

IN THE MATTER of the Resource Management Act 1991
AND
IN THE MATTER of the hearing of submissions on Proposed Plan Change 5 (Nutrient Management and Waitaki Sub-region) to the Canterbury Land and Water Regional Plan

BY **MORVEN, GLENAVY, IKAWAI IRRIGATION COMPANY LIMITED**

AND **WAITAKI IRRIGATORS COLLECTIVE LIMITED**

Submitters

TO **CANTERBURY REGIONAL COUNCIL**

Local authority

STATEMENT OF EVIDENCE OF JUDITH VICTORIA NEILSON ON BEHALF OF THE MORVEN, GLENAVY, IKAWAI IRRIGATION COMPANY LIMITED AND THE WAITAKI IRRIGATORS COLLECTIVE LIMITED

Dated: 22 JULY 2016



INTRODUCTION

Qualifications and experience

1. My name is Judith Neilson. I am the Environmental Manager of the Morven, Glenavy, Ikawai Irrigation Company Limited ("**MGI**") Irrigation.
2. I hold the qualifications of Master of Resource and Environmental Planning (Hons), Bachelor of Education, Diploma of Teaching and Learning. I also have a certificates in Intermediate and Advanced Sustainable Nutrient Management.
3. I have nearly 10 years of experience in managing issues related to the management of natural resources, including environmental monitoring and compliance, farm environment planning, auditing, nutrient management, development of catchment management programmes and farmer extension programmes. My experience relevant to this submission includes:
 - (a) Employed by Environment Canterbury for seven years in advisory, monitoring and compliance roles (including large scale industrial, farm dairy effluent and water (take/use) consent monitoring and compliance); and then for 3 years as a Senior Land Management Advisor. During this time, I worked with the Lower Waitaki South Coastal Canterbury Zone Committee to develop and implement the non-statutory components of catchment management and farmer extension programmes; to achieve the on-ground outcomes of the Lower Waitaki South Coastal Canterbury Zone Implementation Programme.
 - (b) I have been in my current role of Environmental Manager for MGI Irrigation since October 2014. I am responsible for the development and implementation of the schemes environmental management strategy and farm environment plans and oversee the scheme's auditing programme. I also undertake scheme environmental monitoring, extension programme development, and compliance with farm environment plan requirements and resource consents. I am currently working through the Environment Canterbury Auditor Certification training programme.

SCOPE OF EVIDENCE

4. My evidence will cover the following matters:
 - (a) MGI Irrigation Environmental Management – Environment Management Strategy, farm environment planning and auditing;

(b) Advantages and robustness of a scheme self-management approach

OUR SUBMISSION

5. It is my submission that irrigation schemes such as MGI Irrigation that have existing robust and successful environmental management systems in place should be able to self-manage their nutrient discharges; and that farmer shareholders should not be required to demonstrate good management practice via the farm portal and instead continue to achieve, demonstrate and measure GMP through farm environment plan requirements and auditing processes – to achieve continuous improvement and progress to achieving catchment environmental outcomes.
6. MGI Irrigation has reluctance to hold a scheme-wide nutrient discharge consent if farmers in the scheme are going to be held to achieving a GMP number (or better) as calculated through the Farm Portal. To date feedback on the Farm Portal has highlighted discrepancies between GMP loss numbers on farms that are considered through other assessments to be operating at good management practices. In some situations, where farmers have had their farm data put through the Farm Portal, the good management practices (observed on their farms and through FEP/Audit processes) do not positively align with the GMP loss number that is generated through the Farm Portal (examples of these situations are given in the evidence of Waitaki Irrigators Collective). GMP loss numbers have in some cases been significantly lower than what is being lost (as measured by Overseer) despite the farm, on the basis of all other assessments, operating at good management practice.
7. Consequently, there is an unquantified compliance risk to the scheme as a business, if non-compliance of a large number of shareholders occurs due to an inability to achieve their GMP number. Especially when there is discrepancy between modelled or calculated good management practices and what is actually observed, measured and assessed through farm environment plans and auditing.
8. A range of tools are required to accurately assess whether or not a farm is operating at (or beyond) industry agreed good management practice – relying heavily on one tool to determine this is at risk of providing an inaccurate result and unwanted environmental and on-farm outcomes. The Farm Portal is defined as a set of modelling proxies, which 'translate' the industry agreed good management practices, and are applied to OVERSEER® files to calculate the Good Management Practice Loss Rate for each farm, according to the land use and the property's soils and climate.

9. MGI would prefer to have the nutrient discharge from farms that are part of the scheme classified as a permitted activity in order to reduce the cost of administration and instead rely upon the existing FEP and good management practices.

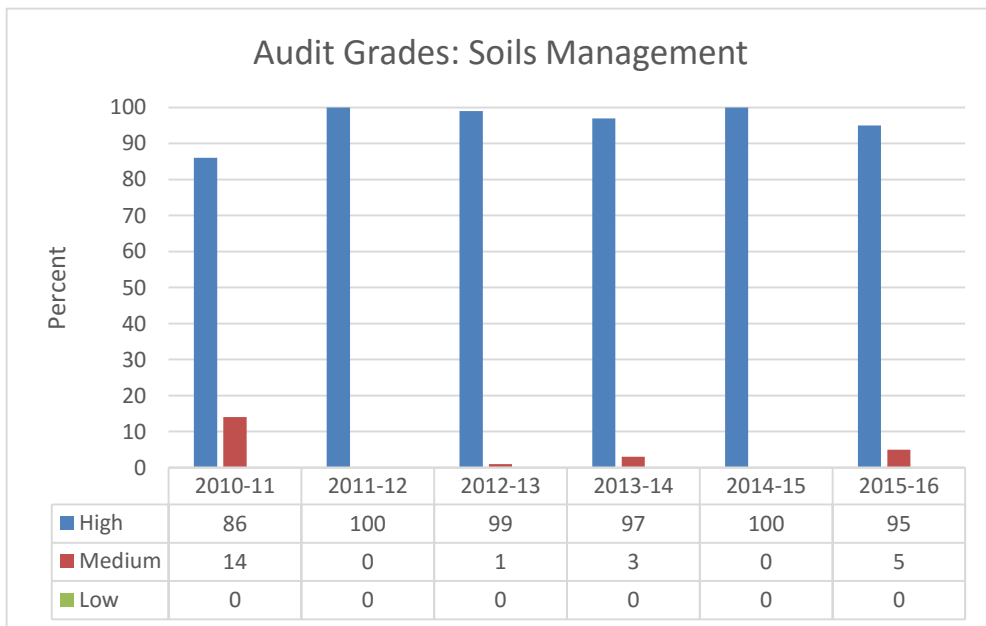
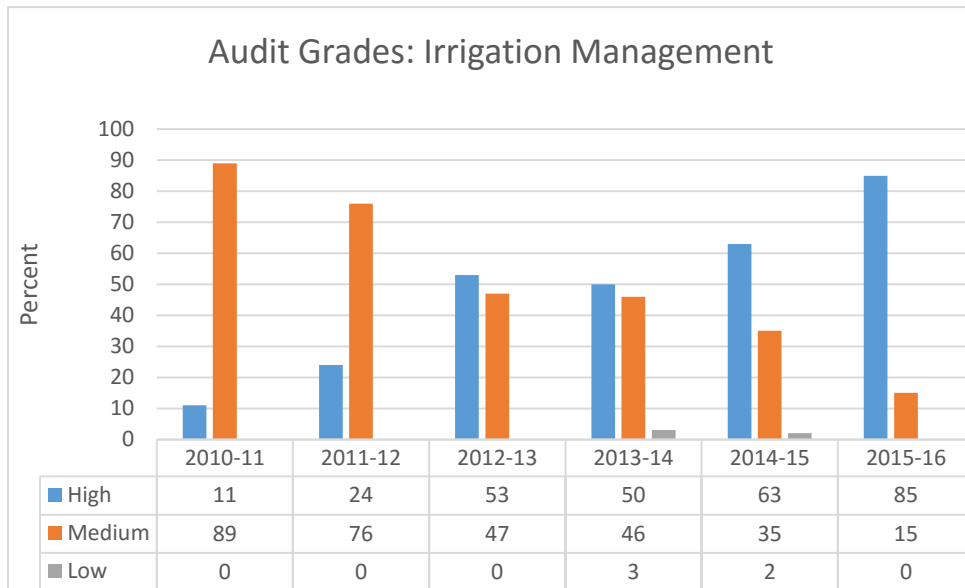
MGI IRRIGATION ENVIRONMENTAL MANAGEMENT – ENVIRONMENTAL MANAGEMENT STRATEGY, FARM ENVIRONMENT PLANNING AND AUDITING

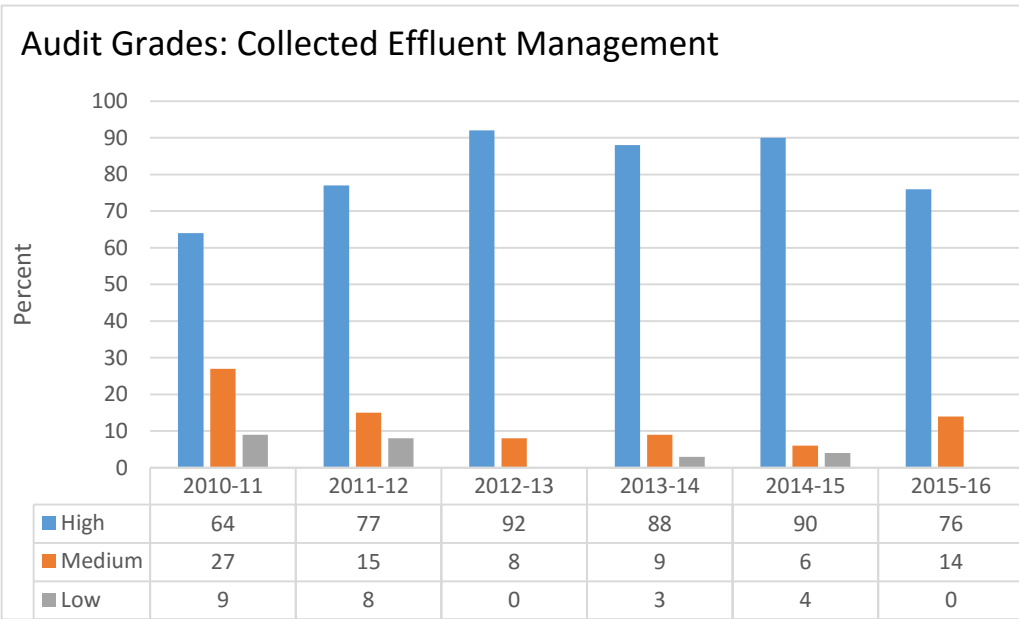
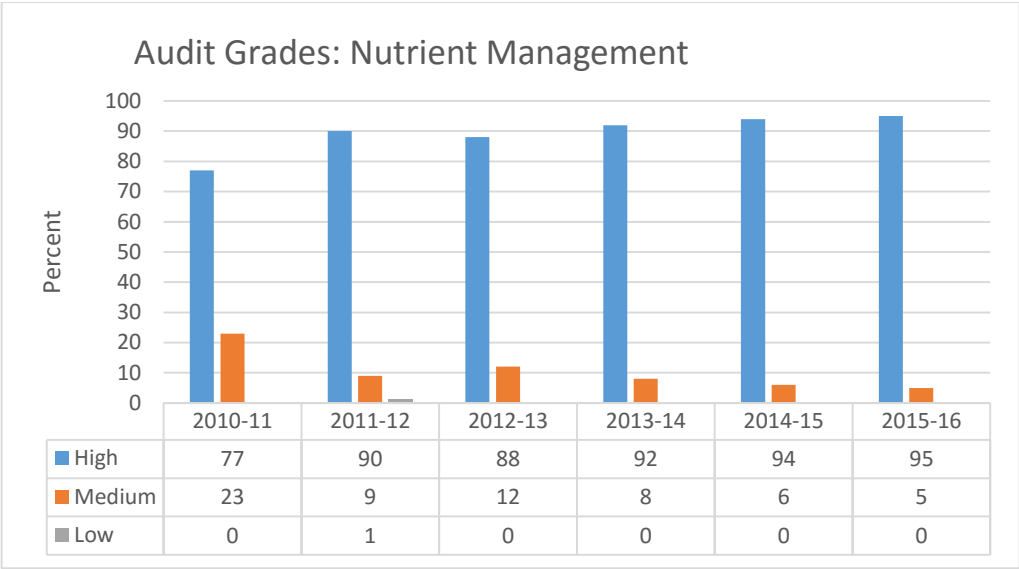
10. MGI has well established, successful and respected environmental management processes in place through FEPs and auditing. In 2010 MGI Irrigation developed its Environmental Strategy which sets out the protocols, policies and procedures for the company. A key purpose of the Strategy is to ensure the scheme operators and water users can achieve high environmental standards and sustainable outcomes. For MGI Irrigation, sustainability is about ensuring that the scheme is viable and contributes lasting benefits to society through consideration of social, environmental, ethical, and economic aspects in all that it does.
11. Farm environment plans were developed directly from the Environmental Management Strategy. The Plans were designed with the purpose of giving effect to the Strategy by putting in place measures to avoid, or minimise adverse impacts of on-farm activities associated with irrigation, and to implement good management farm practices.
12. The farm environment plans are independently audited by external auditors and after five years of scheme-wide auditing most farmers are now on a three-year audit cycle. This is a direct consequence of having consistently demonstrated good farm management practices and having adopted a cycle of continuous improvement across the seven focus areas of farm management. This has been facilitated through setting targets and achievement/completion timeframes; and providing constructive feedback through auditing.
13. The MGI Irrigation farm environment plan template was reviewed and updated to meet new regulatory requirements (Schedule 7 of the Canterbury Regional Council Land and Water Regional Plan). The quality of this revised template was acknowledged by both the Regional Councils approval panel and by CEO Bill Bayfield, “The Land & Water Regional Plan is a primary delivery mechanism of the Canterbury Water Management Strategy,” Mr Bayfield said. *“It is reassuring to see in this template a methodology that will enable development of plans identifying actual*

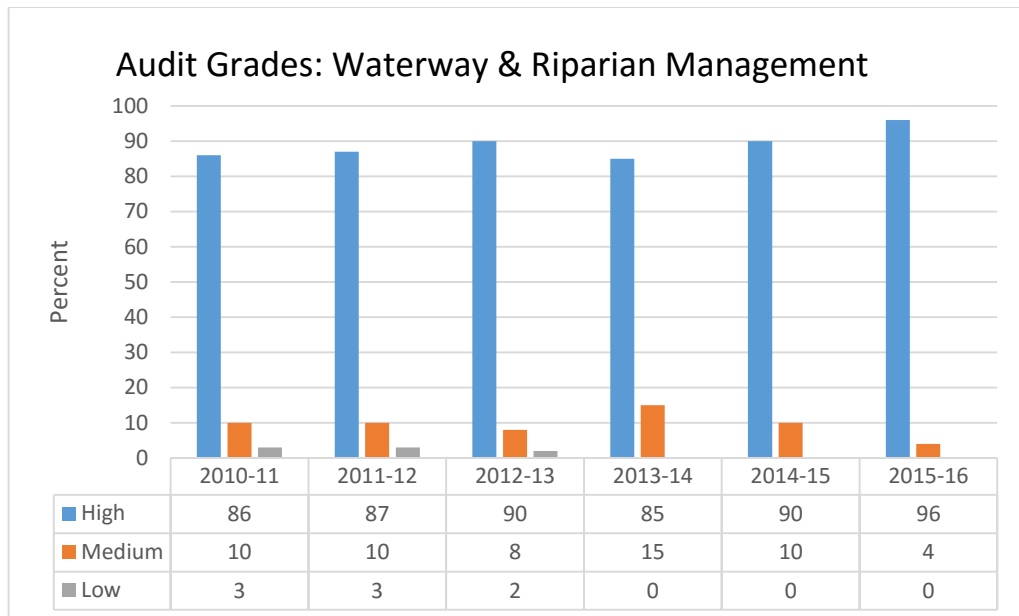
and potential environmental effects and risks to properties, addresses those effects and risks, and has a high likelihood of appropriately avoiding, remedying or mitigating them.”

14. Farm environment plans have the key advantage of being action driven and outcome focussed; and encompass more than the statutory bottom-lines of environmental performance. The capability and flexibility to include additional catchment focussed requirements where appropriate, to address specific catchment issues. An example of this is in the upper Waihao Catchment where critical source area mapping and riparian planting programmes are being integrated into the existing farm environment plan structure.
15. Where specific risk factors are identified on a farm or at a catchment level these can often be easily and successfully addressed within the scope of farm environment plans and integrate management of specific risk across farm system management e.g. irrigation on hills addressing infrastructure, irrigation management and staff training to avoid issues as well as mitigation for any effects that may occur beyond the management actions. The Wainono Restoration Project is an example of where on farm changes through farm environment plans and farmer engagement, education and resourcing; has resulted in changes to farm practices but also the willingness to make physical improvements to control sediment losses.
16. Farm Good Management Practices are observable, measureable and are outcome focussed. They are the core of what farmers do on a day to day basis. It is actions taken and changes made (often in the small things) that make the biggest differences. GMP in real terms is much more than a number output from a portal. It has been estimated in a report by Dr Glen Andrew Treweek, a soil scientist with Aqualinc Research (who is also presenting evidence to the Hearing Committee) that if existing dairy farms implemented GMP, then the calculated Waikakahi nitrogen load could decrease by 20-40%. This figure is based on modelling undertaken through the Farm Portal.
17. MGI Irrigation farmers are a good example of how what is considered good farm management practices have changed over time; and this has been reflected in their farm environment plans and in farm plan audit results. Farmers are now undertaking farm management differently than they did six years ago as a direct consequence of farm environment plan requirements and audit feedback.
18. MGI Irrigation has six years of farm environment plan audit data to date – it is the first scheme in Canterbury to have data that tracks farmer performance in this way.

19. The strong farmer leadership at the Board level has developed a culture of pride and support in achieving excellent audit results and demonstrating good practices on farms. There have been very few instances of 'low' grades for specific management areas or overall non-compliance. In particular, almost no repeat non-compliance. Most problems identified have been remedied without requiring any significant follow-up from MGI.
20. The graphs below highlight this change and establishment of scheme-wide continuous improvement:







Note 1: The irrigation seasons 2010-11 and 2011-12 were both unusually wet seasons and most irrigators were not running when auditors visited. Because they were not able to check for visual signs of good or poor performance it was necessary to take a conservative approach, and a 'high' rating was not given unless other suitable evidence was provided on system operation.

Note 2: The number of audits carried out per year has varied, as all farms are required to have annual audits until they have 3 compliant audits, after which they are audited at least once every 3 years.

Note 3: As the programme has progressed the expectations of what is required to achieve a 'high' grade has increased. For example, spray irrigating farmers now need to provide evidence that they are using soil moisture monitoring to make irrigation decisions to achieve a 'high' result for irrigation management, but this was not a requirement earlier on. A programme of workshops and support was provided to assist farmers implement appropriate techniques.

ADVANTAGES AND ROBUSTNESS OF SCHEME SELF-MANAGEMENT

21. MGI Irrigation has well-established and implemented environmental management systems, with proven success in achieving on-going continuous improvement in farm management practices. Within these established processes is the flexibility to be responsive and adaptive to environmental indicators (through scheme monitoring,

State of the Environment Reporting etc.). MGI Irrigation has a strong environmental ethic and vested business interest, for ensuring it's continued high levels of performance. MGI Irrigations' environmental management approach is focussed on meeting more than just the scheme's requirements. Its Environmental Management Strategy is overt in stating the schemes desire, obligation and commitment to meaningfully and successfully contribute, towards meeting catchment and community environmental outcomes.

"This Environmental Management Strategy outlines the commitment that Morven Glenavy Ikawai Irrigation Company Ltd (MGI) and Waihao Downs Irrigation Ltd (WDI) have made to a pro-active approach to environmental management in all aspects of the development, operation and maintenance of the schemes.

It describes how MGI and WDI ("the schemes") and their water users will jointly manage environmental issues, including the use of Farm Environment Plans (FEPs), independent audits, and robust compliance and enforcement.

The schemes recognise that they are operating under a wider sustainable management framework, in particular the Canterbury Water Management Strategy (CWMS), the Land and Water Regional Plan and the Lower Waitaki South Coastal Canterbury Zone Implementation Programme (ZIP). The schemes' environmental objectives and activities are intended to assist in implementation of all of these". (MGI Irrigation Environmental Management Strategy, page 3).

22. This approach is detailed further in the Environmental Management Strategy on page four (excerpt below):

1. Sustainability Policy and Principles

The schemes are committed to ensuring that they are viable and contribute lasting benefits to society. Through consideration of social, environmental, ethical and economic aspects in all that they do, they will seek a balance between agricultural productivity and environmental protection, both of which are essential for the long term productivity and sustainability of the area.

Sustainability Policy

The schemes aim to be leaders in sustainable irrigation performance in New Zealand, and will develop, implement and maintain systems for sustainable management to drive continual improvement in performance and will strive to:

- Meet or, where less stringent than our own standards, exceed applicable legal requirements, including our resource consent conditions;
 - Promote continual improvement in responsible and efficient use of water and other natural resources;
 - Ensure that our shareholders understand their environmental responsibilities and support them in reaching the required standards, particularly through the Farm Environment Plan and audit processes;
 - Understand, uphold and respect cultural heritage, in particular respecting the Ngai Tahu values in relation to water, the natural environment and other taonga¹;
 - Actively enhance biodiversity values, wherever possible, within our operation;
 - Engage regularly, openly and honestly with people affected by the scheme operations and have processes in place to act on concerns associated with irrigation activities;
 - Develop and maintain positive relationships with industry partners and local communities;
 - Track and regularly review our environmental performance and report to shareholders, Canterbury Regional Council and others.
23. The sense of pride and ownership that I have observed within the scheme's shareholders and Board; of these processes provides powerful motivation to develop solutions, resources and continued investment in farmer extension and environmental programmes.
24. Scheme self-management both enables and facilitates an integrated, collaborative environmental management approach working alongside and with other agencies; including the Canterbury Regional Councils own catchment programmes. MGI Irrigation is currently involved with and supports collaborative projects of this nature in the Lower Waitaki Zone.
25. Conversely a clear disadvantage of farmers having individual nutrient discharge consents would be a shift in some people to a bottom line compliance mentality; with a view on minimising the cost of compliance rather than on achieving catchment outcomes, good management practices and continuous improvement.
26. Environment Canterbury are currently investing significant resourcing into developing a robust farm environment plan auditor certification programme. This is indicative of the value and credibility placed in existing audited self-management processes.
27. MGI Irrigation has established farm environment plan and auditing, management structures. The cost of implementing these is internalised within the scheme. If farmers were to have individual nutrient discharge consents, then the additional cost and burden on resourcing of administering and monitoring these, to the Regional Council would have to be acknowledged. It is also a more cost effective approach for farmers to have the scheme undertake environmental management on their behalf, rather than having to engage professionals on an individual basis. Scheme self-

¹ Sacred treasure, valuables

management administered through scheme structures where data management, compliance and reporting are undertaken would relieve this burden from the Regional Council, freeing up resources to focus on high risk activities, environmental monitoring, catchment improvement programmes and farmer engagement.

CONCLUSION

28. MGI Irrigation has developed and established environmental management systems and wants to continue to utilise these processes with its farmer shareholders - towards achieving catchment environmental outcomes; without the requirement of additional, complex (and yet to be proven reliable) number determined GMP compliance targets, as generated through the farm portal.
29. Farm environment plans and auditing recognise farmer efforts and input to change and improvement. Farm environment plans more accurately and holistically represent what is actually happening on farm and facilitate the cycle of continuous improvement. The risk of relying solely on an output number from a model to determine if a farm is operating at GMP, is that it may provide unreliable or non-representative information, which then determines not only compliance but in some cases business viability.
30. A number centric environmental management approach may over time serve to distract and demotivate farmers from consistently implementing good farm management practices on a day to day basis. The key driver becoming number driven; rather than outcome and management focussed.
31. Farmer performance in meeting GMP requirements should be assessed through a range of tools including Overseer and farm environment plans and auditing. Schemes are in an ideal position to continue to implement, manage and monitor these processes provided they are not placed in a position of high environmental and business compliance risk.

Judith Neilson

Date 22 July 2016