BEFORE THE INDEPENDENT COMMISSIONERS

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of Variation 2 (Hinds/Hekeao Plains Area) to the Canterbury Land and Water Regional Plan by the CANTERBURY REGIONAL COUNCIL

REBUTTAL EVIDENCE OF PETER GORDON WILSON ON BEHALF OF CENTRAL SOUTH ISLAND FISH AND GAME COUNCIL
28 MAY 2015

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QUALIFICATIONS AND EXPERIENCE

1 My name is Peter Gordon Wilson. My qualifications and experience were set out in my Evidence in Chief, dated 15 May 2015

2 In preparing this rebuttal evidence, I have reviewed:

(a) The reports and statements of evidence of other experts giving evidence relevant to my area of expertise, including:

(i) Gerard Willis for Fonterra and Dairy New Zealand

(ii) Fiona MacKenzie for Federated Farmers of New Zealand

(iii) Lynnette Wharfe for Horticulture New Zealand

(iv) Nic Conland for Horticulture New Zealand

(v) Lynda Murchison for Te Runanga O Ngai Tahu

(b) I have also reviewed the statements of rebuttal evidence of Fish and Game witnesses including:

(i) Dr Alison Dewes, incorporating Barrie Ridler

(ii) Adam Canning

(iii) Mark Webb

(iv) Frank Scarf

3 I have again prepared this evidence in compliance with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014.

4 The particular points that I wish to rebut are set out below.

EVIDENCE OF GERARD WILLIS

5 I have read the Evidence in Chief of Gerard Willis who has provided planning evidence for Fonterra and for Dairy New Zealand. Mr Willis cites Dairy New Zealand modelling evidence to state that the nitrogen load in the Hinds catchment has been under calculated by the Canterbury Regional Council. The Dairy NZ/Overseer 6.2/Aqualinc modelling result has calculated a modelled nitrogen leaching load, below the root zone, of 6,500 tonnes, with a corresponding modelled nitrogen concentration of 13.9mg/L[1].

6 Fish and Game agrees with the direction of this analysis. Mr Willis has provided a useful conceptual understanding of how to handle over allocation within regional plans, which I largely agree with. However, in my opinion some of his detailed policy amendments are not appropriate.

7 Mr Willis' evidence[2] proposes a change to **Policy 13.4.12** to remove the reference to the target load, based on the assertion that because the current load is uncertain, that the target load is somehow also uncertain. In my opinion it is preferable for numeric limits and targets to be inserted in plans where at all possible, based on best available information, as this better links them with scientific understanding.

8 This argument confuses the distinction between the *target load,* which is the agreed future state of the catchment and linked to nutrient concentration in freshwater, and the *current load*, which has likely been under calculated, and which is agreed by both Fonterra/Dairy NZ and Fish and Game experts. The target load has a date of 2035, by which time the plan would have been reviewed. This provides the Canterbury Regional Council with sufficient time to undertake further modelling work to link the target load to the desired nutrient concentrations for groundwater and surface water in 2035.

[1] Gerard Willis, EiC, item 8.5
[2] Gerard Willis, EiC, item 14.1

9 The approach recommended by Mr Willis would result in the target and current loads being recalculated and changed in the plan each and every time the modelled result changes. In my opinion such a dynamic and ever changing target would be uncertain, and would not give effect to the Act, the NPS-FM, the Canterbury Regional Policy Statement, and the proposed Canterbury Land and Water Regional Plan.

10 The Canterbury RPS has the following relevant requirements:

> *Objective 7.2.1 – "the life-supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded"*

11 Variation 2 has in my view adopted the minimum standard possible – that of the national bottom line for groundwater of 6.9 mg/L – in order to achieve this objective.

12 Policy 7.3.6 requires the regional council to "*establish and implement minimum water quality standards for surface water and groundwater in the region, which are appropriate for each water body"*

13 A "standard", as the term used in Policy 7.3.6 of the RPS, is defined by the Oxford English Dictionary as: "*to establish or deposit as a standard of measure or weight."*

14 The proposed Canterbury Land and Water Regional Plan provides the following guidance on 'limits', in section 2.5[3]:

> *"Limits as required by the Freshwater NPS, are included in the rules to this Plan. Limits in the Plan are set to achieve the Plan's objectives and the in-stream fresh water outcomes described in Table 1 to Policy 4.1, or in the relevant sub-regional section.*

[3] Decisions version, proposed Canterbury Land and Water Regional Plan

15 The Plan's limits either:

1. Set out the maximum amount of a resource that can be allocated to those using the resource within a catchment; or

2. Control activities by:

   (a) Permitting activities that the Council has determined can cumulatively occur while still ensuring that the objectives and the in-stream fresh water outcomes sought by the Plan will be achieved;

   (b) Prohibiting activities that the Council has determined will not enable the objectives and the in-stream fresh water outcomes sought by the Plan to be achieved;

   (c) Requiring resource consents for activities where the Council has determined that a case-by-case assessment is required to assess whether the objectives and the in-stream fresh water outcomes sought by the Plan will be achieved

16 The word "amount", as used in (1) above is synonymous with "measure."

17 The instream concentration targets in Table 13(k) that set these standards and can be thought of as a "measure", to use the dictionary definition. More succinctly, it is a limit. The target load of 3,400 tonnes N/year currently within the variation can also be thought of as a measure or a limit.

18 In my opinion Mr Willis' proposal to remove the target load from the policy does not meet the definition of "standard", nor the definition of

"limit" from the parent plan. A standard or a limit isn't a percentage of an unknown quantity; it is a precise or discrete number or known quantity, stated in numbers in this instance.

19 The Table 13(k) targets are of little use without the intermediate step which is the *target* load. Clarity of the required target load is just as important as clarity in the final instream nutrient concentration target. Removing the target load from Policy 13.4.12 effectively decouples the policy from the desired water concentrations in Table 13(k), and would break the logical integrity of the plan structure.

20 In my Evidence in Chief, I discuss the flaws in the approach used by the Canterbury Regional Council in determining their target load by starting the modelling process to determine the desired load from land, rather than to begin from the receiving environment (surface water and shallow groundwater) and to calculate that back to land[4]. Such an approach fails to set the load calculation, target or limit in a way that will achieve the desired instream concentration to meet the specified freshwater objective.

21 Furthermore, in my opinion the suggestion of removing the target load from Policy 13.4.12 would inhibit the Council's ability to act in accordance with its section 30 (c) (iii) and (iiia) functions of controlling the use of land for the purpose of:

> *(iii) the maintenance of the quantity of water in water bodies and coastal water:*
>
> *(iiia) the maintenance and enhancement of ecosystems in water bodies and coastal water:*

22 If Policy 13.4.12 has its target load removed, and replaced with a percentage of an unknown quantity, there is no clear linkage between the instream nutrient concentration, the load that meets this concentration, and any land use controls that distribute proportions of this load to individual properties, by way of resource consent or permitted activity. The test in s30(c)(iii) above is that the

[4] Peter Wilson, EiC, item 29-30

Canterbury Regional Council must control the use of land to ensure the maintenance and enhancement of the quantity of water. Removing the target load from the policy breaks the logical integrity of the plan.

23 At paragraph 14.1 Mr Willis' evidence sets out his amended Policy 13.4.12. In my opinion the inclusion of managed aquifer recharge in **Policy 13.4.12** sets the assumption that managed aquifer recharge will be successful before it is tested, however it is highly contested as to whether this will be successful

24 Mr Willis proposes a number of changes to Variation 2 itself, provided in a marked-up version of the plan change.

25 In **Policy 13.4.9(d)** the proposed N loss reduction of 45% is replaced with 30% in Mr Willis' version. Other parts of Mr Willis' evidence based on Ms Haywood's modelling suggested that 36%[5] reductions are possible. This may be an error. I support the 45% N leaching reductions to remain in the plan, and would not support the proposed reduction being dropped to 30%. I note that this 45% reduction is staged. The catchment is currently significantly degraded, and the reduction targets are necessary in order to achieve the freshwater objectives, as well as to maintain current water quality within the catchment. Adam Canning has stated that:

> *"Of 54 native fish taxa, as at 2013, 74% were considered as being at risk or threatened with extinction (Joy 2014). Furthermore, according to Dr Mike Joy (personal communication, 2015), the freshwater fish IBI is decreasing nationally at approximately 0.38/year which if continued will mean that all native freshwater fish species will be extinct by 2050 - and that's not including any Allee affects which may occur sooner (Joy 2009, Joy 2014). To that end, if limits to support ecosystem health are not met until 2055 then it is likely that by then there will be little biodiversity left to support. Once native freshwater fish are extinct, they will not be able to come back. Limits to safeguard life supporting capacity need to be met as soon as possible to provide suitable habitat for native freshwater fauna to thrive and prevent the decline of freshwater fish"*[6]

[5] Gerard Willis, Table 2
[6] Dr Adam Canning, EiC, paragraph 8

26 Extensive changes are suggested for **Policy 13.4.13**. In my opinion these changes are inappropriate for two primary reasons. The first is that they introduce unnecessary complexity into a policy that was formerly simple. The policy is now twice the length as a result of the suggested changes, and therefore complex. The second reason is that many of the matters introduced into the policy, see (a)(i)-(vii) and (d), if acceptable, would be best implemented as matters for Council discretion, rather than as policy.

27 For **Policy 13.4.14 (g)**, an addition of "significant adverse effects on farming activities and rural production existing as at 1 October 2014 are avoided" is proposed[7]. The definition of a significant adverse effect on farming activities is highly subjective, and to "avoid" these effects is too high a test. This raises the suggestion that some farming enterprises may use this test, at the policy level, to avoid complying with the staged reductions in N leaching. It also unfairly penalises good environmental practice over poor practice, in that those operations that are over-extended and unable to easily reduce N leaching may argue for exemption. This is at odds with other parts of Mr Willis' evidence[8].

28 **For Policy 13.4.18** in my opinion, the removal of the 30 June 2020 date which applies Table 13(e) minimum flows and limits to water permits is inappropriate. The removal of this date removes a substantial incentive for the Hinds Drains Working Party and other collaborative processes to develop appropriate minimum flows and allocation limits.

29 In my opinion a similar argument applies for **Policy 13.4.19**[9], the proposed removal of which would remove the new default allocation regime after 1 July 2020.

30 Mr Willis suggests a number of changes to **Rule 13.5.33,** which relate to the transfer of water permits. In my opinion these changes are inappropriate *unless* they also address the specifics of the end

[7] Pg 55, Gerard Willis, EiC
[8] For example, item 12.11
[9] Pg 56, Gerard Willis, EiC

use of that water. Mr Willis' suggestions don't address this issue, and could lock in excessive or inefficient water uses if they have occurred for a period of time. A suggestion of improvement, based on efficiency is provided below:

13.5.33 The temporary or permanent transfer, in whole or in part, (other than to the new owner of the site to which the take and use of water relates and where the location of the take and use of water does not change) of a water permit to take or use surface water within the Hinds/Hekeao Plains Area must not under section 136 of the RMA be approved, in the same was as if it were is a prohibited is a discretionary activity provided the following conditions are met:

~~*1. The volume of water to be transferred for annual take and use does not exceed the greater of:*~~

~~*a) the annual average volume taken and used over the period 01 July 2009 – 30 June 2013 ; and*~~

~~*b)the annual average volume taken and used over the four-year period immediately preceding the application to transfer the water permit.*~~

1. The quantity of water granted to take is no more than that required for the purpose of use taking into account:

(a) How local climate, soil, crop or pasture type and water availability affect the quantity of water required; and

(b) The efficiency of the proposed water transport, storage and application system[10].

2. In the case of a partial transfer, the total volume taken and used in all locations under the permit shall not exceed the volume described in 1 above.

Peter Gordon Wilson

26 May 2015

[10] Obtained from Policy 6.4.0A, Otago Regional Plan: Water