

IN THE MATTER

of the Resource
Management Act 1991
(RMA)

AND

IN THE MATTER

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

TO BE HEARD BY

Environment
Canterbury

**Statement of Evidence of Christopher Adrian Hansen on Behalf of
Ravensdown Fertiliser Co-operative Ltd**

08 September 2014

Introduction

- 1 My name is Christopher Adrian Hansen. My experience and qualifications are set out in my evidence in chief dated 29 August 2014. 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:
 - Scott Pearson
 - Alison Dewes & Jim Cooke

Scott Pearson (North Canterbury Fish & Game Council and Royal Forest & Bird Protection Society)

- 4 In Appendix 1 of his EIC Mr Pearson introduces a new Table X entitled: "*N and P and MCI Indicator/Limits Table for Selwyn Te Waihora Catchment*". In paragraphs 150 and 151 of his EIC Mr Pearson outlines the rationale behind introducing this new table, and states in paragraph 151 that the table is "*designed to anchor the Variation 1 plan in terms of nutrient management*". In essence the approach proposed by Mr Pearson on behalf of Fish and Game is to add an additional 20% reduction on nutrient concentrations between 2037 and 2050 making an overall all reduction of 50% from current levels (presumably the nitrogen baseline).
- 5 I am concerned that the table includes no figures to determine what these reductions might look like, and no benefit/cost evaluation to determine the environmental benefits and the costs to the resource user. In my view this evaluation should be provided for such an important table which Mr Pearson describes as the '*anchor*' for Variation 1. In my opinion what Mr Pearson is proposing seems to add little to the nitrogen baseline approach already

included in Variation 1 which establishes the ‘current’ nitrogen loss rates for a farming activity.

- 6 Following on from this point, Mr Pearson has included in Appendix 5 of his EIC suggested amendments to the provision contained in Variation 1. In particular I note he recommends the following amendment to Policy 11.4.12 (a):

“Improve water quality by ~~R~~reducing discharges of nitrogen, phosphorus, sediment and microbial contaminants from farming activities in the catchment by requiring farming activities to:

(a) ~~Not exceed~~ Reduce the nitrogen baseline where a property’s nitrogen loss calculation is more than 15kg of nitrogen per hectare per annum, unless circumstances set out in Policy 11.4.14B apply; and ...”

- 7 There are two aspects of the amendments sought by Mr Pearson that I wish to address. Firstly, I am concerned that Mr Pearson is recommending Policy 11.4.12 (a) require a reduction in the nitrogen baseline of a property. I cannot find any commentary in his EIC that elaborates on or supports this recommendation. As stated in paragraph 28 of my EIC, it is my understanding that the nitrogen baseline was established in the proposed CL&WRP for farming activities and farming enterprises so that historical nitrogen losses could be benchmarked with the goal to ensuring exceedence is avoided in the interim in nutrient over-allocated catchments such as the Selwyn Te Waihora. In my view, seeking a reduction in the nutrient baseline is illogical and inappropriate. The current rule regime (which I have expressed concerns about in my EIC) means exceedence of the nitrogen baseline is a prohibited activity (Rule 11.5.12). Having a reducing nitrogen baseline would mean that an activity that was operating within the bounds of the rules would become a prohibited activity which has significant implications for the resource user. In my view, the recommended amendment does not represent best planning practice and should be rejected.

- 8 Secondly, Mr Pearson introduces an exception to the need to reduce the nitrogen baseline by referencing a new Policy 11.4.14B which he proposes. Policy 11.4.14B reads:

“In circumstances where a farming activity seeks to increase its nitrogen loss above amount calculated as the nitrogen baseline for the property this may only occur if:

(a) records held by the council show that reductions in nitrogen loss calculations from other farming activities in the catchment have been achieved that are equal to or greater than the increase in nitrogen loss above the nitrogen baseline for the property sought; and

(b) the nitrogen loss from the farming activity, in combination with all other nitrogen loss from farming activities in the catchment does not cause the relevant interim nitrogen load limit for farming in the catchment to be exceeded; and

(c) the nitrogen loss calculation for the property does not exceed the rate calculated to be the Good Management Practice Nitrogen and Phosphorus Loss Rate for the farming activity less the percentage reduction in nitrogen loss rates required for the farming activity in Policy 11.4.14(b) and any further reductions required by Policy 11.4.14A; and

(d) the farming activity must implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A.”

- 9 While in principle I understand what Mr Pearson is seeking to achieve (as outlined in paragraphs 127; 130 – 131 of his EIC), I have two concerns: firstly, it is not clear to me how (a) will be established or determined. There seems to be an off-setting mechanism being proposed between farms which may be fraught with difficulties and may not be equitable. In theory it would appear that one farm may be allowed to benefit at the expense of other farms that are actively reducing the nutrient discharges. Secondly, this provision seems contrary to Rule 11.5.12 and the current rule regime which prohibits any exceedence of the nitrogen baseline. In other words, it is unclear how the recommended Policy 11.4.14B is to be implemented through the rules as only Rule 11.5.12 appears relevant and this rule is contrary to the intent of the recommended policy.

Alison Dewes & Jim Cooke (both on behalf of the North Canterbury Fish & Game Council and Royal Forest & Bird Protection Society)

10 I note in paragraph 176 of Ms Dewes EIC she states that:

“There is a lack of “tools” available to measure diffuse phosphorus loss from farms. At present, we have Overseer at our disposal. This is not reliable for quantifying P loss. Predictions can be 30% out, and have varied by 30% between versions. Overseer does not quantify P loss during storm events when the greatest losses occur. Overseer is best used as a tool to manage N outputs from farms, and quantify the relative gains from mitigations.” (Ms Dewes emphasis)

11 I agree with Ms Dewes views. However, in paragraph 54 of Mr Cooke’s evidence he states:

“Given the major uncertainty on the effectiveness of in-lake remediation techniques such as alum dosing, and evidence of phosphorus enrichment in groundwater, there is a strong case for introducing phosphorus limits at a farm level as well as nitrogen.”

12 It seems to me that Mr Cooke is advocating phosphorus loss limits to be introduced on a farm basis, but Ms Dewes is clearly indicating that there is a lack of ‘tools’ available to measure such losses. I agree with Ms Dewes, and am concerned that Mr Cooke might be putting forward a proposition that cannot be implemented and will cause more uncertainty and costs to the resource user. In my view, the views expressed by experts representing the same organisations appear to be contradictory.

Chris Hansen

08 September 2014