

**IN THE MATTER**

of the Resource  
Management Act 1991  
(RMA) and the  
Environment  
Canterbury  
(Temporary  
Commissioners  
and Improved Water  
Management) Act 2010

**AND**

**IN THE MATTER**

of Proposed Variation  
3 to the Canterbury  
Land & Water  
Regional Plan

**TO BE HEARD BY**

Environment  
Canterbury

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**Statement of Rebuttal Evidence of Christopher Adrian Hansen on  
Behalf of Ravensdown Limited**

**21 October 2015**

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## **Introduction**

- 1 My name is Christopher Adrian Hansen. My experience and qualifications are set out in my evidence in chief dated 25 September 2015. Since that time I have reviewed the statements of evidence filed on behalf of other submitters. I have provided rebuttal to new matters raised, or where I consider additional comment is warranted.
- 2 I have continued to comply with the code of conduct for expert witnesses as contained in the Environment Court's practice note when preparing this rebuttal evidence.
- 3 I make reference to the following expert Evidence in Chief (EIC) in my evidence in reply:
  - Ms Angela Christensen for Central South Island Fish & Game Council
  - Mr Gerard Willis for Fonterra and Dairy NZ
  - Mr Mark Neal on behalf of Fonterra and Dairy NZ
  - Mr Stuart Ford on behalf of Horticulture NZ
  - Dr Samuel Dennis on behalf of Beef + Lamb NZ

### **Ms Angela Christensen (for Central South Island Fish & Game Council)**

- 4 I note Ms Christensen includes in Appendix 1 to her Evidence in Chief (EIC) proposed Variation 3 provisions marked up with the changes Fish & Game seek (in green text). In particular Fish & Game seek additional 'critical values' to be added to Table 15 (a) (as referenced in paragraph 25 of her evidence) and amendments to the proposed Variation 3 policies and rules to reference the achievement of the freshwater outcomes in Tables 15 (a) (as amended by the Fish & Game submission) and (b). The policy and rule amendments include:
  - A New Policy to be added to Section 15.4 Policies under the heading '*Managing landuse to maintain or improve water quality*';
  - A new Clause e. added to Policy 15.4.1 (as recommended to be amended by the s.42A Report);
  - A new Clause 2 added to Policy 15.4.13;

- A reference in Policy 15.4.15;
- A new Condition 6 in Rule 15.5.2;
- A new Condition 3 in Rule 15.5.2A (new rule recommended in the s.42A Report);
- A new Condition 2 a. in Rule 15.5.3;
- A new Condition 6 in Rule 15.5.4A (a new rule recommended in the s.42A Report);
- A new Condition 7 in Rule 15.5.6;
- A new footnote to Tables 15(m); 15(n); and 15(p) stating that the freshwater outcomes of Table 15(a) and (b) must be met.

- 5 I have a number of concerns regarding the implications of the above provisions being included in proposed Variation 3. Firstly, in my opinion Ms Christensen's evidence does not provide sufficient commentary or justification for the raft of policy and rule provisions being sought, and an assessment of the implications of including these provisions. For example, the Fish & Game submission includes a new column in Table 15(a) listed as '*critical values*' that relate to biodiversity; salmonid fishery; amenity; and contact recreation. The implications of including these values in Table 15(a) are not carried through into an evaluation of the economic costs and benefits, and environmental benefits, that might be expected by including the provisions proposed.
- 6 In relation to the policy amendments proposed, on a first reading they appear in my view to be reasonable and appropriate. However, when read in the context of the additional '*critical values*' sought by Fish & Game to Table 15(a), I consider there are implications of these amended policy directions on the resource user that have not been identified or assessed. This concern is compounded when considering the amendments sought to the rules, and the implications of these provisions.
- 7 The basis of my concern is that Tables 15(a) and (b) sets freshwater outcomes for a management unit. In this case the management units are geographically defined in Table 15(a) (hill or plain) in Column 1, and specific rivers, streams or creeks are named within the management units in Column 2; and Table 15(b) for lakes. I am therefore comfortable with a policy directive (as

- included in the notified plan) by which a decision maker can consider fully a resource consent for an activity that might have an effect on these freshwater outcomes for the management units in Tables 15(a) and (b) being achieved.
- 8 However, there is no direction in Tables 15(a) and (b) regarding where in the management unit the freshwater outcome is measured, and there is no way an individual resource user within a management unit will know if the freshwater outcomes are being achieved where they are located. In other words, there is no mechanism available to the resource user, such as a defined point in a river, stream or creek where the values are to be measured and complied with, to demonstrate their particular activity is achieving or hindering the achievement of the freshwater outcomes included in Tables 15(a) and (b).
- 9 It is therefore unworkable, in my opinion, for the policy directive to achieve the freshwater values expressed in Tables 15(a) and (b) to be carried down into a condition on a permitted activity or restricted discretionary activity rule, as proposed by Ms Christensen. The wording of the rules she has put forward are all-inclusive meaning all freshwater outcomes (included those sought to be added by Fish & Game in their submission) would need to be met to meet the condition, and there is no way of establishing this fact.
- 10 The implications of this are that the resource user cannot determine whether the freshwater outcomes included in Table 15(a) (with the amendments sought by Fish & Game in their submission) and (b) are being achieved, and therefore there is uncertainty regarding whether their activity is permitted or restricted discretionary. The rule regime proposed by Ms Christensen would mean non-complying activity consent under Rule 15.5.4 is required as the amendment to the restricted discretionary activity Rule 15.5.3 has the same implications I have discussed above.
- 11 In my opinion Ms Christensen intends for the freshwater outcomes included in Tables 15(a) and (b) as a threshold to determine whether consent is required, and this is inappropriate and does not represent sound resource management planning practice.

**Mr Gerard Willis (for Fonterra and Dairy NZ)**

- 12 I note in Mr Willis' evidence he highlights the challenges of setting property leaching limits and quite rightly points out that OVERSEER<sup>TM</sup> is subject to regular updating and change meaning a farms nitrogen loss can change over time even if nothing changes with the way a property is farmed over the same period (paragraph 68 of his EIC). Mr Willis bases his views on expert evidence of Mr Mark Neal (of DairyNZ Limit).
- 13 Mr Willis proposed amendments to Policy 15.4.1A that includes a need to remodel nitrogen loss limits following the issue of updated versions of OVERSEER<sup>TM</sup>; using the same input data originally used to generate the load limits in Tables 15(p), 15(m) and (n); and applying the load limit remodelled in accordance with the policy (paragraph 95 of his EIC).
- 14 I agree with the concerns raised by Mr Willis, and endorse the proposed amendment to Policy 15.4.1A he proposes.
- 15 I also note in paragraph 84 of his EIC Mr Willis expresses an opinion that proceeding with a plan change that is acknowledged to depart from the intent of the core advice informing the variation and which is based on data about existing and 'good practice' nitrogen losses known to be out-dated (as he references the s.42A Report in paragraph 82 of his EIC) is not good planning practice. I agree with Mr Willis' opinion on this matter, particularly given the outcomes of MGM Project are due to be received by Environment Canterbury by the end of the year, and will be the subject of a separate Plan Change process. It is my understanding the maximum cap limits contained in proposed Variation 3 can be replaced by the MGM outputs for a particular farm, and in my opinion replacing the maximum cap numbers with the MGM values is good planning practice.

**Mr Mark Neal (for Fonterra and Dairy NZ)**

- 16 In his evidence Mr Neal discusses the problems with flexibility and maximum caps, including the fact that there are a number of errors in the calculation of the catchment loads and consequently the flexibility and maximum caps (paragraph 34 of his EIC). Mr Neal concludes he is unable to advise on appropriate flexibility and maximum cap numbers (paragraph 69). Mr Neal

does however identify that Council will be in a position to improve the current issues with flexibility and maximum cap numbers shortly with the outcomes of the MGM project. Mr Neal seems to support in paragraph 72 the inclusion of the MGM outcomes in the Variation 3 framework.

- 17 In my opinion the concerns expressed by Mr Neal with the flexibility and maximum cap numbers is valid and needs consideration, and the proposition that the MGM numbers will provide improvements to the current flexibility and maximum cap numbers is accepted. In my view it is good planning practice to adopt the approach outlined in paragraph 72 of Mr Neal's EIC to adopt the MGM outcomes.

### **Mr Stuart Ford (for Horticulture NZ)**

- 18 I note Mr Ford expresses his disappointment with the Council choosing to use the Lookup Table Report in adopting the N leaching values in proposed Variation 3 (paragraph 4.1 of his EIC) and discussed in detail his concerns with this approach. Mr Ford also addresses the potential loss of land use flexibility, and highlights an issue that maximum caps will, according to his calculations, be restrictive to all land uses for heavy soils (being the highly productive soils) (paragraph 8.1 of his EIC). Mr Ford concludes that as the rules stand at present it will not be possible for land use change to a higher N leaching land use because the maximum cap is too low (paragraph 8.3 of his EIC). Mr Ford highlights the economic implications of this proposition.

- 19 I consider Mr Ford's findings raise important questions about adopting the maximum cap approach, as questioned by Ravensdown in its submission, and highlight the need for an alternative approach to provide for land use flexibility. The outcome of the MGM Project provides such an alternative approach, as I have discussed in my EIC.

### **Mr Samuel Dennis (for Beef + Lamb NZ)**

- 20 Mr Dennis makes some useful comments in paragraphs 100 – 105 of his EIC directed at the flexibility caps included in proposed Variation 3. He generally concludes that while flexibility caps are an excellent idea, the proposed values have been set far too low to be useful, as it is likely they will apply to very few

farms. The main reason Mr Dennis gives for this conclusion is that there are critical flaws in how the flexibility caps have been calculated and the OVERSEER<sup>TM</sup> modelling has been over simplistic and do not reflect real-world farming systems (paragraph 102 of his EIC). Mr Dennis recommends flexibility caps be based on a pool of models of real farms (which are complex) rather than a set of hypothetical, simplified systems (paragraph 104 of his EIC).

- 21 I agree with the concerns raised by Mr Dennis, and consider his proposed solution has merit. In some ways the solution he proposes is similar to the expected outcomes of the MGM project, and from this perspective I consider the concerns he has raised could equally be addressed by adoption of the MGM values.

Chris Hansen

21 October 2015