and Report is completed by an independent suitably qualified and independent auditor

6.1.10 Acceptance of Gifts or Gratuities from Shareholders

Shareholders often provide gifts of vegetables and produce during the harvest season. However, any gift can be viewed as an attempt to persuade the outcome of the audit.

The offering and acceptance of small gifts from shareholders is a gesture of trust and goodwill and, well managed, can build the relationship between the auditor and shareholder without compromising the outcome of the audit itself.

Any FEP Auditor will notify the Environmental Manager and/or BCI General Manager of any gifts or gratuities received from shareholders during the FEP Audit. A register of such gifts and gratuities will be held, including who gave them, when, why and what value they might have.

The FEP Auditor should not accept gifts or gratuities valued more than \$100, without prior approval of the Environmental Manager and/or BCI General Manager.

6.1.11 Process if Insufficient FEP Audits are Completed

The FEP Auditor will report progress with completion of FEP Audits on a weekly basis to the Environmental Manager and/or BCI General Manager throughout the year. If the number of audits being completed was unlikely to meet our consented requirements, the Environmental Manager will contract a suitably qualified external auditor to complete the outstanding audits.

6.2 Non-conforming Shareholder Procedures

Most Shareholders are willing and able to comply with the FEP and audits. However, others may require more encouragement.

A successful compliance model is fair, reasonable, consistent and transparent in the process. Where it is appropriately implemented, Shareholders are more likely to make the permanent changes required to consistently perform at a higher standard.

The Department of Internal Affairs promotes a “Volunteer-Assist-Direct-Enforce” Compliance Model, as summarised in Figure 3. A key focus of the model is to make compliance as easy and practical as possible, using accessible templates, and providing guidance and information.

Model 1

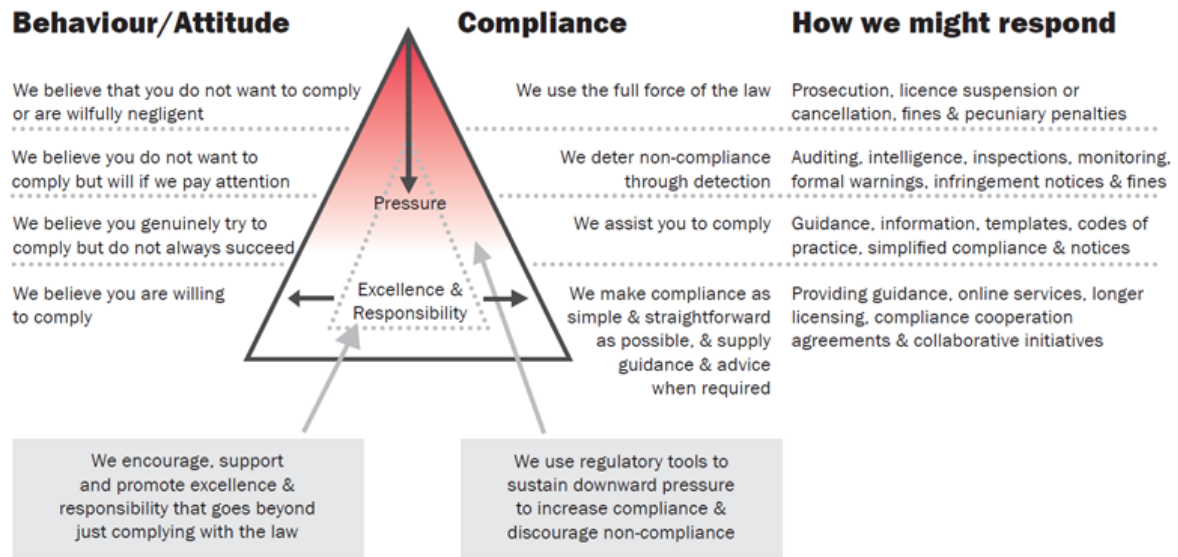


Figure 3: Department of Internal Affairs Compliance Model

The following procedures set out the process to be taken to assist Shareholders in meeting the requirements of the FEP and Audit.

6.2.1 Methods to encourage voluntary compliance

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

6.2.2 Programme of Continuous Improvement

Shareholders will be encourage to improve practices over time. Farm Environment Plans will initially encourage simple and basic actions, such as improving records, complete bucket tests etc. As FEPs are reviewed annually, better data is collected and information on management practices are provided, “investigate...”, “look into...” actions will be expected to become “install...”.

Information on GMP will target a particular area for improvement in a season. For instance, in the 2015-16 season, we will target irrigation efficiency management. Workshops and newsletters will focus on how to manage the irrigation system they have, how to complete bucket and uniformity tests, soil moisture monitoring technology and how to interpret soil moisture data to maximise efficiency. By focussing on a particular area of improvement, shareholders will be able to fully understand and implement one area of good management practice before moving on to another.

More detailed questions relating to the theme area of management will be included in the annual FEP to prompt shareholders to consider what they do in more detail.

Other theme seasons include:

- Effluent management
- Maximising fertiliser efficiency
- Point source contamination management (offal pits, septic tanks etc)
- Odour management

6.2.3 BCI and AFIC Breach of Water Agreement Process

Where a breach of the Water Agreement has been identified, provisions 20 and 21 of the Water User Agreement can be initiated, which permits the scheme to temporarily prohibit a take or forfeit a customer's shares.

Both BCI and AFIC have policies in place relating to actions to be taken for other breaches of the Water User Agreement, which are detailed within each scheme's own policy documents. Breaches of the Water User Agreement related to the management of nutrient discharges and FEPs are categorised below.

Prior to the initiation of any sanction, educational processes and support would have been undertaken in accordance with sections 6.2.5, 0, and 0.

6.2.3.1 Charges Incurred

Where an **ORANGE** or an **RED** card has been issued and water is turned off, the customer is still liable for charges in accordance with their Water User Agreement.

6.2.3.2 Yellow Cards

One yellow card may be issued for failing to provide information within requested timeframes or for other minor breaches of the Water User Agreement.

Where information is required to be provided during the off-season, a **YELLOW CARD** is issued. No water will be released to the customer until the required information has been received.

Where no specific information needs to be provided or information is required during the irrigation season, a **YELLOW CARD** is treated as a warning letter.

In each case the customer will be notified of the breach and warned of actions to be taken if the issue is not rectified.

6.2.3.3 Orange Cards

Up to two orange cards may be issued for specific breaches of the Water User Agreement.

An **ORANGE CARD** is issued for the second yellow card offence within two water seasons or for an orange card offence.

When one **ORANGE CARD** is issued a customer will have their water turned off for three days.

When the second **ORANGE CARD** is issued a customer will have their water turned off for a further seven days.

In each case the customer will be notified of the breach and sanctions in writing and the water will be turned off in twenty business days as outlined in the water agreement.

If either breach occurs during the winter season the water will be turned off at the commencement of the following season provided the twenty business days' notice is achieved.

6.2.3.4 Red Cards

Only one red card may be issued for specific breaches of BCI Scheme Policies.

A **RED CARD** will be issued for the third orange card offence or for a red card offence.

When a **RED CARD** is issued a customer will have their water turned off for twenty days.

If the breach occurs during the winter season the water will be turned off at the commencement of the following season provided the twenty business days' notice is achieved.

When a customer receives a red card, they will be required to explain the reasons for the breach to scheme management.

Any subsequent breach will be deemed to be a second red card offence and the water will be turned off for the remainder of the season. The BCI Scheme management will meet with the offending customer and determine if the continued breaching can be remedied.

If the BCI Scheme management determines the continued breaching cannot be remedied, the water agreement will be cancelled and it will be recommended to the BCIL Board that the customer's shares be forfeited.

If a shareholder is excluded from the scheme for any issues relating to nutrient management, BCI/AFIC will formally notify the Environment Canterbury Monitoring and Compliance Manager within 20 working days of the exclusion.

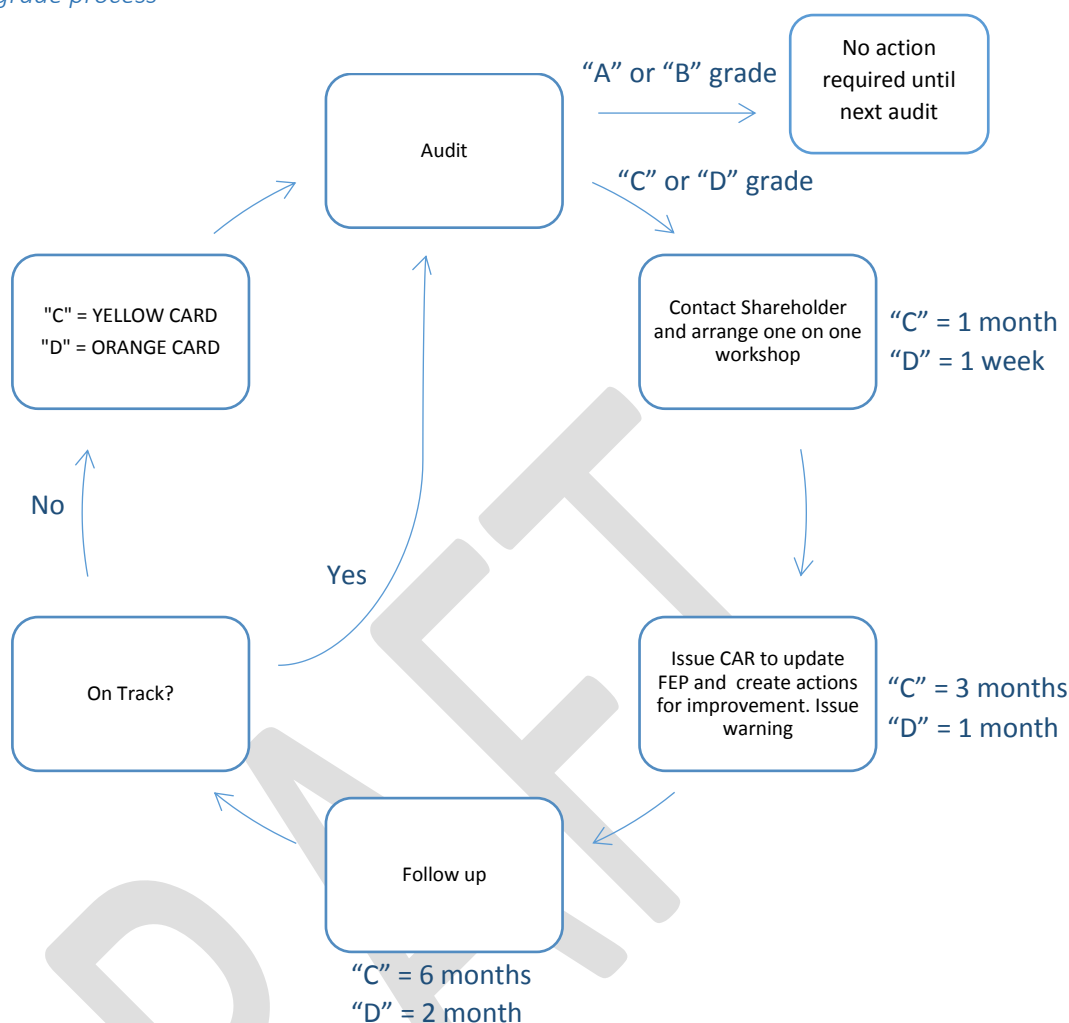
6.2.4 Farm Environment Plan Audit Grade

Audits are completed by the Irrigo Centre FEP Auditor or suitably qualified person within the timeframes specified in 6.1.9. All Audits are undertaken in accordance with the most recent version of the Canterbury Certified Farm Environment Plan (FEP) Auditor Manual. After the first audit grade is determined, Shareholders are required to complete audits according to 6.1.

Shareholders may receive recommendations for improvements when given an "A" or a "B" grade, however it is expected the Shareholders will be pro-active in implementing these recommendations and will not be actively follow up until the next audit.

Shareholders who received "C" or "D" grades are not on track to meet the requirements of their FEP and need to be supported to improve their grade during their next audit cycle.

6.2.4.1 Audit grade process



Repeated "C" or "D" grades will escalate through the sanction process until repeated red cards are issued and the shareholder forfeits their shares.

Most areas under BCI of AFIC management are red water and nutrient allocation zones. The take of new ground- or surface water in these areas is prohibited and the shareholder will not be able to apply for resource consent to replace their water from some other source.

6.2.5 FEP Audit Cancellation

The FEP Auditor will request an audit at least two weeks in advance and group audits according to land use, location and risk. Audits will be timed to avoid high workload periods e.g. during calving for dairy farms, during harvest for arable properties etc.

The shareholder will have an opportunity to defer audits to another day at the time of booking, but late cancellation can cause the auditor to have significant down time between audits and/or increase travel time and costs. Where BCI or AFIC have employed an external auditor, late cancellations can be costly.

Therefore, shareholders are expected to provide at least 5 working days notice to enable the auditor to book in another shareholder in that time slot.

To ensure FEP Audits are completed within expected timeframes, shareholders will be allowed to defer or cancel their FEP audit once. A second delay or cancellation will result in an automatic “C” grade.

6.2.6 Farm Environment Plan, Nutrient Budget, Farm Manager Notification

All Shareholders are required to update the FEP and OVERSEER nutrient budget annually for BCI to comply with the land discharge consent CRC162882.

Shareholders will be required to notify BCI of the name and contact details of the individual in charge of managing day to day operation of their property.

Where Shareholders do not provide this information, the following procedure will be implemented.

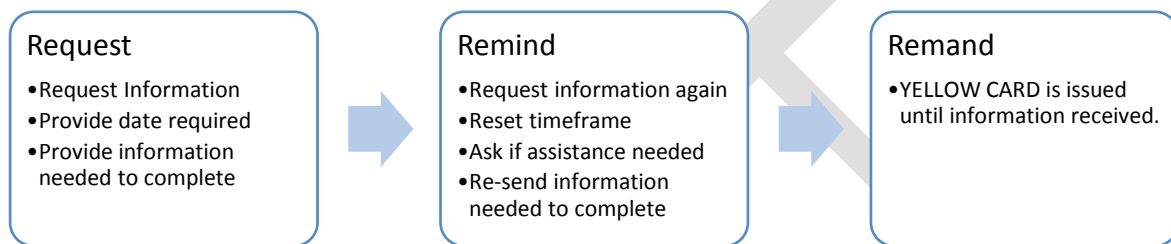


Figure 4: Process for failing to provide information on request

The scheme will ensure Shareholders are able to complete FEPs online and will advise them of the information they will need and the timeframes for completion. Weekly workshops will be available to assist all Shareholders through the FEP update process.

6.2.7 Notification of non-compliance

If a shareholder is found to be significantly non-compliant with a resource consent or shed inspection, there is a risk the shareholder will not achieve an “A” or “B” grade during their next FEP audit, unless practises or systems have improved.

The aim of this process is to support the shareholder where issues have been identified to ensure high- or medium- level of confidence standards are achieved during their next FEP audit. It is recognised other industry bodies have their own processes (Synlait’s Lead with Pride etc) and BCI needs to work in with established industry protocols.

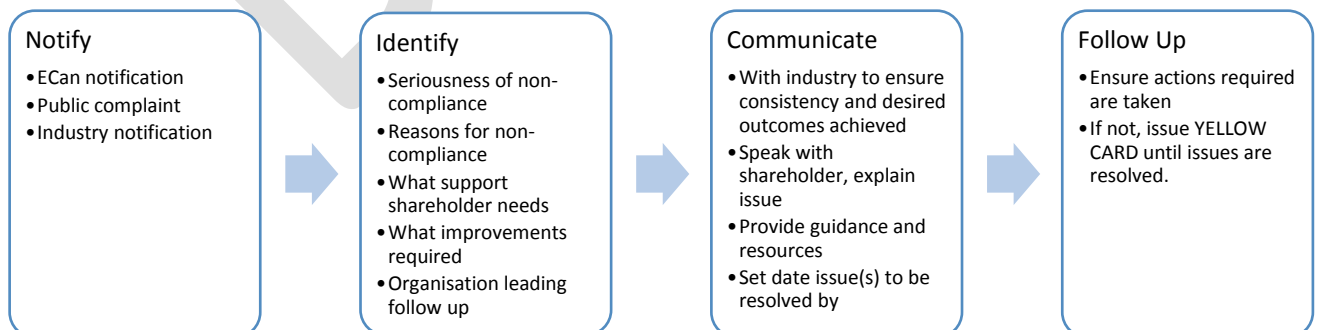


Figure 5: Notification of non-compliance process

6.2.8 Summary of Actions to be Taken

Card	Example	Off-season	Irrigation Season
YELLOW	Nutrient budget not completed on time	No water provided until nutrient budget submitted	
	"C" audit grade and not on track to pass next audit	Formal warning issued OR No water provided until on track (<i>if possible</i>)	Formal warning issued
	No action taken for between audit non-compliance	Formal warning issued	
ORANGE (1)	Nutrient budget not provided 20 working days after YELLOW CARD issued		
	"D" or second consecutive "C" audit grade and not on track to pass next audit	First 3 days of water not provided at start of irrigation season	Cease water for three days.
	Intensification of land use without prior approval		
ORANGE (2)	Nutrient budget not provided 20 working days after first ORANGE CARD issued	First 7 days of water not provided at start of irrigation season	Cease water for seven days.
	Second consecutive "D" or third "C" within five years and not on track to pass next audit		
RED (1)	Nutrient budget not provided 20 working days after second ORANGE CARD issued	First 20 days of water not provided at start of irrigation season, whether budget provided or not. Meet with the Board to explain actions.	Cease water for 20 days. Meet with the Board to explain actions.
RED (2)	Nutrient budget not provided 20 working days after first RED CARD issued	No water provided in the following season. Meet with the Board to determine if issue can be rectified.	Cease water for rest of irrigation season. Meet with the Board to determine if issue can be rectified.
RED (3)	Nutrient budget not provided 20 working days after second RED CARD issued	Cancellation of Water User Agreement	
	Persistent "D" or "C" grades with no or insufficient action taken by the customer		

6.3 Nutrient Discharge Allocation

6.3.1 Principles of Nitrogen Cap Management

The following principles will be employed in the management of the Nitrogen Cap;

- Individual irrigators will not be allocated a share of the Nitrogen Cap and trading of Nitrogen Cap between individual irrigators will not be employed.
- Existing irrigators (contracted prior to 10 September 2015) can continue to operate at individual base nitrogen losses (estimated in the consenting process) but there is an expectation that existing irrigators will improve environmental performance in line with enhancements in industry accepted good management practice.
- Existing irrigators can change their land use provided they remain at (or below) their base nitrogen losses (estimated in the consenting process). Some new farming systems may require advanced mitigation measures to remain at (or under) the base nitrogen loss for the property.
- New users will need to have a high level of environmental performance through operating at Good Management Practice.
- New users should be allocated water provided they can show they will meet the scheme's expectation of nitrogen loss to ground water for their particular farming system and soil type. This will be assessed by new users providing approved Overseer® simulations of their proposed farming system.
- The scheme will not allocate more irrigation to a given farming system/soil type combination than the proportion outlined in Table 2: Nutrient allowance for new users, unless reduction of existing irrigators nitrogen loss is achieved and allows for increased nitrogen losses for new irrigators.
- New users, and existing users changing land use, should be given a reasonable time period to implement Good Management Practice which have a negative financial impact on the farming business. Good Management Practice must be achieved by all shareholders by 2020.
- Where irrigators have multiple sources of water the scheme's expectation of nitrogen loss to ground water will be based on the area irrigated by the BCI Scheme water (either a specific area or an area based on the weighted average application rate over the entire property from all sources of water).

6.3.2 Overall BCI Nutrient Discharge Allocation and Irrigated Area Calculation

Resource consent CRC162882 limits nitrogen losses from BCI and AFIC through a Nutrient Discharge Allowance (NDA). The NDA was calculated assuming the average loss in kg N/ha/year for existing Shareholders and future users would implement Good Management Practices immediately. The consented NDA is re-calculated annually to relate to the most recent version of OVERSEER.

The following chart shows the calculation of the overall Nitrogen Cap.

Table 1: Nutrient Allowance calculation August 2015 (OVERSEER v 6.2.2)

	Area (ha)	Tonnage N/year	Average loss per ha
Current BCI Scheme	12,456	1,258	101 kg
Current Acton Scheme	5,148	275	53 kg
Future allocation	22,396	1,268	57 kg
Total	40,000	2,801	70 kg

The future allocation was based on the following proportions of land use and soil types;

Table 2: Nutrient allowance for new users

	Very Light Soil	Light Soil	Medium Heavy Soil
Dairy	5%	30%	15%
30% wintering cows	1%	6%	3%
70% wintering cows	2%	12%	6%
Arable with process	1%	6%	3%
Arable with small seed	1%	6%	3%

The NDA used in CRC162882 was calculated using the estimated area of irrigated land, based on the flow rate of water received from the scheme, not the whole farm total or the whole farm's water usage. Where a shareholder has an alternative source of irrigation water, the total farm N losses and irrigated will be far greater than the proportion of scheme water expectation would allow for.

In these circumstances, only the portion of whole farm nitrogen losses proportional to the scheme irrigated area is to be used to calculate the whole scheme NDA. An example of how the total BCI NDA will be calculated is in the table below. If another scheme supplies an alternative source of water, and a PO agreement has been made, then the NDA and irrigated area contribution is calculated using the combined volume of water from both sources.

In this case, the calculated BCI irrigated area to determine consent compliance would be 670 ha and the nutrient loss will be 17,750 kg N/year.

The sum of the total N loss for properties within BCI's ASM programme and the amount attributed to land irrigated by the scheme will be reported annually.

Table 3: Example of how BCI NDA will be calculated

Farm Name		PO Scheme Allocated Flow rate (l/s)	Secondary Scheme Allocated Flow rate (l/s)	Other Source Flow rate (l/s)	Total Farm Flow Rate (l/s)	% Scheme water ¹	Whole farm area (ha)	Estimated % scheme irrigated area (ha)	2014-15 Whole Farm N losses (kg N/yr)	NDA contribution (kg N/yr)
Cow Farm Ltd		50	0	150	200	25%	400	100	10,000	2,500
Mr Seeds Ltd		80	0	0	80	100%	180	180	3,600	3,600
Moo Dreams winter retreat Ltd		45	0	45	90	50%	220	110	12,100	6,050
Valetta Fields Trust		80	40	0	120	100%	280	280	5,600	5,600
Total							1,080	670	31,300	17,750

¹ Effective water (l/s) used for purpose of calculating NDA

6.3.3 New Shareholder Nutrient Expectation Calculation

New users are first to apply for new water in accordance with 4.0 of the Barrhill-Chertsey Irrigation Scheme Policy Manual v3.3 April 2016 and complete a Water User Agreement. Acceptance of the application will partially be based on the scheme's ability to comply with their overall NDA.

Prior to a new water application being accepted:

1. The proposed shareholder shall provide an Overseer simulation for the proposed irrigated system for the whole property submitted with application for shares/connection.
2. BCI will confirm land use/soil type combination is not over-allocated (Table 2), unless in combination which is lower than average loss and review the robustness of the nutrient budget provided.
3. BCI will confirm the nutrient expectation parameters for the new shareholder, which will be used to calculate their allocated N load using the most recent Nutrient Allocation Model prepared by PDP.
4. The GMPs required to meet these expectations are to be communicated, with timeframes of meeting these standards.
5. The Shareholder is to submit a Farm Environment Plan prior to being given water.

An OVERSEER© nutrient budget is to be completed at the end of the first irrigation season using Year-End input data. Provided the change of land use has been completed, the first season nitrogen loss will become the nutrient expectation for this property.

6.3.4 Existing Shareholder Nutrient Expectation

Existing shareholders are expected to maintain or reduce their nutrient losses, which are defined as their OVERSEER© calculated nitrogen losses using Year-End data for the previous water season.

The calculated nutrient loss expectations will change with updated versions of OVERSEER©.

6.3.5 Application for change of land use for existing Shareholders

Prior to any land use intensification, the shareholder must first apply for an increase in their nutrient expectation. The process for apply for the increase in N load is as described in Figure 7 below. The application form is available in 9.7.

Intensification may be any of the following:

- Any increase in irrigated area beyond what was agreed in Schedule 1 of the Water User Agreement
- Change in land use beyond what was agreed in Schedule 1 of the Water User Agreement, which is likely to increase losses of nitrogen to groundwater.
- Any increase in stocking rate
- Any increase in the area under intensive Winter Grazing by cattle
- Intensification of current system (e.g. System 2 dairy to System 3).

If a shareholder changes their land use in a way which will increase their N losses beyond what we have allocated them, they will be managed according to the Exceed Nutrient Expectation process described in 6.4.

6.3.6 Annual Nutrient Budgets

Year-End Nutrient budgets are to be prepared by 31 October each year in order to calculate the overall BCI NDA by 30 November each year.

Shareholders are to provide all necessary information to their nutrient budget provider by 1 August each year to ensure these reporting times are met.

Nutrient budgets for each shareholder are to be prepared by a suitably qualified person in general accordance with the most recent version of the OVERSEER Best Practice Data Input Standards. And using the best information available. Where a deviation of the Input standards is necessary, the individual preparing the budget must clearly state the changes made and the reasons why and provide a copy of the original input data .xml file.

Nutrient budgets will only be accepted in .xml format. The Shareholders must retain all records used to complete the nutrient budgets for at least 7 years.

Nutrient budgets may be audited either by BCI or Irrigo personnel or Farm Auditors. Any errors are to be rectified by the individual responsible for preparing the original budget.

Where a shareholder fails to complete and submit or arrange for a nutrient budget to be completed within the required timeframes, they will be issued with a **YELLOW CARD**.

6.3.7 Transfer of shares and nutrient load after property sale

Applications for share transfers between old and new owners of properties are approved by the BCI or AFIC board. Prior to giving approval, the board must ensure the following information is provided:

- An OVERSEER nutrient budget using data for the season until the date the property changes hands
- An updated Farm Environment Plan
- A declaration from the new owner that they are aware of their nutrient management obligations.

The Scheme Environmental Manager is to be notified of each share transfer within one month of being processed.

6.3.8 Exceed Nutrient Expectation

All Shareholders are given a land use description which is used to calculate their nitrogen expectation for their property, based on soil type and land use, in order for BCI to effectively manage the total Nitrogen Discharge Allocation (NDA) limit. Exceptions can be made where the shareholder has implemented GMP. If a Shareholder changes land use without advising or fail to undertake farm management practises as necessary for good nutrient management, they may exceed their nutrient allocation, which could cause BCI to exceed their total consented NDA.

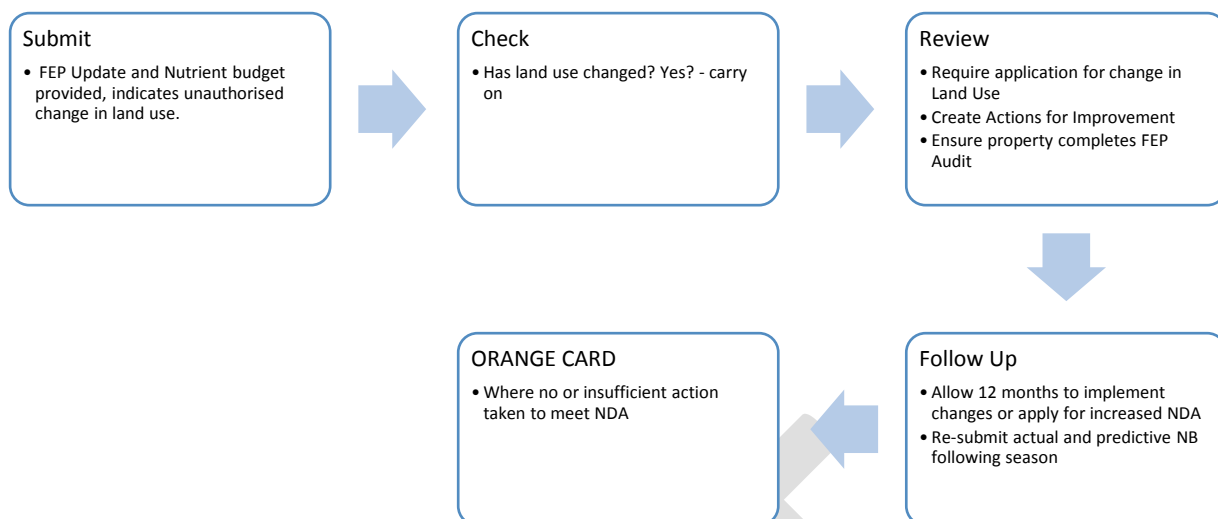
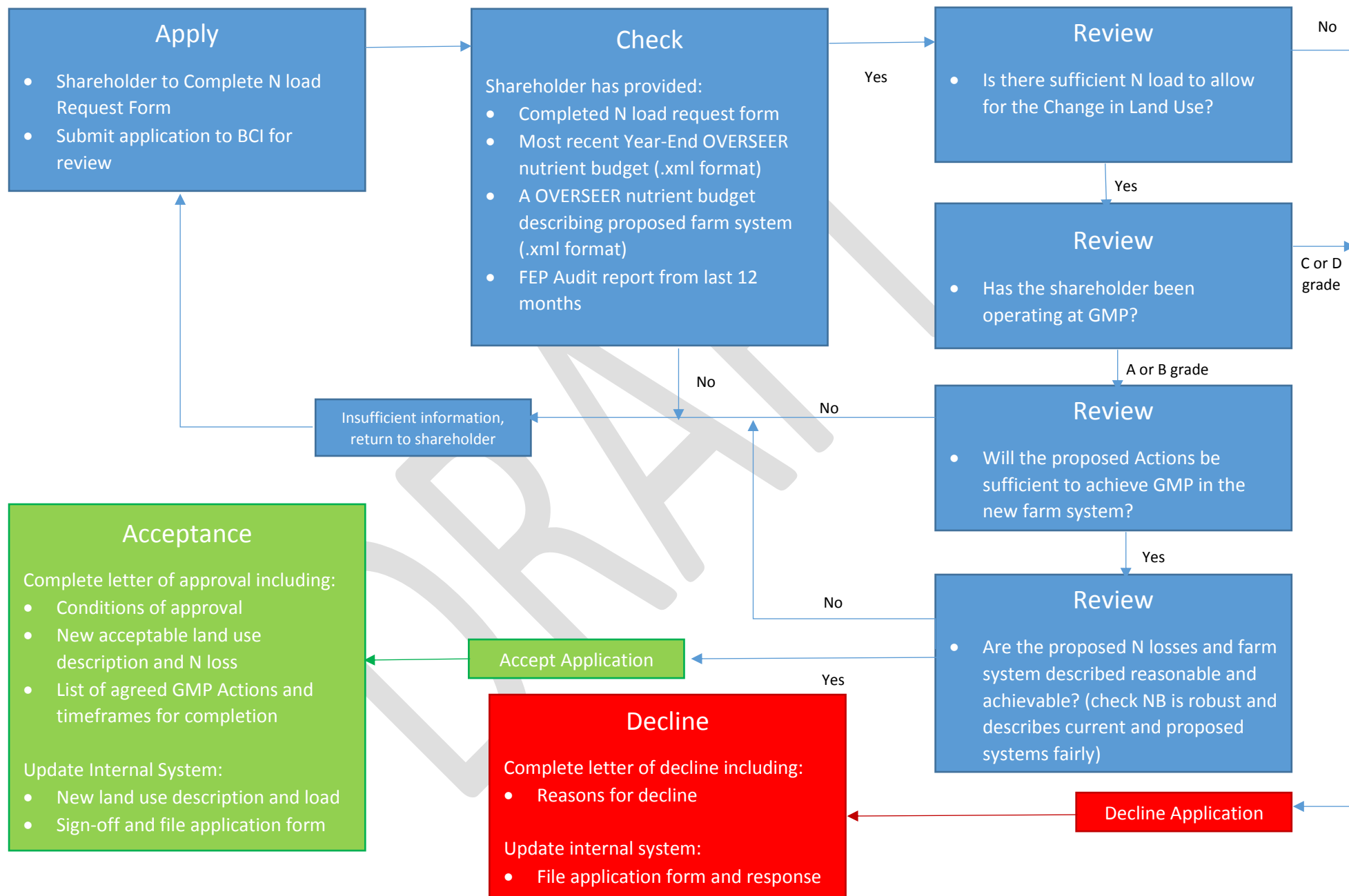


Figure 6: Exceed NDA process

Where a consent holder repeatedly exceeds their nutrient expectation, they will be referred to the board for a recommendation to forfeit their shares and cease receiving water from BCI.



6.4 Dispute Resolution Process

6.4.1 FEP Audit Disputes Process

The aim of the process is to ensure all shareholders are graded fairly and in accordance with the *Canterbury Certified Farm Environment Plan (FEP) Auditor Manual (February 2016)*. The FEP Auditor should also always conduct themselves in a professional and constructive manner.

If a Shareholder disagrees with the outcome of a FEP Audit, they are entitled to have their audit peer reviewed and/or the conduct of the Auditor investigated, as described in Figure 8.

In time, any FEP Auditor must become accredited and will be subject to the codes of conduct of the accreditation scheme and their accreditation may be investigated if a complaint is lodged. The details of this process have not yet been defined.

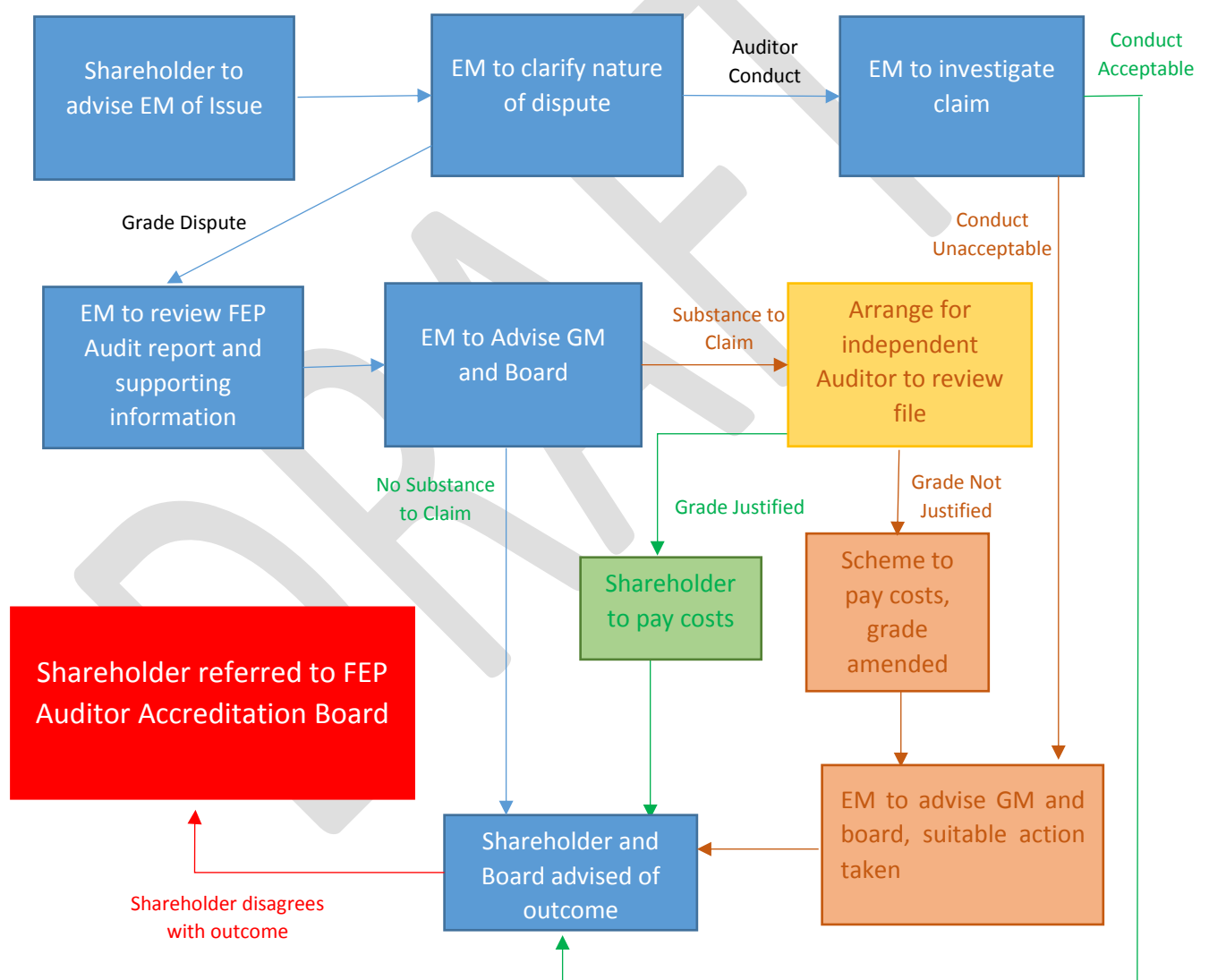


Figure 8: FEP Audit Dispute Resolution Process

6.4.2 Water User Agreement Disputes

Any shareholder who disagrees with actions taken under 6.2.3 may enact Section 26 (Dispute Resolution) of the Water User Agreement. The aim of these provisions is to negotiate a speedy resolution for any matter arising under the terms of the Water User Agreement.

If a Shareholder chooses to use these provisions within their Water User Agreement, the following steps need to be taken:

1. Contact either the Environmental Manager and/or BCI General Manager to discuss issue
2. The complaint may be brought to the board for discussion
3. The Shareholder will be advised of the outcome, if any
4. If agreement cannot be met, either party may choose to resolve the differences using either mediation or arbitration.

6.5 Other Processes

6.5.1 New and Transferred Shareholder Scheme Induction

All new shareholders (those who have purchased a Scheme-irrigated property and those who have just signed up) are to be introduced to the Scheme Management Plan and key procedures within one month of signing up to become a shareholder. The Environmental Manager (EM) for the scheme will arrange to meet up with them and explain the Farm Environment Plan, Audits and nutrient budgeting requirements.



Key information to provide new shareholders:

- Land use description limiting N loss
- Change in Land Use Process
- FEP Audit requirements
- Nutrient budgeting requirements
- Overview of Scheme Management Plan
- Where to locate key information, e.g. website etc

6.5.2 Farm Manager Notification Process

The Farm Environment Plan Audit is scheduled according to the result of the last audit, unless there is a change of manager or land use. Shareholders therefore have a responsibility to ensure BCI are kept up to date with any changes in management or land use.

Shareholders will be requested to confirm the contact details of owners and managers annually through the annual FEP Update. Where a change has occurred, the property will be audited that season, regardless of their previous audit grade. Failure to provide this information on time will result in a **YELLOW CARD** being issued.

6.5.3 Annual Review of the SMP

Resource consent CRC162882 requires this document, the procedures in it, and the audits completed to be reviewed annually, with a report provided as part of the annual report.

The annual review will be completed by an independent, suitably qualified person and will include the following:

- Review of the effectiveness of current policies and objectives with meeting consent compliance and ensuring all shareholders are on a path to meeting Good Management Practice
- Review of the effectiveness and implementation of the procedures set out in this document
- Review of the methodology and 10% of the nutrient budgets used to calculate compliance with the BCI NDA.
- Review of 10% of the FEP Audits completed within the past season to ensure the processes followed meet the most recent version of the Canterbury Certified Farm Environment Plan (FEP) Auditor Manual

Recommendations for improvement will be considered and included in the following year's review of this document.

7 Implementation

7.1 Timeline

Task	Objective	Date due	Person responsible
Scheme Management Plan	Ensure SMP is up to date and relevant, approved by BCI Board and ECan	30 November annually	Environmental Manager
FEPs – Existing Shareholders	All BCI and AFIC Shareholders will have an up to date FEP	Due 31 July Annually	Environmental Manager
FEPs – New Shareholder	All new shareholders to complete FEP prior to receiving water	As Required	Environmental Manager
Overseer Nutrient Budgets	All BCI and AFIC Shareholders to completed an Overseer nutrient budget	12 August annually	Environmental Manager
FEP audits	Every BCI and FEP shareholder will have their FEP audited	10/9/2017	FEP Auditor
Shareholder Support	Provide education and information to Shareholders on requirements	TBC	Environmental Manager
EMS Review	EMS to be reviewed by a independent, suitably qualified person annually	30 November annually	Environmental Manager
Annual report	Annual progress report submitted to Environment Canterbury	30 November annually	Environmental Manager

7.2 Supporting Documentation

BCI will ensure the following templates are available for shareholders

- Schedule 7 compliant FEP templates, suitable for property size
- FEP audit checklists
- Nutrient budget record checklists
- Update to date information on achieving GMP

Where possible, a web-based portal will be established to improve ease of use for Shareholders. Shareholders can choose to opt out of a web-based system if they are more comfortable with other methods of managing information.

7.3 FEP and Nutrient Budget Communication Plan

From 1 April 2015, Shareholders are to be advised of the requirement to complete Farm Environment Plans and nutrient budgets by a date set according to their nutrient expectation. Shareholders will be advised of the information required to complete the plan.

An online FEP template should be available at this stage for Shareholders to complete.

To support Shareholders through the FEP process, Irrigo Centre will set up weekly drop in workshops where the Shareholders will be advised of what a FEP is, why they are doing it and what our expectations are. The rest of the session will be an opportunity for Shareholders to become familiar with the WaterLine portal under the guidance of an Irrigo or BCI representative.

Once an FEP is completed, monthly record completion reminders will be emailed or posted to Shareholders to ensure all necessary information is recorded.

7.4 Exceptions to Requirements

Where shareholders use water for uses other than farming activities, BCI will formally request permission from Environment Canterbury to exclude these properties from the Schedule 7 GMP, Nutrient Budgeting and Auditing requirements.

DRAFT

8 Reporting

8.1 Weekly Reporting

The FEP Auditor will report to the Environmental Manager the following information:

- Number of FEP Audits completed the previous week
- Number of FEP Audits Planned the following week
- Number of FEP Audit Reports to be drafted
- Number of FEP Audit Report to be finalised
- Break down of C or D grades
- Highlight issues noted

8.2 Monthly Reporting

The FEP Auditor will summarise the weekly reports to the BCI General Manager and the Environmental Manager, which will be provided to the JV, BCI and AFIC Board meetings.

8.3 Annual Reporting

An annual report on the compliance with BCI resource consent CRC162882 is to be prepared and submitted to Environment Canterbury by 30 November each year.

The information to be included in the report are as follows:

- A summary of the performance of the scheme in meeting its environmental targets and objectives
- Summary of FEP and nutrient budget completion progress by land use type
- Summary of nutrient discharge by land use type
- Summary of number and impact of new users, including predicted NDA
- Totals and long term trends on the following:
 - Irrigation area by new and existing BCI customers
 - NDA by land use
 - NDA for new and existing users
 - Total NDA
 - Forecast for expected NDA in coming season based on predicted losses of new users and existing user
- Progress on Shareholders meeting GMP, as defined in 5.9.1.
- Methodology and implementation of Farm Audits
- Summary of FEP audit results including
 - Name of Auditor (s)
 - Planned number of FEP audits vs completed audits
 - Audit results by area and land use
 - Summary of reasons for C and D grades
 - Actions taken to remedy C and D grades
 - Summary of properties with repeated “C” or “D” grades
 - The progress achieved for previously identified issues, if applicable

The annual report will be reported to the relevant boards during their board meeting, with a summary report circulated to the shareholders.

8.4 Annual Management Review

The Environment management will seek feedback on the SMP processes and procedures from representatives from the BCI and AFIC boards every September. The Environmental Manager will provide an annual summary to the management review panel to consider the following:

- Summary of the audits completed for the previous season
- Follow up actions taken with “C” or “D” grades
- Effectiveness of the nutrient budget and FEP update process that season
- Feedback from shareholders regarding the nutrient management processes undertaken the previous season
- Feedback from shareholders regarding workshops held
- Feedback on strategic direction for the coming season

Recommendations from the boards will reviewed and considered by both the BCI General Manager and Environmental Manager and suitable changes will be included in the annual SMP review.

9 Schedules

9.1 Water Agreement Warning Letter Template

To be sent out at least 20 working days prior to ceasing supply of water for any reason.

NOTIFICATION OF BREACH OF WATER AGREEMENT

On **X**, you were issued with a final request to complete your Farm Environment Plan by **X**. Our records indicate you have not yet submitted your FEP and are therefore in breach of your Water User Agreement with BCI.

This letter is formally advise you that you have breached Clause 8 of your Water User Agreement with Barrhill Chertsey Irrigation Limited for failing to provide a Farm Environment Plan as requested in writing on **X** and **X**.

Barrhill Chertsey Irrigation Limited has now enacted Clause 20(b) of your Water User Agreement, ceasing access to BCI water until you have submitted a Farm Environment Plan meeting all requirements. Access to BCI water will resume immediately upon confirmation all requirements of the Water User Agreement are met.

Please note you are still liable for any water charges in accordance with the Water User Agreement.

If you need assistance with completing your FEP and/or nutrient budget, please arrange for a third party to help you. I am no longer available for one on one support for existing shareholders.

If you have any technical issues, please feel free to contact me on 03 928 8073 or 0275 500 129.

9.2 CARD Water Agreement Letter Template

XX CARD ISSUED – [REASON]

In the letter dated **X**, Barrhill Chertsey Irrigation Limited (BCI) requested you complete a Farm Environment Plan (FEP) and OVERSEER nutrient budget by **X**. You are required to complete a FEP and nutrient budget under Clause 8 of your Water User Agreement with BCI.

Our records indicate you have **XXX** and are therefore in breach of your Water User Agreement with BCI.

This letter is formally requesting you to **XX**. You are now listed as receiving a **[COLOUR]** Card as detailed under 4.2.2.2 of the Scheme Management Plan.

Failure to **XX** by this date will result in BCI stopping your water supply from **X** under Clause 20(b) of your Water User Agreement. Access to BCI water will resume when all requirements of the Water User Agreement are met.

Please note you are still liable for any water charges in accordance with the Water User Agreement.

If you need assistance, please feel free to contact me on 03 928 8073 or 0275 500 129.

9.3 Farm Environment Plan Audit Template

See template described in the most recent Canterbury Certified Farm Environment Plan (FEP) Auditor Manual.

9.4 Farm Environment Plan Audit Process Checklist

9.4.1 FEP Audit Preparation Checklist

Action	Complete (Y/N/NA)
Review Online FEP for property	
Review QGIS Maps	
Print FEP Summary and Maps	
Review most recent OVERSEER nutrient budget <ul style="list-style-type: none">• Is it robust?• Does it represent the farm system described in the FEP?	
Review previous FEP Audit Report	
Note risks and features to be reviewed/Visited	
One Day Prior to Audit: <ul style="list-style-type: none">• Call Shareholder• Confirm Date/Time/Meeting Point• Confirm H&S or biosecurity requirements	

9.5 Farm Environment Plan Audit Communication Documents

9.5.1 Confirmation of FEP Audit (email and letter template)

Information to include with email:

- FEP User Guide
- FEP Summary (if available)
- Summary of Useful Records

Information to include with Letter:

- Conformation Letter
- Summary of Useful Records
- FEP Summary (if Available)

Email/Letter Template

Confirmation of Farm Environment Plan Audit

Date:

Time: (please allow 30min either side)

Auditor: Megan Hands

Prior Health and Safety Requirements: Please advise Megan directly if you have any health and safety

The length of your audit will depend on the complexity of your farm. The audit will involve both office, and on-farm time, typically this will be split 50/50, although this depends on your farm.

Preparing for your audit:

- Read your FEP
- Keep records handy
- Refresh yourself on the actions listed in your FEP

Keys areas assessed in the audit:

- Irrigation
- Nutrient
- Soil
- Animal Effluent
- Soil
- Waterbodies
- Point Sources
- Water Use (Excluding Irrigation water)

The audit will only assess areas relevant to your property.

Should you need to cancel or postpone the audit once confirmed, we require at least 5 days' notice in order to fill your space. You will appreciate that I have many audits to get through and limited timeframes to meet deadlines for the scheme consents. If you cancel the audit with less than 5 days' notice you will risk an automatic C grade. Any questions or concerns please feel free to give me a call.

Regards,

9.5.2 FEP Audit Confirmation Checklist

Action	Date Complete
Confirm Date/Time of Audit with Shareholder	
Identify Meeting Point Location, Personnel and H&S requirements	
Email Confirmation including: <ul style="list-style-type: none">• FEP User Guide• Suggested FEP Records• FEP Summary (when available)• Meeting Requests (if required)	
Post Hard Copy Confirmation Including: <ul style="list-style-type: none">• Cover Letter• Suggest FEP Records	
Book into FEP Auditor Calendar	

9.5.3 Draft FEP Audit Report Email or Letter

To be sent with a pdf or .xps copy of their Draft FEP Audit Report

Hi XXXXXX.

Thanks for taking part in the FEP audit process recently covering your FEP number XXXX. I have given your farm a X grade, meaning the next audit will be in about X years time unless there is a change in farm system or management.

You were close to an 'A' grade, which should easily be achievable at your next audit. Some key actions are

-
-
-
-
-

Please see the audit report attached for further information. As discussed please

If you would like help with any environmental or compliance tasks, please call Eva Harris at Irrigo Centre.

9.5.4 FEP Audit Report Finalising Checklist

Action	Date Complete
Draft Report Completed, sent to shareholder	
All site visit information uploaded into QGIS folder	
FEP Audit report finalised within 2 weeks of draft being sent <ul style="list-style-type: none">• Report amended if required• Cover letter sent	
Final report saved as pdf or .xps in QGIS	
All internal spreadsheets updated	
QGIS maps updated	
Any "C" or "D" grades reported to Environmental Manager	

FARM ENVIRONMENT PLAN AUDIT OUTCOME

FEP Audit Date:

Farm Environment Plan Number:

Farm Name:

Farm Physical Address:

Thank you for your time to complete your **Barrhill-Chertsey Irrigation Limited Acton Farmers Irrigation Limited** Farm Environment Plan Audit for the 2015-16 irrigation season. Please find attached your final report.

FARM ENVIRONMENT PLAN AUDIT GRADE

A

You are meeting Good Management Practice for all Management Areas

Next Audit Due: **Date** unless you change management or farming system.

Please contact me if you have any questions.

FARM ENVIRONMENT PLAN AUDIT OUTCOME

FEP Audit Date:

Farm Environment Plan Number:

Farm Name:

Farm Physical Address:

Thank you for your time to complete your **Barrhill-Chertsey Irrigation Limited Acton Farmers Irrigation Limited** Farm Environment Plan Audit for the 2015-16 irrigation season. Please find attached your final report.

FARM ENVIRONMENT PLAN AUDIT GRADE

B

You are on track to meeting Good Management Practice for all Management Areas

Next Audit Due: **Date,** unless you change management or farming system.

Please contact me if you have any questions.

FARM ENVIRONMENT PLAN AUDIT OUTCOME

FEP Audit Date:

Farm Environment Plan Number:

Farm Name:

Thank you for your time to complete your **Barrhill-Chertsey Irrigation Limited** **Acton Farmers Irrigation Limited** Farm Environment Plan Audit for the 2015-16 irrigation season. Please find attached your final report.

FARM ENVIRONMENT PLAN AUDIT GRADE

C

You are not on track to meeting Good Management Practice for one or more Management Areas.

Key Action(s) to Improve Grade:

1. Ensure irrigation maintenance, calibration and irrigation scheduling is undertaken and recorded
2. Work with nutrient management advisor to understand key drivers of nutrient losses and nutrient management strategies moving forward

Next Audit Due: **12 months' time.**

Please contact me if you have any questions.

FARM ENVIRONMENT PLAN AUDIT OUTCOME

FEP Audit Date:

Farm Environment Plan Number:

Farm Name:

Farm Physical Address:

Thank you for your time to complete your **Barrhill-Chertsey Irrigation Limited Acton Farmers Irrigation Limited** Farm Environment Plan Audit for the 2015-16 irrigation season. Please find attached your final report.

FARM ENVIRONMENT PLAN AUDIT GRADE

D

You are not on track to meeting Good Management Practice for one or more Management Areas.

Key Action(s) to Improve Grade:

1.

Next Audit Due: **6 months' time.**

Please contact me if you have any questions.

9.6 Farm Environment Plan Audit Checklist for Shareholders

To be provided when the shareholder is advised of the date of their audit to ensure all required information is readily available.

FEP Actions:

- ☐ Date completed, who was responsible
- ☐ Evidence action was undertaken (e.g. receipts, photos etc)
- ☐ Evidence progress has been made to achieve actions

Irrigation:

- ☐ DIY Maintenance records (e.g. <http://irrigationnz.co.nz/news-resources/irrigation-resources/irrigation-system-checklist/>)
- ☐ Maintenance receipts/register
- ☐ Winter servicing invoice
- ☐ Bucket/uniformity test results
- ☐ Soil moisture (measurements or budgeting)
- ☐ Soil temperature, rainfall, PET
- ☐ Staff training/induction records
- ☐ Irrigation application depths/timing
- ☐ Code of Practice Certificate, system design, irrigation system evaluation and Commissioning reports
- ☐ Events log (e.g. noted water irrigating road/leaky seal and what you did to fix it)

Fertiliser/Overseer:

- ☐ OVERSEER nutrient budget or other N calculation model
- ☐ Date, time, location, type and rate of fertiliser application per nutrient budget block
- ☐ Soil test results
- ☐ GPS fertiliser tracking records (ground and aerial applications)
- ☐ Spreading calibration and maintenance records (if you spread yourself)
- ☐ Stock type/numbers/ages/weights (numbers averaged per month)
- ☐ Nutrient management plan /agronomist recommendations
- ☐ Type and area of crop, how/when cultivated, how/when harvested, yields
- ☐ Imported and exported supplementary feed (type/amount)
- ☐ Milk production (kg MS/season)

Effluent:

- ☐ Effluent management plan
- ☐ Application depth, location and time of liquid and solid effluent applications
- ☐ DIY maintenance records
- ☐ Maintenance receipts
- ☐ Bucket/calibration tests
- ☐ Backflow prevention test results
- ☐ Staff training records
- ☐ Dairy NZ WOF
- ☐ Dairy Effluent Storage Calculator and/or effluent pond design specifications
- ☐ Events log

Biodiversity/Waterways/Soils:

- ☐ Riparian planting plan
- ☐ Evidence of good practice which cannot be seen
- ☐ Receipts for planting/fencing/troughs

9.7 Application for Additional Nutrients

Barrhill Chertsey Irrigation Limited (BCI) have been consented a nitrogen load for shareholders. The load is calculated based on the land use of shareholders in 2013, with an allowance for new irrigation within the scheme, assuming Good Management Practices are implemented.

Increases in nutrient losses beyond what was allocated to a shareholder may result in less nutrients being made available for new shareholders or potentially a breach of the nutrient load conditions of the resource consent. For this reason, BCI require all increases in nitrogen losses to be first approved by the scheme to ensure these issues do not arise.

The following document specifies the information that must be provided for any proposed land use change to be considered by the board.

Examples of land use change are:

- Change in land use (e.g. sheep and beef grazing to dairy support)
- Any new or increased area of winter grazing of cattle
- Any increase in irrigated area
- Any increase in stocking rate
- Any intensification of current system (e.g. system 3 dairy to system 4)

Prior to making any of the above changes, you must first seek approval from the BCI board as the scheme needs to know how your change will affect the Scheme N load limit.

Application Checklist:

- ☐ Complete the Farm System Information Template (Appendix 1).
- ☐ Provide the most recent FEP Audit Report. Please contact the Environmental Manager to arrange your FEP Audit if one has not been completed for your property.
- ☐ OVERSEER analysis of your existing and proposed new land use scenario, with a proposal of the Good Management Practices you will implement in the new system to minimise the increase in N losses, if applicable.

All OVERSEER nutrient budgets must be prepared according to the following standards:

- Nutrient budgets are prepared by a suitably qualified person using the latest version of OVERSEER™ nutrient budget model and the relevant Best Practice Data Inputs Standards.
- Overseer analysis is provided in Xml format.
- The Overseer analysis aligns with all the parameters presented in the Farm System Information Template.
- A map(s) of the property at a scale that clearly shows proposed changes

Appendix 1 – BCI/AFIC Farm System Information Template

Date of Application	
FEP #	
Property name / ID	
Property Owner	
Property Owner Contact info	
Contact number/s	
Postal address	
Email	
Person responsible, if different from Property Owner	
Role of person responsible	
Person responsible Contact info	
Contact number/s	
Postal address	
Email	

Land Use Descriptions:

	Existing Land Use	Proposed Land Use
Total Area (ha)		
Total Irrigated Area (ha)		
BCI Irrigated Area (ha)		
Irrigation System Designed Water Use (mm/day)		
Land Use(s) e.g. Arable/Sheep/Beef, Dairy etc		
Area Winter Grazing (ha) cattle only		
Average Stocking rate (r.s.u/ha)		
Effluent Area (ha) if applicable		
Other Relevant Changes (please describe)		

FEP Audit Grade:

Date of Last FEP Audit	
Auditor Name	
FEP Audit Grade	
Required Actions from FEP Audit	

Nutrient losses:

Please provide OVERSEER xml files for review.

	Existing	Expected	Proposed	Proposed (with GMPs)
Average N loss (kg per ha)				
Total N loss (kg N/year)				
BCI N Loss (kg N/year)				
Area (ha)				

Description of Good Management Practice Actions Proposed:

If you have not achieved a High Level of Confidence for Target 3 of the Irrigation and Nutrients management objectives, please list the Actions you will take to achieve Good Management Practice prior to changing your land use.

To ensure your change in land use continues to be authorised, you must implement these actions.

Proposed Good Management Practice Action	Proposed Date of Completion

Declaration

I declare the information I have provided is true and correct. If this application for a change in land use is approved, I will ensure:

- 1. The change in land use will not exceed the nitrogen losses (or equivalent based on later versions of OVERSEER) proposed and approved by this application*
- 2. I maintain or implement Good Management Practices as described*

I understand that failing to meet the above two conditions of this approval may result in a breach of the Water User Agreement and be subject to the Barrhill-Chertsey Irrigation Limited internal compliance procedures.

Signed

Date

Name(s)

BCI Board Approval

Signed

Date

Name(s)

APPENDIX 2: Good Management Practices

Good Management Practice has been defined in the Industry Agreed Good Management Practice relating to Water Quality Guide [http://ecan.govt.nz/publications/General/Industry Agreed GMPs A5 Version2 Sept2015 FINAL.pdf](http://ecan.govt.nz/publications/General/Industry%20Agreed%20GMPs%20A5%20Version2%20Sept2015%20FINAL.pdf)