

Canterbury Certified Farm Environment Plan (FEP) Auditor Manual

January 2018



Facilitating sustainable development in the Canterbury region

Acknowledgements

The Canterbury Certified Farm Environment Plan (FEP) Auditor Manual has been written by Andy Barbati (Environment Canterbury) in collaboration with representatives of the Primary Industry, Central Government and Environment Canterbury Staff.

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Preface

The reader shall note that the Canterbury Certified Farm Environment Plan (FEP) Auditor Manual (the Manual) has been prepared in anticipation of the new nutrient management requirements proposed to be introduced through Nutrient Management and Waitaki (NMW) Plan Change (Plan Change) to the Canterbury Land and Water Regional Plan (LWRP).

Until the NMW Plan Change is made operative, the provisions in the plan, other than the FEP Auditor Certification requirements and Schedule 7, do not have legal effect at the date of printing. For this reason, any nutrient management requirements proposed to be introduced through NMW Plan Change should not be considered during the audit until those requirements have legal effect. An exception exists if those requirements are part of:

- A resource consent; or
- Environment Management Strategy of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a Nutrient Discharge Allowance.

NMW Plan Change – Region wide requirements related to the audit activities included in this Manual are:

- FEP Requirements
- Certified FEP Auditor;
- Registration of farms through the Farm Portal;
- Farm Portal Farm Report on nutrient losses;
- Good Management Practice Loss Rate assessment (4.5.10);
- Irrigation and Winter Grazing area assessment (if applicable) – Increase in land area – Excluding Farms within the Hurunui Waiau River Regional Plan (4.5.12); and
- Calculation of the farm nitrogen loss to be undertaken using annual input and not the 4 year average when a farm is graded either C or D until such time as the farm achieves an A or B grade.

NMW Plan Change – Waitaki Sub-Region Section requirements related to the audit activities included in this Manual is:

- Sub-Region FEP Requirements (4.5.15).

Any requirement included in this Manual related to:

- Any other LWRP Plan Change - Sub-Region Section (e.g. Selwyn/Waihora Plan Change) shall be followed as they have been notified and take legal effect; and
- The Hurunui Waiau River Regional Plan (HWRRP) shall be followed as the HWRRP is fully operative.

1. Introduction

1.1 Canterbury Certified Farm Environment Plan (FEP) Auditor Manual Purpose

The Canterbury Certified FEP Auditor Manual (the Manual) has been prepared to:

- Describe processes and standard operating procedures that Certified FEP Auditors must follow
- Provide guidance for Certified FEP Auditors.

Although separate information about FEP preparation and FEP audits is tailored for use by farmers, it is understood that this Manual may also inform farmers' expectations and understanding of FEP audit activities. It is also recognised that the Manual may also be viewed by wider parties who are seeking assurance about the approach to and management of Canterbury FEP audit activities.

The processes and procedures described, and the guidance provided in this Manual have been derived from:

- Statutory Requirements;
- Industry-agreed Good Management Practices (GMP) relating to water quality;
- Sector specific GMP (where available (e.g. Beef and Lamb and DairyNZ))
- Expertise and experience of an Industry Advisory Group and an Environment Canterbury Internal Working Group established to specifically develop and improve the Canterbury FEP audit approach; and
- AS/NZS International Standards Organisation (ISO) 19011 (Guidelines for quality and/or environmental management systems auditing).

The following documents should also be referred to when viewing and applying this Manual:

- Canterbury Land and Water Regional Plan (LWRP);
- Canterbury Land and Water Sub-Region Sections of the Plan (Sub-Region Sections);
- Hurunui Waiau River Regional Plan (HWRRP);
- Industry-agreed GMP relating to water quality;
- Sector specific GMP (where available e.g. Beef and Lamb and DairyNZ);

Environment Canterbury FEP Auditor Certification Programme.

1.2 Farm Environment Plans and Auditing Overview

The Canterbury FEP Audit Programme focuses on establishing confidence that on-farm environmental risks are suitably identified and appropriately managed.

An FEP is a tool for farmers to:

- Recognise key on-farm environmental risks that relate to water quality and can have an effect on cultural values (mahinga kai) and biodiversity; and
- Set out a programme to manage those risks through the implementation of GMP.

FEPs are unique to a property and reflect the local climate and soils, the type of farming operation, and the goals and aspirations of the land user.

The complexity of a FEP will vary accordingly and is expected to increase dependent upon how much farm system change is under way or being considered.

FEP preparation, content (including management areas, management objectives (objective) and targets), performance of farming activities should be influenced by the:

- Appendix of resource consent containing the Region and Sub-Region FEP requirements; or
- Environment Management Strategy (EMS) for farms connected to an Irrigation Scheme or Principal Water Supplier holding a resource consent with a Nutrient Loss Limit (NLL) or HWRRP Collectives.

An FEP audit is an independent assessment of the implementation of:

- The programme to manage the identified risks; and
- GMPs that would contribute towards the management of the identified risks to minimise the impact on water quality and thereby protect cultural values (mahinga kai) that can be affected by that water quality.

FEP audit completion is influenced by the:

- The Appendix of resource consents listing the Region and Sub-Region FEP requirements; or
- EMS for farms connected to an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collectives;
- Guidance provided through Industry-agreed GMPs relating to water quality together with supporting detail;
- Guidance on assessing environmental risk management using a level of confidence approach as included in this Manual;
- Professional performance and competence of Certified FEP Auditors; and
- Relationships with other Environment Canterbury roles, scheme programmes and Industry initiatives.

It is important to note that what defines whether the on-farm practices can meet the objectives and targets documented in the FEP and GMPs, and determines considerations during the assessment of farming practices, is therefore confined to:

- The Appendix of resource consents listing the Region and Sub-Region FEP requirements; or
- The EMS for farms connected to an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collectives;
- Industry-agreed GMPs relating to water quality and supporting specific information agreed as being appropriate with Industry;
- Sector specific GMP (where available e.g. Beef and Lamb and DairyNZ); and
- Requirements and guidance provide to Certified FEP Auditors in this Manual.

1.3 Definitions

Terms with specific meaning in the context of the Canterbury FEP Audit Programme and this Manual are included in Appendix 12 (Definitions).

2. Auditing Purpose, Objectives and Scope

2.1 FEP Audit Programme Purpose

The purpose of the Canterbury FEP audit programme is to establish confidence that on-farm environmental risks are being suitably identified and appropriately managed through the implementation of GMPs.

Conducting consistent and robust FEP audits throughout the Canterbury region has been identified as critical in achieving this.

Individual FEP Audit Reports are expected to provide information directly to farmers and contribute to continuous improvement of farm management and practices, in order that on farm environmental risks can be better managed and achievement of environmental outcomes enhanced.

2.2 FEP Audit Programme Objectives

The Canterbury FEP audit programme objectives are:

- To evaluate progress being made towards meeting the objectives, targets (as defined in Appendix 12 (Definitions)) and practices included in FEPs based on a Level Of Confidence (LOC) approach;
- To encourage continuous improvement in the development and application of GMP;
- To ensure consistency in approach and audit assessments across Certified FEP Auditors and properties; and
- To provide a robust audit process that generates credible findings by professional Certified FEP Auditors.

2.3 FEP Audit Programme Scope

The scope of the Canterbury FEP Audit Programme is influenced by:

- The relationship between FEP audit activities and Environment Canterbury Consenting and Compliance activities and Irrigation Scheme, Principal Water Supplier holding a resource consent with a NLL and HWRRP Collectives EMS;
- Differences between performing an audit role and providing advice; and
- Individual FEP audit requirements, as described below.

2.3.1 Relationship with Environment Canterbury Consenting Activities and Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives Environment Management Strategy

Assessment of the FEP document against the Appendix attached to a resource consent or in an EMS (for Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives) containing criteria for the content of an FEP shall occur as part of the FEP audit. Consent Planners will not usually check the content of an FEP, except to ensure that it meets the requirements of a plan, to establish with confidence that on-farm environmental risks are suitably identified and appropriately managed. The key reasons for this are that:

- FEPs are living documents and may therefore be revised following:
 - The granting of the consent; or
 - Changes in the EMS they are linked to; or
 - Changes in on-farm practices or systems

- It is not anticipated that properties will usually be visited, and farming systems considered by Consent Planners at the time the resource consent application is lodged and assessed; and
- Assessment of the suitability of FEPs and performance of farming activities to achieve environmental outcomes should be interdependent.

2.3.2 Relationship with Environment Canterbury Compliance Activities

The mandate and catalyst for the Canterbury FEP Audit Programme is the granting of Resource Consents or in an EMS (for Irrigation Schemes or Principal Water Suppliers holding a consent with a NLL or HWRRP Collectives) that include specific conditions requiring an FEP and FEP audit.

Although these Resource Consents may include conditions covering matters other than the need for an FEP and FEP Audit, Certified FEP Auditors are not required to determine compliance with any of these other conditions.

This is because the Certified FEP Auditor's role focuses on assessing progress being made by farmers toward the practices listed in their FEP to manage the identified environmental risks by:

- Assessing the FEP content relative to the Appendix attached to a resource consent containing criteria for the content of an FEP; or
- Assessing the FEP content relative to the EMS (for Irrigation Schemes or Principal Water Suppliers holding a resource consent with a NLL or HWRRP Collectives); and
- Assessing whether on-farm actions are what is described in the FEP and if these meet GMPs, objectives and targets.

However, should two subsequent FEP Audit assessments find that the FEP practices are ineffective with respect to meeting the objective and targets of the FEP, then Environment Canterbury's Compliance Team will be notified and subsequent action determined by them.

As with any other farming professional, Certified FEP Auditors are nonetheless bound to notify the appropriate organisation of any illegal activity they see being carried out. Such an organisation could be Environment Canterbury's Compliance Team and the Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL) and HWRRP Collective. Certified FEP Auditors shall also inform farmers when they observe an illegal activity. Please refer to sections 2.3.3 and 4.5.17 (Observed Non-Compliance with Region and Sub-Region Rules and Gross Pollution Incidents) and for more details on what do to when an illegal activity is sighted.

It is additionally important for Certified FEP Auditors to understand that:

- Any auditing requirements included in resource consent conditions shall override any practice or procedure included in this Manual; and
- Environment Canterbury can perform its statutory functions to determine compliance with resource consent conditions.

2.3.3 Observed Non-Compliance with Region and Sub-Region Rules and Gross Pollution Incidents

As the non-compliance may affect the LOC and ultimately the audit grade, Certified FEP Auditors shall request farmers to address any observed non-compliance with the Region and Sub-Region rules during the audit within a timeframe, in line with the criteria set in section 4.5.17 (Observed Non-Compliance with Region and Sub-Region Rules and Gross Pollution Incidents) before finalising the audit grade. If the non-compliance is not rectified within the timeframes set by the Certified FEP Auditor, the Certified FEP Auditor shall conclude the audit and finalise the audit grade.

The Certified FEP Auditors shall also report any gross pollution to Environment Canterbury. Examples of gross pollution are given in section 4.5.17 (Observed Non-Compliance with Region and Sub-Region Rules and Gross Pollution Incidents).

2.3.4 Provision of advice

The role of a Certified FEP Auditor is not to act as a farm advisor.

The Certified FEP Auditor shall identify areas where it is necessary for better progress to be made toward the achievement of environmental outcomes and management of environmental risks to minimise and avoid an impact on water quality, which may also affect cultural values. The Certified FEP Auditor shall not, however, require specific solutions to be put in place nor prescribe changes to documents or farming practices.

However, if requested, the Certified FEP Auditor may suggest approaches that could be taken to address issues identified, and where advice and support can be obtained to create an action plan and implement the required actions.

As part of continuous improvement, where appropriate, the Certified FEP Auditor shall:

- Provide required action/s related to achieving GMP, objectives and targets, e.g. investigate options and implement practices to minimise runoff of sediment into stream from stock track in paddock X;
- Provide required actions to assist in the reduction of nutrient losses to meet GMP nutrient loss rates, e.g. investigate other options to decrease nitrogen losses and develop a time and timeframes; and
- Provide options of where advice and support can be obtained to implement required actions provided at the time of the audit and in the final audit report.

The Industry Agreed GMP related to water quality can be found on Environment Canterbury website.

2.3.5 FEP Audit requirements

FEP audit requirements are derived from the Appendix attached to a resource consent containing criteria for the content of an FEP or EMS (for Irrigation Schemes or Principal Water Suppliers holding a resource consent with a NLL or Collectives under the HWRRP) typically shall include the following:

A. Resource Consents and EMS (other than HWRRP Collectives audit requirements):

- Assessment of the performance of farming activities against objectives, targets, GMPs, GMP nutrient loss rates and timeframes specified in the FEP;
- Assessment of the robustness of the nutrient budget(s);
- Assessment of the efficiency of water use (if irrigated); and
- Assessment of Sub-Region FEP requirements.

B. HWRRP Collectives audit requirements:

- Assessment of performance against agreed actions at an individual level (i.e. farm) in line with the Collective's EMS; and
- Assessment of records that are to be kept for auditing purposes.

3. FEP Audit Process

3.1 FEP Audit Programme Management

An overview of the process flow for management of the Canterbury FEP Audit Programme is shown in Figure 1.

This approach is broadly based on International Standard AS/NZ ISO19011, Guidelines for quality and/or environmental management systems auditing, and applies the Plan-Do-Check-Act methodology.

Key responsibilities for each FEP Audit Programme component are also shown in Figure 1. This Manual focuses on implementation of the FEP audit programme, primarily carrying out audit activities.

3.2 FEP Audit Activities Outline

An overview of the process that will be followed and activities that will typically be carried out during FEP audits is shown in Figure 2. This approach to audit activities is broadly based on International Standard AS/NZ ISO19011, Guidelines for quality and/or environmental management systems auditing.

The FEP audit activities shall focus on evaluation of the farm's overall performance.

For each management area identified in resource consent requirements and the EMS of Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives, the Certified FEP Auditor shall:

- Assess objective evidence presented;
- Justify their reasons for any positive and/or negative assessments; and
- Use this information to assign an overall level of confidence grade.

3.3 Requirements for Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL, HWRRP Collectives, Farms linked to an approved ISO accredited audit programme and Individual Resource Consent Holders

The requirement for an FEP and mandate for FEP audits is provided through the LWRP, HWRRP together with EMS and resource consents granted for Irrigation Schemes, Principal Water Suppliers, HWRRP Collectives, farms linked to an approved ISO accredited audit programme and individual properties or farming enterprises.

There are some differences in the FEP audit process for those properties or farming enterprises which are part of an Irrigation Scheme, Principal Water Supplier or HWRRP Collective or farm linked to an approved ISO accredited audit programme, and those properties or farming enterprises for which an individual Resource Consent has been granted that is not part of such a Collective Group. The Certified FEP Auditor shall obtain a copy of the EMS of the Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives to familiarise with their governance, overarching targets and objectives and follow any specific processes and procedures, such as performance reporting.

Specific audit programme activities for properties or farming enterprises that are part of an Irrigation Scheme, Principal Water Supplier or HWRRP Collective or linked to an approved ISO accredited audit programme, and those that are not, are shown in Figure 3 (Canterbury Audit Process Overview) as follows:

Figure 3.1: Consented Properties and Farming Enterprises (single and multiple management);
Figure 3.2: Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL,
HWRRP Collectives; and
Figure 3.3: Consented Properties and Farming Enterprises (single and multiple management) linked
to an approved ISO accredited audit programmes.

Figure 1 - Canterbury Farm Environment Plans Audit Programme Process

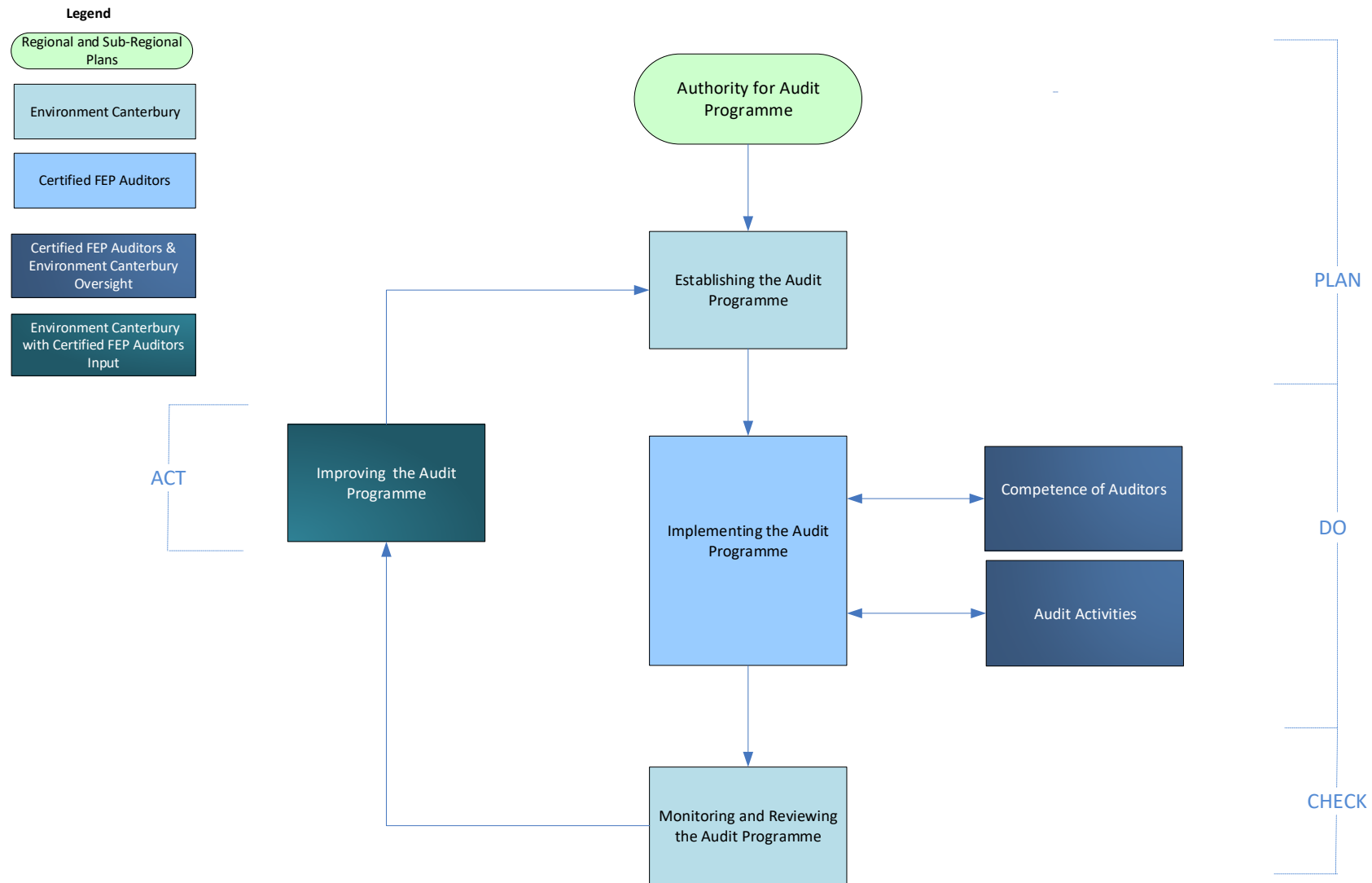


Figure 2 - Canterbury Farm Environment Plans Audit Activities Outline

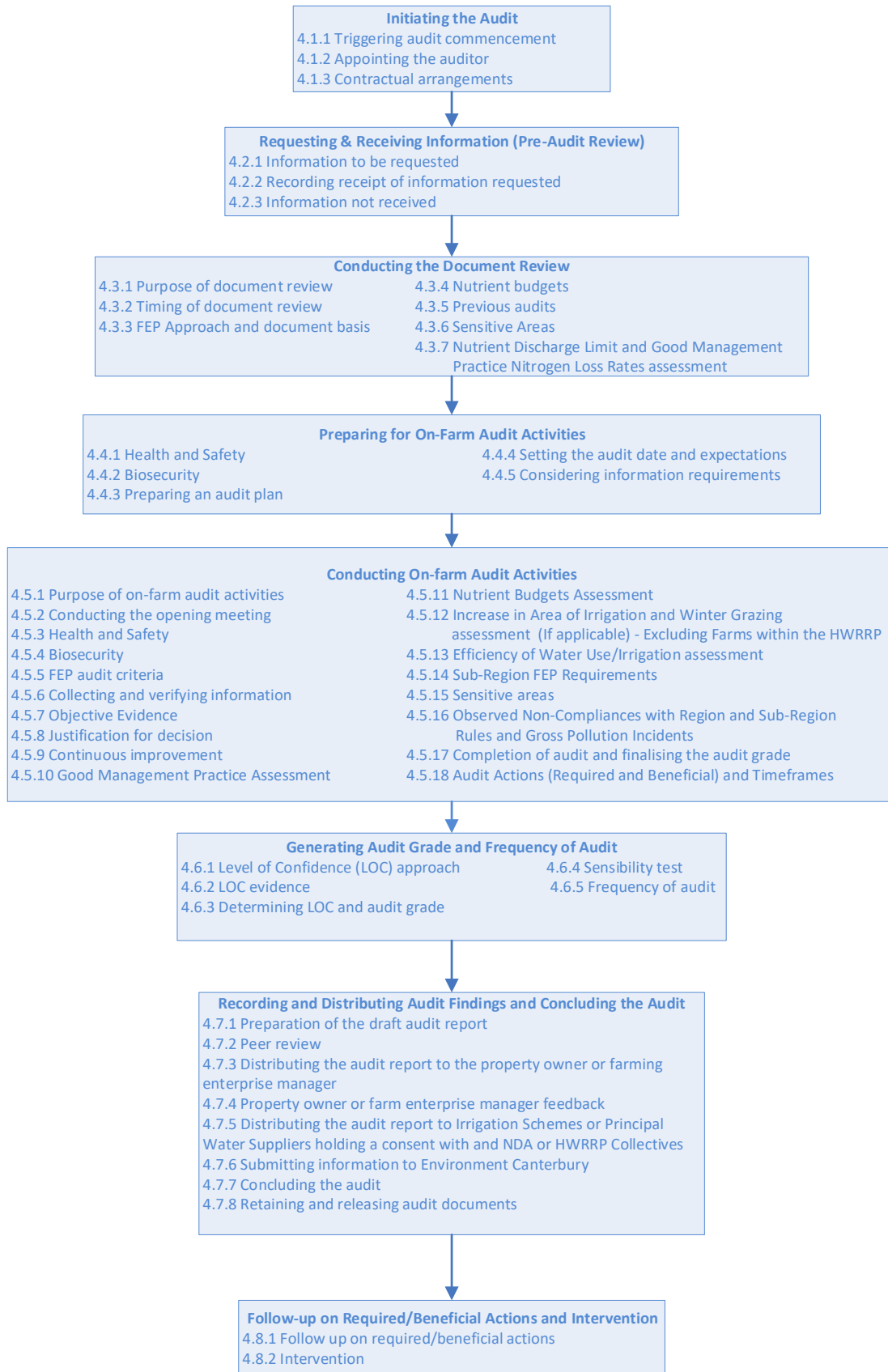


Figure 3: Canterbury Audit Process Overview

Figure 3.1: Consented Properties and Farming Enterprises (single and multiple management)

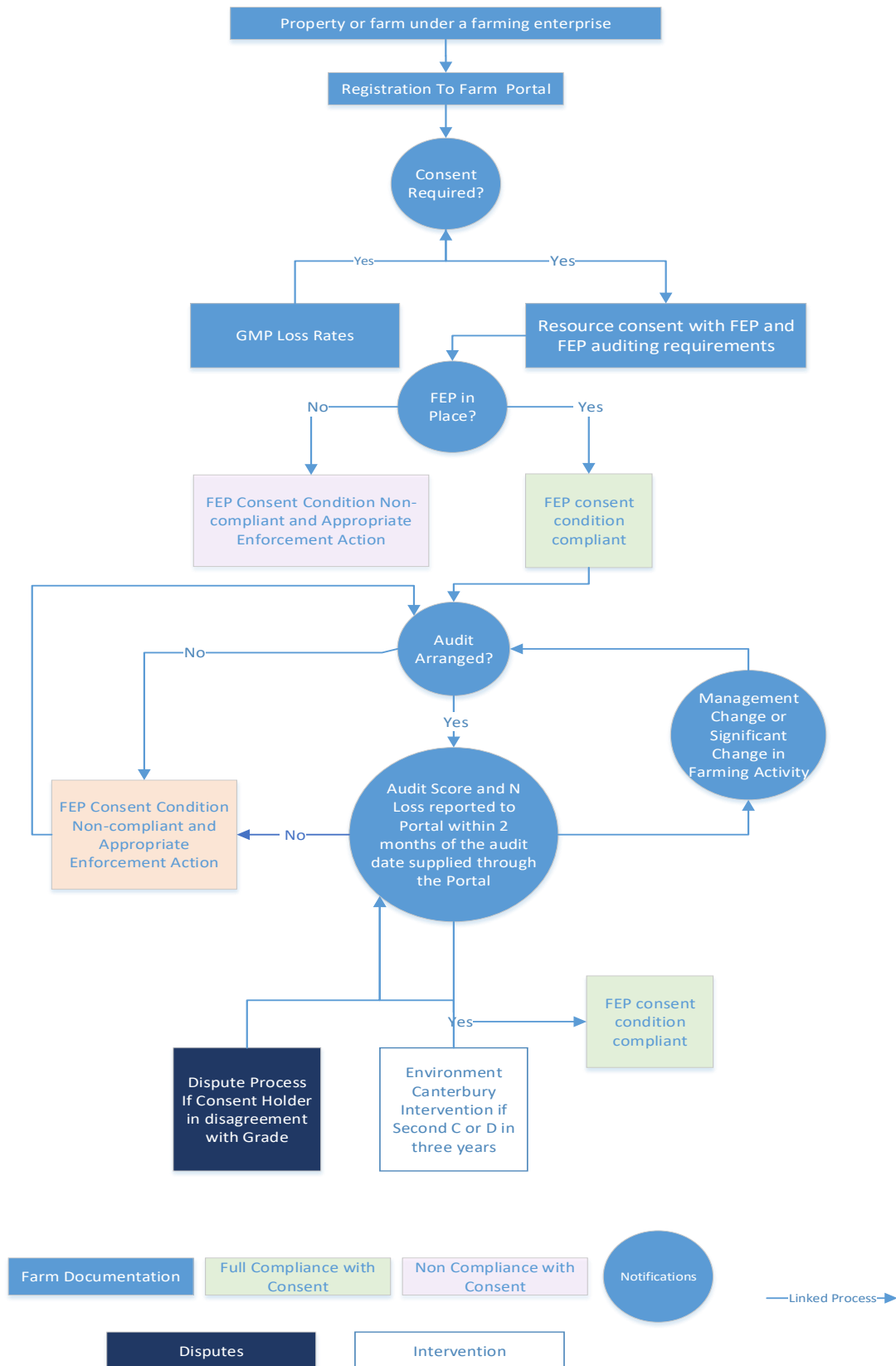


Figure 3.2: Irrigation Schemes and Principal Water Suppliers holding a resource consent with an NDA and HWRRP Collective

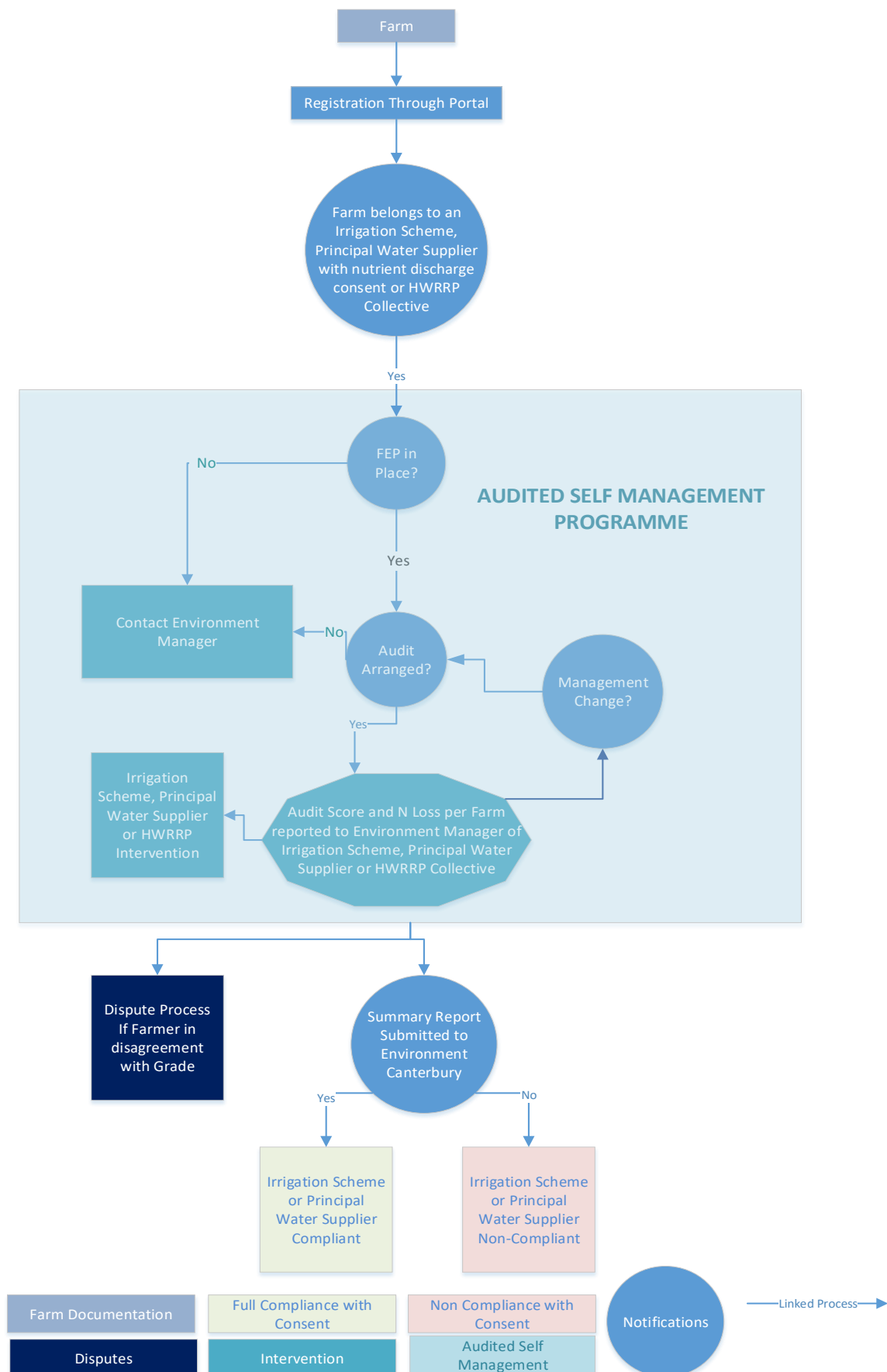
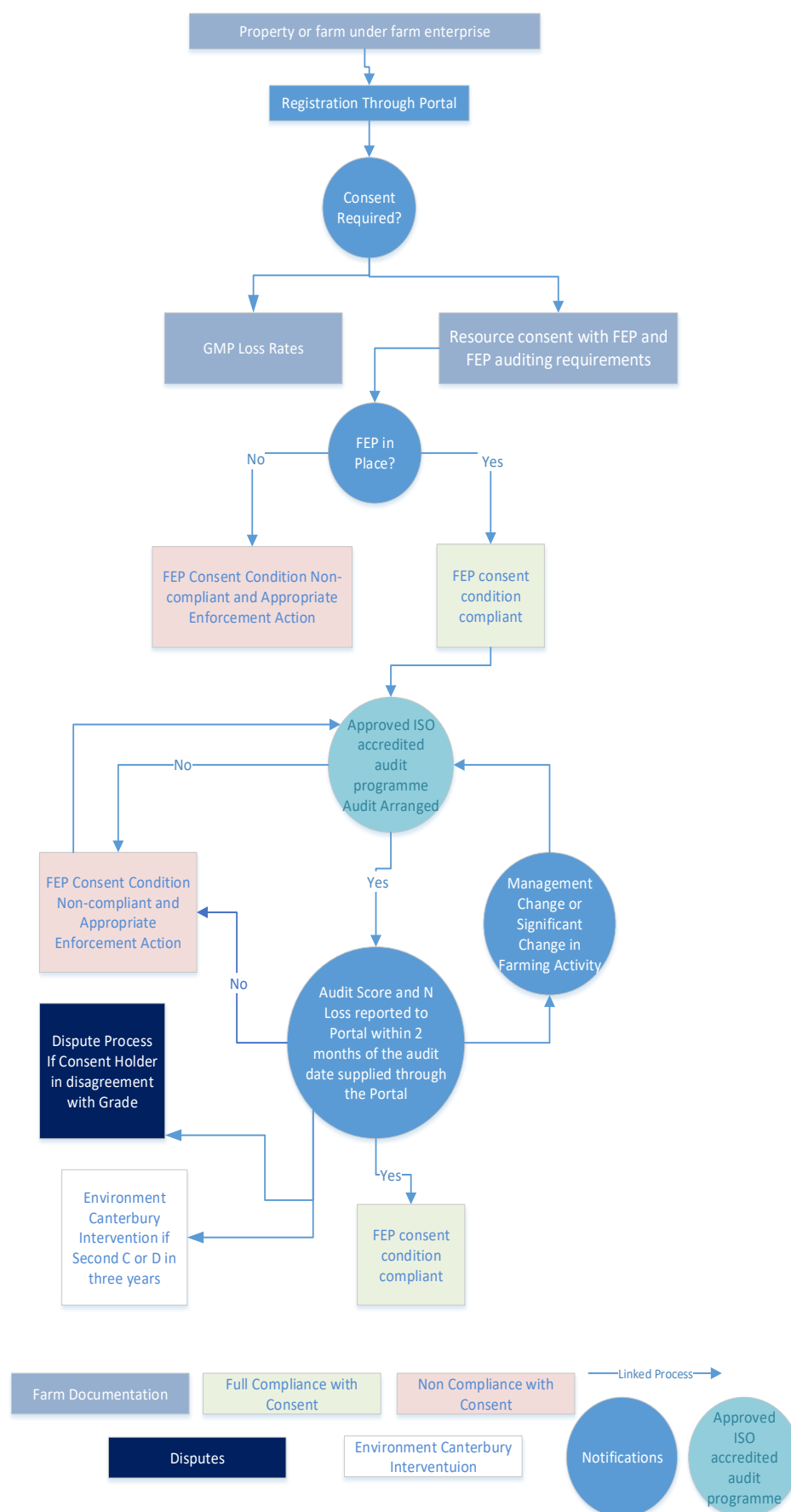


Figure 3.3: Consented Properties and Farming Enterprises (single and multiple management) linked to an Approved Industry Delivery Programme



4. FEP Audit Activities

4.1 Initiating the Audit

4.1.1 Triggering audit commencement

First FEP Audit

Consented properties and farming enterprises (single and multiple management)

An overview of the process for Initiating Audit Activities for consented properties and farming enterprises is shown in Figure 4.

Resource Consents that include a condition requiring development and implementation of an FEP shall stipulate the time when the first FEP audit is due.

Before the first FEP audit due date, Environment Canterbury will send a notification to the property owner and farming enterprise manager(s) which:

- Indicates the audit due date;
- Includes a reminder that, in line with resource consent conditions, an FEP audit is due to commence within six months;
- Requests the property owner and farming enterprise manager(s) to:
 - Identify an independent Certified FEP Auditor as defined in this Manual;
 - Agree a date for the audit with the Certified FEP Auditor; and
 - Recalculate using the current version of OVERSEER®:
 - Current N Losses
 - NLL, being either the:
 - Nutrient Discharge Allowance;
 - Nitrogen Baseline
 - Refer to an OVERSEER® budget for Selwyn Te Waihora, Hinds and South Coastal Streams catchments;
 - To be found in the Farm Portal Nutrient Loss Report elsewhere in region; and
 - Properties who have used NCheck (Region wide arable and horticulture properties or Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr) please ensure a Farm Portal Nutrient Loss Report has been re-run for the baseline 2009-13 period.
 - Baseline GMP or GMP Loss Rate (found in the Farm Portal Nutrient Loss Report) whichever is the lesser; or
 - Equivalent Baseline GMP or Equivalent GMP Loss Rate (calculated using the alternative model to the Farm Portal);and/or
 - Relevant reductions.
- Requires the property owner and farming enterprise manager to provide Environment Canterbury:
 - The name of Certified FEP Auditor; and
 - The date of the Audit.

If FEP audit intentions are not indicated as required by the first notification, Environment Canterbury shall send a further reminder to the property owner and farming enterprise manager(s). This further reminder shall provide the same information as the notification initially provided.

Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives

Farmers belonging to Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives will not receive a notification from Environment Canterbury that the first audit is due.

Instead, the management body for Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives shall ensure that the first audit for the farms belonging to their Irrigation Scheme, Principal Water Supplier or HWRRP Collective is undertaken within the timeframes and conditions stipulated in their resource consent and/or EMS. Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives can decide to either appoint their Environment Manager as the Certified FEP Auditor, if they meet the Certified FEP Auditor person specification criteria included in the FEP Auditor Certification Guidelines (including the independence criteria¹), or a Certified FEP Auditor.

Consented properties and farming enterprises (single and multiple management) linked to an approved ISO accredited audit programme

The approved ISO accredited audit programme management body shall notify all consented properties and farming enterprises that are part of their approved ISO accredited audit programme that in order to avoid duplication, no additional or separate FEP audit is required for any farm that has recently, or will imminently, have an audit carried out as part of an approved ISO accredited audit programme as defined in this Manual unless the farm is within the HWRRP area.

The approved ISO accredited audit programme Manager shall ensure that their audit score is converted into one of the Canterbury FEP scores listed in Table 4.

Subsequent FEP Audits

Consented properties and farming enterprise (single and multiple management)

Environment Canterbury will also trigger notification to the consented farm owner or farming enterprise manager of the need to initiate subsequent FEP audits based on their audit grade.

Change in Management or Significant Changes in Farming Systems

In order to check whether a change in management or significant change to a farming system has occurred, Environment Canterbury will send a "Change in Management or Significant Change in Farming System Confirmation Request" to all properties and farming enterprises (including farms that are part of an approved ISO accredited audit programme).

If change in management or significant changes to farming systems have occurred, Environment Canterbury will forward a reminder that an FEP audit must be carried out within 12 months or sooner for D graded farms.

¹ Certified FEP Auditor shall:

- Be Independence from the ownership, operation of the farm for which a FEP applies; and
- Have had no involvement in the preparation and implementation of the initial FEP; and
- Have not provided subsequent advice or guidance for FEP continuous improvement.

Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives

No “Change in Management or Significant Change in Farming System Confirmation Request” will be sent to the individual properties or farming enterprises that are members of Irrigation Schemes, Principal Water Suppliers, or HWRRP Collectives and to the Manager of such groups. Irrigation Schemes, Principal Water Suppliers and HWRRP Collectives are responsible for ensuring that subsequent audits for the farms belonging to their Irrigation Scheme, Principal Water Supplier or HWRRP Collective are undertaken within the time frames shown in Table 4. These time frames are determined by the grade awarded during the immediately previous audit or a change in management or significant changes in farm systems.

Consented properties and farming enterprises (single and multiple management linked to an approved ISO accredited audit programme)

Approved ISO accredited audit programmes shall also be responsible for ensuring that subsequent audits for the farms belonging to their Programme are undertaken within the time frames shown in Table 4.

4.1.2 Appointing the Certified FEP Auditor

Environment Canterbury will provide a list of Certified FEP Auditors.

Consented properties and farm enterprises (single and multiple management)

A Certified FEP Auditor shall be contracted by the property owner or farming enterprise manager(s) to carry out the FEP audit.

Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives

Irrigation Schemes, Principal Water Suppliers and HWRRP Collectives may use their Environment Manager to undertake their audit if they are a Certified FEP Auditor and meet the person specification criteria listed in the FEP Auditor Certification Guidelines, including those for independence. If these criteria cannot be met, the Irrigation Scheme, Principal Water Supplier or HWRRP Collective shall appoint a Certified FEP Auditor who meets the criteria.

4.1.3 Contractual arrangements

Parties to the contract for an FEP Audit

Environment Canterbury shall not enter into any contractual arrangements for performance of individual property or farming enterprise FEP audits. All contractual arrangements shall be made directly between the property owner, farming enterprise manager or Irrigation Scheme and Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective Manager and the Certified FEP Auditor.

The Certified FEP Auditor shall not enter into any contractual arrangements if they have been involved in the preparation of the FEP or nutrient budget for the property requiring the FEP audit.

Agreeing audit objectives, scope, criteria, peer reviews and costs

The Certified FEP Auditor is responsible for ensuring that any FEP audit contract they enter into includes:

- Audit objectives, scope and criteria that are able to be completed in accordance with this Manual
- Any intentions for a peer review of the audit activities and/or report
- An estimate of audit fees and costs together with means by which any change to these will be agreed and met.

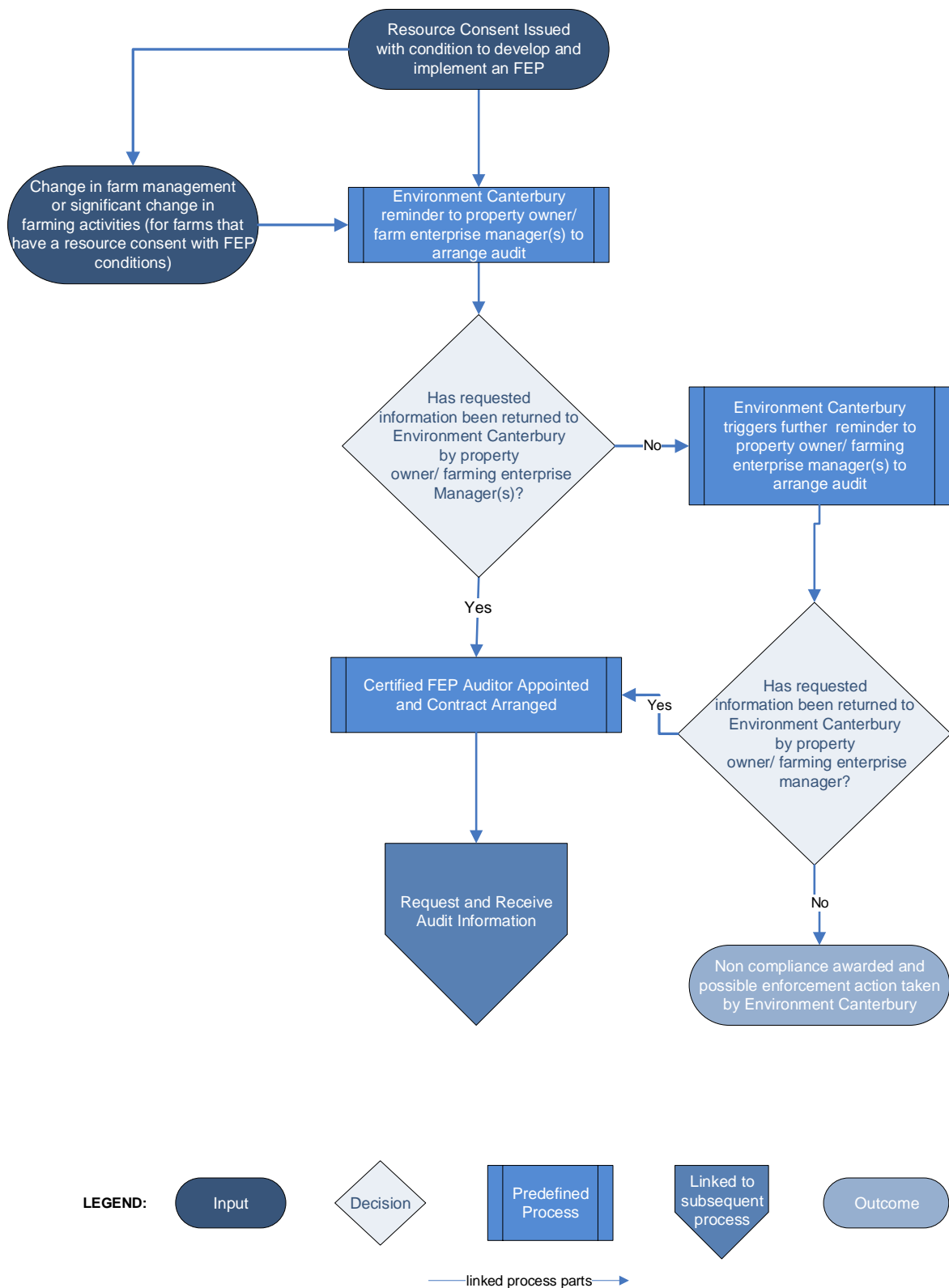
The Certified FEP Auditor shall request that the person responsible for the implementation of the FEP will be present on the day of the audit.

In the event that the person responsible for the FEP implementation cannot be at the audit, they shall nominate an appropriate person to be present in their place.

Providing for liability and insurance

Certified FEP Auditors shall ensure that their contract includes appropriate liability provisions and that they are responsible for arranging appropriate insurance pertaining to any service performed throughout the FEP audit.

**Figure 4: Initiating the Audit Activities
for consented properties and farm enterprises Overview**



4.2 Requesting and Receiving Audit Information (Pre-audit Review)

An overview of the process for Requesting and Receiving Audit Information (Pre-audit Review) shown in Figure 5.

4.2.1 Information to be requested

Upon entry into an FEP Audit contract, the Certified FEP Auditor shall request the information listed in Table 1 prior to the audit commencement and agree the date of submission.

Table 1: Information to be requested by the Certified FEP Auditor (Pre-Audit Review)

Information to be Requested		Caveat
Farm Identification		
<u>All consented properties and farming enterprises (single and multiple management)</u>		
Consent Number(s) the audit is related to	You can find the consent number in the <u>Farm Portal Nutrient Loss Report</u> .	
<u>Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective</u>		
Reference number	For their farms, please follow the reference number for the farm included in the EMS or, in its absence, contact their Environment Managers to retrieve their own naming conventions.	
FEP Information		
<u>All farms</u>		
Latest FEP	Must include a copy of property maps.	
<u>Consented properties</u>		
Copy of the Resource Consent Appendix containing FEP requirements	Certified FEP Auditors shall assess whether the FEP content matches the Resource Consent Appendix requirements.	

Information to be Requested	Caveat
<p align="center"><u>Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective</u></p>	
<p>A copy of the relevant Irrigation Scheme, Principal Water Supplier or HWRRP Collective EMS</p>	<p>This information is required only for farms connected to Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives.</p> <p>The EMS will help Certified FEP Auditors to familiarise themselves with the relevant Irrigation Scheme, Principal Water Supplier or HWRRP Collective governance regime, overarching targets and objectives and to follow any specific processes and procedures, such as performance reporting that may be required.</p> <p>If the individual farmer does not have a copy of the EMS, the Certified FEP Auditor should contact the Irrigation Scheme, Principal Water Suppliers or HWRRP Collectives to request a copy of their EMS.</p>
<p align="center"><u>All farms</u></p>	
<p>Previous audit report and any action plans</p>	<p>At least the latest report should be retained by the property owner or farming enterprise manager and made available to the appointed Certified FEP Auditor.</p>
<p align="center">Nutrient Losses information</p>	
<p align="center"><u>All farms</u></p>	
<ul style="list-style-type: none"> Nutrient Budget electronic Xml File (preferable) or paper copy of the budget Name of the person that prepared the nutrient budget Date OVERSEER® Version (or equivalent model approved by the Chief Executive of Environment Canterbury) <p><u>Arable and horticulture farms and Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr only:</u> <i>NCheck – Farm Portal Nutrient Loss Report showing answers related to the farming system.</i></p>	<p>The level of scrutiny of the robustness of nutrient budget is dependent on whether the budget has been prepared by a competent (e.g. Certified Nutrient Management Advisor) and experienced person.</p> <p>NCheck can be used to generate:</p> <ol style="list-style-type: none"> A nitrogen baseline or nitrogen loss calculation; and An updated nitrogen baseline or nitrogen loss calculation for a Farm Environment Plan audit when the nitrogen baseline or nitrogen loss calculation used in the Farm Environment Plan was generated using 'NCheck'

Information to be Requested	Caveat		
<p style="text-align: center;"><u>Consented properties</u></p> <table border="1"> <tr> <td data-bbox="193 230 810 943"> <ul style="list-style-type: none"> • Current Year N Loss (latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)) • Consented NLL: <ul style="list-style-type: none"> ○ Baseline (latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)) ○ Farm Portal Nutrient Loss Report containing: <ul style="list-style-type: none"> ▪ GMP Loss Rate as determined by Farm Portal (based nutrient budget estimated using latest version of OVERSEER®) ▪ Baseline GMP as determined by Farm Portal (based nutrient budget estimated using latest version of OVERSEER®) </td><td data-bbox="810 230 1422 943"> <p>To determine whether farm meets Target 1 of Objective 1 and 2 of the Nutrient Management Area.</p> <p>The GMP Loss Rate and Baseline GMP shall relate to the latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)).</p> <p><u>Certified FEP Auditors shall remind farmers to re-generate all losses using the latest version of OVERSEER® and Farm Portal Nutrient Loss Report to ensure that the audited losses are in line with the new version of OVERSEER®.</u></p> </td></tr> </table>		<ul style="list-style-type: none"> • Current Year N Loss (latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)) • Consented NLL: <ul style="list-style-type: none"> ○ Baseline (latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)) ○ Farm Portal Nutrient Loss Report containing: <ul style="list-style-type: none"> ▪ GMP Loss Rate as determined by Farm Portal (based nutrient budget estimated using latest version of OVERSEER®) ▪ Baseline GMP as determined by Farm Portal (based nutrient budget estimated using latest version of OVERSEER®) 	<p>To determine whether farm meets Target 1 of Objective 1 and 2 of the Nutrient Management Area.</p> <p>The GMP Loss Rate and Baseline GMP shall relate to the latest version of OVERSEER® (or equivalent model approved by the Chief Executive of Environment Canterbury)).</p> <p><u>Certified FEP Auditors shall remind farmers to re-generate all losses using the latest version of OVERSEER® and Farm Portal Nutrient Loss Report to ensure that the audited losses are in line with the new version of OVERSEER®.</u></p>
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<p style="text-align: center;">Health and Safety - Biosecurity Information</p>			
<p style="text-align: center;"><u>All farms</u></p> <table border="1"> <tr> <td data-bbox="193 1574 810 1720"> <p>Health and Safety procedures</p> </td><td data-bbox="810 1574 1422 1720"> <p>Certified FEP Auditors shall follow all Health and Safety procedures stipulated by the farmer and the Certified FEP Auditor's own organisation.</p> </td></tr> </table>		<p>Health and Safety procedures</p>	<p>Certified FEP Auditors shall follow all Health and Safety procedures stipulated by the farmer and the Certified FEP Auditor's own organisation.</p>
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<p>Biosecurity procedures</p>	<p>Certified FEP Auditors shall follow all biosecurity procedures stipulated by the farmer and the Certified FEP Auditor's own organisation</p>		

Certified FEP Auditors should note that in order to obtain access to nutrient budget information, farmers may need to sign a nutrient budget xml file release declaration issued by their fertilizer representative. The purpose of this declaration is to prevent tampering with the nutrient budget.

4.2.2 Recording receipt of information requested

The Certified FEP Auditor shall record receipt of the information requested. This record may be made using the Pre-Audit Review Check Form template included in Appendix 1 or by using alternative checklists and/or templates.

4.2.3 Information not received

If the requested information is not received within the agreed timeframe, the Certified FEP Auditor shall remind the property owner or farming enterprise manager that they are required to submit the information within one week.

At a minimum, in order for the audit to be able to be carried out, a copy of the FEP must be submitted to the Certified FEP Auditor.

If the FEP has not been submitted to the Certified FEP Auditor by the audit due date, the Certified FEP Auditor shall:

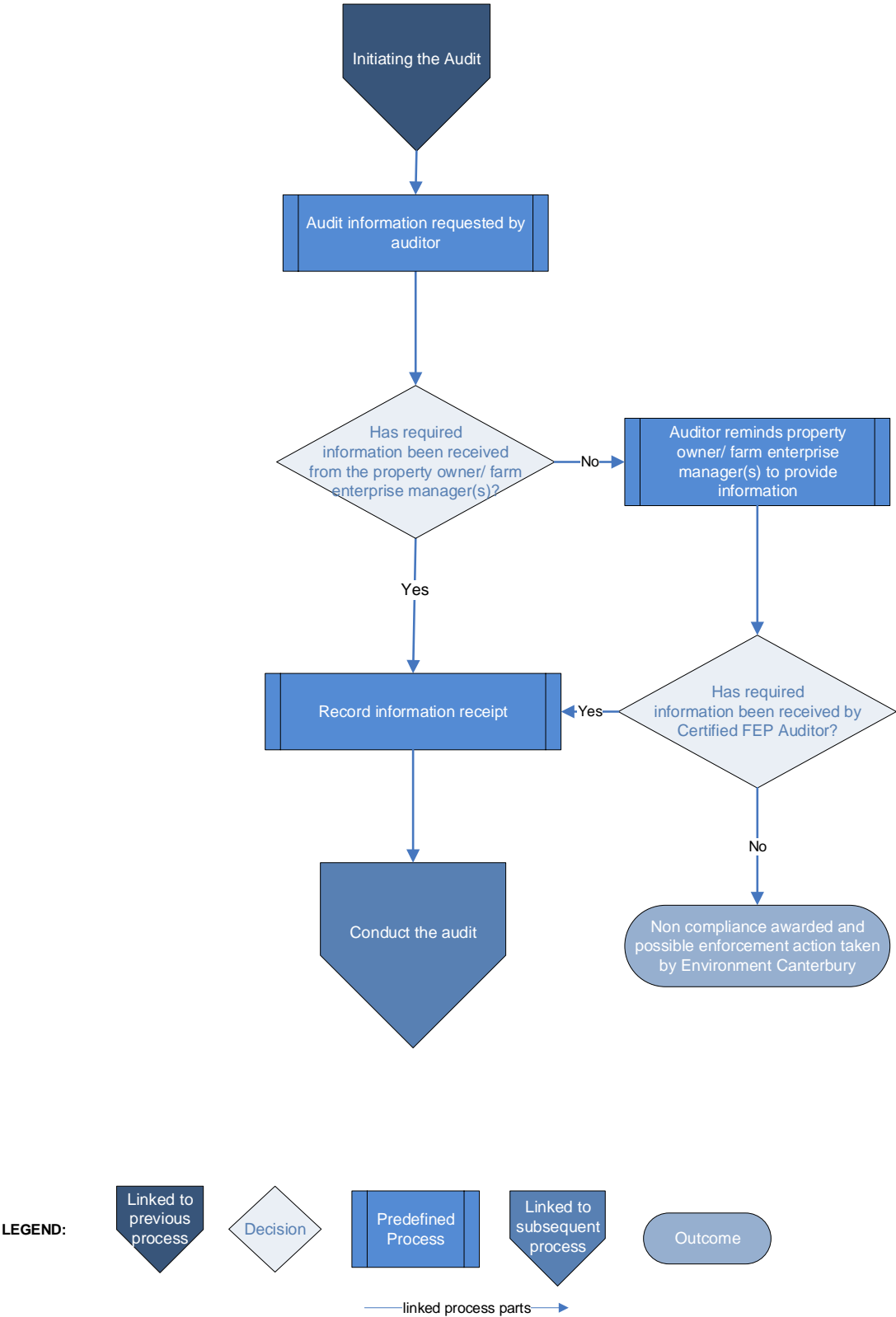
- Advise the Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL) or HWRRP Collective Environment Manager, as per their EMS, and property owner or farming enterprise manager that the audit has been cancelled, together with the reason for the cancellation;
- Contact Environment Canterbury to report that the audit has been cancelled together with the reason for its cancellation.

Should no audit be carried by the audit due date as required by the resource consent conditions, then the Certified FEP Auditor shall advise Environment Canterbury that this has not been able to occur.

Environment Canterbury will therefore consider that the conditions of the resource consent have not been met and shall:

- Award a non-compliance; and/or
- Take appropriate enforcement action.

Figure 5: Requesting and Receiving Audit Information (Pre-audit Review) Activities Overview



4.3 Conducting the Document Review

4.3.1 Purpose of the document review

A review of the FEP document shall be completed by the Certified FEP Auditor. The purpose of the document review is to:

- Consented properties and farm enterprises (single and multiple management)
 - consented properties - Check whether the FEP document meets the requirements defined in the Appendix attached to the resource consent;
 - Assess the robustness of the nutrient budget as described in Appendix 4 of this manual; and
 - Aid preparation for on-farm audit activities.
- For farms belonging to an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective
 - Ensure that an FEP developed as part of an Irrigation Scheme, Principal Water Supplier or HWRRP Collective programme meets objectives and targets described in their EMS and familiarise themselves with any specific processes and procedures that should be followed during the audit;
 - Assess the robustness of the nutrient budget as described in Appendix 4 of this manual; and
 - Aid preparation for on-farm audit activities.

4.3.2 Timing of document review

The FEP and supporting documentation is to be reviewed before commencing on-farm audit activities.

4.3.3 FEP review approach and document basis

A FEP should clearly demonstrate that it addresses requirements defined in either:

- The relevant Appendix of a resource consent requiring an FEP; or
- The EMS of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective's.

The Certified FEP Auditor shall assess whether the FEP approach and document basis meet the relevant Appendix of the resource consent requiring an FEP or meets Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL) or HWRRP Collective EMS requirements.

If during the audit, the Certified FEP Auditor finds that:

- Any relevant management area (including objectives and target) has not been considered as part of the FEP,
 - A "D" grade should be awarded to the farm; and
 - Follow up actions should indicate the inclusion of those management areas in line with either:
 - the Appendix of their resource consent; or
 - the EMS the farm is connected to.
- Any other information is missing, such as list of consents, the Certified FEP Auditor shall:
 - Consider the lack of information as part of the LOC assessment; and
 - As a follow up action, indicate to include the missing information in the FEP.

4.3.4 Nutrient Budgets

The Certified FEP Auditor shall assess whether or not the current nutrient budget is robust in line with Appendix 4 of this Manual. For arable and horticulture properties or Selwyn Waihora catchment properties with N losses less than 15kg N/ha/yr please follow 4.3.4.1 (Arable and horticulture properties or Selwyn Te Waihora properties with N losses less than 15kg N/ha/yr – NCheck).

If there are multiple nutrient budgets, the auditor shall assess the current nutrient budgets that refer to different farm systems. For example, if one farm had three dairy sheds, and three nutrient budgets prepared each season (one for each shed), then each of the three nutrient budgets would need to be assessed.

If a farm system has not undertaken a significant change in farm system, then a review of key inputs such as stocking rate, supplements (bought and sold), fertiliser use, paddock subdivision, pasture improvement, area in winter fodder etc. will give a Certified FEP Auditor a good sense of trend in current N Loss compared to the NLL.

Conversely there are examples of change where it is difficult to make that kind of judgement without an OVERSEER® budget. For example, where the farm system has changed from pure dairy platform to a system whereby all Mixed Age (MA) cows are wintered and replacements are reared on the platform now milking fewer cows. In those cases, a carefully prepared OVERSEER® budget is fully justified and essential.

Similarly, if a farm system has not undergone significant change but for example they have increased area in winter crop and mitigated using on/off grazing or mop-up crop such as early oats, an OVERSEER® budget would be a key tool in helping the Certified FEP Auditor determine whether the NLL is complied with or not.

4.3.4.1 Arable and horticulture properties or Selwyn Te Waihora properties with N losses less than 15kg N/ha/yr – NCheck

The Chief Executive of Environment Canterbury approved the use of NCheck for the use of land for:

1. For horticulture or arable farming, until 2020 and for Selwyn Te Waihora Catchment until 2022; and
2. Selwyn Te Waihora catchment properties with nitrogen losses less than 15Kg N/ha/yr to generate:
 - A nitrogen baseline or nitrogen loss calculation; and
 - An updated nitrogen baseline or nitrogen loss calculation for a FEP audit when the nitrogen baseline or nitrogen loss calculation used in the Farm Environment Plan was generated using 'NCheck'.

For the purposes of the approval described in bullet point 1 above;

- a. the use of land for a farming activity for horticulture is a farm with intensive vegetable rotations greater than 80% of the time; and
- b. the use of land for a farming activity for arable farming is a farm with a cropping rotation on more than 50% of the property and does not include properties that contain a milking platform for cows.

The Certified FEP Auditor will need to review the Farm Portal Nutrient Loss Report and ensure that the report has been re-run for the period related to the audit. At the time of the audit, the Certified

FEP Auditor will need to ensure that the answers to the questions included in the Farm Portal Nutrient Loss Report represent the farm system observed on farm.

4.3.5 Previous audits

Copies of previous audit findings, including recommended improvements and supporting documents should preferably be obtained from the property owner or farming enterprise manager or may alternatively be obtained from the previous Certified FEP Auditor.

The Certified FEP Auditor should have regard for any recommended improvements and required corrective actions identified during previous audits and consider the effectiveness of actions in addressing these. Improvements in practices that are included in the FEP and/or the application of farming practices between audits should also be identified by the Certified FEP Auditor.

4.3.6 Mahinga Kai

The Certified FEP Auditor shall:

- Take note of all mahinga kai areas (any waterbodies, wetlands, mahinga kai species and habitats); and
- Determine if the FEP (or accompanying mahinga kai guide) contains:
 - The appropriate targets and/or objectives; and
 - GMPs to protect and enhance mahinga kai.

4.3.7 Biodiversity Values

The Certified FEP Auditor shall:

- Take note of all biodiversity values have been identified on the FEP Map; and
- Determine if the FEP contains:
 - The appropriate targets and/or objectives; and
 - GMPs to protect and enhance biodiversity values.

4.3.8 N loss vs NLL assessment

4.3.8.1 Consented properties and farming enterprises under single management

This assessment relates to target 1 of Objective 2 of the Nutrients Management Area. If the resource consent does not include any requirement for the assessment of current N loss against the NLL then the relevant target or objective shall be graded as Non-Applicable.

The Certified FEP Auditor shall assess whether the current N loss for the farm meet the consented NLL defined in the resource consent and the Appendix attached to the resource consent as:

- Nutrient Discharge Allowance;
- Nitrogen Baseline²:
 - Refer to an OVERSEER® budget for Selwyn Te Waihora, Hinds and South Coastal Streams catchments;
 - To be found in the Farm Portal Nutrient Loss Report elsewhere in region; and
 - Properties who have used NCheck (Region wide arable and horticulture properties or Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr) please ensure a Farm Portal Nutrient Loss Report has been re-run for the baseline 2009-13 period.

- Baseline GMP or GMP Loss Rate (found in the Farm Portal Nutrient Loss Report) whichever is the lesser; or
 - Equivalent Baseline GMP or Equivalent GMP Loss Rate (calculated using the alternative model to the Farm Portal); and/or
- Relevant reductions.

The current N Loss is either:

- Current year N Loss if less or equal to the consented NLL; or
- Average of latest 4 years N Loss if current N Loss is greater than the consented NLL – Losses under the same version of OVERSEER® or equivalent model approved by the Chief Executive of Environment Canterbury:
 - NCheck (Region wide arable and horticulture properties or Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr): please ensure that the Nutrient Loss Report has been re-run for the period related to the audit.
 - If the current year N Loss is greater than the consented NLL and the farmer does not have records of the latest 4 years N losses, the Certified FEP Auditor shall:
 - Report the current year N Loss; and
 - Compare the current year N Loss to the consented NLL.

4.3.8.1.1 Discrepancies between Nitrogen Loss and the NLL

Discrepancies will affect the LOC for the target, objectives and consequently the audit grade.

Where discrepancies are found, the Certified FEP Auditor shall determine whether this is due to the property not operating at GMP, a farm system change, and/or a limitation of the model used to estimate the Nitrogen losses, as follow:

- 1) If the property is not operating at GMP the FEP shall record required actions and timeframes to get to GMP and shall be graded depending upon the auditor's level of confidence around whether the farmer is on-track to meet the target as normal;
- 2) If the property is operating at GMP (in terms of the actual practices) or beyond where further reductions are required and:
 - a. Has undergone a system change; and
 - i. An OVERSEER® version change now means that they are not meeting the target; but
 - ii. The farmer can demonstrate that they were able to meet the NLL under the previous version of OVERSEER®; and
 - iii. The FEP record contains required actions and timeframes to reduce losses to at or below the NLL.
 - iv. Where reductions are required, the GMPs present on farm account for further reductions.
 - Or
 - b. Has not undergone a system change from the baseline/target system but the farmer can demonstrate that the discrepancy is due to a limitation of:
 - i. The OVERSEER® model, or alternative model approved by the Chief Executive of Environment Canterbury in measuring natural variability in farm systems

then the:

- i. Target shall be graded as “medium” at best;
- ii. Objective shall be graded as “medium” at best.

Table 2: Examples of discrepancies between Nitrogen Losses and the NLL

LOC	NLL Met	Target 1		Objective 2
		GMP in place or beyond where required	Limitation of model used to estimate N Loss	LOC
High	Y	Y	N/A	High at best <i>dependent on other targets LOC</i>
Medium	N	Y	Y	Medium at best <i>dependent on other targets LOC</i>
Low	N	Y	N	Low
Low	N	N	Y	Low
Low	N	N	N	Low

Actions to reduce nutrient losses are only required in the event of a farm system change having occurred.

4.3.8.2 Consented farming enterprises under multiple management

If applicable, this assessment relates to target 1 of Objective 2.

The Certified FEP Auditor shall ascertain whether the contractual arrangement and corresponding FEPs require the farm to meet NLL and/or further reductions where applicable. If this requirement is present, the Certified FEP Auditor shall assess whether the current N loss meet the NLL and/or further reductions included in the FEP.

Where discrepancies are found, the auditor shall follow the procedures included in 4.7.3.1.1 (*Consented farms and farming enterprises under single management*).

4.3.8.3 LWRP Irrigation Scheme and Principal Water Suppliers holding a resource consent with a NLL

4.3.8.3.1 Irrigation Scheme or Principal Water Supplier’s resource consent or the EMS containing explicit GMP Loss Rate targets per farm

If applicable, this assessment relates to target 1 of Objective 2, i.e. the GMP Loss Rate only.

The Certified FEP Auditor shall ascertain whether the EMS of the Irrigation Scheme or Principal Water Supplier and corresponding FEPs require the farm to meet GMP Loss Rate and further reductions. If this requirement is present, the Certified FEP Auditor shall assess whether the current N loss meet the GMP Loss Rate and/or further reductions included in the FEP.

Where discrepancies are found, the auditor shall follow the procedures included in 4.7.3.1.1 (*Consented properties and farming enterprises under single management*).

4.3.8.3.2 Irrigation Scheme or Principal Water Supplier’s resource consent or the EMS without explicit GMP Loss Rate target per farm

The Auditor shall interpret Target 1 of Objective 2 as:

- Nitrogen losses from farming activities are minimised.

The Certified FEP Auditor shall provide the LOC against that target. The nutrient budget is a tool that will help the Certified FEP Auditor to assess whether nitrogen losses from farming activities are being minimised. While not required, the Certified FEP Auditor should use as a guide, the GMP Loss Rate for the property where it is available.

4.3.8.4 HWRRP Collective farms - GMP Loss Rate assessment only

4.3.8.4.1 HWRRP EMS containing explicit GMP Loss Rate targets per farm

If applicable, the Certified FEP Auditor shall assess the performance of the farm against the GMP Loss Rates for nitrogen and phosphorus described in the Collective's EMS.

Where discrepancies are found, the auditor shall follow the procedures included in 4.7.3.1.1 (Consented properties and farming enterprises under single management). The same approach would apply for Phosphorus targets.

4.3.8.4.2 HWRRP EMS without explicit GMP Loss Rate targets per farm

The Auditor shall interpret Target 1 of Objective 2 as:

- Nitrogen losses from farming activities are minimised.

The Certified FEP Auditor shall provide the LOC against that target. The nutrient budget is a tool that will help the Certified FEP Auditor to assess whether nitrogen losses from farming activities are being minimised. While not required, the Certified FEP Auditor should use as a guide, the GMP Loss Rate for the property where it is available.

4.4 Preparing for On-Farm Audit Activities

4.4.1 Health and Safety

The Certified FEP Auditor shall:

- Understand all health and safety procedures provided by the farm manager and abide by these; and
- Ensure that all necessary Personal Protective Equipment (PPE) is clean and in good condition.

4.4.2 Biosecurity

The Certified FEP Auditor shall:

- Understand all biosecurity procedures provided by the farm manager for visitors and abide by these;
- Ensure that all necessary PPE is clean and in good condition.

If the farm is experiencing an outbreak of contagious disease, such as Salmonella or Yersinia, the Certified FEP Auditor shall postpone the audit until the farm has been declared as clear. Environment Canterbury should be advised of this postponement and the reason for it.

Biosecurity for pig farms

Pig farmers seek to maintain a high health status of their pigs to ensure healthier pigs, limit deaths and maintain productivity. They do this by eliminating some diseases and parasites from their farm, buy in stock from high health herds, breeding their own replacement stock, having a quarantine and acclimatisation procedure in place for new stock arriving on farm. To maintain their health status, they limit possible disease vectors, one of these being visitors to the farm, including vehicles and equipment.

If you want to visit a pig farm you will be required to adhere to biosecurity protocols. These may include but are not limited to:

- To have a 'stand down period' (no contact with any pigs) from other farms, sale yards, backyards for up to 72 hours or longer;
- Change into farm clothing and footwear provided by the farm;
- Visiting vehicles to remain outside boundary of farm;
- Sterilisation of any equipment taken into piggery;
- Shower in and out of the farm; and
- Sign a document stating that you have not had contact with pigs.

Before visiting the farm, check with the farm what the farm biosecurity requirements for visitors are

4.4.3 Preparing an audit plan

The Certified FEP Auditor shall prepare an audit plan to facilitate scheduling and coordination of on-farm audit activities and agreement of these with the property owner or farming enterprise manager. The audit plan should be sufficiently flexible to allow for changes that may become necessary as the audit progresses.

As part of the audit plan, the Certified FEP Auditor shall ensure that they have reviewed and prepared work documents referred to in section 4.2.1 (Information to be requested) of this Manual.

Matters covered in the audit plan should include the following:

- The date, time and place where the on-farm audit activities will be conducted;
- Issues identified in the pre-audit check that should be considered during the on-farm audit assessment;
- Expectations of the property owner during the audit (e.g. guiding around the farm, availability to answer questions, demonstration of specific practices);
- An outline of audit activities expected to take place, including opening and closing meetings, consideration of specific issues highlighted during the document review or otherwise identified;
- Logistical arrangements (e.g. ensuring access to the property, specific facilities or equipment);
- Health and Safety procedures to be followed at the time of the audit;
- Biosecurity procedure to be followed at the time of the audit; and
- Confidentiality reassurance.

A Pre-Audit Checklist/ Audit Plan template can be found in Appendix 1. Use of the Pre-Audit Checklist/ Audit Plan template provided in Appendix 1 is not mandatory and a Certified FEP Auditor may develop and use their own Pre-Audit Check and Audit Plan documents. However, irrespective of the document used to record pre-audit checks and prepare audit plans, the Certified FEP Auditor must retain copies as these could be considered during the Auditor Certification re-registration assessment (please refer to the FEP Auditor Certification Guidelines for information on re-registration).

4.4.4 Setting the audit date and expectations

The Certified FEP Auditor shall agree a date for the on-farm audit assessment with the property owner or farming enterprise manager and inform them of:

- Farm data/records that need to be available at the time of the on-farm audit assessment;
- Farm practices or activities to be observed; and
- Farm locations to be viewed.

It is also essential that the person most responsible for FEP implementation is present at the time of the audit because:

- Conversations with them can contribute the accuracy of audit findings, including assessment levels of confidence and identification of follow up actions; and
- Access to records, ability to observe farm practices or activities and ability to access farm locations or equipment may be enabled or enhanced.

4.4.5 Considering information requirements

When preparing for on-farm audit activities, the Certified FEP Auditor must develop an Audit Plan that focuses on:

- Gathering and assessing information required to assess on-farm performance with respect to each management area identified in the FEP, as defined in the relevant Appendix to the Resource Consent or Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective programme EMS; and
- Being able to use this information to assign a LOC grade for overall farm performance.

This means that the audit plan should ensure that:

- An appropriate sample of farming activities can be assessed;
- Objective evidence is considered;
- Justifiable reasons for assessment outcomes (negative or positive) can be provided; and
- The information gathered and considered can be used to assign an accurate overall LOC audit grade.

The audit plan should therefore have regard for the Certified FEP Auditor's ability to gather appropriate evidence during the audit to determine the LOC.

Matters the Certified FEP Auditor should consider when developing audit plans include:

- Significance of the objective and operations;
- Results of previous audits; and
- Competence of personnel.

It is preferable for checklists and forms developed by Environment Canterbury to be used by Certified FEP Auditors. However, a Certified FEP Auditor may develop and use their own checklists and include these as part of the audit records.

Further specific information about how these needs can be met is provided in the following parts of this Manual describing:

- Conducting on-farm audit activities; and
- Generating audit findings and preparing audit conclusions.

4.5 Conducting On-Farm Audit Activities

The Environment Canterbury FEP Audit Template included as Appendix 2 shall be used to record findings.

An overview of the process for Conducting On-Farm Audit Activities is shown in Figure 6.

4.5.1 Purpose of on-farm audit activities

The purpose of the on-farm audit activities is to assess:

- The extent to which FEP document content has been met; and
- Progress being made toward the achievement of objectives, targets and GMPs that would contribute towards the management of the identified risks in the FEP to minimise the impact on water quality and thereby protect cultural values that can be affected by that water quality.

4.5.2 Conducting the opening meeting

The Certified FEP Auditor shall commence the on-farm audit assessment with an opening meeting involving the property owner or farming enterprise manager to:

- Explain how the on-farm audit assessment activities will be carried out;
- Confirm the audit timetable and other relevant arrangements;
- Confirm matters relating to confidentiality;
- Discuss any concerns raised during the pre-audit review;
- Re-affirm that the audit findings will be provided at the completion of the on-farm assessment;
- Confirm matters related to Health and Safety; and
- Confirm matters related to Biosecurity.

4.5.3 Health and Safety

To eliminate, isolate or minimise potential hazards, the Certified FEP Auditor shall ensure that:

- A safety briefing is undertaken to re-affirm any hazards present on the farm on the day of the audit.
- Follow all the Health and Safety procedures as required by the property owner or farming enterprise manager, including those provided prior to the on-farm audit assessment
- Follow all the Health and Safety procedures provided by the Certified FEP Auditor's own organisation

4.5.4 Biosecurity

To eliminate, isolate or minimise potential spread of disease and pests, the Certified FEP Auditor shall ensure that:

- A safety briefing is undertaken to re-affirm any biosecurity matters;
- All National, Regional and Industry biosecurity guidelines are followed;
- Biosecurity criteria for Pig Farms listed in section 4.4.2 (Biosecurity) are followed;
- Appropriate PPE is worn while on farm; and
- No area of the farm shall be accessed unless accompanied or given permission by the farm manager.

4.5.5 FEP audit criteria

The farming activity occurring on the property must be audited against the following minimum criteria:

- An assessment of performance against the objectives, targets, good practices and timeframes in the FEP;
- An assessment of the robustness of the nutrient budget/s; and
- An assessment of the efficiency of water use (if irrigated).

4.5.6 Collecting and verifying information

In order to carry out their assessment against the minimum criteria, the Certified FEP Auditor should:

- Review farm data/records;
- Visit locations on the property or parts of the farming enterprise where areas of interest/issues can be observed in order to assess the application of practices to meet targets and objectives;
- Observe practices occurring that relate to areas of interest/issues can be observed to assess the application of practices to meet targets and objectives; and
- Carry out interviews using open questions, engaging with and listening to the property owner or farming enterprise manager.

4.5.7 Objective evidence

All decisions must be made on the sighting of objective evidence. This may include:

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

Examples of objective evidence against targets for each management area are included in Appendix 7.

4.5.8 Justification for decisions

All audit findings, being LOC assessments (see 4.6 Generating Audit Grade and Frequency of Audit), must be supported by information which justifies the decision including some or all of:

- Targets reasons for the assessment (based on GMP);
- Targets objective evidence; and
- Targets reasons against the Assessment.

Justification for decisions (both for and against) could include reference to GMPs, including those which can and cannot be modelled

4.5.9 Continuous Improvement

Audit findings should promote continuous improvement in farm practices.

During the assessment the Certified FEP Auditor should therefore recognise innovation and provide flexibility for the implementation of GMP and GMP changes over time. The auditor should consider effort made by the property owner or farming enterprise manager to implement new practices and have regard for the timeframe that implementation of new practices may require (even if longer than is defined in the FEP).

4.5.10 Good Management Practice assessment

The Certified FEP Auditor shall assess whether the activities carried out on the farm meet GMP and determine the LOC with which the FEP target and objectives are met. When GMP is met, the Certified FEP Auditor shall have a higher LOC than the target and objectives included in the FEP are being met.

When assessing GMPs, the Certified FEP Auditor should:

- Assess the application of GMPs that are related to the current farm system;
- Take into consideration the period over which the implementation programme is planned to occur and assess progress relative to that programme; and
- Recognise not only when industry and sector specific GMP have been applied, but also when practices beyond this have been implemented at the farm and recognise their implementation.

4.5.11 Nutrient Budgets assessment

Appendix 4 contains procedures of how to determine the robustness of a nutrient budget. For Selwyn Te Waihora catchment arable and horticulture farms please follow 4.5.11.1

The Certified FEP Auditor shall assess the robustness of the budget related to the most recent budget.

This assessment will affect the LOC of meeting the nutrients management area targets and objectives.

4.5.11.1 Arable and horticulture properties or Selwyn Te Waihora catchment properties with nitrogen losses less than 15kg N/ha/yr – NCheck

The Certified FEP Auditor shall ensure that the Farm Portal Nutrient Loss Report relates to the period of the audit (most recent 1 July – 30 June period).

The auditor shall ensure that the answers included in the Farm Portal Nutrient Loss Report represent the farm system present on farm.

4.5.12 Increase in Area of Irrigation and Winter Grazing Assessment (if applicable) - Excluding farms within the HWRRP

If winter grazing and/or irrigation are undertaken on the farm, the Certified FEP Auditor shall ascertain whether the irrigated land area and winter grazing area have increased as compared with the area of land that was irrigated and/or irrigated at the time of the most recent audit.

If the area has increased, the Certified FEP Auditor should include in the Required Actions and timeframes provisions to prepare the farm nitrogen loss using annual input and not four-year average for the period related to the increase of winter grazing or irrigation area.

Certified FEP Auditors should refer to Sub-Region Sections and EMS's of Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL for specific and localised requirements.

4.5.13 Efficiency of Irrigation and Water Use assessment

Certified FEP Auditors are required to assess the efficiency of irrigation and water use, if irrigated. The FEP should include a description of measures planned to achieve efficient irrigation and water use.

The Certified FEP Auditor should include consideration of the description of means by which this will be achieved as part of the document review.

Assessment of the efficiency of irrigation and water use should include an assessment of system capability and mode of operation. It may also include an assessment of application efficiency calculated using water meter data, long term average climatic data, and take in to account soil types and land use.

Where handheld soil moisture monitoring probes (e.g. K-probe) are used the Certified FEP Auditor shall inspect the areas where they are used and ask the farmer how they use them.

In instances where no irrigation data is present, the Certified FEP Auditor shall require a farmer to start recording quantitative evidence of their irrigation scheduling.

This assessment will affect the level of confidence of meeting the irrigation targets and objective.

The Certified FEP Auditor shall be aware that, for implementation purposes:

- New irrigation infrastructure is either brand new installed infrastructure or infrastructure installed within the current irrigation season.

Appendix 5 contains procedures on how to assess irrigation and water use efficiency.

4.5.14 Mahinga kai

Mahinga kai protection and enhancement through the implementation of GMP is now a target (target 4) within the Waterbody Management Area (wetlands, riparian areas, drains, rivers, lakes) of the regional FEP framework. Some Sub-Regions, e.g. Selwyn Waihora (Management Area) and Waitaki (Management Area), may have additional requirements which needs to be included in the FEP.

The Certified Auditor shall assess:

- Mahinga kai risks adequately identified in the FEP; and
- GMPs to manage risks.

4.5.14.1 Regional Framework - Target 4 of Waterbodies Management Area and Selwyn Waihora - Target 1 of Mahinga Kai Management Area

To determine whether the risks have been appropriately addressed, the Certified FEP Auditor shall assess whether GMPs related to risks on mahinka kai value have been applied throughout all Management Area targets based on the awareness of the value and evidence actions taken or a documented plan to address the values, as these will influence Level of Confidence of all Management Area targets (section 4.6.3.1.1.3).

This assessment will influence the Level of Confidence of all Management Areas targets and related objectives, which, consequently determine the Level of Confidence of the mahinga kai target

The Certified FEP Auditor shall follow the steps included in section 4.6.3.1.1.2 to determine the Level of Confidence of the mahinga kai target.

4.5.14.2 Other Mahinga Kai Targets

For other mahinga kai targets, the Certified Auditor shall follow the steps included in section 4.6.3.1.1.3 to determine the Level of Confidence for the targets and related objectives.

4.5.15 Biodiversity values

Biodiversity values protection and enhancement through the implementation of Sub-Regional requirements, e.g. Waitaki (Management Area).

The Certified Auditor shall assess, where applicable:

- Biodiversity values have been adequately identified in the FEP; and
- GMPs to address their protection and enhancement.

4.5.16 Sub-Region FEP requirements

Certified FEP Auditors shall assess the progress made towards meeting Sub-Region FEP requirements included in the Appendix of resource consents or the EMS of an Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL) or HWRRP Collective, as they would influence the LOC of meeting the objective and targets included in the FEP.

The Certified FEP Auditor shall record in the audit report:

- The progress made towards meeting the Sub-Region FEP requirements in line with the Level of Confidence approach; and
- The necessary required actions and timeframes to ensure conformity with Sub-Region FEP requirements and to meeting the FEP objectives and targets.

The progress made towards meeting Sub-Region targets and objectives will influence the overall audit grade.

4.5.17 Observed Non-Compliances with Region and Sub-Region Rules and Gross Pollution Incidents

Certified FEP Auditors shall ensure that the steps shown below are followed when they observed any non-compliance with Region and Sub-Region rules before finalising the audit grade and concluding the audit:

- (i) Notify the farmer of the non-compliance;
- (ii) Provide a timeframe to rectify the non-compliance;
- (iii) If the non-compliance is not rectified
 - a. Obtain confirmation that the non-compliance is rectified by either re-visiting the farm or receiving photographs, etc.;
 - b. Report the non-compliance in the Audit Report as a reason against saying it has been addressed/corrected and in the comments section saying it has been addressed/corrected
- (iv) If the non-compliance is not rectified or will require a longer timeframe to rectify:
 - a. The Certified FEP Auditor shall have either a Low or Medium LOC that the targets and objectives have been met;
 - b. Report the non-compliance in the Audit Report as a reason against the assessment and in the comments section;
 - c. Report the non-compliances:

- In line with the EMS of the Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective the farms belong to; or
 - For dairy farms, to their Milk Supplier or Dairy Industry Body.
- (v) Conclude the audit and finalise the audit grade.

In addition to the above, the Certified FEP Auditor shall notify Environment Canterbury (e.g. using 24-hour Pollution Hotline (03) 366 4663 or 0800 76 55 880) of any observed gross pollution. Examples of gross pollution are:

- Mass stock in waterways;
- Discharge of contaminants into waterways (e.g. effluent; agrichemicals, leachate from silage pits; milk etc.);
- Burning of toxic waste (e.g. tyres);
- Vegetation clearance against a Region or Sub-Region rule or unconsented activity; and
- Illegal works in waterways (e.g. building bridges and or culverts).

If in doubt, the Certified FEP Auditor should discuss the incident with Environment Canterbury.

4.5.18 Completion of the audit and finalising the audit grade

The Certified FEP Auditor shall conclude the audit when they are satisfied that no further assessment is required.

Once the audit is concluded and before leaving the property they shall summarise the audit activities, provide an overview of audit findings and inform the property owner or farm enterprise manager:

- Of the indicative result of the audit (targets LOCs, overall grading and required actions with timeframes);
- If relevant, where to seek advice and support to create an action plan to implement the required actions; and
- That a draft of the audit report will be sent to them for consultation before finalising the audit report.

Appendix 8 contains examples of how to grade farms in instances where GMP has not been followed.

4.5.19 Audit Actions (Required and Beneficial) and Timeframe

Audit findings may include identification of:

- Required Actions; or
- Beneficial Actions (A grades or High LOC Objectives and Targets only).

The registered FEP Auditor shall provide **SMART** required or beneficial actions.

Specific
Measurable
Agreed-upon
Realistic
Time-related

Required Actions

These are action(s) to improve farm performance in order that FEP objectives and/or targets can be met or to promote continuous improvement.

Beneficial Actions – A grades or High LOC Objectives and Targets only

These are actions action(s) to promote continuous improvement.

Audit required or beneficial actions and timeframes are not submitted to Environment Canterbury unless required by a resource consent but may be requested by Environment Canterbury when it is clear that:

- A law, including statutory or regulatory requirements are not being met, leading to a low level of confidence of meeting the targets and/ or objective of the FEP
- Any target and or objective of the FEP is not met
- FEP deficient in respect of the activities occurring at the site
- The FEP is not in line with either:
 - The Appendix of the resource consent containing FEP requirements; or
 - The EMS of the Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL) or HWRRP Collective.
- GMP has not been met.

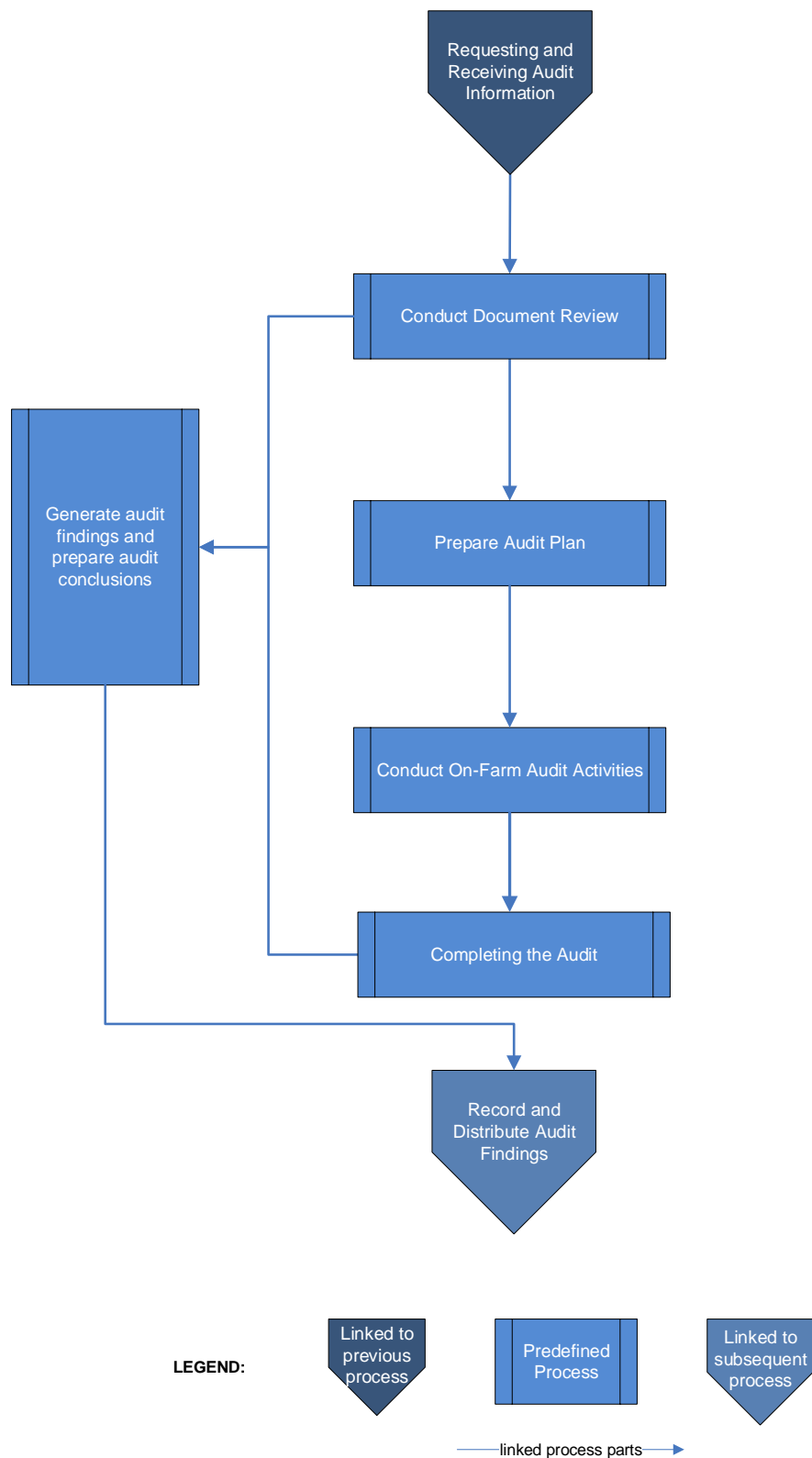
Any audit required or beneficial action(s) identified should be discussed with the property owner or farming enterprise manager during the on-farm audit closing meeting. At that time the Certified FEP Auditor should also explain to the property owner or farming enterprise manager that it is necessary to prepare an Action Plan for addressing the audit required or beneficial actions and implement that plan.

While audit required actions identify the need for improvements to be made in order for objectives and/or targets to be achieved, the property owner or farming enterprise manager must make decisions about how targets and objectives will be met, including what GMPs are appropriate and implement these.

The Certified FEP Auditor may provide options for solutions and where advice and support can be obtained, such as Environment Canterbury (Land Manager Advisors, Biodiversity Officers or Monitoring and Compliance Officers), Industry Organizations (such as Dairy NZ, Irrigation New Zealand and Milk Suppliers) or consultancies, to create an action plan and implement the required or beneficial actions.

Appendix 9 shows examples of required and beneficial actions per Management Area.

Figure 6: Conducting On-Farm Audit Activities Overview



4.6 Generating Audit Grade and Frequency of Audit

4.6.1 Level of confidence (LOC) approach

The LOC approach shall be applied when generating audit findings.

The LOC approach involves assessing the likelihood that each objective and associated targets will be met. The LOC assessment shall:

- Be based on how well the objective and targets for each Management Area have been met;
- Consider whether systems and processes:
 - Are in place to effectively manage the risks associated with achieving objectives and targets for each Management Area;
 - Meet GMP; and
 - Meet the Appendix of Resource Consents or the EMS of the Irrigation Schemes or Principal Water Suppliers (holding a resource consent with a NLL) or HWRRP Collectives.
- Include reviewing current practices, together with proposed additional actions and their appropriateness, in terms of achievement of objectives and targets plus proposed timeframes for implementation.

LOC standards should be developed using the lists of GMP, including practices able to be modelled and not able to be modelled.

LOC assessments for each objective must be justified by

- Targets Reasons for the Assessment (based on GMPs);
- Targets Objective Evidence; and
- Targets Reasons Against the Assessment.

Justification for decisions (both for and against) could include reference to GMPs, including those which can and cannot be modelled.

4.6.2 LOC evidence

Assessment of the LOC should be based on a combination of:

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

GMPs will be dependent on farming type, soil and climate. When assessing the LOC associated with meeting an objective or target, observed on-farm practices should be compared to the GMPs. The Certified FEP Auditor is therefore required to be familiar with the relevant industry-agreed GMPs for the farming activity being audited (e.g. sheep, beef, horticulture, dairy, outdoor piggeries).

The following questions can help Certified FEP Auditors determine objective evidence:

- Is it happening?
- Is it understood?
- Is it effective?

Appendix 6 provides examples of what information per Management Area a Certified FEP Auditor can look at to gather objective evidence to determine the LOC of meeting targets and objectives.

4.6.3 Determining the LOC and audit grade

The process for determining overall FEP audit grading and timing between audits differs for properties and farming enterprises that are part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective and those that are not. This is illustrated in Appendix 10 which comprises three parts:

- Appendix 10.1: Process for Determining Overall FEP Audit Grade – property or farming enterprise (single and multiple management) is part of an Irrigation Scheme, Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective;
- Appendix 10.2: Process for Determining Overall FEP Audit Grade – consented property or farming enterprise (single and multiple management) part of an approved ISO accredited audit programme; and
- Appendix 10.3: Process for Determining Overall FEP Audit Grade – Consented property or farming enterprise (single and multiple management) is not part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective or approved ISO accredited audit programme.

The following four steps shall be followed to determine the LOC and the audit grade:

1. Establish the objective and targets LOC rating;
2. Identify reasons for and against:
 - For objective and targets LOC rating and required actions;
 - If practices recorded as “reason for” meeting GMP, a higher LOC of meeting targets and objectives will be triggered; and
 - With objective evidence.
3. Sensibility test, i.e. is the grade a true representation of the practices observed at the farm?
4. Assign the overall audit grade and frequency of re audit.

4.6.3.1 Establish the objective and targets grade

The Certified FEP Auditor shall take into consideration the likelihood of each target and objective being met before awarding a LOC rating for each objective.

4.6.3.1.1 LOC in relation to Targets

4.6.3.1.1.1 Nutrient Losses Targets

Please refer to section 4.3.7 to determine the LOC for Target 1 of Objective 1 and 2 of the Nutrients Management Area

4.6.3.1.1.2 Mahinga kai Target 4 Waterbody Management Area Regional Framework and target 1 Mahinga kai Management area Selwyn Waihora sub-regional requirements

- High LOC
 - All High LOC objectives;
- OR
- Medium LOC
 - High or Medium LOC objectives for Irrigation and Cultivation and Soil Structure Management Area; and
 - Any Medium LOC and NIL Low LOC objectives for other Management Area;
- OR
- Low LOC
 - Any Low LOC objective.

4.6.3.1.1.3 Other Targets

The Certified FEP Auditor shall take into consideration the likelihood of each target being met before awarding a LOC rating for each objective.

Please note that where mahinga kai requirements are present in FEPs, the LOC rating shall take into consideration the awareness of the value and evidence actions taken or a documented plan to address the values.

There are three possible LOC ratings:

- High LOC
 - Has appropriate evidence to demonstrate 'target' is being achieved AND can explain or show what/how this "practice has been undertaken AND, where applicable, what mahinga kai values are and how risks on them have been mitigated.
- Medium LOC:
 - Has appropriate evidence to demonstrate 'target' is being achieved BUT cannot explain or show what/how this "practice has been undertaken AND, where applicable, what mahinga kai values are and how risks on them have been mitigated ;
 - OR
 - Does not have appropriate evidence to demonstrate 'target' is being achieved BUT can explain or show what/how this "practice has been undertaken AND, where applicable, what mahinga kai values are and how risks on them have been mitigated;
 - OR
 - The observed infrastructure is not fit for purpose AND the risk on mahinga kai is not managed but there is a plan in place for its upgrade.
- Low LOC:
 - Does not have appropriate evidence to demonstrate 'target' is being achieved AND cannot explain or show what/how this "practice has been undertaken AND, where applicable, what mahinga kai values are and how risks on them have been mitigated ;
 - OR
 - The evidence and any explanation provided demonstrate the farm is not meeting the 'target' required and therefore the objective required by Environment Canterbury.

It shall be noted that when not all the targets related to an objective are met or on-track to be met, the Certified FEP Auditor shall determine whether the practices on farm can give:

- A high LOC that the objective is “on-track” to be met in order to award a higher audit grade; or
- A medium or a low LOC that the objectives are “on-track” to be met in order to award a lower grade and consider the objective to be “off track” to be met.

Table 4 show the relationship between audit grade and objectives LOCs.

4.6.3.2 LOC in relation to Objectives

4.6.3.2.1 Nutrients Management Area Objectives

Please refer to section 4.3.7 to determine the LOC for Objective 1 and 2 of the Nutrients Management Area.

4.6.3.2.2 Other Objectives

The LOC assessment for each objective shall take into consideration:

- The likelihood for the objective being met; and
- The LOC for each target included in the FEP that relate to the farmer being able to achieve the objective.

There are three LOC for Management Areas objectives:

- High (H) = The objective has probably been achieved
- Medium (M) = The objective has possibly been achieved
- Low (L) = It is unlikely that the objective has been achieved

The likelihood of meeting the objective is based on the collative targets LOC and the weight of each target related to the farm as shown below:

- All targets assessed as highs – High LOC
- Targets mostly assessed as highs, with 1 or more mediums – either High or Medium LOC
 - Where a target is graded as Medium LOC due to not fit for purpose infrastructure, the objective shall be graded at best a Medium LOC
- Targets mostly assessed as highs, with 1 or more lows – either Medium or Low LOC
- Targets mostly assessed as mediums – Medium LOC
- One or more lows – Low LOC

The Certified FEP Auditor may record additional reasons for meeting the objective.

4.6.3.3 Identify reasons for and against the objective and targets grade

When determining the LOC associated with meeting each target, the Certified FEP Auditor shall:

- Determine whether GMP is met as it would provide a higher LOC that targets are met;
- Make judgements based on objective evidence and identify reasons for and against their judgement, including factors that indicate achievement or not of each target.

Examples of information that a Certified FEP Auditor may use to make judgements when reaching LOC decisions with respect to achievement of targets for each Management Area are included in Appendix 6.

There are various acceptable formats of objective evidence from basic recording pages through to electronically generated data – all formats are acceptable as long as it displays the critical information relevant to the activities and risks identified on their property.

Examples of target, reasons for and objective evidence can be found in Appendix 7.

The electronic version of the Environment Canterbury FEP Audit Template will include standardised reasons for together with standardised objective evidence and reasons against, which have been based on Industry-agreed GMPs. Please note that the Certified FEP Auditor can use other reasons for/against and objective evidence as an alternative to the standardised ones.

4.6.3.4 Assign the overall audit grade and frequency of audit

The overall audit grade is determined by the LOC associated with achievement of each objective.

Table 4 below shows:

- How to translate the level of confidence in to an overall audit grade
- The related frequency of audit.

Table 4 – Determining Overall Audit Grading and Frequency of Audit

Objectives Level of Confidence	Overall Grade	Frequency of Audit (unless defined by a resource consent)			
		Individual consents (individual farms and farming enterprises and nutrient management groups)	Farms part of an Approved ISO Accredited Audit Programme	Irrigation Scheme and Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective	Change in Management or significant change in farm systems
All H	A	3yr	In line with the timeframes of the Approved ISO accredited audit programme	4yr	1yr
One or more M + Nil L + on track of meeting objective ^(*)	B	2yr		2yr	1yr
One or more M + Nil L + off track of meeting objective ^(*)	C	1yr	1yr	1yr	Within 1yr
Any L	D	6 months	6 months	6 months	Within 6 months

()It shall be noted that when not all the targets (other than the nutrient loss target of objective 1 and 2) related to an objective are met or on-track to be met, the Certified FEP Auditor shall determine whether the practices on farm can give:*

- (i) A high LOC that the objective is “on-track” to be met in order to award a B grade for the audit; or*
- (ii) A medium or a low LOC that the objectives are “on-track” to be met to award a C or grade and consider the objective to be “off-track” to be met.*

When a C or D grade is awarded, the Certified FEP Auditor should include in the required actions and timeframes the provision that calculation of the farm nitrogen loss shall be prepared using annual input and not the 4 year average until a B or A grade is awarded.

Appendix 8 contains examples of how to grade farms in instances where GMP has not been followed.

4.6.4 Sensibility test

The Certified FEP Auditor shall determine whether the awarded grade corresponds to the practices observed at the farm. If the Certified FEP Auditor considers the grade to be not a true representation of the practices undertaken on the farm, the Certified FEP Auditor shall review the Targets and Objectives LOC for each management.

The Certified FEP Auditor shall however grade a farm at best as a B when the N losses do not meet the NLL and the GMP loss rates.

4.6.5 Frequency of audits

As shown in Table 4, timing between audits ranges as follows, unless otherwise defined by a resource consent:

- 6 months - 4 years for properties or farming enterprises that are part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective or Approved ISO accredited audit programme
- 6 months - 3 years for properties or farming enterprises that are not part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective or Approved ISO accredited audit programme.

In addition to Irrigation Scheme and Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective or approved ISO accredited audit programme status, frequency of audits is also determined by the overall audit grade.

The longer audits return time for a property or farming enterprise that receives an overall audit A grade and is part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective or approved ISO accredited audit programme, recognises the additional support systems that Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective or approved ISO accredited audit programme has in place.

A caveat to the extension of audit return time frames to beyond one year for good performance, is the reversion to an annual audit if there is a change in property owner or farming enterprise manager and/or a significant change in farming system.

4.7 Recording, Distributing Audit Findings and Concluding the Audit

An Overview of the Recording and Distributing Audit Findings Activities is shown in Figure 7.

Within two months of completion of the Audit, the Certified FEP Auditor shall submit the audit findings to Environment Canterbury.

4.7.1 Preparation of audit report

On completion of the audit, the Certified FEP Auditor shall prepare a report of their findings using the Environment Canterbury FEP Audit Template provided in Appendix 2.

No alternative or amended audit report format shall be used unless approved by Environment Canterbury Chief Executive.

4.7.2 Peer review

The Certified FEP Auditor may decide to have their report peer reviewed by another Certified FEP Auditor before sending the draft audit report to the land owner. The peer review should be undertaken within a week of the audit. If the cost of this is to be charged to the farmer, it shall be included as part of the audit contract.

4.7.3 Distributing the audit report to the property owner or farming enterprise manager(s)

The Certified FEP Auditor shall provide a copy of the audit report to the property owner or farming enterprise manager(s) within two weeks of the on-farm audit completion.

4.7.4 Property owner or farm enterprise manager(s) feedback

The property owner or farm enterprise manager(s) shall be provided with an opportunity to provide feedback within two weeks (10 working days) and should be specifically asked to:

- Raise any obvious mistakes and/or misunderstandings;
- Provide any additional information that was not available at the time of the audit which may alter the audit grade; and
- Provide his/her feedback and information within two weeks (10 working days) of the date that the correspondence was sent by the auditor.

The auditor shall consider any feedback and additional information that may be provided by the property owner or farm enterprise manager(s) and if relevant revise the audit report.

In making judgements about inclusion, or not, of feedback and comments received, it is important that the auditor refers back to objective information gathered and is able to define reasons for their decisions.

4.7.5 Distributing the audit report to Irrigation Schemes or Principal Water Suppliers holding a resource consent with a NLL or HWRRP Collectives

When relevant the auditor shall provide a copy of the audit report to the Irrigation Schemes, Principal Water Suppliers or HWRRP Collectives in line with their requirements.

4.7.6 Submitting information to Environment Canterbury

No sign-off of any audit report by Environment Canterbury is required.

Consented properties and farming enterprise under single management

Within two months of completion of the audit, the Certified FEP Auditor shall submit the following information to Environment Canterbury, using the Electronic FEP Audit Data Reporting Form, available from Environment Canterbury On-line Services:

- Name of Certified FEP Auditor;
 - Date of Audit;
 - Name of Farm;
 - Farm Type;
 - Consent Number(s) covered by the Audit containing FEP audit requirements;
 - Overall Grade;
 - Version of OVERSEER® or equivalent model approved by the Chief Executive of Environment Canterbury ;
 - Nitrogen (N) Loss;
 - Current year N Loss if less or equal to the consented NLL; or
 - Average of latest 4 years N Loss if current N Loss is greater than the consented NLL – Losses under the same version of OVERSEER® or equivalent model approved by the Chief Executive of Environment Canterbury
- If the current year N Loss is greater than the consented NLL and the farmer does not have records of the latest 4 years N losses, the Certified FEP Auditor shall:
- Report the current year N Loss; and
- NLL as defined in the appendix of the resource consent – please note that:
 - The NLL shall be updated prior to the audit;
 - Baseline GMP and GMP Loss Rate can be found in the Farm Portal Farm Report

If Environment Canterbury On-line Services is not used, the Certified FEP Auditor shall send the electronic form, available from the FEP Auditor sharepoint website (a copy shown in Appendix 3.1) to Environment Canterbury addressed to the Regional Lead Compliance and Monitoring.

All FEP auditing information collected by Environment Canterbury will be considered commercially sensitive information and may be released/reported externally on a catchment basis.

Please note that Environment Canterbury may at any point request a copy of the audit report to undertake its statutory functions to determine compliance with resource consent conditions and carry out enforcement if it is deemed necessary. Any audit report and supporting documents could also be selected during the Auditor's Certification re-registration assessment.

Farming Enterprises under multiple management (including Nutrient Management Groups)

The Certified FEP Auditor shall not submit any information to Environment Canterbury. A copy of the audit report shall be provided to the Main contact of the Farming Enterprises under multiple management (including Nutrient Management Groups).

Farming Enterprises under multiple management (including Nutrient Management Groups) shall submit a summary report to Environment Canterbury, using the Electronic FEP Audit Data Reporting Form, available from Environment Canterbury On-line Services, containing the following information:

- Name of Certified FEP Auditor;
- Date of Audit;
- Name of each Farm;
- Farm Type;

- Consent Number covered by the Audit containing FEP audit requirements;
- Audit grade for each farm;
- Average Annual Nitrogen loss
- Sum of the Nitrogen Baselines;
- And where applicable:
 - Sum of Baseline GMPs (as shown in the farm portal farm report – this should be updated prior to the audit);
 - Percentage reductions

If Environment Canterbury On-line Services is not used, the Certified FEP Auditor shall send the electronic form, available from the FEP Auditor sharepoint website (a copy shown in Appendix 3.2) to Environment Canterbury addressed to the Regional Lead Compliance and Monitoring.

All FEP auditing information collected by Environment Canterbury will be considered commercially sensitive information and may be released/reported externally on a catchment basis.

Please note that Environment Canterbury may at any point request a copy of the audit report to undertake its statutory functions to determine compliance with resource consent conditions and carry out enforcement if it is deemed necessary. Any audit report and supporting documents could also be selected during the Auditor's Certification re-registration assessment.

Irrigation Schemes and Principal Water Suppliers holding a resource consent with a NLL and HWRRP Collectives

The Certified FEP Auditor shall not submit any information to Environment Canterbury. A copy of the audit report shall be provided to the Manager of the Irrigation Scheme, Principal Water Suppliers and HWRRP Collectives.

Irrigation Schemes or Principal Water Suppliers or HWRRP Collectives shall submit a summary report to Environment Canterbury, using the using the Electronic FEP Audit Data Reporting Form, available from Environment Canterbury On-line Services, containing the following information:

A summary report:

- Name of Certified FEP Auditor/s;
- Period of Audits;
- Aggregated N loss for the year from all properties within the Irrigation Scheme or Principal Water Supplier or HWRRP Collective by nutrient management zone;
- Summary of the numbers of farms graded A, B, C and D per farm type;
- Summary of the number of farms that are repeated C, D (1st repeat, 2nd repeat) per farm type;
- List of the main reasons why farms have been graded C or D;
- Programme to improve performance of these farms;
- Progress report on previous identified issues; and
- Identified illegal discharges and actions taken.

If Environment Canterbury On-line Services is not used, the Certified FEP Auditor shall send the electronic form, available from the FEP Auditor sharepoint website (a copy shown in Appendix 3.3), form to Environment Canterbury addressed to the Regional Lead Compliance and Monitoring.

This information will be considered commercially sensitive information and may be released/reported externally on a catchment basis.

Please note that Environment Canterbury may at any point request a copy of the audit report to undertake its statutory functions to determine compliance with resource consent conditions and carry out enforcement if it is deemed necessary. Any audit report and supporting documents could also be selected during the Auditor's Certification re-registration assessment.

4.7.7 Concluding the audit

The audit is completed when all activities included in the FEP Audit contract between the Certified FEP Auditor and property owner or farming enterprise manager have been undertaken (see Figure 8).

The Certified FEP Auditor shall be aware that they may be subject to disputes and complaints.

4.7.7.1 Disputes

4.7.7.1.1 Payments

Any disputes over payments for Certified FEP Auditor services shall be dealt with as part of normal business procedures by the Certified FEP Auditor and other parties to the contract (see Figure 8).

4.7.7.1.2 Audit grades and assigned required/beneficial actions

Disputes about audit findings or grading shall be addressed following a formal process.

The dispute process is cost recoverable and includes the submission of a FEP Audit Dispute Submission supported by a fee which will be paid by:

- a. The disputer paying a submission fee upfront. This fee will be refunded if the complaint is substantiated. The fee would be retained if the dispute is unsubstantiated; and
- b. The Certified FEP Auditor if dispute is substantiated. An invoice will be sent to the Certified FEP Auditor at the end of the process.

We may ask the disputer and the Certified FEP Auditor to attend an interview. The certified FEP Auditor may need to submit copies of the FEP Audit Report together with all material and evidence used to determine the audit grade and/or assigned required/beneficial actions. If the dispute is substantiated, Environment Canterbury may revoke the FEP Auditor Certification.

4.7.7.2 Complaints

Any complaints related to the conduct of a Certified FEP Auditor will be referred to the professional institute the Certified FEP Auditor is a member of. If the professional institute finds the complaint to be substantiated and revokes the auditor membership, we will revoke the FEP Auditor Certification.

4.7.8 Retaining and releasing audit documents

The Certified FEP Auditor is required to keep an electronic copy of the audit report and all supporting documents for at least seven years.

Unless required by law, the Certified FEP Auditor shall not disclose the contents of any audit documents, or other information obtained during the performance of audit activities, to any other party without the explicit approval of the property owner or farming enterprise manager with whom the audit contract has been entered into, with the following exceptions:

- The Certified FEP Auditor contracted to carry out the follow up audit;
- Environment Canterbury for carrying out any intervention or compliance functions that may be required following the awarding of consecutive C and/or D grades; and

- Reference during the Audit Programme Review or during the FEP Auditor's Certification re-registration assessment.

Property owners and farming enterprise managers should also retain their copy of the audit report and supporting documents for at least seven years and pass these on to new owners and/ or managers.

Figure 7: Recording and Distributing Audit Findings Activities Overview

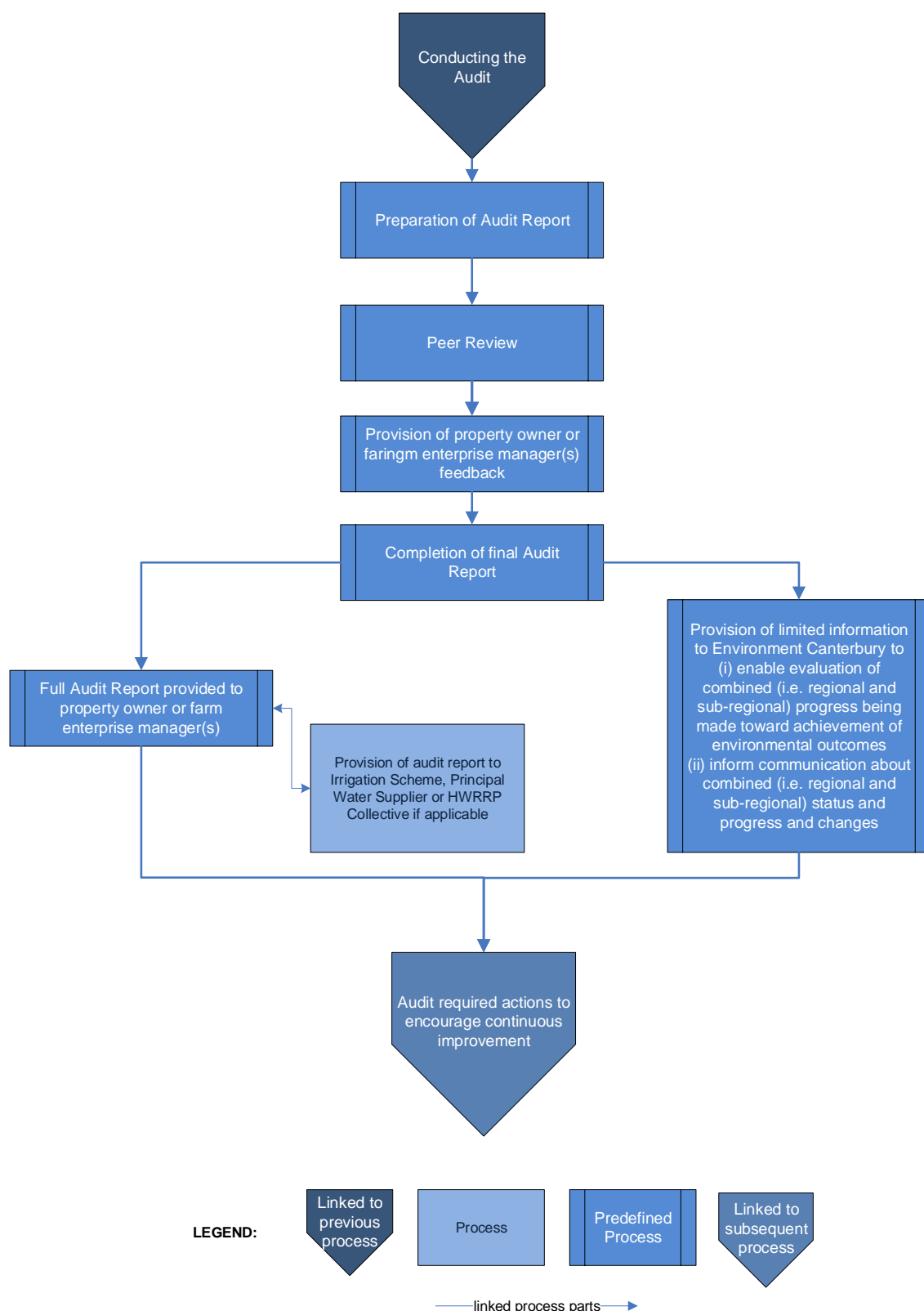
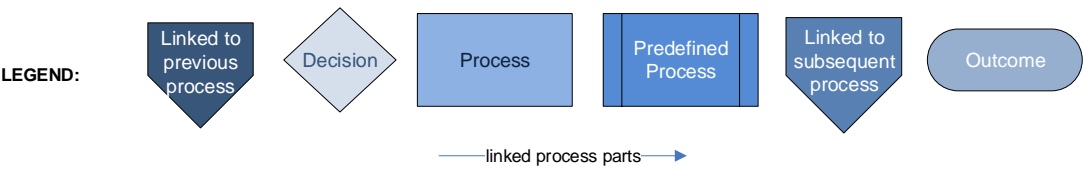
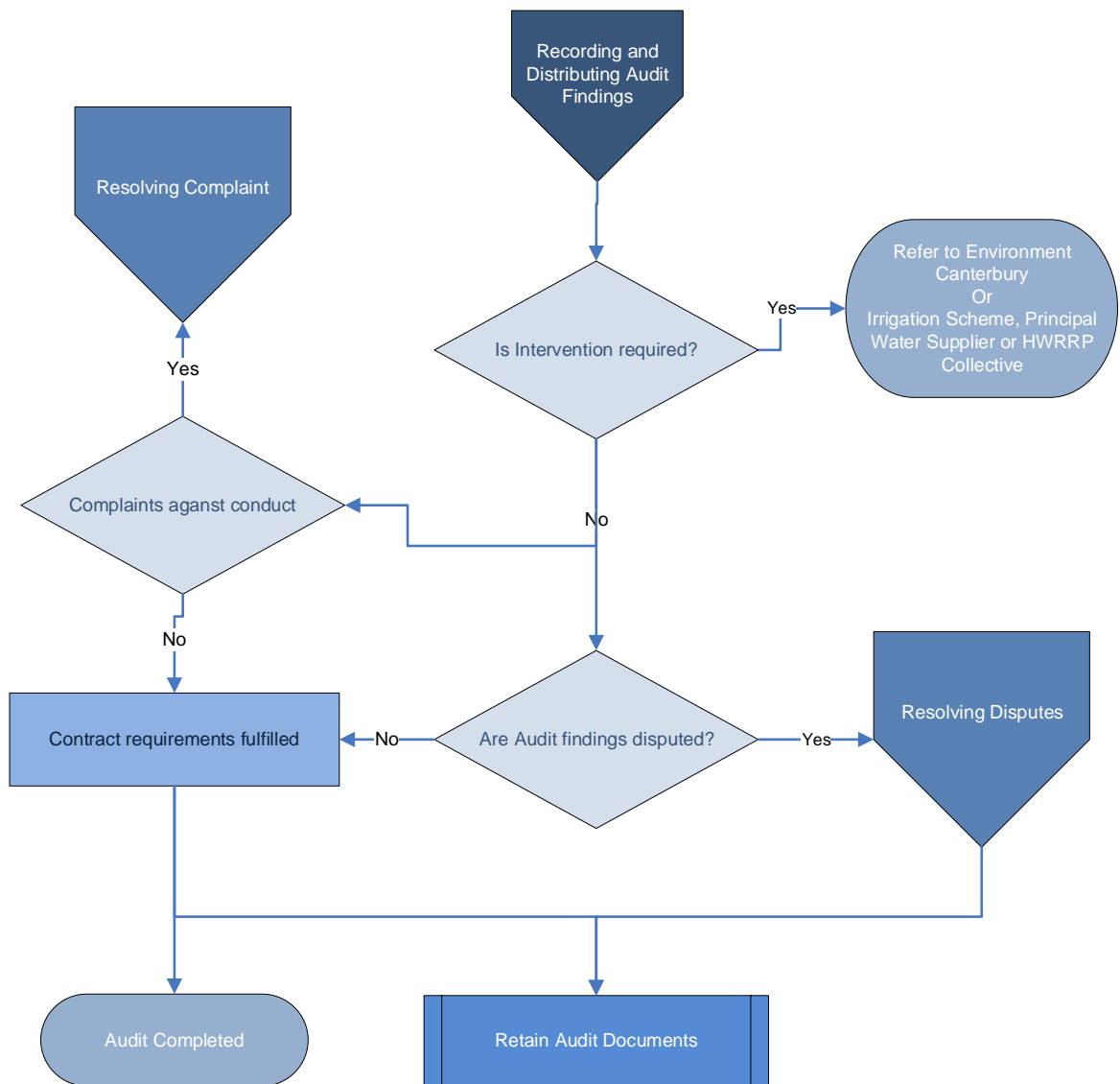


Figure 8: Concluding the Audit, Disputes, Complaints and Intervention Activities Overview



4.8 Follow-Up on Required/Beneficial Actions and Intervention

4.8.1 Follow up on required/beneficial actions

The completion and effectiveness of any audit required actions should be verified by the Certified FEP Auditor as part of follow up audit activities.

Should a C or D audit grading be received, the property owner or farm enterprise manager will be given a timeframe for required action(s) completion. This is decided by the auditor in line with the audit grade.

4.8.2 Intervention

Certified FEP Auditors do not have responsibility for carrying out any intervention or compliance functions, as shown in Figure 8

Should any intervention be required following the awarding of consecutive C and/or D grades, this shall be undertaken as shown in Appendix 10.1 for Individual Consents and Appendix 10.2 for Irrigation Scheme and Principal Water Supplier holding a resource consent with a NLL, HWRRP Collective or approved ISO accredited audit programme. In circumstances that a site visit is required, and that visit is related to cultural matters, an opportunity for a Papatipu Rūnanga representative to attend will be provided for.

It is anticipated that within an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective, intervention will be handled by the Irrigation Scheme, Principal Water Supplier or HWRRP Collective as included in their EMS (see Figure 3 and 7).

If properties or farming enterprises are not part of an Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective but subject to a resource consent, intervention activities will be directly handled by Environment Canterbury.

Irrespective of the circumstances, Environment Canterbury retains the right to exercise enforcement powers included in the Resource Management Act 1991 (as amended).

Appendices

Appendix 1 – Pre-Audit Check and Audit Plan

Pre-audit Check Form						
Farm Details						
Farm Name	Farm ID - Resource consent relevant to the audit; or - Farm Reference Number given by the Irrigation Scheme, Principal Water Supplier or HWRRP Collective.	Main Contact		Telephone Number		
		Position		E-mail address		
Irrigation Scheme/Catchment Collective Y – (Please insert Name) N		Farming enterprise Y N	Nutrient Management Zone <div> <div>Red Lakes Orange Green Light Blue</div> <div>Selwyn Hinds South Coastal Waitaki Hurunui Waiau</div> </div>			
Contact Details						
Address		Phone		E-mail		
Nutrients Assessment						
Consented Nutrient Loss Limit (NLL)						
Nutrient Discharge Allowance	Baseline	Baseline Good Management Practice Loss Rate	Good Management Practice Loss Rate			
N Loss			OVERSEER® Version (Or equivalent model approved by the Chief Executive of Environment Canterbury)			
Current Yr. (e.g.2015)	<u>Consented properties</u> - if Current Yr. N Loss is greater than consented NLL					
	Previous (e.g.2014)	Previous 2 (e.g.2013)				Previous 3 (e.g.2012)
Is Current Year N Loss greater						
GMP Loss Rate? Y N	NLL? Y N		Is Budget Robust? Y N			
Has budget been prepared using annual input data if: <ul style="list-style-type: none"> The farm has received a C or D Grade in the most recent audit; The area of irrigated land has increased as compared with the area of land that was irrigated at the time of the most recent audit The area of land used for winter grazing has increased, as compared with area of land used for winter grazing at the time of the most recent audit 						
Y N N/A						
Issues with Nutrient Budget						
Previous Audit						
Date of Previous Audit	Name of Previous Certified FEP Auditor			Pervious Audit Grade A B C D		

Winter grazing area increased from the previous audit? Y N		Irrigation area increased from the previous audit? Y N	
Action Plan provided Y N		Action Plan represent Required Actions Y N	
Previous Audit factors to consider during audit 			
Farm Environment Plans			
Approved template/Schedule 7 Compliant? Y N		Version 	FEP relates to farm area Y N
Geographical Analysis			
Erosion Area to be visited Wind Water			
Waterways to be visited Stock Exclusion Riparian Crossing Mahinga kai			
Point source contamination site to be visited Silage Pits Offal Pits Waste Pits			
Other areas of interest to be visited 			

Audit Plan

Date of Audit

Objectives to be audited

Any issue identified in the pre-audit check that should be considered during the audit

Expectations of the property owner during the audit

Audit activities expected to take place

Logistical Arrangements

Health and Safety

Please enter the Health and Safety Issues raised by the Landowner

Biosecurity

Please enter the Biosecurity Issues raised by the Landowner

Appendix 2 – Environment Canterbury FEP Audit Template

Please note that the electronic spreadsheet version of the audit report template (the template) found on our website contains standardised:

- Reason for and against the assessment based on the Industry-agreed Good Management Practices (GMPs) relating to water quality (18 September 2015). As this list is not exhaustive, Certified FEP Auditors can add their own reasons for/against;
- Objective evidence. As this list is not exhaustive, Certified FEP Auditors can add their own objective evidence;
- Sub-Region Specific Management Area pages containing Sub-Region Specific Management Area objective and targets.

The above standardised components of the template have not been included in this Manual as they may change in line with changes in Good Management Practices and avoid continuous update of this Manual and the electronic version of the template. The electronic version of the template will be update online with changes in Good Management Practices which may affect the standardised components of the template.

The Certified FEP Auditor shall be aware that, for implementation purposes, Target 3 and 4 of the irrigation Management Area, as described in Schedule 7 of the LWRP, have been combined as they are pursuing the same outcome.

Industry-agreed Good Management Practices Tables
Identify the physical and biophysical characteristics of the farm system, assess the risk factors to water quality associated with the farm system, and manage appropriately.
Maintain accurate and auditable records of annual farm inputs, outputs and management practices.
Manage farming operations to minimise direct and indirect losses of sediment and nutrients to water, and maintain or enhance soil structure, where agronomically appropriate.
Manage periods of exposed soil between crops/pasture to reduce risk of erosion, overland flow and leaching.
Retire all Land Use Capability Class 8 and either retire, or actively manage, all Class 7e to ensure intensive soil conservation measures and practices are in place.
Identify risk of overland flow of sediment and faecal bacteria on the property and implement measures to minimise transport of these to water bodies.
Locate and manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of run-off to minimise risks to water quality.
To the extent that is compatible with land form, stock class and intensity, Exclude stock from waterways.
Monitor soil phosphorus levels and maintain them at or below the agronomic optimum for the farm system.
Manage the amount and timing of fertiliser inputs, taking account of all sources of nutrients, to match plant requirements and minimise risk of losses.
Store and load fertiliser to minimise risk of spillage, leaching and loss into water bodies.
Ensure equipment for spreading fertilisers is well-maintained and calibrated.
Manage the amount and timing of irrigation inputs to meet plant demands and minimise risk of leaching and runoff.
Design, calibrated and operated irrigation systems to minimise the amount of water needed to meet production objectives.
Store, transported and distributed feed to minimise wastage, leachate and soil damage.
Ensure the effluent system meets industry specific Code of Practice or equivalent standard.
Have sufficient, suitable storage available to enable farm effluent and waste water to be stored when soil conditions are unsuitable for application.
Ensure equipment for spreading effluent and other organic manures is well-maintained and calibrated.
Apply effluent to pasture and crops at depths, rates and times to match plant requirements and minimise risk to water bodies.
Select appropriate paddocks for intensive grazing, recognising and mitigating possible nutrient and sediment loss from critical source areas.
Manage grazing to minimise losses from critical source areas.

Farm Environment Plan Audit Report

Farm Details

Farm Name	
Farm ID	Audit Triggered by

Person(s) present at the time of the audit		
Name		
Position	Telephone Number	E-mail Address
Name		
Position	Telephone Number	E-mail Address

Person responsible for FEP implementation if different from person present at the audit		
Position	Telephone Number	E-mail Address

Auditor's Details

Name	Company
Telephone Number	E-mail

Date of Audit

Statement of Audit Practice

This audit has been undertaken in accordance with the standardised audit procedures as set in the Canterbury Certified Farm Environment Plan Auditor Manual

Signature

Date

Summary

Overall Grade

A - High Level of Confidence (LOC) of meeting objectives for all Management Areas

Re-audited in 4 years if part of an Irrigation Scheme or Principal Water Supplier (holding a consent with a Nutrient Loss Limit (NLL)), HWRRP Collective or approved ISO accredited audit programme; or

Re-audit in 3 years if individual consent holder.

Change in manager and/or significant farm system will trigger a re-audit in 1 year.

B - Medium Level of Confidence (LOC) of meeting objectives for one or more Management Area BUT on-track of meeting objectives.

Re-audit in 2 years.

Change in manager and/or significant farm system will trigger a re-audit in 1 year.

C - Medium Level of Confidence (LOC) of meeting objectives for one or more Management Area BUT off-track of meeting objectives.

Re-audit in 1 year.

Change in manager and/or significant farm system will trigger a re-audit within the year.

D - Low Level of Confidence (LOC) of meeting objective for one of more Management Areas.

Re-audit in 6 months.

Change in manager and/or significant farm system will trigger a re-audit within 6 months.

Management Area Level of Confidence

Irrigation	High	Medium	Low
Nutrients	High	Medium	Low
Cultivation and soil structure	High	Medium	Low
Animal Effluent and Solid Animal Waste	High	Medium	Low
Waterbody (wetlands, riparian areas, drains, rivers, lakes)	High	Medium	Low
Point Sources (offal pits, farm rubbish pits, silage pits)	High	Medium	Low
Water use Management (excluding irrigation water)	High	Medium	Low
Management Area Other 1 – <i>Please enter Management Area</i>	High	Medium	Low
Management Area Other 2 – <i>Please enter Management Area</i>	High	Medium	Low

Summary of Required Actions

Irrigation	Timeframe
Nutrients	Timeframe
Cultivation and Soil Structure	Timeframe
Animal Effluent and Solid Animal Waste	Timeframe
Waterbodies (riparian areas, drains, rivers, lakes, wetlands)	Timeframe
Point Sources (offal pits, farm rubbish pits, silage pits)	Timeframe
Water use Management (excluding irrigation water)	Timeframe

Summary of Beneficial Actions (A Grades or High LOC Objectives and Targets)

Irrigation and water use	Timeframe
Nutrients	Timeframe
Cultivation and Soil Structure	Timeframe
Animal Effluent and Solid Animal Waste	Timeframe
Waterbodies (riparian areas, drains, rivers, lakes, wetlands)	Timeframe
Point Sources (offal pits, farm rubbish pits, silage pits)	Timeframe
Water use Management (excluding irrigation water)	Timeframe

Management Area: Irrigation	
Objective 1	
The amount and timing of irrigation is managed to meet plant demands, minimise risk of leaching and runoff and ensure efficient water use.	
Objective Level Of Confidence (LOC)	
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low
Target 1	Target LOC
New irrigation systems are designed, and installed in accordance with industry best codes of practice and standards	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 2	Target LOC
The performance of irrigation systems is assessed annually and irrigation systems are maintained and operated to apply irrigation water at their optimal efficiency.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 3	Target LOC
The timing and depth of irrigation water applied takes account of crop requirements and is justified through soil moisture monitoring or soil water budgets and climatic information.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 4	Target LOC
Staff are trained in the operation, maintenance and use of irrigation systems.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Required Actions	Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)	Timeframe
Notes/Comments	

Management Area: Nutrients		
Objective 1		
Use nutrients efficiently and minimise nutrient losses to water.		
Objective Level Of Confidence (LOC) -		
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low	
Objective 2		
Nutrient losses do not exceed consented nitrogen loss limits.		
Objective Level Of Confidence (LOC) - Discrepancies between Nutrient Loss Calculations and GMP Loss Rates and Nitrogen Baselines (where applicable) and Non-Robust Budget will affect the LOC		
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low	
Target 1	Target LOC	
Nitrogen losses from farming activities are at or below the: (a) Baseline Good Management Practice (GMP) Loss Rate or GMP Loss Rates (whichever is the lesser); or (b) Consented nitrogen loss limits.	High Medium Low	
Target Reasons For the Assessment	Target Objective Evidence	
<i>For situations where N losses > GMP loss rates but you still consider a High LOC for these reasons:</i>		
Target Reasons Against the Assessment		
Target 1 (A)	Target LOC	
Available nitrogen loss mitigation measures (excluding those associated with irrigation, fertiliser or effluent management) are implemented.	High Medium Low	
Target Reasons For the Assessment	Target Objective Evidence	
<i>For situations where N losses > GMP loss rates but you still consider a High LOC for these reasons:</i>		
Target Reasons Against the Assessment		
Target 2	Target LOC	
Phosphorus and sediment losses from farming activities are minimised.	High Medium Low	
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Target 3	Target LOC	
Manage the amount, timing and application ² of fertiliser inputs to match the predicted plant requirements and minimise nutrient losses	High Medium Low	
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Target 4	Target LOC	
Store and load fertiliser to minimise the risk of spillage, leaching and loss into water bodies.	High Medium Low	
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Required Actions	Timeframe	
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)	Timeframe	
Notes/Comments		

Management Area: Cultivation and Soils Structure		
Objective		
The physical and biological condition of soils in maintained or improved in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.		
Objective Level Of Confidence (LOC)		
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low	
Target 1		Target LOC
Farming activities are managed so as to not exacerbate erosion.		High Medium Low
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Target 2		Target LOC
Farming practices are implemented that optimise infiltration of water into the soil profile and minimise run-off of water, sediment loss and erosion.		High Medium Low
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Required Actions		Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)		Timeframe
Notes/Comments		

Management Area: Animal Effluent and Solid Animal Waste	
Objective	
Animal effluent and solid animal waste is managed to minimise nutrient leaching and run-off.	
Objective Level Of Confidence (LOC)	
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low
Target 1	Target LOC
Effluent systems meet industry Codes of Practice or an equivalent standard.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 2	Target LOC
The timing and rate of application of effluent and solid animal waste to land is managed so as to minimise the risk of contamination of groundwater or surface water bodies.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 3	Target LOC
Sufficient and suitable storage is available to enable animal effluent and wash-down water to be stored when soil conditions are unsuitable for application.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 4	Target LOC
Staff is trained in the operation, maintenance and use of effluent storage and application systems.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Required Actions	Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)	Timeframe
Notes/Comments	

Management Area: Waterbodies – wetlands, riparian areas, drains, rivers, lakes	
Objective	
Wetlands, riparian areas and the margins of surface waterbodies are managed to avoid damage to the bed and margins of the water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.	
Objective Level Of Confidence (LOC)	
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.	High Medium Low
Target 1	Target LOC
Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 2	Target LOC
Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies are minimised.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 3	Target LOC
Farm tracks, gateways, water troughs, self-feeding areas, stock camps wallows and other farming activities that are potential sources of sediment, nutrient and microbial loss are located so as to minimise the risks to surface water quality.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Target 4	Target LOC
Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health.	High Medium Low
Target Reasons For the Assessment	Target Objective Evidence
Target Reasons Against the Assessment	
Required Actions	Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)	Timeframe
Notes/Comments	

Management Area: Point Sources - offal pits, farm rubbish pits, silage pits		
Objective		
The number and location of pits are managed to minimise risks to health and water quality.		
Objective Level Of Confidence (LOC)		
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.		High Medium Low
Target 1		Target LOC
All on-farm silage, offal pit and rubbish dump discharges are managed to avoid direct discharges of contaminants to groundwater or surface water.		High Medium Low
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Required Actions		Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)		Timeframe
Notes/Comments		

Management Area: Water use Management (excluding irrigation water)		
Objective		
To use water efficiently ensuring that actual; use of water is monitored and efficient.		
Objective Level Of Confidence (LOC)		
Likelihood that the objective has been met based on the practices and the evidence supplied at for each target at the time of the audit.		High Medium Low
Target 1		Target LOC
Actual water use is efficient for the end use.		High Medium Low
Target Reasons For the Assessment	Target Objective Evidence	
Target Reasons Against the Assessment		
Required Actions		Timeframe
Beneficial Actions (A Grades or for High LOC Objective and Targets Only)		Timeframe
Notes/Comments		

Audit Grade Explanation

Level of Confidence (LOC)

The audit grade is 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 Good Management Practices (GMPs);
- Stated GMPs supported by evidence;
- Nutrient budgets; and
- Field observation.

The following four steps have been followed to determine the LOC and the audit grade:

1. Establish the objective and targets LOC rating;
2. Identify reasons for and against:
 - o For objective and targets LOC rating and required actions;
 - o If practices recorded as “reason for” meeting GMP, a higher LOC of meeting targets and objectives will be triggered; and
 - o With objective evidence.
3. Sensibility test, i.e. is the grade a true representation of the practices observed at the farm?
4. Assign the overall audit grade and frequency of re audit.

Targets LOC Table

Target 1 of Nutrient Management Area

Target 1 - Objective 2			
LOC	NLL Met	GMP in Place or beyond where required	Limitation to the model used to estimate N loss
High	Y	Y	N/A
Medium	N	Y	Y
Low	N	Y	N
Low	N	N	Y
Low	N	N	N

¹Baseline GMP or GMP Loss Rate as calculated by the Farm Portal

Mahinga kai target

LOC	Description
High	All High LOC Objectives
Medium	a) High or Medium LOC objectives for Irrigation and Cultivation and Soil Structure Management Area AND b) Any Medium LOC and NIL Low LOC objectives for other Management Area
Low	Any Low LOC objective

Other targets

LOC	Description
High	Has appropriate evidence to demonstrate ‘target’ is being achieved AND can explain or show what/how this ‘practice’ has been undertaken AND, where applicable, what mahinga kai values are and how risk on them have been mitigated.
Medium	a) Has appropriate evidence to demonstrate ‘target’ is being achieved BUT cannot explain or show what/how this ‘practice’ has been undertaken AND, where applicable, what mahinga kai values are and how risk on them have been mitigated. OR b) Does not have appropriate evidence to demonstrate ‘target’ is being achieved BUT can

	explain or show what/how this 'practice' has been undertaken AND, where applicable, what mahinga kai values are and how risk on them have been mitigated.
Low	a) Does not have appropriate evidence to demonstrate 'target' is being achieved AND cannot explain or show what/how this 'practice' has been undertaken AND, where applicable, what mahinga kai values are and how risk on them have been mitigated. OR b) The evidence and any explanation provided demonstrate the farm is not meeting the 'target' required and therefore the objective required by Environment Canterbury.

Objective LOC Table

Objective 1 and 2 of Nutrient Management Area

Target 1	Objective 1
LOC	LOC
High	High
Medium	Medium
Low	Low
Low	Low
Low	Low

Other Objectives

LOC	Description
High	It is likely that the objective has been met <ul style="list-style-type: none"> • All targets assessed as highs – High LOC; or • Targets mostly assessed as highs, with some 1 or more mediums – either High or Medium LOC (dependent on the weight of each target related to the farm and the nature and significance of the Medium).
Medium	It is possible the objective has been met; <ul style="list-style-type: none"> • Targets mostly assessed as mediums – Medium LOC; or • Targets mostly assessed as highs, with some 1 or more mediums – either High or Medium LOC (dependent on the weight of each target related to the farm and the nature and significance of the Medium); or • Targets mostly assessed as highs, but with 1 or more lows – either Medium or Low LOC (dependent on the weight of each target related to the farm and the nature and significance of the Low); and • Where a target is graded as Medium LOC due to not fit for purpose infrastructure, the objective shall be graded at best a Medium LOC.
Low	It is unlikely the objective has been met <ul style="list-style-type: none"> • Targets mostly assessed as highs, but with 1 or more lows – either Medium or Low LOC (dependent on the weight of each target related to the farm and the nature and significance of the Low); or • One or more lows – Low LOC (dependent on the weight of each target related to the farm and the nature and significance of the Low).

Overall Grading

The overall audit grade is determined by the LOC associated with achievement of each objective.

Grade	Description
A	High Level of Confidence (LOC) of meeting objectives for all Management Areas.
B	Medium Level of Confidence (LOC) of meeting objectives for one or more Management Area BUT on-track of meeting objectives.
C	Medium Level of Confidence (LOC) of meeting objectives for one or more Management Area BUT off-track of meeting objectives.
D	Low Level of Confidence (LOC) of meeting objective for one of more Management Areas.

Timeframe of future audits

The timeframe between audits is determined by the overall grade and if your farm belongs to:

1. Is linked to a resource consent or belongs to an Irrigation Scheme or Principal Water Supplier (holding a resource consent with a NLL), Hurunui Waiau Collective or approved ISO accredited audit programme as defined in “Definitions”; and
2. Change in Management or significant change in farm system as defined in “Definitions”.

Grade	Timeframe between audits
A	4 years if part of an Irrigation Scheme or Principal Water Supplier (holding a consent with a NLL), HWRRP Collective or approved ISO accredited audit programme; OR 3 years if individual consent holder; OR In line with Approved ISO Accredited Audit Programme for farms that belong to an Approved ISO Accredited Audit Programme Change in manager and/or significant farm system will trigger a re-audit within in 1 year; OR
B	2 years ; OR In line with Approved ISO Accredited Audit Programme for farms that belong to an Approved ISO Accredited Audit Programme Change in manager and/or significant farm system will trigger a re-audit within in 1 year;
C	1 year Change in management and/or a significant farm system will trigger a re-audit within the year.
D	Re-audit in 6 months Change in management and/ or a significant farm system will trigger a re-audit within the 6 months.

Disputing the Audit Grade

You can dispute the awarded Audit Grade by submitting a Farm Environment Plan Audit Grade Dispute Application form found on Environment Canterbury website. Information on the Farm Environment Plan Dispute Resolution Process can also be found on Environment Canterbury website.

Definitions

Approved ISO Accredited Audit Programme – means an International Standards Organisation accredited audit programme that has been approved by the Chief Executive of Environment Canterbury as an equivalent standard. These are typically nationally or internationally certified farming assurance programme led by industry to assist the implementation of best practices at farm level to reduce the risk of health, safety and environmental issues.

Change in management – means a change in the management structure and/or person in charge of the day-to-day operations of the farm.

Hurunui Waiau River Regional Plan (HWRRP) Collective – means a formal group of farmers and/or farming enterprises working together to decrease and manage the environmental effects of farming activities (i.e. land use) on water quality (i.e. reduce Nitrogen and Phosphorous leaching). Collectives are required to register with Environment Canterbury Environment Management Strategy (EMS) on or before the 01 January 2017.

Irrigation Scheme – means a trust, company, incorporated society or other legal entity that holds a resource consent to take and supply water to more than one property.

Principal Water Supplier – publicly or privately-owned supplier that is the sole abstractor of water which is subsequently conveyed and distributed to constituent irrigation schemes, community and/or stock-water schemes, hydro-electricity generators and/or other users of the water.

Significant change in farm systems – means 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.

Appendix 3 – Audit Data Reporting Forms

Appendix 3.1 - Environment Canterbury Farm Environment Plan Audit Data Reporting Form – Consented Properties and Farming Enterprises under Single Management

This form shall be sent to the Regional Manager – Resource Management Monitoring & Compliance within two months of the completion of the audit.

This form can be accessed electronically through Accela Citizen Access.

Environment Canterbury Farm Environment Plan Audit Data Reporting Form Consented properties or Farming Enterprise (Multiple Properties) under Single Management					
Farm Details					
Consent Number	Farm Type primary	Farm Type secondary	Farm Name	Name of approved ISO accredited audit programme the farm belongs to (if applicable)	
Audit Date				Audit Grade	
OVERSEER® Version <i>(Or equivalent model approved by the Chief Executive of Environment Canterbury)</i>					
Nutrient Loss					
Nitrogen Loss					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Nitrogen Loss Limit					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
GMP Loss (Before date indicated in consent appendix, if applicable) – as defined by the Farm Portal					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Baseline GMP from (Before date indicated in consent appendix, if applicable) - as defined by the Farm Portal					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Certified Environment Plan Auditor Details					
Name	Telephone number	E-mail address		Company	

Appendix 3.2 - Environment Canterbury Farm Environment Plan Audit Data Reporting Form – NLL Farming enterprises under multiple management

This form shall be sent to the Regional Manager – Resource Management Monitoring & Compliance annually

This form can be accessed electronically through Accela Citizen Access.

Environment Canterbury Farm Environment Plan Audit Data Reporting Form					
Nutrient Management Group or Farming Enterprise (Multiple Properties under Multiple Management)					
Name of Nutrient Management Group or Farming Enterprise	Consent Number	Main Contact Name	Main Contact e-mail	Main contact Tel Number	
Certified Farm Environment Plan Auditor Details					
Name	Telephone Number	E-mail address	Company		
Enterprise Performance					
Farm Name	Name of approved ISO accredited audit programme the farm belongs to (if applicable)		Farm Type	Audit Date	Audit Grade
OVERSEER® Version <i>(Or equivalent model approved by the Chief Executive of Environment Canterbury)</i>					
Nitrogen Loss			Nitrogen Loss Limit		
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Nitrogen Loss Limit					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Baseline GMP from the date defined in the resource consent if applicable – as defined by the farm portal					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha

Appendix 3.3 - Environment Canterbury Farm Environment Plan Audit Data Reporting Form – Irrigation Schemes and Principal Water Suppliers (holding a resource consent with a NLL), Hurunui Waiau River Regional Plan Collectives

This form shall be sent to the Regional Manager – Resource Management Monitoring & Compliance annually

This form can be accessed electronically through Accela Citizen Access.

Environment Canterbury Farm Environment Plan Audit Data Reporting Form <i>Irrigation Schemes and Principal Water Suppliers (holding a consent with a NLL), Hurunui Waiau River Regional Plan Collectives</i>						
Irrigation Scheme and Principal Water Supplier (holding a consent with a NLL), Hurunui Waiau River Regional Plan Collective Details						
Name			Consent Number(s) covered by the Audit containing FEP Audit requirements			
Certified Farm Environment Plan Auditor Details						
Name	Telephone Number	E-mail address	Company			
Audits Period						
Summary of Grades						
Grade	Approved ISO accredited audit programme the farm belongs to (if applicable)	Farm Type	Farm Type	Farm Type	Farm Type	Farm Type
A						
B						
C						
D						
Repeated C – 1st						
Repeated C – 2nd						
Repeated D – 1st						
Repeated D – 2nd						
OVERSEER® Version						
(Or equivalent model approved by the Chief Executive of Environment Canterbury)						
Nitrogen Loss						
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	

Nitrogen Loss Limit					
Nutrient Management Zone	Ha	Nutrient Management Zone	Ha	Nutrient Management Zone	Ha
Reasons for C Grades					
Reasons for D Grades					
Programme to improve performance of C and D farms					
Progress report on previous identified issues					
Identified illegal discharges and actions taken					

Appendix 4 – Assessment of Nutrient Budget Robustness

Purpose

This Appendix contains the procedures that a Certified FEP Auditor shall follow to evaluate whether the current year budget relates to the activities carried out at the farm.

How to determine the robustness of a nutrient budget

To evaluate whether the budget relates to the activities undertaken at the farm, the Certified FEP Auditor shall check the information shown below.

The level of scrutiny is dependent on whether the budget has been prepared by a competent (e.g. Certified Nutrient Management Advisor) and experienced person.

All nutrient budgets shall be prepared using the latest version of OVERSEER® or alternative model approved by the Chief Executive of Environment Canterbury.

OVERSEER® Budget

- **Budget Type**
 - *Actual required;*
 - *Predictive is acceptable if the farm is found to be at a stable state, i.e. no changes in inputs and outputs compared to previous budget.*
- **Consistency with Farm Environment Plan**
 - *Has the budget been prepared using the latest (correct) version of the Best Practice Data Input Standards?*
 - *Is data provided during the FEP audit consistent with data included in the budget? Check particularly:*
 - *Block areas especially effluent block areas*
 - *Irrigation areas and type*
 - *Fertiliser application rates and location*
 - *Stock numbers and types*
 - *Areas in crop.*
 - *For ongoing operations, is the budget consistent with previous years?*
- **Sensibility Test**
 - *Is the N loss consistent with what you would expect for an operation of that type on those soils in that location?*
 - *Does the summary of inputs and outputs make sense? Especially clover fixation and change in block pools?*
 - *Go to 'Other values' in block reports and check rainfall, irrigation depth, drainage, field capacity and Profile Available Water*
 - *Go to 'Other values' in scenario reports and check production data and stocking rate*
 - *Go to 'Pasture production' in scenario report and check pasture growth and utilisation – is it consistent with what you would expect for a farm of this type in this location?*
- **Risk**
 - *What's the size of property and sensitivity of its receiving environment?*
 - *What's the dominant land use and inherent risks for this kind of land use at this location?*
 - *Has there been a recent change of land use?*

- *What's the (environmental) track record for this property?*
- *Is the budget going to a hearing? The subject of a complaint or enforcement action?*
- **Key Drivers of N Loss**
 - *Taking into account the results of the above especially risk and 'materiality', review the following key drivers of N loss:*
 - Irrigation;
 - Soil parameters;
 - Drainage (rainfall, soil water holding capacity);
 - Animals (intake requirements, production, numbers, winter grazing, species, gender);
 - Effluent management (dairy, pads/animal shelters);
 - Fertiliser (type, amount and timing);
 - Crops (ex-pasture, cultivation, yield/type e.g. winter crops); and
 - Imported feed (i.e. supplements).

NZPork - OVERSEER standalone pig module

The following inputs shall match the farm records:

- Sow block area;
- Post weaning growers and finishers block area;
- Stock numbers- sows, boars, unmated gilts, post weaning growers and finishers;
- Replacement rates;
- Sow productivity - Litters/sow/year;
- Stock practices- weaning weight and age;
- Feed method;
- Feed form;
- Feed amount; if default not used);
- Feed composition (if default was not used);
- Straw usage;
- Straw and composting management practices;
- Green Cover estimates;
- Soil description;
- Soil test results or use default;
- Climate data.

NCheck

- Only for arable and horticulture properties or Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr; Farm Portal Nutrient Loss Report relates to the period of the audit; and
- The auditor shall ensure that the answers included in the Farm Portal Nutrient Loss Report represent the farm system present on farm.

Appendix 5 – Assessment of Irrigation and Water Use Efficiency

Purpose

This Appendix provides procedures to establish whether Irrigation and Water Use Efficiency has been met in line with Good Management Practices as defined in the Industry-agreed Good Management Practice (GMP) related to water quality.

Definition of Irrigation Efficiency as per the Land and Water Regional Plan

The percentage of water retained in the root zone, or in the target area, after an irrigation event.

Industry-agreed Good Management Practice (GMP) related to water quality GMP Irrigation and water use intent

To apply irrigation water efficiently to meet plant demands and minimise risk of leaching and runoff.

How to assess water efficiency

It is almost impossible to measure a numerical percentage of irrigation efficiency. To assess irrigation and water efficiency, the Certified FEP Auditor shall ask the questions included in Table A5.1 and consider factors included in Table A5.2 and A5.3. The information provided would help Certified FEP Auditors determine the level of confidence of meeting the targets and objective of the Irrigation and Water Use Management Area.

Table A5.1 Questions to assess irrigation and water use efficiency

Question	Supporting Information
Irrigation Management Area - Target 1	
Does your system design meet the Irrigation New Zealand Codes of Practice and standards?	<p>Yes/no/don't know.</p> <p>Are the original designs/as built plans available?</p> <p>Has there been a design audit?</p> <p>Did you use a Certified company?</p>
Irrigation Management Area - Target 2 and 4	
How do you know the operation and maintenance of your system keeps it operating at its optimum level?	<p>Is your system calibrated?</p> <p>What is the regular maintenance carried out?</p> <p>Is the operator sufficiently trained and skilled?</p>
Irrigation Management Area - Target 3	
What are the factors that you consider when scheduling irrigation?	See Table A5.2
<p>How do you use these factors to schedule your irrigation?</p> <p>a. Water budget</p> <p>b. Representative soil moisture measurement probe to base your applications decisions on?</p>	<p>See Table A5.3</p> <p>Calibration undertaken? Y N</p> <p>Representative Soil Moisture Information:</p> <p>- Type:</p> <ul style="list-style-type: none"> Number: Location:
What are the irrigation system constraints that limit your ability to apply optimum irrigation applications?	May be – return period, irrigator settings, system capacity

Table A5.2 – Irrigation event scheduling decision - Site constants (Irrigation and Water Use Management Area - Target 3)

Date:		Site:		
Site constants		How to calculate this		Values
Soil	Water Holding Capacity (WHC) mm/100mm	Based on your soil profile: Research WHC of soil e.g. www.smap.landcareresearch.co.nz		
	drainage – restrictions or otherwise			
Crop	rooting depth	Dig a hole and measure. Look up typical depths for crop		
Crop Available Water (CAW)	mm	Combination of the WHC of soils in profile and rooting depth	CAW	
			Stress point	
Topography	gradient, aspect, etc....	Carry out on-site research. Explain how this may affect application decision		
Irrigator performance	Application depth and distribution uniformity of irrigation	Carry out a calibration		
Site variables		How to calculate this		Values
Soil moisture status 10-day water budget	Equivalent crop available water (mm) See template below	Water budget or soil moisture measurement		
Soil temperature	Degrees Celsius °C	Measurement		
management events or other factors	e.g., spraying – anything that might affect why you would/would not irrigate or alter the depth applied	Check with decision maker on scheduled events		
return interval	how fast irrigator can return to same point (system constraint)	Check with decision maker		

Table A5.3 – 10-day water budget (Irrigation Management Area - Target 3)

Starting value = 'Crop available water' balance 5 days ago. Calculated via soil moisture measurement or water budget.						mm
	Date	Rainfall	Irrigation	Potential Evapotranspiration	Crop Factor	Balance (+/-) mm
4-day History						
Today						
5-day Forecast						

Appendix 6 – Examples of what information a Certified FEP Auditor can look at to gather objective evidence to determine the LOC of meeting targets and objective per each management area

Nutrients
<ul style="list-style-type: none"> Please refer Appendix 4
Irrigation
<ul style="list-style-type: none"> Please refer to Appendix 5
Cultivation and Soil Structure
<ul style="list-style-type: none"> Timing and method of cultivation Inspection of high risk erosion areas
Animal Effluent and Solid Animal Waste
<ul style="list-style-type: none"> Compliance records Storage calculator - to determine whether additional storage is needed Effluent (liquid and solid) discharge records Maintenance records for storage and effluent (liquid and solid) discharge systems (e.g. travelling irrigator, muck spreader, central pivot nozzles etc.) Inspection of discharge field – if irrigator is in operation or been in operation a few hours prior to the audit – to determine whether ponding is occurring Inspection of storage facility (liquid effluent and solid effluent) - to look for cracks Inspection of effluent discharge systems – to look for blockages and failures Inspection of feeding pad – to look for cracks and leakage and effluent storage from this area Inspection of back-flow prevention system – to look for blockage, leaks etc. Staff training records
Waterbodies (wetlands, riparian areas, drains, rivers, lakes)
<ul style="list-style-type: none"> Stock exclusion records (fencing, installation of temporary infrastructure such as hot-wires to stop stock accessing waterways, etc.) Inspection of selected waterways to determine whether stock exclusion infrastructure has been installed (The Certified FEP Auditor should always access this area if safe and with the landowner or a member of staff) Inspection of crossing facilities (bridges, culverts etc.) to ascertain whether measures have been put in place to prevent effluent and run-off reaching waterways. (The Certified FEP Auditor should always access this area if safe and with the landowner or a member of staff) Riparian planting records, field observation Inspection of selected waterway to determine whether riparian planting has been undertaken (The Certified FEP Auditor should always access this area if safe and with the landowner or a member of staff)
Point Sources (offal pits, farm rubbish pits, silage pits)
<p>Inspection of offal, waste and silage pits to determine:</p> <ul style="list-style-type: none"> Location – it must be appropriate and in line with Environment Canterbury Regional rules and the location shown on FEP map (offal, waste and silage pits should not be present directly above aquifers or in proximity of waterways); Presence of unwanted material such as agrichemicals; Sign of burning activities – Burning is not allowed under Environment Canterbury Regional rules Management of leachate from silage pits to avoid waterway contamination
Water Use Management (excluding irrigation water)
<ul style="list-style-type: none"> Infrastructure certificates of constructions/installation Infrastructure maintenance records Water use records

Appendix 7 - Examples of reasons for assessment and related objective evidence per management area

All reasons for included in this example are in line with the Industry-agreed Good Management Practices relating to water quality.

Irrigation

Objective 1: The amount and timing of irrigation is managed to meet plant demands, minimise risk of leaching and runoff and ensure efficient water use.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
1. New irrigation systems are designed and installed in accordance with industry practice and standards.	<ul style="list-style-type: none"> Irrigation system design meet the Irrigation New Zealand Codes of Practice and standards Post installation checks show that system performs to desired specifications for system capacity, application depth and uniformity 	<ul style="list-style-type: none"> Design plans Commissioning certificate
2. The performance of irrigation systems is assessed annually and irrigation systems are maintained and operated to apply irrigation water at their optimal efficiency.	<ul style="list-style-type: none"> Application depth and uniformity checks are undertaken pre-season and through the season On-going through the season system maintenance is undertaken and actions recorded 	<ul style="list-style-type: none"> Bucket test Maintenance records
3. The timing and depth of irrigation water applied takes account of crop requirements and is justified through soil moisture monitoring or soil water budgets and climatic information.	<ul style="list-style-type: none"> Rainfall forecast, soil temperature and ET status monitored and used in decision making Deficit irrigation used with soil moisture trigger points 	<ul style="list-style-type: none"> Rainfall records Soil moisture records
4. Staff is trained in the operation, maintenance and use of irrigation systems.	<ul style="list-style-type: none"> Staff fully trained in the operations of the systems All staff are aware of issue identification and action process to remedy 	<ul style="list-style-type: none"> Staff training records Discussion with Staff

Nutrients

Objective 1: Use nutrients efficiently and minimise while minimising nutrient losses to water.

Objective 2: Nutrient Losses do not exceed consented nitrogen loss limits.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
1. Nitrogen losses from farming activities are at or below the: (a) Good Management Practice Loss Rates for the property; and (b) Nitrogen limits.	<ul style="list-style-type: none"> • N Loss at or below GMP loss rates • N Loss at or below GMP loss rates 	<ul style="list-style-type: none"> • Nutrient budget • Farm Portal Nutrient Loss Report
1A. Available nitrogen loss mitigation measures (excluding those associated with irrigation, fertiliser or effluent management) are implemented.	<ul style="list-style-type: none"> • Overall indication that sound nutrient management practices are in place which are designed to maximise nutrient use efficiency and minimise losses. 	<ul style="list-style-type: none"> • Field Assessment • Farm systems discussion
2. Phosphorus losses from farming activities are minimised.	<ul style="list-style-type: none"> • Minimum or no till cultivation techniques are used when high risk of run-off or flooding of cultivated paddocks. • Drains are shaped to minimise risk of bank erosion 	<ul style="list-style-type: none"> • Field Assessment • Farm systems discussion
3. Manage the amount, timing and application of fertiliser inputs to match the predicted plant requirements and minimise nutrient losses.	<ul style="list-style-type: none"> • Soil nutrient status 'specifically Olsen P' is maintained at or around the agronomic optimum levels • Deep soil N testing is used as basis of N applications to crops 	<ul style="list-style-type: none"> • Soil test results • Deep N soil test results
4. Store and load fertiliser to minimise the risk of spillage, leaching and loss into water.	<ul style="list-style-type: none"> • Overall indication that sound nutrient management practices are in place 	<ul style="list-style-type: none"> • Field Assessment • Farm systems discussion

Cultivation and Soil Structure

Objective: The physical and biological condition of soils is maintained or improved in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
1. Farming activities are managed so as to not exacerbate erosion.	<ul style="list-style-type: none"> • Little or no evidence of unmanaged soil erosion from the operation of the irrigation system • Tracks and fences are designed and located in a way that minimises the risk of erosion damage 	<ul style="list-style-type: none"> • Field Assessment • Farm systems discussion
2. Farming practices are implemented that optimise infiltration of water into the soil	<ul style="list-style-type: none"> • The risk of soil compaction from the grazing by cattle of winter forage crops is recognised. 	<ul style="list-style-type: none"> • Soil compaction field test results • Field assessment

profile and minimise run-off of water, sediment loss and erosion.	<p>Appropriate management measures have been put in place to minimise the risk</p> <ul style="list-style-type: none"> • Cropping rotations are managed in such a way to help maintain and/or improve soil structure 	
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Animal Effluent and Solid Animal Waste

Objective: Animal effluent and solid animal waste is managed to minimise nutrient leaching and run-off.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
2. Effluent systems meet industry Codes of Practice or an equivalent standard.	<ul style="list-style-type: none"> • Effluent irrigation system is set up and operated in a way that they are likely to comply with regional council rules and/or resource consent requirements • No effluent is spread, over drains or water races, within 50m of watercourse or bore, within 20m of public road, within 150m of residential dwelling 	<ul style="list-style-type: none"> • Effluent system discussions • Management Plan
3. The timing and rate of application of effluent and solid animal waste to land is managed so as to minimise the risk of contamination of groundwater or surface bodies.	<ul style="list-style-type: none"> • Fertiliser applied to the effluent block is calculated taking into consideration the timing and amount of effluent applied • Effluent is applied at depths/rates that do not lead to ponding or runoff 	<ul style="list-style-type: none"> • Effluent spreading records • Application depth records
4. Sufficient and suitable storage is available to enable animal effluent and wash-down water to be stored when soil conditions are unsuitable for application.	<ul style="list-style-type: none"> • All farm dairy effluent storage installed on the property are designed in accordance with the Effluent Design Code of Practice • Effluent solids when removed from the storage facility are spread evenly to land as required 	<ul style="list-style-type: none"> • Effluent storage design specifications • Effluent system discussions
5. Staff is trained in the operation, maintenance and use of effluent storage and application systems.	<ul style="list-style-type: none"> • Staff is trained to operate the effluent system to the requirements of their role. • Emergency mgmt. – major risks identified & emergency procedures in place 	<ul style="list-style-type: none"> • Staff training records • Field assessment

Waterbodies (wetlands, riparian area, drains, rivers, lakes)

Objective: Wetlands, riparian areas and the margins of surface waterbodies are managed to avoid damage to the bed and margins of the water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
1. Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.	<ul style="list-style-type: none"> • Stock are excluded from areas on the property which have been identified as significant wetlands • All waterways crossings for cattle are either bridged or culverted 	<ul style="list-style-type: none"> • Stock Exclusion Map • Field Assessment
2. Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.	<ul style="list-style-type: none"> • Riparian margins are of sufficient width to adequately filter runoff of nutrients, sediment and pathogens • Short to medium term riparian planting programme prepared for the property and plan in process of being implemented 	<ul style="list-style-type: none"> • Riparian management records • Riparian management plan
3. Farm tracks, gateways, water troughs, self-feeding areas, stock camps wallows and other farming activities that are potential sources of sediment, nutrient and microbial loss are located so as to minimise the risks to surface water quality	<ul style="list-style-type: none"> • Runoff from water troughs is directed away from waterways or filtered through riparian buffers • Runoff from stock camp wallows is directed away from waterways or filtered through riparian buffers 	<ul style="list-style-type: none"> • Risk map and action plan • Field Assessment
4. Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health	<ul style="list-style-type: none"> • Laneways, cut offs and troughs located away from waterways and take into account terrain/slope and drainage patterns to avoid effluent and sediment entering waterways • Grazing ephemeral waterways not undertaken in times of high ground and surface water and/ or flooding 	<ul style="list-style-type: none"> • Risk map and action plan • Field assessment

Point Sources (offal pits, farm rubbish pits, silage pits)

Objective: The number and location of pits are managed to minimise risks to health and water quality.

Target	Reasons for (Based on Good Management Practice)	Objective Evidence
1. All on-farm silage, offal pit and rubbish dump discharges are managed to avoid direct discharges of contaminants to groundwater or surface water.	<ul style="list-style-type: none">• Offal pit located in areas where there is no risk of contamination of groundwater• No runoff of leachate evident from silage pits to waterways including drains	<ul style="list-style-type: none">• Pit location map• Field assessment

Water-Use Management (excluding irrigation water)

Objective: To use water efficiently ensuring that actual; use of water is monitored and efficient

Target	Reasons for (Based on Good Management Practice)	Evidence Required
1. Actual water use is efficient for the end use.	<ul style="list-style-type: none">• Annual water use checklist complete• Reticulated water system is managed and maintained to avoid wasted water	<ul style="list-style-type: none">• Water use data• Field assessment

Appendix 8 Examples of how to grade the LOC in instances where GMP has not been followed.

Management Area: Irrigation

Grading:

- Water on the road = Medium Level of Confidence at best
- Big leaks and irrigation ponding = Medium
- No evidence of decision making process or when irrigation is turned on/off = Medium
- Water flowing down gullies = Low
- Water everywhere, ponding = Low

Management Area: Nutrients

Grading:

- GMP and N losses not met = Please refer to section 4.3.7
- Medium LOC the nutrient budget reflects on-farm practice = Medium (and action required to check that revised nutrient budget input data accurately reflects actual farm practice – annually)
- Low LOC the nutrient budget reflects on-farm practice = Medium (and action required to check that revised nutrient budget input data accurately reflects actual farm practice – annually) = Low
- If fertiliser is applied throughout the winter = Medium

Management Area: Cultivation and Soil Structure

Grading:

- Overgrazing of pasture in area prone of drying out = Medium
- Evidence of sediment run-off in to waterway = Low

Management Area: Animal Effluent and Solid Animal Waste

Grading:

- Low storage and no evidence of effluent removal 1st audit = Medium
- Low storage and no evidence of effluent removal 2nd audit = Low
- Effluent ponding/spillage = Medium (minor), Low (significant)

Management Area: Waterbodies (wetlands, riparian areas, drains, rivers, lakes)

Grading:

- Sediment entering waterways (excluding significant climatic event) first offenders = Medium, repeat offenders = Low

Management Area: Point Sources (offal pits, farm rubbish pits, silage pits)

Grading:

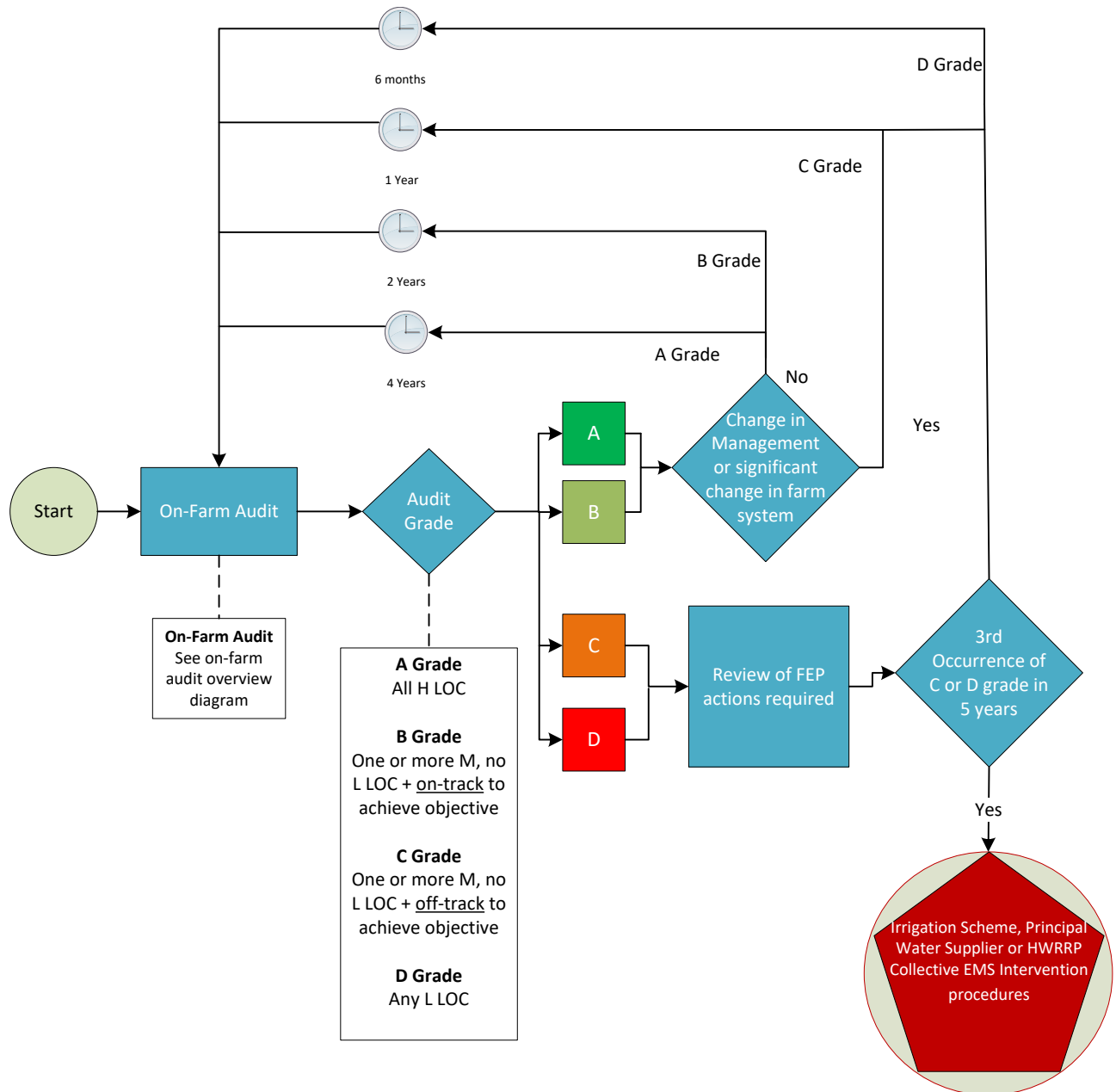
- Pits located in areas where there is risk of contamination of groundwater 1st audit = Medium
- Pits located in areas where there is no risk of contamination of groundwater 2nd audit = Low
- Leachate from pits into waterway =

Appendix 9: Examples of required actions per management area

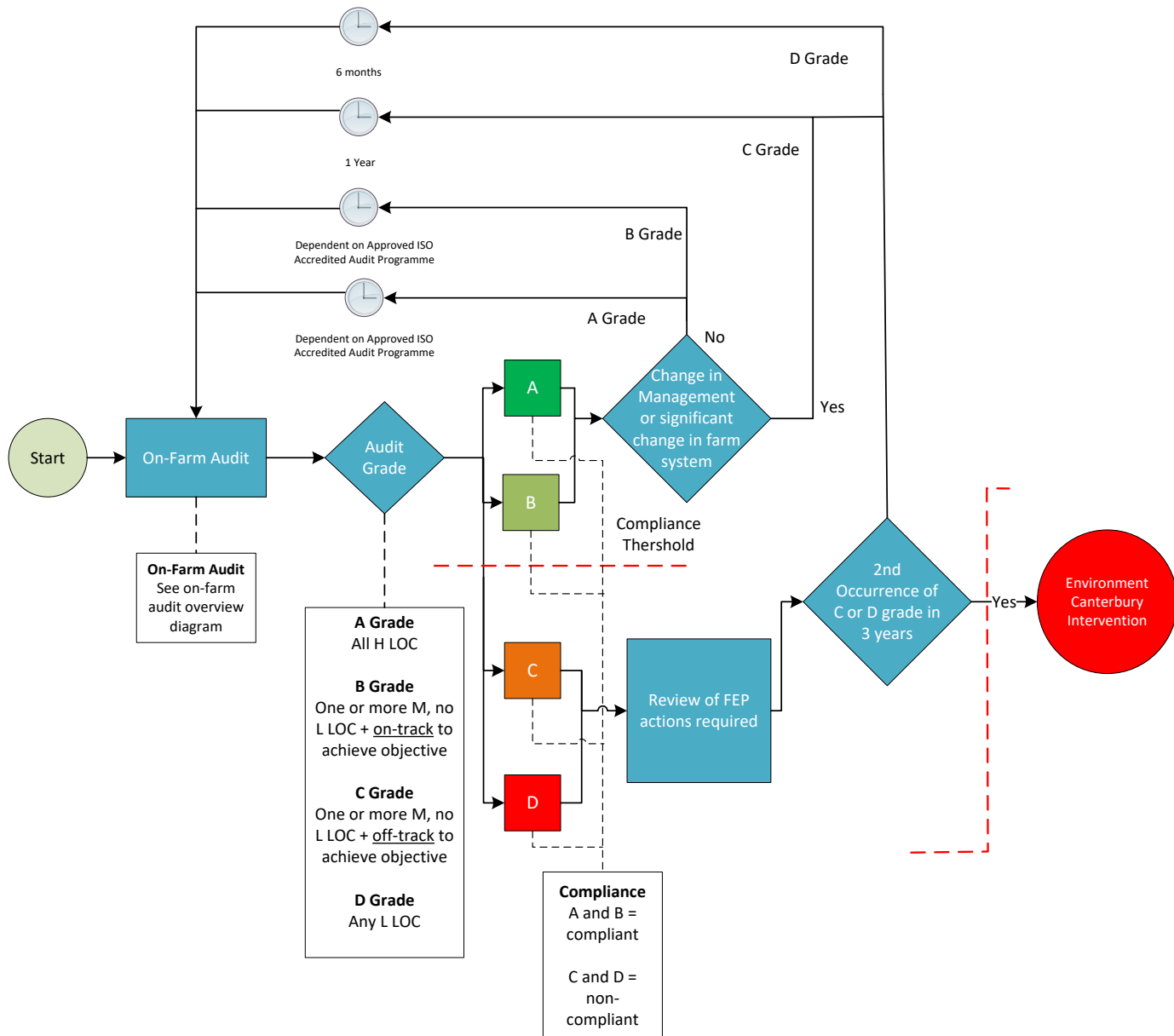
Management area: Nutrients
To undertake a survey of critical phosphorous source areas on the property and implement a management plan for those areas
Proof of placement technology to be used for all fertiliser applications
Management Area: Irrigation
To undertake and evaluation of the system efficiency using the Irrigation NZ guidelines
To consider the use of appropriate technology, such as soil moisture monitoring, as the basis for irrigation scheduling on the property
Management Area: Cultivation And Soil Structure
High risk erosion areas to be clearly identified and procedures developed for managing these areas
To develop a programme to address soil compaction issues on the property
Management Area: Animal Effluent and Solid Animal Waste
To increase effluent storage capacity of the property to ensure sufficient and suitable storage is available to store effluent and any wastewater when soil conditions are unsuitable for application
To consider and implement the use of appropriate technology, such as soil moisture monitoring, as the basis for effluent application scheduling on the property
Management Area: Waterbodies Management (wetlands, riparian areas, drains, rivers, lakes)
To extend width of riparian margins where necessary to provide a reasonable filter for nutrients
To exclude stock from waterways by using the most appropriate tool, e.g. hot-wire, fencing, etc.
Management Area: Point Sources (offal pits, farm rubbish pits, silage pits)
To relocate offal pit
To manage silage stacks so that overland flow of water from heavy rain cannot enter the stacks
Management Area: Water Use (excluding irrigation water)
Water meter to be installed to log water use

Appendix 10 - Process for Determining Overall FEP Audit Grade and Timing

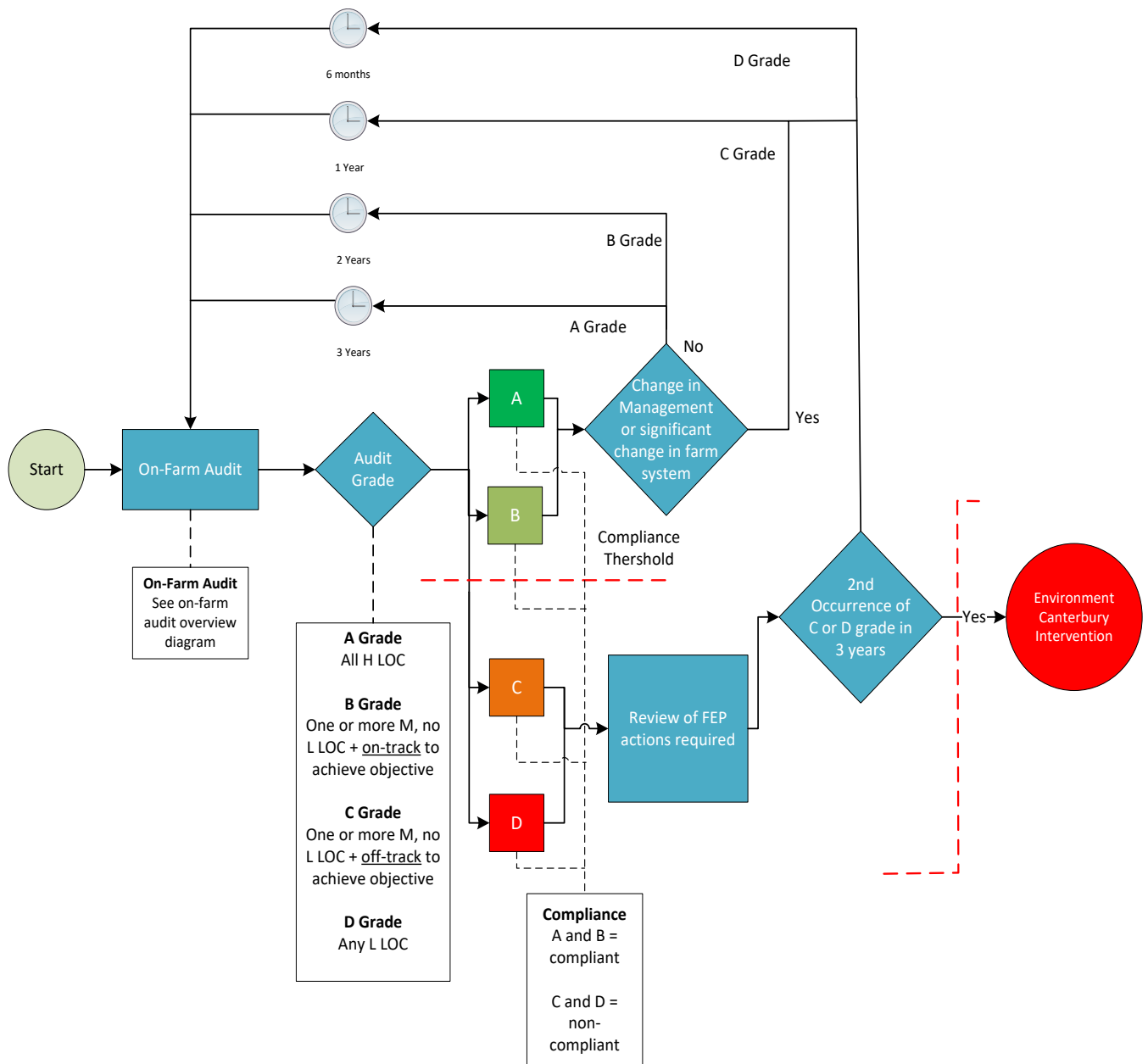
Appendix 10.1: FEP Grading and Timing – Irrigation Scheme and Principal Water Supplier holding a resource consent with a NLL, and HWRRP Collective process



Appendix 10.2: FEP Grading and Timing – Consented Properties and Farming Enterprises (single and multiple management) linked to an approved ISO accredited audit programme process



Appendix 10.3: FEP Grading and Timing – Consented Properties and Farming Enterprises (single and multiple management)



Appendix 11 Useful Contacts

The contacts shown below may be used by the Certified FEP Auditor to seek advice and support.

Environment Canterbury Regional Council	Calling from Christchurch: (03) 353-9007 Calling from any other area: 0800 324 636 (0800 EC INFO)
Environment Canterbury Pollution Hotline	Calling from Christchurch: (03) 366-4663 Calling from any other area: 0800 76 55 88
Ballance Agri-Nutrients	(03) 347-4360
Beef and Lamb	(03) 357-0693
DairyNZ	(03) 321-9016
DeerNZ	(04) 473-4500
Department of Conservation	Aoraki/Mt Cook Office: (03) 435 1819 Arthur's Pass Office: (03) 318 9211 Christchurch Office: (03) 371 3700 Geraldine Office: (03) 693 1010 Kaikoura Office: (03) 319 5641 Rangiora Office: (03) 313 0820 Twizel Office: (03) 435 0802
Federated Farmers	(03) 307-8145
Fish and Game	North Canterbury: (03) 3135728 or 0800-FISHANDGAME (0800 347 426) Central South Island: (03) 615-8400
Fonterra	(09) 374-9000
Forest and Birds	(03) 940-5523
Foundation for Arable Research	(03) 345-5783
HorticultureNZ	(04) 472-3795
Irrigation New Zealand	(03) 341-2225
New Zealand Institute of Primary Industry Management	(04) 939-9134
Ministry for the Environment	(04) 439-7400
Ministry of Primary Industry	General enquiries: 0800 00 83 33 Report exotic pests/diseases : 0800 80 99 66
Oceania Dairy	(03) 686 6403
PorkNZ	0800 697 675
Ravensdown	0800 100 123
Synlait Milk	(03) 373 3000

Te Rūnanga O Ngāi Tahu	0800 KAI TAHU (0800 524 8248)
Westland Milk Products	(03) 371-1600

Appendix 12 – Definitions

Please note that the definitions listed in this Appendix are relevant for this means of this Manual only

Action plan – means a list of tasks to address the issues raised the audit. This plan shall be prepared by the Manager of the property, farming enterprise or Environment Manager of Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL or HWRRP Collective

Advice – means technical guidance given to a landowner regarding the practices that could be implemented to meet the objectives and targets of the FEP

Alternative model – means model used to calculate Equivalent Baseline GMP or GMP Loss Rates by applying:

- (a) Modelling proxies equivalent to those in Schedule 28 of the LWRP to that part of the farming activity where that is practicable and appropriate; and
- (b) Alternative methods and modelling proxies that are representative of good management practice to the balance of the farming activity.

Approved International Standards Organisation (ISO) accredited audit programme – means an ISO accredited audit programme has been approved by the Chief Executive of Environment Canterbury as an equivalent programme to the Canterbury FEP Audit Programme. These are typically nationally or internationally certified farming assurance programme led by industry to assist the implementation of good management practices or better at farm level to reduce the risk of health, safety and environmental issues

Baseline GMP Loss Rate – means the average nitrogen loss rate below the root zone, as estimated by the Environment Canterbury Online Farm Portal, for the farming activity represented by the Nitrogen Baseline OVERSEER® input files provided with the application if operated at Good Management Practice. If the Baseline GMP Loss Rate cannot be generated by the Environment Canterbury Online Farm Portal, it means the Nitrogen Baseline

Beneficial action – means an action(s) to improve farm performance in order that FEP objectives and/or targets can be met or to promote continuous improvement

Canterbury Farm Environment Plan (FEP) Audit Programme – means a process and procedures to satisfy the requirements of Schedule 7 of the Land and Water Regional Plan

Certified Farm Environment Plan (FEP) Auditor – 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:

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 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.

Certified Nutrient Management Advisor – means a person certified as meeting the Nutrient Management Advisor Certification Programme

Change in management – means a change in the ownership or the management structure and/or person in charge of the day-to-day operations of the farm

Continuous improvement – means an ongoing effort to improve processes and practices based on an incremental improvement over time or innovation all at once. The implementation of processes and practices are evaluated and based on their efficiency, effectiveness and flexibility

Crop Available Water (CAW) – The rainfall equivalent depth of total available water by a specified crop

Equivalent Baseline Good Management Practice (GMP) Loss Rate – means a nitrogen loss rate, expressed in kg per hectare per annum, for a 48-month consecutive period within the period 01 January 2009 to 31 December 2013, and that has been calculated by applying:

- (a) Modelling proxies equivalent to those in Schedule 28 of the LWRP to that part of the farming activity where that is practicable and appropriate; and
- (b) Alternative methods and modelling proxies that are representative of good management practice to the balance of the farming activity.

For the purposes of clarity, in the case where a building consent and effluent discharge consent have been granted for a new or upgraded dairy milking shed in the period 01 January 2009 to 31 December 2013, the calculation will be on the basis that the dairy farming activity is operational.

Equivalent Good Management Practice (GMP) Loss Rate – means the average nitrogen loss rate below the root zone, expressed in kg per hectare per annum, for the most recent four-year period and that has been calculated by applying:

- (a) Modelling proxies equivalent to those in Schedule 28 of the LWRP to that part of the farming activity where that is practicable and appropriate; and
- (b) Alternative methods and modelling proxies that are representative of good management practice to the balance of the farming activity.

Environment Management Strategy (EMS) – means a document that outlines the Irrigation Scheme or Principal Water Supplier holding a resource consent with a NLL and HWRRP Collective's programme to implement and administer on-farm (through the FEPs)

Farming enterprise – means an agglomeration of parcels of land held in single or multiple management/ownership that constitutes a single operating unit for the purpose of nutrient management

Farm Portal – means the nutrient management database accessed at www.farmportal.ecan.govt.nz and that is used to derive a Baseline GMP Loss Rate and Good Management Practice Loss Rate

Farm Portal Nutrient Loss Report – means the summary of nutrient losses based on OVERSEER® or equivalent model been approved by the Chief Executive of Environment Canterbury and GMP loss rates

Good Management Practices (GMP) – means the practices described in the document entitled *Industry-agreed Good Management Practices relating to water quality*

Good Management Practice (GMP) Loss Rate – means the average nitrogen loss rate below the root-zone, as estimated by the Farm Portal, for the farming activity carried out over the most recent four-year period, if operated at good management practice

Hurunui Waiau River Regional Plan (HWRRP) Collective – means a formal group of farmers and/or farming enterprises working together to decrease and manage the environmental effects of farming activities (i.e. land use) on water quality (i.e. reduce Nitrogen and Phosphorous leaching). Collectives are required to register with Environment Canterbury Environment Management Strategy (EMS) on or before the 01 January 2017

Irrigation Scheme – means a trust, company, incorporated society or other legal entity that holds a resource consent to take and supply water to more than one property

Level Of Confidence (LOC) – means a rating (represented as High, Medium or Low) determined by Certified FEP Auditor reflecting the level of confidence that the objectives and targets in FEP are being met or that progress towards meeting them is being made

Mahinga kai – means the working (“mahi”) of food resources (“kai”) and their associated ecosystems, and the places and practices (“mahinga”) involved. In Canterbury, it refers to Ngāi Tahu interests and rights to customary gathering of food and natural materials and the places where those resources are gathered. It is the cornerstone of Ngāi Tahu culture, identity and heritage.

Management area – means the areas of farm management practice as set out below:

- (a) Nutrients
- (b) Irrigation and water use
- (c) Cultivation and Soil Structure
- (d) Animal effluent and Solid Animal Waste
- (e) Waterbodies (riparian areas, drains, rivers, lakes, wetlands)
- (f) Point sources (offal pits, farm rubbish pits, silage pits)

Management objective (objective) – means the overarching outcome sought in relation to each Management Area

NCheck – means the system approved by the Chief Executive of Environment Canterbury approved the use of NCheck for the use of land for:

1. For horticulture or arable farming until 2020 and for Selwyn Te Waihora Catchment until 2022; and
2. Selwyn Te Waihora catchment properties with nitrogen losses less than 15Kg N/ha/yr to generate:
 - A nitrogen baseline or nitrogen loss calculation; and
 - An updated nitrogen baseline or nitrogen loss calculation for a FEP audit when the nitrogen baseline or nitrogen loss calculation used in the Farm Environment Plan was generated using 'NCheck'.

For the purposes of the approval described in bullet point 1 above;

- c. the use of land for a farming activity for horticulture is a farm with intensive vegetable rotations greater than 80% of the time; and
- d. the use of land for a farming activity for arable farming is a farm with a cropping rotation on more than 50% of the property and does not include properties that contain a milking platform for cows.

Nitrogen Baseline – means the discharge of nitrogen below the root zone as modelled with the current version of OVERSEER® (or an equivalent model approved by the Chief Executive of Environment Canterbury) as represented by the Nitrogen Baseline OVERSEER® input files provided with the application.

New irrigation infrastructure – means either brand new installed infrastructure or infrastructure installed within the current irrigation season.

Nitrogen loss – means the discharge of nitrogen below the root zone, as modelled with OVERSEER®, (where the required data is inputted into the model in accordance with OVERSEER® Best Practice Input Standards), or an equivalent model approved by the Chief Executive of Environment Canterbury. If OVERSEER® is updated, the most recent version is to be used

Nutrient Discharge Allowance – means the discharge of nitrogen below the root zone as modelled with the current version of OVERSEER® (or an equivalent model approved by the Chief Executive of Environment Canterbury) as represented by the original OVERSEER® input files provided with the application.

Nutrient Loss Limit (NLL) – means either:

- Nutrient Discharge Allowance;
- Nitrogen Baseline²
 - Refer to an OVERSEER® budget for Selwyn Te Waihora, Hinds and South Coastal Streams catchments;
 - To be found in the Farm Portal Nutrient Loss Report elsewhere in region; and
 - Properties who have used NCheck (Region wide arable and horticulture properties or Selwyn Te Waihora catchment properties with N losses less than 15kg N/ha/yr) please ensure a Farm Portal Nutrient Loss Report has been re-run for the baseline 2009-13 period.
- Baseline GMP or GMP Loss Rate (found in the Farm Portal Nutrient Loss Report) whichever is the lesser; or
 - Equivalent Baseline GMP or Equivalent GMP Loss Rate (calculated using the alternative model to the Farm Portal); and/or
- Relevant reductions.

Nitrogen Baseline OVERSEER® input files – reflect clause A or B of the Nitrogen Baseline definition in the resource consent appendix, as defined below, and were inputted into the model in accordance with the OVERSEER® Best Practice Data Input Standards. They can be updated to reflect the current Overseer Best Practice Data Input Standards but must still describe the same activity.

Clause A: “the discharge of nitrogen below the root zone, as modelled with OVERSEER®, (where the required data is inputted into the model in accordance with OVERSEER® Best Practice Data Input Standards), or an equivalent model approved by the Chief Executive of Environment Canterbury, averaged over a 48 month consecutive period in the years of the period of 2009 – 2013 inclusive, and expressed in kg per hectare per

annum, except in relation to Rules 5.46 and 5.62 where it is expressed as a total kg per annum from the identified area of land"

OR

Clause B: "in the case where a building consent and effluent discharge consent have been granted for a new or upgraded dairy milking shed in the period 01 January 2009 –31 December 2013, the calculation under (a) will be on the basis that the dairy farming activity is operational"

Nutrient Management Groups: means a farming enterprise with more than one FEP

Practice – means an action or bundle of actions that contribute to achievement of the target

Principal Water Supplier – publicly or privately-owned supplier of water which is conveyed and distributed to constituent irrigation schemes, community and/or stock-water schemes, hydro-electricity generators and/or other users of the water

Profile Available Water (PAW) – means the rainfall equivalent depth of total available water within a specified depth in the soil

Property – means any contiguous area of land, including land separated by a road or river, held in one or more than one ownership, that is utilised as a single operating unit, and may include one or more certificates of title

Relevant reductions – means N Loss reductions as indicated in a land use resource consents.

Required action – means an action(s) to improve farm performance in order that FEP objectives and/or targets can be met or to promote continuous improvement

Sensitive Areas – means areas of mahinga kai and biodiversity values.

Significant change in farm systems – 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

Targets – means a measurable, auditable statement that contributes to achievement of the management objective

Water Holding Capacity (WHC) – means the volumetric ratio of all water contained in a layer or depth of soil at field capacity, including that held too tightly for plants to access

Winter grazing – means the grazing of cattle within the period of 1 May to 30 September, where the cattle are contained for break-feeding in-situ brassica and root vegetable forage crops or consuming supplementary feed that has been brought onto the property

Environment Canterbury Offices

Christchurch
PO Box 345
P. 03 365 3828

Timaru
75 Church Street
PO Box 550
P. 03 687 7808

Kaikōura
73 Beach Road
PO Box 59
P. 03 319 5781