

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of submissions and further submissions by Rangitata Diversion Race Management Limited (**RDRML**) on proposed Plan Change 5 to the partially Operative Canterbury Land & Water Regional Plan

STATEMENT OF REBUTTAL EVIDENCE OF DAVID JOHN GREAVES

Introduction

1. My full name is David John Greaves.
2. I provided a statement of evidence dated 22 July 2016 in connection with submissions by RDRML on Plan Change 5¹ to the partially Operative Canterbury Land & Water Regional Plan.² My qualifications and experience are set out in that statement. Consequently, I do not repeat that detail here.
3. I have read the evidence of other submitters that was exchanged, and wish to provide, via this statement, rebuttal evidence to aspects of the statements made by the following witnesses.
 - Scott Pearson and Angela Christensen (North Canterbury and Central South Island Fish and Game Councils³);
 - Treena Lee Davidson (Ngā Rūnanga, Ngāi Tahu Farming Limited and Te Rūnanga o Ngāi Tahu⁴).
4. I confirm that this rebuttal evidence is also prepared in accordance with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014.

Evidence of Scott Pearson and Angela Christensen

PC 5 Nutrient Management Policies and Rules

5. From paragraph 36, the Fish and Game Statement of Evidence⁵ provides an assessment of the proposed PC5 Policies and Rules as they relate to the Fish and Game submission and further submission. The assessment steps through the proposed provisions and at paragraph 39 states:

¹ Hereafter referred to as '**PC5**' or '**the Plan Change**'

² Hereafter referred to as '**CL&WRP**'

³ Hereafter referred to as '**Fish and Game**'

⁴ Hereafter referred to as '**Nga Rūnanga**'

⁵ Hereafter referred to as '**Evidence**'

"Policy 4.37 is considered critical for systematically applying the policy framework. Fish and Game does not support changing this process to an alternative consenting pathway, because this would remove the "portal" and supporting MGM framework as the means of consistently determining GMP compliance and meeting associated nutrient management policies and rules."

6. Following this, paragraphs 40 and 41 detail previous examples that Fish and Game have experienced with resource consent applications regarding nutrient management, their view on intensification of land use from irrigation and how this intensification is modelled in Overseer. Specifically it states at paragraph 41:

"...We are not convinced that modern irrigation practices have created a zero sum game at this stage, given the uncertainties and discretionary aspects associated with Overseer modeling. Fish and Game has strong concerns regarding the potential for Overseer gaming by farm advisors who have significant flexibility in relation to input variables. In the P&E Ltd case, which is still under deliberation in the Environment Court, the comparative Overseer assessments were quite different between Environment Canterbury and P&E Ltd's farm advisors."

7. Paragraphs 41 and 42 suggest, to me, that Mr Pearson and Ms Christensen have little confidence that OVERSEER™, produces accurate and validated nutrient loss calculations. Given the interconnection that OVERSEER™ has with the Farm Portal through the PC5 framework, I conclude that this lack of confidence must too apply to the use of the Farm Portal.
8. However, at paragraph 43, Mr Pearson and Ms Christensen appear to promote the adoption of the Plan Change framework, including the Farm Portal and OVERSEER™ tools, as the most 'consistent and equitable' approach. I question the strength of this conclusion, particularly where it is coupled with evidence that an alternative consent pathway is not appropriate. As I have concluded in paragraph 5.21 of my Evidence in Chief⁶, I am of the opinion that in order for PC5 to achieve the desired water quality outcomes, the modelling undertaken within the Farm Portal needs to accurately reflect the Nitrogen and Phosphorous outputs resulting from farm activities. Any other outcome could threaten public confidence, and thus buy-in to what is a significant chapter of a very significant planning instrument.
9. More particularly, I am of the opinion that reaching such a conclusion after having highlighted significant flaws within the framework does not represent good planning practice and does not appear to consider the full implications of such a decision. Not only could this approach reduce the effectiveness of the Plan Change, but adopting a method without ensuring that it is able to meet the key objectives that are being sought does not provide any certainty that the Plan Change will succeed and achieve the environmental outcomes sought at all. In addition to this, and as identified in my evidence, in this instance the economic and social implications of the Plan Change are extremely significant. Inaccurate modelling may lead to unnecessary changes to farming practices that as a result affect the ability for these enterprises to remain viable. Given the significant role that farming plays within the Canterbury region, such unnecessary measures have the potential to lead to financial and social hardship to the wider area.

⁶ being the Statement of Evidence of David John Greaves to PC5 of the partially Operative Canterbury Land and Water Regional Plan, dated 22 July 2016 and hereon referred to as '**my evidence**'.

10. I also question if adopting a position because it is 'consistent and equitable' rather than because it is 'accurate' gives effect to the purpose of the Resource Management Act 1991⁷. Section 5 of the Act sets out the purpose, being to promote the sustainable management of natural and physical resources. I consider that in order to achieve this purpose, decisions and actions need to be based on sound, justified and accurate information. Given my understanding of the current outputs produced by the Farm Portal, and I believe in light of the evidence identified above this is also the position of Mr Pearson and Ms Christensen, the Farm Portal is currently not producing results that can be considered as sound, justified and accurate.
11. Mr Pearson and Ms Christensen also conclude that for these 'consistent and equitable' reasons, the adoption of an alternative rule framework is not supported by Fish and Game in place of the Farm Portal approach. At paragraph 7.6 of my evidence, I agree with this position as it relates to a stand alone alternative rule framework to the Farm Portal. However as indicated in paragraphs 7.3 to 7.5 of my evidence, the Farm Portal has been identified as containing significant limitations when considering the range of farming operations and how their specific nutrient management outcomes are modelled. As such, I have proposed a mechanism to allow for consideration of such operations, through amendments to Rules 5.45A, 5.55A and 5.58A. The assessment proposed through these rules specifically relate only to those activities that are unable to be modelled by the Farm Portal. As a result of this, I do not believe that they introduce a mechanism that would cumulatively undermine the Farm Portal framework.
12. In light of the discussion in paragraph 10 above identifying the purpose of the Act, I consider that this amended approach better reflects the ability to promote sustainable management than the position of Fish and Game, which is to acknowledge that OVERSEER™ and the Farm Portal do not produce accurate results but do not provide for the ability for these selected activities to be considered through a resource consent process.
13. In my opinion a more suitable approach is that advanced in the RDRML submission and detailed further in my evidence. This approach is that, as a result of the identified inaccuracies within the Farm Portal (in particular the current irrigation and fertiliser proxies), the decisions on the Plan Change should be deferred for a defined period of time while agreement between the relevant parties is sought on appropriate changes to the proxies. As indicated at paragraph 4.13 of my evidence and based on the technical assessments within the evidence of a number of other submitters⁸, it is anticipated that the duration of the deferral period is likely to be in the order of only three to four months. Following the refinement of the Farm Portal to accurately reflect nitrogen loss, I propose that then appropriate timeframes are able to be set for the implementation of the Plan Change allowing it, including the amendments to Rules 5.45A, 5.55A and 5.58A, to be adopted.

Evidence of Treena Davidson

Staged Nitrogen Reduction and Permitted Activity Thresholds

14. The Statement of Evidence of Treena Davidson traverses a number of issues, in support of Ngā Rūnanga's submission, with the PC5 provisions. In Section 6 of her Evidence, Ms Davidson

⁷ Hereafter referred to as '**the Act**'

⁸ Refer evidence of Reuben Edkins, RDRML; Ian McIndoe, Irrigation New Zealand and Alister Metherell, Ravensdown Limited.

discusses the staged reduction of nitrogen losses as identified in the Ngā Rūnanga submission and the previous submissions and evidence to Variation/Plan Change 2 of the CL&WRP. Ms Davidson states that following its consideration of the section 42A report, in particular the assessment in Appendix C, Ngā Rūnanga wishes to amend its requested relief. In this respect, I understand Ms Davidson to be stating that Nga Runanga's proposed amendments to the permitted activity limit triggers is no longer necessary. As such, I understand that the staged reduction in nitrogen loss rates proposed in its primary submission are no longer sought.

15. However Ms Davidson identifies that Ngā Rūnanga's position on nitrogen management is one that seeks continual reduction past 2020. Ms Davidson notes that the current proposed PC5 provisions do not appear to provide for this relief.
16. As a result of this, Ms Davidson proposes an additional clause (iii) to Policy 4.37, which is identified in paragraph 6.7 and reproduced below:

Freshwater quality is improved within the Lake Zone and the Red Nutrient Allocation Zone by: ...

(c) requiring a Farm Environment Plan as a part of any application for a resource consent to use land for a farming activity, and requiring that Farm Environment Plan to: ...

(iii) show how continued improvement in nitrogen to below Baseline GMP loss Rate or the Good Management Practice Loss Rate (whichever is the lesser) will be achieved.

17. In addition to this, Ms Davidson proposes amendments to Policy 15B.4.10 to provide for similar relief with regard to the Waitaki and South Coastal Canterbury provisions, as identified at paragraph 6.9 of her statement.
18. Through its submissions to the various stages of the CL&WRP, RDRML has supported a planning regime that seeks to reduce nitrogen loss rates from existing and future activities in order to address environmental effects. I support this position and believe that it is needed to achieve the sustainable management purpose of the Act (in a water quality context) in Canterbury and the direction advanced by the National Policy Statement for Freshwater Management.
19. I understand that Plan Change 5 was drafted following extensive public and targeted consultation and with the intention of introducing provisions to ensure that Good Management Practices relating to farming activities were implemented as a means of reducing nutrient losses. The notified provisions clearly identified this intention and are specific in their direction to implement Good Management Practice. Based on this understanding, submissions and further submissions have been made to the Plan Change addressing what is Good Management Practice and when it should be implemented.
20. Whilst I believe that the amendments proposed by Ms Davidson represent sound aspirational goals, I consider that they have far reaching implications and as such their introduction at this late stage of the process is not appropriate and their content is outside of the scope of the relief sought. As Ms Hamm is to address the Committee on the matter of 'scope' and natural justice, I do not take this matter further in this statement, other than to state that were Ms Davidson's recommended

approach to have been signalled in Nga Runanga's submission, rather than in evidence, RDRML (and others) would have been able to better consider its implications, and call considered evidence on it, were it unacceptable to them.

17. As identified in the RDRML submission and in further detail in my Statement of Evidence, I do not believe that currently the Plan Change has accurately identified how Good Management Practice is represented on the farm and as a result has not quantified the effects associated with implementing it. With this in mind, I question if Ms Davidson has considered or quantified the effects that could be generated by 'further', unspecified, reduction in nutrient losses. Further, I question if Ms Davidson has justified the need for reductions beyond those anticipated by PC5, or confirmed that they are needed achieve the environmental results anticipated by the Plan, the higher order planning instruments, or the Act.
18. In light of the foregoing, I question if the relief advanced by Ms Davidson is appropriate. I consider that only once the full effects (being environmental, economic and social) of implementing Good Management Practice have been fully evaluated (and are understood with a degree of certainty) should consideration be given to the measures that see nutrient losses reduced further.



David John Greaves
Associate & Environmental Planner

5th of August 2016