

IN THE MATTER of the Resource Management Act
1991

AND

IN THE MATTER of the Proposed Canterbury Land
and Water Regional Plan

**STATEMENT OF REBUTTAL EVIDENCE OF GERARD MATTHEW WILLIS
FOR GROUP 2 HEARING**

1. INTRODUCTION

1.1 My name is Gerard Matthew Willis and I have the qualifications and experience described in my Evidence in Chief for the Group 1 Hearing. I again agree to comply with the Code of Conduct for Expert Witnesses.

2. SCOPE OF EVIDENCE

2.1 In this statement of evidence, I rebut evidence given by Ms Guest. Ms Guest's evidence addresses the land use (farming) policies and rules (Policies 4.28-4.38, Rules 5.39-5.51 and associated Schedules 7 & 8). In particular, she provides a planning analysis of those provisions against the requirements of the Act, the National Policy Statement for Freshwater Management (NPSFM), the Canterbury Regional Policy Statement (CRPS) and the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010 (ECan Act) and the Canterbury Water Management Strategy (CWMS).

2.2 While Ms Guest appropriately raises a number of planning issues, in my opinion, the issues raised are generally overstated or key relevant material in understanding those issues is omitted. As a consequence, I consider many of Ms Guest's planning conclusions to be unsound. I discuss those issues below.

3. THE PLAN'S OBJECTIVES

- 3.1 As I understand Ms Guest's argument, she opines that the Objectives of Section 3 of the Plan are set at a very high level and that Table 1 should be elevated to Section 3 so that the values of that table become objectives of the plan.
- 3.2 Much of Ms Guest's analysis appears based on her understanding of the NPSFM. I agree that the NPSFM requires councils to set freshwater objectives. However I do not agree with Ms Guest's inference that freshwater objectives must only be contained within the broad objectives of the plan.¹ On that issue I make three points:
- 3.3 First, the NPSFM guide² (at page 14) that Ms Guest quotes in several places has the following to say about freshwater outcomes:

"Freshwater objectives should be set at a variety of scales and levels of detail. Broad narrative objectives for the region may be set in a regional policy statement. More detailed narrative objectives for a region and/or an individual catchment can be set in regional plans as objectives and policies. Detailed freshwater objectives can be numeric (eg, a desired concentration of a contaminant, or a measure of a marker species) and can be set as policies in regional plans. A narrative objective may outline an acceptable amount of change, an outcome or parameters sought, without containing numeric values. A detailed objective may relate to a part of a waterbody or catchment".

[My emphasis]

- 3.4 From that it is clear to me that the authors of the guide anticipated that freshwater objectives may be expressed as policies. My experience with crafting and interpreting various policy documents over many years leads me to agree with that approach.
- 3.5 Second, the Plan is very clear that Policy 4.1 (and by association Table 1) is a "freshwater objective" for the purpose of the NPSFM. At Section 2.5 it states:

"Both the objectives in Section 3 and Policy 4.1 in this plan form the "freshwater objectives" for Canterbury Region, as described by the Freshwater NPS."

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1. Refer para 7.10 of my evidence in chief for the Group 1 hearing and page 101 of the Council's s 42A Report for the Group 1 hearing, both of which dealt with this issue.
 2. Ministry for the Environment. 2011. *National Policy Statement for Freshwater Management 2011: Implementation Guide*. Wellington: Ministry for the Environment

3.6 Hence any suggestion that the Objectives of Section 3 of the Plan do not meet the definition of freshwater objective as given in the NPSFM, or do not provide a robust planning framework, is irrelevant since that Plan does not rely on those objectives alone to fulfil its obligations in that regard.

3.7 Ms Guest's statement at paragraph 42, that "*There is no rationale provided in the PLWRP for choosing to implement Table 1 at a policy level rather than an objective level*" suggests that there has been no rationale articulated for the placement of the Table at policy level. In fact, the Section 42A Report for the Group 1 hearings states at page 101:

"Policy 4.1 and the references to Table 1 were deliberately included in the pLWRP at a "policy" level, rather than elevating them to an objective. This is because the pLWRP is set up to have a single set of objectives, with sub-regional sections able to set policies specific to the sub-regions to achieve the objectives. Elevating this policy to an objective would "lock-in" Table 1, which is not the intention in drafting the pLWRP".

3.8 I understand it is the Director-General of Conservation's (and Fish and Game's) submission that Table 1 outcomes should be "locked in". However, as previously described in my Group 1 hearing evidence in chief and rebuttal evidence, I consider that approach would unwisely cut across the process established to set outcomes and limits at the sub-regional scale. Further, I do not agree that the NPSFM requires that approach to be taken.

4. FRESHWATER LIMITS

4.1 At paragraph 56 of her evidence, Ms Guest asserts that the Plan "does not include any freshwater limits" and hence does not meet its obligations under NPSFM.

4.2 With respect, that assessment is demonstrably incorrect. Most obviously, the Plan sets out a range of both surface and ground water allocation limits in Sections 6-15.

4.3 Even if we accept that Ms Guest's statement may be intended to refer to allocation limits that apply to water *quality* I consider it a gross over-statement. I say that for two reasons

- 4.4 First, the Plan, *as notified*, contains "limits" in the form of the:
- (a) Red zoning within which land use change is non-complying;³
 - (b) Distinction between existing farming and a "change"; and
 - (c) The definition of "change".
- 4.5 As I understand it, the interplay of these provisions means that the nitrogen limit on any existing farm in the Red Zone is the annual amount of nitrogen lost on average over the 2011-2013 plus 10%. That is a very clear limit in my opinion. (Indeed it is, in effect, a nitrogen discharge allowance determined on a "grandparenting" basis).
- 4.6 Second, the plan sets a range of limits in the form of conditions that trigger an activity to fall within a non-complying or prohibited consent category (signalling the maximum amount of resource use that will ordinarily be allowable). For example, Rule 5.35 (stockholding and effluent discharge) contains a condition that land within a ground or community water supply protection area cannot be used for effluent disposal. In my opinion, that can be described as a limit for the purpose of the NPSFM because it (in association with a number of other conditions) defines the land that may and may not be used for the stated purpose.
- 4.7 Thus, I prefer the approach discussed in the Plan itself (Section 2.6) that controlling activities through permitted and prohibited activity rules and by requiring consents is a valid means to impose limits that in whole or part gives effect to the NPSFM.
- 4.8 All that said, even if I am wrong and the rules and associated, maps and conditions cannot be described as "limits", in whole or part, for the purpose of the NPSFM then that is not necessarily fatal to compliance with the NPSFM provided a staged programme to develop limits is in place.
- 4.9 On that point, Ms Guest notes (at paragraph 56) that Environment Canterbury's notification of a staged programme to prepare all eleven sub regional sections

3. I accept here that the Section 42A Report recommends changing this to discretionary.

of the Plan was for the specific purpose of meeting obligations of Policies A2 and B6 of the NPSFM and not for setting limits pursuant to Policy A1.

- 4.10 While that is technically correct, it does seem to be academic since it is clear from the headings provided for in Sections 6-15, that each of these sub regional sections will include "Catchment Nutrient Load Limits and Allowances" - i.e. catchment specific limits.

5. POLICIES REGARDING FRESHWATER QUALITY

- 5.1 Ms Guest's argument from paragraph 57 appears to be that the efficacy of the proposed management regime is unproven and uncertain. With respect to Ms Guest, I think that analysis misses the point.

- 5.2 At paragraph 82 of her evidence Ms Guest asks:

Under this regime are catchment contaminant loads expected to reduce, remain the same, or continue to increase?

- 5.3 As I understand it the regime is intended to hold nitrogen loss rates (setting aside lags in the system) at or about current levels until such time as more detailed sub catchment plans are developed. Based on a plain reading of the planning provisions (as notified), it is clear to me that it will do this by:

- (a) Ensuring existing farms cannot increase their nitrogen loss more than 10% before being reclassified as land use "change".
- (b) Making (in the Red zone) land use change a non-complying activity.⁴

- 5.4 On that basis I do not agree that the regime proposed is as uncertain as painted by Ms Guest (accepting that outcomes in such cases can never be guaranteed).

- 5.5 I am also puzzled by Ms Guest's assertion at paragraph 84 that "there is no basis for assessing their collective effect at a catchment level". I hold the contrary view that the collection and collation of information of nutrient loss from

4. I acknowledge that the Section 42A report proposed this be changed to discretionary but with applications subject to a policy that sets a very high level of performance and subject to all existing farms preparing and implementing Farm Environment Plans. I understand that that is to increase the likelihood of "headroom" creation to offset any discretionary consents that may be granted.

farms (complemented by continued in-stream nutrient concentration monitoring) provides an absolute basis to monitor effectiveness over time and represents a significant advance in the ability to manage land and water resources.

- 5.6 With regard to Ms Guest's apparent support for NDAs, I would simply reiterate my comments at paragraph 4.5 that the approach of the Plan does set an NDA for all existing farms (i.e. 2011-2013 average annual loss +10%). I expect that any consents granted for land use change could also set an NDA for the property.

6. COMPLIANCE WITH SECTION 70 OF THE RMA

- 6.1 In paragraphs 90 to 96 Ms Guest makes an argument that Rule 5.50 is contrary to Section 70 of the Act because it permits discharges of a contaminant to water or to land in circumstances where it may enter water when there will result in "a significant adverse effect on aquatic life".

- 6.2 She summarises the basis for her position paragraph 95 when she states:

In catchments that are already over-allocated, and potentially in catchments that are "at risk" of outcomes not being met, it seems to me to be implicit in the definition of nutrient status category, that the cumulative effects of existing non-point source discharges will fail (or are close to failing) to meet the s70 test in terms of significant adverse effects on aquatic life.

- 6.3 It appears to me that her opinion is based on an assumption about the link between Red zoning and significant adverse effects of aquatic life but I am uncertain as to the technical evidence she relies on to make that assumption.
- 6.4 I accept that the Red zoning was defined, in part, on whether the nitrate toxicity guideline values were exceeded (as noted in Appendix 6 of the Section 32 Report).
- 6.5 However, based on the Group 1 evidence of Associate Professor Death and the Group 2 rebuttal evidence of Ms Hayward, it is my understanding that there is only a very weak relationship between exceedances of the nitrate toxicity guidance values and low QMCI scores (I understand that QMCI is an indicator of ecosystem health).

6.6 Associate Professor Death includes a graph (Figure 4, page 21) that shows that high QMCI scores (over 6 – being the outcome in the Plan’s Table 1a for upland areas⁵) are recorded across almost the full range⁶ of nitrate levels shown on the graph.

6.7 This seems consistent with Ms Hayward’s Group 2 rebuttal evidence where at paragraph 4.3 she states that:

“While I concur with Associate Professor Death that QMCI values are low for many lowland streams across Canterbury that indicate poor ecological health, this does not mean that nutrient enrichment is the primary causative factor nor will reduction in nutrient inputs necessarily be the solution. In fact, fine sediment deposition in lowland streams, loss of habitat heterogeneity and loss of flow are more likely to be the primary drivers for poor QMCI values in Canterbury’s lowland streams.”

6.8 Furthermore, also in her Group 2 rebuttal evidence, Ms Hayward makes the point at paragraph 5.3 that:

“The nitrate toxicity guidelines (Hickey and Martin 2009, Hickey 2013) are developed conservatively, addressing non-lethal risks (e.g. growth rates) on sensitive species and as such represent thresholds where there may be in an increased risk of minor effects on growth rates, development and reproduction of some aquatic organisms.”

6.9 The final point I would make in response to this issue is that, in my opinion, Section 70 needs to be applied in the broad context of the Plan. In that sense in deciding whether it was satisfied that the specified effects will not occur, the council needs to consider the provisions to be included in the Plan to address the risks of those effects occurring and determine whether the level of likely effect is, as a result, better or worse than the existing level of effect. In that regard, the fact that the permitted activity rules will be subject to conditions that enhance performance relative to the status quo (as discussed below) and that other rules better manage the “same, similar, or other contaminants”, will be material.

5. The Table 1a outcome for lowland rivers are in the 4-5 range.

6. That range is from approximate 0.01 to 10 NOx (mg/l).

6.10 For those reasons I consider that it is unsound for Ms Guest to conclude that the permitted activity rules for farming in the Orange and Red zones are therefore contrary to Section 70 of the Act⁷.

7. COMPLIANCE WITH CRPS AND PLWRP OBJECTIVES

7.1 Ms Guest asserts from paragraph 103 that the pre 2017 policy will meet neither the CRPS nor the PLWRP objectives to “maintain or enhance” water quality. This is on the basis that “*there is no evidence provided that shows that leaching will decline*”. She then goes on to note “*at best, catchment nutrient status might remain the same...*”

7.2 I agree there is little evidence demonstrating what the proposed rules will achieve in terms of net change in nutrient loads. Modelling such likely change would, as I understand it be extremely difficult. However, by a process of simple logic it seems to me that there is a high degree of certainty that there will not be significant change in nutrient loads in the Red zone over the period until sub regional sections are put in place. That is because:

- (a) Of the caps on nitrogen loss from existing farms as explained in my paragraph 5.3;
- (b) The relatively short time period until sub regional plans are developed for Red zone catchments; and
- (c) Of the limited availability of water to allow dryland to irrigated farming (including reliance on yet to be developed irrigation schemes - most notably the Central Plains Water scheme).

7.3 However, I also consider it important to note the critical role of the Farm Environment Plan (FEP) as now proposed in the Section 42A Report version of the Plan (and as proposed to be amended as per my Group 2 hearing evidence in chief).

7 Furthermore, I question whether Rule 5.50 is required at all since other rules of the plan clearly address the range of specific discharges to water and land from farming, and it is reasonably clear that the discharge from an animals to land or water is not to be considered a discharge for the purpose of the Plan.

- 7.4 Schedule 7, Part B requires FEPs to (amongst other things):
- (a) Assess effects and risks and identify how these effects and risks will be managed;
 - (b) Describe how specified objectives set in relation to each risk activity will be managed; and
 - (c) Specify measureable targets and describe the good management practices and actions to achieve those targets.
- 7.5 An industry-prepared FEP under Part A of Schedule 7 is required to include certain specified minimum components including⁸:
- “A methodology that will enable development of a Plan that will identify environmental effects and risks specific to the property, addresses those effects and risks and has a high likelihood of appropriately avoiding, remedying or mitigating those effects.”*
- 7.6 In addition, an industry-prepared FEP must contain performance measures that are capable of being audited.
- 7.7 Whichever of the Part A or Part B requirements are satisfied, there is a requirement on farmers to identify effects and risks and to address those much more comprehensively than would occur in the absence of such a requirement. It seems to me that in addressing those effects and risks, nutrient (and other) contamination will be reduced relative to what would otherwise be the case. I accept that it is difficult to know what level of reduction will be achieved but there ought, logically to be *some* reduction and hence, in planning terms it is reasonable to expect that the objectives of maintaining or enhancing water quality will be given effect to. I note also that because nutrient loss information will be recorded the extent of improvement in nitrogen loss will be able to be monitored by Environment Canterbury.
- 7.8 With regard to Ms Guest’s preference for nutrient load limits and property level nutrient discharge allowances (NDA), I simply quote Ms Guest’s concluding remarks when she says that:

8. Although my Group 2 evidence in chief proposes to modify the wording of this Appendix this fundamental requirement is retained.

“The need for catchment nutrient load limits has been recognised by Ecan since at least 2007, yet much of the technical analysis required to underpin this management approach is still to be completed”

- 7.9 It stands to reason that in the absence of a catchment load there can be no individual property-level allocation (or NDA) except via the means proposed in the Plan (as described in my paragraph 4.5). In my opinion, the proposal advanced in the Section 42A Report as modified as per my Group 2 evidence in chief does provide a sound, practical, low risk and responsible approach to manage non point source discharges from farms until sub regional sections of the Plan are developed.

Gerard Willis

10 April 2013