BEFORE THE HEARING COMMISSIONERS

IN THE MATTER	of the Resource Management Act 1991 ("**the Act**")
AND	
IN THE MATTER	of the Resource Management Act 1991 and the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010

STATEMENT OF REBUTTAL EVIDENCE BY VANCE ANDREW HODGSON FOR HORTICULTURE NEW ZEALAND

8 SEPTEMBER 2014

[redacted] ATKINS | HOLM | MAJUREY

Helen Atkins
PO Box 1585
Shortland Street
AUCKLAND 1140

Solicitor on the record Helen Atkins Helen.Atkins@ahjmlaw.com (09) 304 0421

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1. QUALIFICATIONS AND EXPERIENCE

1.1 My full name is Vance Andrew Hodgson, my qualifications and experience are set out in my evidence in chief.

1.2 In relation to this rebuttal statement of evidence I reiterate and confirm my compliance with the Code of Conduct for Expert Witnesses as set in my evidence in chief.

2. CONTEXT AND SCOPE OF MY REBUTTAL EVIDENCE

2.1 The context and scope of my rebuttal evidence is to respond to the statements of evidence from:

- Gerard Mathew Willis for Fonterra;
- Chris Hansen for Ravensdown Fertiliser Co-operative Ltd;
- Michael Robert Bennett for North Canterbury Province of Federated Farmers of New Zealand;
- Kathy Begley for Te Runanga o Ngai Tahu;
- Anthony Davoren for HydroTrader;
- Hamish Peacock for Central Plains Water Limited;
- Scott Pearson for the North Canterbury Fish and Game Council (Fish and Game).

2.2 A summary of my rebuttal evidence is:

2.2.1. There are key areas of agreement across the statements of evidence that I support.

2.2.2. In particular all parties identify concerns with including policy and methods in Var1 concerning Good Management Practice Nitrogen and Phosphorous Loss Rates in the absence of conclusion the Matrix of Good Management project.

2.2.3. There also appears to be agreement that there is uncertainty and variability in the knowledge and information support Var1.

2.2.4. Alternative nitrogen allocation/ reduction systems are proposed by most parties, highlighting the complexity of the issue and the fact that no system

will please all parties. Horticulture New Zealand propose their own allocation mechanism[1].

2.2.5. In my opinion the Horticulture New Zealand proposal, like any other should be tested through the 1st Schedule process of the Resource Management Act 1991. Until that time a staged approach is required and this should be clear in Var1 and based on steps that include:

- 2017 to conclude MGM and implement a plan change to include this in the plan.
- 2022 achieve a minimum of Good Management Practice as defined by the MGM process, including the systems developed to audit farm plans and the trained independent certifiers to ensure GMP is managing the risks associated with different farm systems.
- By 2022 the Regional Authority and the primary sector to have developed the on farm accountant and the catchment accountant to a point where a transfer system would be feasible to operate relative to a confirmed allocation model.

3. GERARD WILLIS

Status of the NPSFM

3.1 In paragraphs 17 and 18 of his evidence, Mr Willis provides a discussion on the context of Part 2 of the Act relative to the recent King Salmon decision[2]. I concur with his opinion that an overall judgement under Part 2 of the Act is required when considering limit setting and timing but that this approach cannot be relied upon to argue that limits and targets ought not to be set.

3.2 The NPSFM is clear on the environmental outcomes sought. Limits and the timing associated with target setting must be specified. The difficulty for this planning process is that a new

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[1] Statement of Rebuttal Evidence by Christopher Martin Keenan for Horticulture New Zealand 8 September 2014

[2] Environmental Defence Society Incorporated v New Zealand King Salmon Company Limited [214] NZSC 38.

regime for limit and target setting was introduced by the new NPSFM after Var1 was notified.

3.3 As identified by Mr Willis (relying on the evidence of Shirley Ann Hayward), this Var1 does not achieve all of the outcomes ("attribute states") required by the new NPSFM. Further relying on Ms Hayward's evidence and correspondence from the Ministry for the Environment, Mr Willis clarifies that Te Waihora / Lake Elsmere is an intermittently closing and opening lagoon (ICOL) deemed to be excluded from the attribute states set out in the NPSFM. In the absence of evidence to the contrary I concur with that position. However, this does not detract from my position that Te Waihora / Lake Elsmere is nationally significant and degraded and that there are various statutory and non-statutory instruments supporting its protection and improvement.

The Existing Environment

3.4 Following on from my statement above on the lakes significance and various instruments applying, I note the detailed description of the existing environment provided by Mr Willis. I agree with this assessment and the context it provides. I particularly highlight the references to water management being complex and challenging in this catchment, matters of uncertainty and the factor that time has played in creating the problem and time needed to enact a fix.

Planning Principles

3.5 Mr Willis states in paragraph 50 that in the absence of technical evidence there is no planning grounds supporting an alternative view on the freshwater outcomes sought by Var1. At the time of writing the evidence in chief I was of the same view. However, I now note that evidence from the Jacobs team supports my original conclusions regarding the uncertainty that exists around key scientific information. This leads me to a position where I would support a more conservative and precautionary approach when applying limits and imposing timeline deadlines due to the disparities in the modelled results (ie comparing Jacobs' modelling with work commissioned by ECAN). In short, it is my opinion that

there is a need for us to pause and reflect on what Var1 will deliver and should deliver at this point in time.

Nitrogen Baseline

3.6 I concur with the assessment of Mr Willis on the nitrogen baseline issues and in particular his comments on the application of informal discretion by Council in regards to applying the nitrogen baseline definition resulting in an untenable planning position. I noted in paragraph 11.4 of my evidence in chief that if this is the practice then it should be in the body of the rule or a defined matter of discretion.

3.7 I agree with the Mr Willis that codifying Council's published implementation guide is an appropriate solution and that this should apply until 30 June 2017.

Good Management Practices and Good Management Practice Nitrogen and Phosphorous Loss Rates

3.8 Like Mr Willis I also support a nitrogen reduction system whereby rural activities move to a baseline and then to good management practice. However, as noted in paragraph 74 of his evidence, there are problems in the way Var1 achieves this.

3.9 Consistent with my evidence in chief, Mr Willis notes that the introduction of GMPNPL rates should be via a separate plan change process. An alternative to this approach is suggested by Mr Willis whereby more generic references are made in Var 1 to good management practice. I understand the intent but lean more towards a separate plan change process where GMPNPL can be fully considered by a section 32 process and any updated modelling information or other data can be applied to the decision making on limits and timing.

3.10 The discussion by Mr Willis provides useful analysis on the imposition of the percentage reductions of nitrogen losses post confirming GMPNLR. In paragraph 108, Mr Willis notes that no allocation of the reduction target will satisfy all parties. This is indeed a complex issue. However, it does not appear to me that the use of Ebit to determine the reduction thresholds is an appropriate tool. I have concerns that this does not link clearly to the environmental effects of nitrogen loss and where the losses are generated and I do

not agree that a 'collective' reduction of 14% across the catchment by 2022 is the best approach.

Policy 11.4.15

3.11 In the submission by Horticulture New Zealand (V1pLWRP - 1551) it was noted that (notwithstanding the submitters position on deleting Policy 11.4.14) it is desirable that criteria be established where nitrogen limits or targets may not be met. In respect of horticulture it is important to recognise that the rotational cycle will lead to variations that need to be accounted for.

3.12 In paragraph 116 Mr Willis suggests the criteria could be clearer and suggests factors that should be considered. I support these suggestions in addition to those put forward by Horticulture New Zealand.

Monitoring, Reporting and Adaptive Management

3.13 As previously stated, water management in this catchment is complex and challenging, and there is considerable uncertainty. In my opinion there is a need to take a precautionary approach on all levels and that decisions must be made on the best information available based on current knowledge and modelling techniques. With time comes better information and this leads to the need for monitoring and an adaptive approach to the complexity of issues around freshwater management.

3.14 Mr Willis suggests a new policy addressing this matter in paragraph 207 and I agree with this approach.

4. CHRIS HANSEN

Good Management Practice Nitrogen and Phosphorous Loss Rates

4.1 Chris Hansen provides further comment on the difficulties on imposing provisions that support the implementation of GMPNPLR in the absence of concluding the MGM project and knowing what the loss rates are and their implementation into a regulatory framework.

4.2 Like Mr Hansen, I declared in my evidence in chief, a need to remove references to GMPNLR from Var1 and introduce

any policy and methods changes through a separate process supported by a section 32 assessment.

4.3 I support the suggestions by Mr Hansen to remove GMPNPLR references from Policy 11.4.13.

4.4 I also note that in paragraph 22 Mr Hansen notes difficulties in defining 'farming activity' for the purposes of assessing reductions required in policy 11.4.14(b), relative to a 'property'. This issue reflects Horticulture New Zealand's concerns surrounding the provisions covering farming enterprises. The mixed farming system identified by Mr Hansen would be considered a 'property' for the purposes of nutrient management but its effects would be the same as that of a farming enterprise (a discretionary activity under rule 11.5.10 when the effects on the environment are the same).

Timeframes

4.5 Mr Hansen notes a concern regarding what happens on or around the key dates stated in Var1 and suggests the Council introduce Procedural Guidelines to provide guidance and clarity for resource users. I agree and note that examples of this implementation approach are being developed to respond to implementation issues in relation to the Horizons One Plan.

4.6 In paragraph 92 of his evidence, Mr Hansen notes practical difficulties that may arise in the preparation of Farm Environment Plans – e.g. lack of capacity. This matter is of concern across the horticultural sector and again it is prudent that Council develop Procedural Guidelines to clarify matters around implementation of the method.

4.7 Concerns around implementation are also noted from paragraph 105 in Mr Hansen's evidence in regards to the annual review of nutrient budgets. Again this is also of concern to the horticultural sector who are supportive of the Farm Practices required in Schedule 24 until GMPNPLR are introduced into the plan, but this should be supported by Procedural Guidelines.

Nitrogen Baseline

4.8 It is the opinion of Mr Hansen that the prohibited activity status applying to the use of land for a farming activity that exceeds the nitrogen baseline from 2017 is inappropriate and that a non-complying activity status should prevail.

4.9 The same request was made by Horticulture New Zealand which was predicated on the uncertainty of the science in the catchment model and limits set. It was my statement my evidence in chief that if the numbers in the tables are incorrect or to be altered, then it would appear prudent to me to revisit the prohibited activity status.

4.10 The Jacobs evidence highlights uncertainty. Mr Hansen also identifies a valid situation where a resource user should be given the opportunity for resource use as a non-complying activity. In my opinion the prohibited activity status should now be revisited. Therefore, I support Mr Hansen's suggestions in this regard.

Baseline Land Use Definition

4.11 The evidence of Mr Hansen highlights the issues with the proposed definition of Baseline Land Use that were also identified by Horticulture New Zealand. The definition 'locks in' a farming activity for the purposes of nutrient allocation, removes land use flexibility and for horticultural activities will not accurately reflective the range of activity that occurs on rotational cycles through this catchment.

4.12 As suggested by Mr Hansen, with Baseline Land use tied to GMPNPLR it would appear better to introduce a definition via a future plan change.

5. MICHAEL BENNETT

Introductory Section and Vision for the Catchment

5.1 Mr Bennet identifies the need to present the vision for the catchment as an objective to support the outcomes sought through Var1.

5.2 In my evidence in chief I has set out a similar need but noted that Objective 4.10 of the pLWRP was not particularly supportive of this approach. It remains my opinion, consistent with the section 42A report that this could be presented as a

new policy rather than a new objective and thereby respect the structure of the pLWRP.

Good Management Practice Nitrogen and Phosphorous Loss Rates

5.3 Mr Bennet emphasises a consistent theme from the planners called by the primary sector, namely that Var1 may not be based on sufficiently complete information and that it is inappropriate to imbed GMPNPLR into the Var1 without the MGM project being completed and a subsequent plan change.

5.4 As previously stated, I am also of this opinion.

Nitrogen Baseline

5.5 It is also the opinion of Mr Bennett that a non-complying activity status (rather than prohibited) should apply to the use of land for a farming activity that exceeds the nitrogen baseline from 2017.

5.6 Again, as previously stated, I am also of this opinion and Mr Bennett highlights the issues of Overseer (version control, bugs and deficiencies) in defining a nitrogen baseline which I previously covered in my evidence in chief.

The appropriateness of allocating industry specific 'reduction' targets on the basis of 'Impact on Ebit'

5.7 I again rely on the evidence in chief by Mr Stuart Ford to address this matter but note Mr Bennett's comments in paragraph 38 that reductions based on profitability has very little relationship to environmental effects.

5.8 I concur. The nitrogen baseline is determined on the amount of nitrogen lost into the environment and its relationship to adverse effects. The percentage reductions are based on 'evening out the pain' on earnings before interest and tax. Like Mr Bennett, I would have expected Var1 to establish a clear relationship between the amount of nitrate-nitrogen being lost to the environment from an activity and the amount of reduction required.

5.9 It is the opinion of Mr Bennett that an evenly spread percentage reduction for each property should apply until a further plan change can be undertaken post-MGM. I agree

that policy 11.4.14 should be removed and that any reduction policy should be informed by GMPNPLR. However, the form of the reduction policy requires further development.

Increasing the 15kg/ha/yr threshold to 20kg/ha/yr

5.10 In paragraphs 57-60 Mr Bennett makes an argument for a higher (20kn/ha/yr) permitted activity threshold for dryland farms on light/free draining soils to offer more land use flexibility.

5.11 I do not agree with this suggestion. The section 32 supporting the 15kg/ha/yr is in my opinion robust in setting this limit and I do see not justification for change at this time.

5.12 Notwithstanding my opinion on this threshold, I note that the suggestion by Mr Bennett is towards an allocation that more directly reflects the environmental conditions (i.e. the characteristics of light/free draining soil). This I support in terms of the percentage reductions and I again point to the alternative allocation system proposed by Horticulture New Zealand.

Reliability of Water

5.13 Mr Bennett raises similar concerns in regards to water reliability to that raised in my evidence. Mr Bennett points to the evidence of Dr Lionel Hume that like the evidence of Stuart Ford/Chris Hansen identifies that horticulture is particularly sensitive to the lack of water at critical times. Reliability to meet demand in 8.5 years out of 10 will result in less land use flexibility and discourage horticultural and arable farming in the catchment.

5.14 There is in my opinion a special case here for horticulture. There are no alternatives to water for this land use and reliability is critical.

Transfer of Water

5.15 As identified in my evidence in chief, I am of the opinion that the transfer of water is unlikely to happen where the disincentives are too high. Mr Bennet makes the same point in paragraph 102. Mr Bennett suggests an alternative solution involving restricting the water transferred to a portion of the

allocation such as that used in an average rainfall year. The mechanics of this are not clear and I am unable to suggest an alternative. However, I reiterate that the balance must be right if a proportional surrender is to be pursued.

6. KATHY BEGLEY

Background

6.1 In her evidence, Ms Begley sets out the relationship of the ZIP Addendum to Variation 1. In paragraph 21 Ms Begley states that Ngai Tahu are unconvinced that the mechanisms in Var 1 accurately capture the ZIP Addendum solutions package and put them in a workable framework.

6.2 The ZIP Addendum informed Var1 and I agree with Ms Begley's comment in paragraph 21 that Var1 does not drive continuous improvement. In my opinion Var1 requires more 'checks and balances' to ensure the response to freshwater management is informed by the most up to date knowledge and information.

6.3 Ms Begley makes a similar statement in paragraph 62 and again I agree. Var1 should be viewed as a step towards addressing water quality issues in this catchment.

Introductory Section and Vision for the Catchment

6.4 Ms Begley raises a similar issue to Mr Bennett in regards to the need to present the vision for the catchment as an objective to support the outcomes sought through Var1. As above a policy appears an approach but if a new objective is deemed better then I support this.

Matrix of Good Management

6.5 The need to complete the MGM project is highlighted in paragraph 35 of Ms Begley's evidence. Ms Begley identifies the need for Farm environment plans to be informed by the results of the MGM project. I agree that in the absence of completing the MGM project and incorporating GMPNPLR into the plan then there are a number of certainties about the effectiveness of Var1.

Diffuse Discharges

6.6 Under the subheading 'diffuse discharges' Ms Begley describes a proposed alternative nutrient allocation framework to achieve nutrient reductions. Ms Begley is supportive of a planning framework that requires reductions based on a system that incentivises low nutrient leaching and disincentives high nutrient leaching.

6.7 I agree but in my opinion more thought and time is needed to develop an appropriate nutrient reduction system. Horticulture New Zealand have a preferred model, but this like others should be considered through a Schedule 1 process with any implementation occurring after 2022.

7. ANTHONY DAVOREN

7.1 The evidence of Mr Davoren supports the position of Horticulture New Zealand that it would be better to address a partial surrounded of water as a matter of discretion rather than as a defined standard (50%).

7.2 I agree and consider that this approach would provide a reasoned and robust assessment of these activities where the most up to date knowledge and information can be applied to the decision making.

8. HAMISH PEACOCK

8.1 I note that the evidence of Mr Peacock is primary focused on matters concerning Central Plains Water Limited (CPW).

8.2 On matters that concern the wider planning framework I note that Mr Peacock is also of the view that until the outcomes of what GMPNPLR will achieve are known, it is difficult to justify and set statutory provisions around nitrogen reduction. I agree and again point to the need to take a precautionary approach to setting limits and timeframes.

8.3 I also support the conclusion of Mr Peacock that Var1 ought to take small steps to improve the management of freshwater resources. The implications of larger steps has significant impacts on all resource users not just CPW.

9. SCOTT PEARSON

9.1 Relying on the evidence of Jim Cooke and Alison Dewes, Mr Pearson notes in paragraph 30 of his evidence, the significant uncertainty with modelled N loss load estimates and projections particular given Overseer validation issues. MR Pearson goes on in paragraph 33 to identify that based on advice from Ms Dewes it will take until 2018 to 2020 to complete effective Overseer validation for shallow soils and because of this Fish and Game has sought safeguards within Var1 to help avoid poor nutrient allocation decisions and ineffective monitoring processes.

9.2 This evidence supports my opinion that there is uncertainty and variability in the knowledge and information support for Var1 and that a precautionary approach should be taken to achieving the outcomes sought for the catchment. The Fish and Game suggestion that a 2050 target be set to achieve specific ecosystem health targets in the catchment further supports the need, in my opinion, for an adaptive approach.

9.3 The need for clear review periods, monitoring requirements and adaptive management mechanisms is highlighted in Paragraph 113 of Mr Pearson's evidence where he is outlining the policy and rules approach that Fish and Game proposes for managing land use activities.

9.4 Fish and Game propose revised environmental limits and outcomes with an alternative nitrogen reduction mechanism. The science behind the water quality limits and targets is to be addressed by other experts but what I support from Mr Pearson's evidence is the use of interim limits as steps along the trajectory of improvement. These limits must be subject to ongoing review and reassessment – as is the catchment load.

10. CONCLUSIONS

10.1 For all the reasons outlined in this statement of rebuttal evidence nothing I have given in evidence in chief has changed as a result of my review of the various statements of evidence outlined above.

Vance Andrew Hodgson

September 2014