IN THE MATTER of the Resource Management Act 1991

AND

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

SECOND STATEMENT OF REBUTTAL EVIDENCE OF GERARD MATTHEW WILLIS (RESPONDING TO MR PERCY) 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 Mr Phillip Percy for Nelson/Marlborough, North Canterbury and Central South Island Fish and Game Councils. Mr Percy's evidence addresses the policies and rules proposed for farming activities. The particular planning evidence I rebut is that related to:

(a) Rule 5.36B (Discharges of animal effluent to water);
(b) Rule 5.39C (Existing farming in Orange and Red catchments);
(c) Rule 5.57 (Discharges from sub-surface and surface drains); and
(d) Rules 5.133-5.135 (Stock exclusion from the beds of rivers).

2.2 I also comment on:

(a) Mr Percy’s Section 32 analysis; and
(b) Mr Percy’s definition of “active bed”.

3. RULE 5.36B – DISCHARGES OF ANIMAL EFFLUENT TO WATER

3.1 I note that Mr Percy proposes that a new and additional rule be included in the Plan that would make the discharge of animal effluent, or water containing animal effluent and other contaminants, to water a prohibited activity.

3.2 I agree that the discharge of animal effluent directly to water has potentially significant adverse effects on water quality and should not be contemplated by the Plan.

3.3 The Fonterra submission actually sought that a non-complying rule be added to the Plan in respect of effluent to water discharges to clearly signal that such discharges are generally not to be condoned (unless a case can be made in their favour under section 104D of the Act, either in terms of them only generating minor adverse effects or the activity not being contrary to the objectives and policies of the Plan).

3.4 In my opinion that ought to be the preferred planning approach. While discharges of effluent to water are generally not to be condoned there may be rare exceptions where a farmer uses, for example, an on-farm effluent treatment system\(^1\) to treat dairy shed effluent to a very high standard. In such cases it is, in my opinion, appropriate that the opportunity be left open for a farmer to test whether the discharge can pass the section 104D tests. In fact if the door is closed entirely on discharges of highly treated effluent to water (by way of a prohibited activity classification) it may act as a disincentive for the development of innovative treatment systems and for their adoption on-farm.

3.5 For those reasons I support a non-complying rule for animal effluent discharges to water rather that the prohibited rule proposed by Mr Percy.

4. RULE 5.39C – JUSTIFICATION FOR CONSENT FOR FARMING

4.1 In making his case for farming (as a land use) to require a resource consent rather than be classified as a permitted activity, Mr Percy makes the argument

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1. I understand from the evidence of Mr Cullen that there are technologies that can treat dairy shed effluent to remove nutrients and other contaminants but that at this point there are cost and practicality barriers to widespread implementation.
(paragraph 50 of his evidence) that the discharge to land of animal effluent collected from a shed dairy requires consent and therefore discharge from “animal applied” animal effluent ought also to be subject to consent (via a land use rule for farming).

4.2 As I understand it, Mr Percy’s argument is that the cumulative effects of the two discharges “will be approximately the same”. Therefore, he argues, if dairy shed effluent discharge is a consentable activity so (necessarily) should farming (i.e. the grazing of animals) itself.

4.3 I disagree with the logic of that argument. I support the established practice of dairy shed effluent being subject of consent. It is, in my opinion, clearly distinguishable from the discharge of animal effluent associated with cows (or other animals) on pasture. There are two main differences.

4.4 First, there is a greatly enhanced risk to water quality associated with the discharge of collected animal effluent (e.g. dairy shed effluent) to land because of the potential for that effluent (if not properly managed) to be applied at rates that greatly exceed the rates of natural deposition from a herd of cows under any realistic grazing regime. I understand from the Rebuttal Evidence of Mr Cullen that if effluent is spread over a small area, and/or at high rates of application, more nutrients will pass below the root zone of the pasture and potentially into ground water. Furthermore, in such situations there may be overland flow of effluent directly to surface water. Hence the risk to water from the “mechanical” application of effluent is greater than from grazing dairy cows.

4.5 Second, the ability of a farmer to manage the risk posed by the discharge of dairy shed effluent is significantly greater and more direct than the risk associated with the grazing of animals. Farmers can store effluent so that it need not be discharged when the conditions are unsuitable (e.g. when the ground is saturated). In addition to controlling the timing of discharge, farmers can also directly control the area to which effluent is discharged and, accordingly, the application rates.

4.6 Thus requiring resource consent is clearly more justifiable as the risks are specific and significant and the means of managing those risks may be clearly and directly required of farmers by way of conditions of consent. It does not
follow that accepting the case to control effluent discharges by way of resource consent necessarily means accepting the case for controlling all livestock farming by resource consent. The issues of risk and risk management are not the same.

4.7 It is also important to note that I am not arguing that there is never a case for requiring consent for animal farming. Clearly that is not correct either. What I am saying is that the question of whether a land use consent ought to be required for the activity of farming (e.g. grazing of animals) ought not be related to whether consent is justified for the discharge of animal effluent.

5. RULE 5.57 – DISCHARGES FROM DRAINS

5.1 Mr Percy proposes that Rule 5.57 be changed from a rule permitting discharges from sub surface or surface drains (subject to conditions) to a Rule that makes all such discharges discretionary activities.

5.2 The rationale for this proposed amendment is set out in paragraphs 80 to 87 of Mr Percy’s statement of evidence. In essence his argument is that:

(a) The terms are not defined meaning there is insufficient certainty for a permitted activity rule; and

(b) The extent of drainage networks is unknown and may cross multiple properties and hence the uncertainty means the Council will not be able to satisfy itself that the requirements of Section 70 of the Act are met.

5.3 I disagree with Mr Percy’s analysis of this issue. As I understand Rule 5.57 and 5.58 as proposed, they take a pragmatic approach of allowing the Council to step in to require a resource consent (in addition to all the other resource consents that may be required on a farm as a matter of course) when there is a problem with the quality of a drain discharging into a lake, river or wetland.

5.4 I agree with Mr Percy that the extent of a drainage catchment can be large, spanning multiple properties and sometimes the full extent is unknown. In my opinion that reality simply makes Mr Percy’s proposal to require all such discharges to obtain a resource consent irrespective of their quality, even more unworkable.
5.5 There are administrative and practical difficulties with requiring resource consents for existing sub-surface or surface drains. For example, it is possible for one land owner to be unlucky enough to have a drain discharge to a stream on their property despite the fact that the majority of its contaminant load is contributed by landowners up catchment. In the case of sub-surface drains, it may not be known which properties contribute to the quality of the ultimate discharge. Some investigation to determine who should and should not be required to make an application may be necessary in many cases. Attributing responsibility and imposing suitable conditions could be problematic.

5.6 These problems merit the cost and time in grappling with them where the discharge of water is of a problematic quality. It seems to me, however, that where water meets the standards specified in Rule 5.57 as notified, there is no justification for the cost of imposing a resource consent framework as suggested by Mr Percy.

5.7 The other point to note is that Mr Percy’s approach risks regulating the same discharge-contributing activity multiple times (e.g. through a land use consent, though an effluent discharge consent and through a drain discharge consent).

5.8 In my opinion the permitted rule as recommended by the Section 42A report is a sensible and pragmatic approach. It allows the Council to intervene when and where a specific issue is identified but does not generate another layer of resource consent obligations of dubious added value.

6. **SECTION 32 ANALYSIS FOR CHANGES TO LAND USE RULES**

6.1 At paragraph 116, Mr Percy sets out in table format his assessment of perceived effectiveness and efficiency of the planning approach proposed in the Section 42A Report and that of the planning approach proposed by him on behalf of Fish and Game.

6.2 There are a number of statements made in that table in respect of the “ECan approach” that I disagree with. I have dealt with many of those points in my evidence in chief. However, some additional matters require comment.

(a) Mr Percy discounts any potential for nitrogen loss reduction unless it is regulated by the plan (and hence by resource consent) in very specific
terms. The potential for reductions in nitrogen loss to result from the adoption of farm environment plans (FEPs) (which I propose for all permitted activities in the Red Zone) is apparently assessed as zero. While I accept that we cannot be certain how much reduction will be achieved by this approach I consider it wrong to discount its efficacy entirely. Just because we cannot identify a specific numeric benefit or value from an intervention does not mean that intervention is unworthy or ineffective. Indeed many of the benefits from improved water quality are themselves at least partly intangible. That does not mean they are not worth pursuing.

(b) There is clearly a relationship between the rules that I (and the Council) propose and the Table 1 outcomes. The land use rules in combination with discharge rules target all the key risk activities that (as I understand it) contribute to the achievement of the Table 1 outcomes.

(c) Mr Percy has made the assumption (unsubstantiated as far as I can determine) that the small allowance for nitrogen increase by existing farmers (i.e. a maximum of 10%) will exceed the reductions achieved by the adoptions of FEPs. Furthermore, he assumes that will occur before sub regional plans are introduced. I accept that what the net position will be is unknown but I consider it inappropriate to make the unqualified assumption in the Section 32 analysis.

(d) As stated in my statement of evidence, there is a de facto allocation of nutrient loss entitlement to individual farmers being their 2011 – 2013 loss plus up to 10%. It is incorrect to claim that “there is no allocation to land users”.

(e) It is misleading and inaccurate to suggest that the approach relies on voluntary reduction of nitrogen since the industry FEP schemes can and should (as I propose) require auditable performance measures and consequences for non compliance.

6.3 With respect to the characterisation of the Fish and Game approach, I would simply observe that I cannot draw any conclusions from the analysis because
the fundamental evidential basis for a conclusion is not available. That is, I am not aware of any evidence that sets out:

(a) What likely benefit to water quality will result from 508 of 750 dairy farms being required to reduce nitrogen loss by 20% over five years. Moreover, it is not clear to me how that benefit compares to what would occur through the alternate approach of the Council (and in large part myself) including the adoption of FEPs.

(b) Also not considered in this analysis is the timeframe over which improvement is expected and how that compares with the proposed timeframe of sub regional plans. It seems to me quite possible that if no reduction in farm N loss is expected/required for 5 years from the date this provision is implemented, it could be overtaken by whatever the sub regional plans might require.

(c) How the projected cost (of $21 million, according to Dr Marsh, or $28 million, according to Mr Butcher) falls across the population of farms caught by the rule and what the social and economic impact will be on farms that face a disproportionately large cost.

(d) Any real assessment of policy efficiency (i.e. whether a 20% reduction every five years regardless of circumstances, is the least costly way of achieving the Table 1 outcomes over a reasonable time period).

6.4 In the absence of that (and similar) information I cannot see how Mr Percy can conclude that his approach is more effective and efficient than that of the Council’s.

6.5 I do note his cross-references to the evidence of Dan Marsh and Dr Dewes and I have reviewed that evidence. That did not alter my opinion on the absence of information that allows for a conclusive Section 32 analysis of the Fish and Game proposal.

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2. Figures taken from the Council’s Section 32 Report Table 7 page 58.
7. STOCK EXCLUSION AND DEFINITION OF ACTIVE BED

7.1 Mr Percy relies on the evidence on Associate Professor Death to offer a variation on the definition of “active bed” that I included in my evidence in chief. As I understand it, Associate Professor Death (and hence Mr Percy) is concerned that my definition referred to “dominated by indigenous species” when much of the riparian vegetation along the active beds and banks of Canterbury’s rivers comprises introduced species (lupins and the like). Having read Associate Professor Death’s evidence on that point I agree with the wording used by Mr Percy that refers not to “indigenous vegetation” but to “pioneer grasses, herbs and shrubs”.

7.2 I accept that Mr Percy’s definition is more concise than the one I suggested. I also note that Mr Percy’s definition, in combination with his proposed changes to Rule 5.134A, broadens the scope to include ephemeral streams (i.e. the reference to the area permanently covered by water is removed). My definition was not intended to deliberately exclude streams that do not contain water for parts of the year. Hence I do not disagree with the change Mr Percy proposes provided that any active bed must contain an area that is unvegetated. That will ensure that the waterways caught by the definition flow at least part of the year and not just following extreme weather events.

7.3 A further change inserted by Mr Percy for which there is no apparent explanation is Mr Percy’s Rule 5.134A condition 4. As I read it, that condition means that use of an active bed is not a discretionary activity (but rather a prohibited activity) when a river bed is less than 50 metres in width. Why the width of the river bed alters the risk posed by access to the active bed is not clear to me. It may be that Mr Percy is suggesting that when a river bed is less than 50 metres in width it ought to be bridged rather than stock being permitted. However, that does not necessarily follow since it is often only the active bed that will need to be bridged. In any event, this Rule will seldom apply to intensive farming such as dairying because of condition 3 (also included in my proposed rule) which limits the number of crossing to four per year. (I understand that cows on a milking platform would need the right to cross a river far more frequently than four times per year\(^3\)). Nevertheless, in my view

\(^3\) I understand it might apply in some instances to land used for dairy grazing.
Condition 4 as proposed by Mr Percy has no basis in evidence and is not appropriate.

7.4 Similarly, I do not agree with Mr Percy’s proposed changes to Rules 5.135 and 5.136. As I understand those changes, the net result would be that accessing any that part of a river bed that is not the active bed by intensive livestock would not be covered by those rules and hence would fall to require a discretionary activity consent under the Act. (Accessing the active bed would be prohibited). Thus, grazing on managed pasture that may be regarded as being within a river bed would require discretionary consent. That is precisely the outcome that my proposed changes sought to avoid. In my opinion, the appropriate planning regime would be to make 4:

(a) Access to active beds by intensive livestock a prohibited activity (Rule 5.133) except in very limited circumstances (Rule 5.134A). Access to that part of the bed that is not an “active bed” ought to be permitted subject to meeting appropriate performance standards (Rule 5.135). Failure to meet those standard should trigger discretionary consent (Rule 5.136).

(b) Access to active beds by non-intensive livestock a prohibited activity only where it would compromise specific sensitive values (Rule 5.134). Access by non-intensive livestock to the bed should otherwise be permitted subject to meeting appropriate performance standards (Rule 5.135). Failure to meet those standard should trigger discretionary consent (Rule 5.136).

7.5 For that reason, I support the Council’s Section 42A Report version of the stock exclusion rule as modified in my statement of evidence and not Mr Percy’s version which is more uncertain as it relates to intensive livestock.

Gerard Willis

30 April 2013

4. Rule references relate to the Councils Section 42A Report version as modified in my statement of evidence.