

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of the Proposed Natural Resources Plan for the
Wellington Region

**STATEMENT OF RIGHT OF REPLY EVIDENCE OF GERARD MATTHEW
WILLIS FOR WELLINGTON REGIONAL COUNCIL**

**RESPONSE TO FISH AND GAME PROPOSALS FOR NUTRIENT
MANAGEMENT PROVISIONS**

14 MAY 2018

1. SUMMARY

- 1.1 Planning witnesses for Rangitāne Tū Mai Rā Trust and Rangitāne o Wairarapa, the Minister of Conservation and Wellington Fish and Game Council (collectively referred to here as **Fish and Game**) have suggested that the planning approach taken by the proposed Natural Resources Plan (**pNRP**) to the management of diffuse discharges and, in particular, nutrient discharges does not give effect to statutory responsibilities. I disagree with that opinion. My opinion on this matter was set out in my evidence in chief and I have not changed that opinion as a result of the Fish and Game evidence.
- 1.2 I have now had the opportunity to review the alternative planning provisions proposed by Mr Philip Percy and Ms Lucy Cooper on behalf of Fish and Game. In my opinion, those provisions are not appropriate for the circumstances facing the Wellington Region, are not clear, do not offer a practical solution to the issues identified and, for a number of reasons, would not be effective or efficient. Furthermore, in my opinion their proposal for a variation to the pNRP to address accepted shortcomings of Fish and Game's proposed planning solution would be administratively inefficient.
- 1.3 Accordingly, in my evaluation, the alternative planning provisions proposed on behalf of Fish and Game does not meet the tests of section 32 of the Resource Management Act (**the Act**).

2. INTRODUCTION

- 2.1 My full name is Gerard Matthew Willis. I previously provided evidence in relation to nutrient management planning, on 14 February 2018.
- 2.2 My qualifications and experience are set out in Attachment A of my evidence in chief (**EIC**).

3. CODE OF CONDUCT

- 3.1 I reconfirm that I agree to comply with the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014, as set in my EIC.

4. SCOPE

4.1 This right of reply evidence responds to the evidence of Mr Percy and Ms Cooper who provided joint planning evidence at Hearing Stream 4 (**HS4**) on behalf of Fish and Game.

4.2 In particular, this evidence comments on:

- (a) the matters raised by Fish and Game in relation to nutrient management planning and compliance with relevant planning instruments; and
- (b) on the alternative nutrient planning provisions advanced on behalf of Fish and Game.

5. KEY QUESTIONS RAISED BY THE FISH AND GAME SUBMISSION

5.1 The Fish and Game submission has usefully highlighted a series of questions and issues in relation to the Council's nutrient management obligations. The planning evidence presented by planning witnesses, Mr Percy and Ms Cooper, and their presentation at the hearing sought to elaborate on the submission and provide some planning answers to many of the questions raised. I agree with some of the points raised by Mr Percy and Ms Cooper but on many points I disagree with the interpretation of applicable planning framework and Council's obligations under that framework.

5.2 In large part that is for the reasons I have already set out in my EIC. However, the evidence presented by Mr Percy and Ms Cooper does require further specific response and I provide that in this right of reply evidence.

Is there a failure to comply with the NPSFM?

5.3 The first overarching question raised is whether the pNRP fails to implement the National Policy Statement for Freshwater Management 2014 (**NPSFM**). That has a series of subordinate questions which I address below.

(a) Must the pNRP implement all elements of the NPSFM now?

5.4 I understand that it is common ground between myself and planning witnesses for Fish and Game that the NPSFM allows for progressive

implementation, meaning that the pNRP need not, in and of itself, fully implement the NPSFM at this time provided it does so in accordance with its progressive implementation plan (**PIP**) by 2025.

- 5.5 The logical inference of this is that some requirements of the NPSFM may await a subsequent plan change rather than being included in the pNRP at this stage.

(b) What is the necessary and appropriate action in the period before full implementation of the NPSFM?

- 5.6 The second question is whether there are aspects of the NPSFM that must be implemented *now* notwithstanding the ability for staged implementation? (That is, what mandatory obligation exist in the so-called “interim period”?).
- 5.7 In short, for water quality, with the exception of Policy A4 (which directs that a specific policy be inserted into regional plans requiring consideration of certain matters when considering discharge consents), there is nothing in the NPSFM that states that certain provisions must be implemented in the interim period.
- 5.8 That said, it is common *practice* for regional plans to adopt an approach of “holding the line” (not allowing for further degradation but not seeking to address existing degradation) in the interim period. It is also common practice for regional plans to adopt some numeric and/or narrative “standards” or outcomes for certain attributes in the interim period (these typically include E.coli, cyanobacteria and nitrate toxicity “standards” but also can include outcomes/indicators in respect of periphyton and MCI).
- 5.9 These “standards” may, but need not, be identified as *freshwater objectives* as defined in NPSFM. However, if they are to be *freshwater objectives* they must have been developed in accordance with Part CA of the NPSFM – National Objectives Framework.
- 5.10 In general terms, this practice seeks to recognise (but not necessarily fully implement) the obligations under Objectives A1 and A2 of the NPSFM to safeguard life-supporting capacity and the health of people and communities as well and the general imperative to maintain or improve overall water quality.

(c) Does the plan have (or need to include) freshwater objectives for all compulsory values and others values identified by the Council?

- 5.11 For the reasons outlined above, it is my opinion that in the interim period a regional plan is not required to specify *any* freshwater objectives, regardless of whether they relate to compulsory values or other values, or whether they may coincide with attribute states expressed in Appendix 2 of the NPSFM.
- 5.12 As noted above, regional plans do typically identify *some* water quality “standards” during the interim period to inform management. These may be identified as *freshwater objectives* or they may not. Whether they are so identified will depend on whether the Council considers it has applied the Part CA process in developing those objectives.
- 5.13 Whether particular standards are “NPS freshwater objectives” is important because obligations follow under the NPSFM (e.g. a requirement to specify targets and methods to improve water quality within defined timeframes when freshwater objectives are not being met). Hence plans are typically very clear about this point.
- 5.14 In the recently released decision on the Southland Water and Land Plan the hearing panel added the following to the front of the decisions version of the plan:
- While Objectives 1 to 18 are objectives relating to the management of freshwater, they are not freshwater objectives established in accordance with Section CA2 of the NPSFM. Freshwater objectives established in accordance with Section CA2 of the NPSFM will be developed under the Southland Regional Council’s Freshwater Management Unit process, in time, in accordance with the Southland Regional Council’s Progressive Implementation Programme.*
- 5.15 This clearly acknowledges the difference between an objective prepared in accordance with section 67(1)(b) of the Act (which every plan must have) and *freshwater objectives* under the NPSFM which plans need not include until so required by the applicable PIP. It also confirms the process by which freshwater objectives would be included in the plan. In my opinion, for clarity, it would be useful for the pNRP to include a similar statement.
- 5.16 I note, by contrast, that the Canterbury Land and Water Regional Plan does include freshwater objectives and clearly specifies which provisions

are freshwater objectives for the purpose of the NPSFM (and by inference, which are not). That plan includes the following statement:

The objectives in Section 3 and Policies 4.1 – 4.6 in this Plan form the 'freshwater objectives' for Canterbury Region, as described by the Freshwater NPS.

(d) Has the process been followed to allow freshwater objectives to be set?

- 5.17 Ms Cooper went to some length to attempt to demonstrate that the plan-making process Council has followed is consistent with that required by Section CA2 of the NPSFM. I do not agree with that analysis.
- 5.18 It was the Council's Project Manager of the Whaitua process, Mr Smaill, who advised in the Panel in Hearing Stream 1 that the pNRP did not contain *freshwater objectives*.
- 5.19 Mr Smaill did not elaborate in that evidence on why the pNRP did not contain freshwater objectives other than to explain that establishing freshwater objectives and limits was the express task of the Whaitua Committee processes.
- 5.20 My understanding is that those processes are better able to deliver the process and outputs set out in Part CA of the NPSFM because of the scale at which they operate means they can focus on locally relevant considerations and engage in more locally relevant consultation. Mr Smaill puts it thus (para 12 of his HS1 evidence):

The five whaitua catchments and their management are considered separately because they are quite different from a biophysical perspective. These areas are also different in terms of the resource management issues, they are different in terms of the community and the aspirations of each community, and there are also different iwi. Therefore it makes sense that they are addressed separately and that there may be different policy responses.

- 5.21 This is consistent with Policy CA2's focus on values being identified at the scale of the Freshwater Management Unit (FMU). As I explained in my EIC, the approach is consistent with practice in other regions.
- 5.22 In my opinion, Ms Cooper under-estimates the importance and relevance of Policy CA2 f). This section is not, in my opinion, a set of "*broad touchstones*" as she suggests, but a very specific set of matters that are to be considered at all stages of freshwater objective development. The

section makes clear that the process set out in Policy CA2 a) to e) is not a mechanical (or solely “technical”) exercise but one that requires, consultation, testing of scenarios and the evaluation of costs and benefits of various options on resource users, people and communities. Other regions have taken the view that giving effect to Policy CA2 requires a specific, deliberative process carried out at a sub-regional or FMU scale.

- 5.23 While it is true that there are compulsory values (ecosystem health and human health for recreation) and therefore compulsory attributes that must be reflected in the formation of freshwater objectives (as set out in Appendix 2 of the NPSFM), it does not follow that objectives must be applied at the same level everywhere. There are choices to be made (above the national bottomline). That is the very purpose of the national objectives framework and the FMU objective setting process.
- 5.24 The same logic applies to the values recognised by Objectives O23, O24, O25 of the pNRP. Hence, the fact that there may be “objectives” set for the region as a whole (in respect of certain values and attributes) does not mean that these must be freshwater objectives. Objectives O23, O24 and O25 are, in my opinion, interim objectives that guide decision-making until either confirmed or modified by the Whaitua process as being appropriate in the circumstances of the particular FMU, taking account the matters set out in Policy CA2 f).
- 5.25 Importantly, Policy CA2 clearly anticipates that the objective and limit setting process is iterative and integrated. That is, freshwater objectives will be set taking into account the limits required to achieve them. That has very clearly not occurred here with limits (as proposed by Fish and Game) being developed after, and independent of, the setting of the Table 3.4 “objectives”.
- 5.26 Similarly, Ms Cooper suggested to the Panel that there has been economic cost benefit analysis undertaken as part of the formulation of the Table 3.4 objectives - consistent with the requirements of Section CA f) v of the NPSFM. However, she does not reference any specific reports. In my opinion, it is not possible to have undertaken such analysis. That is because to understand the cost there must be an understanding of the *limits* required to achieve the freshwater objectives. Indeed, Policy CA2 f) v. requires the consideration of “*implications for resource users, people and communities arising from the freshwater objectives and associated*”

limits (my emphasis). Given that the suggested limits have only emerged through the evidence and hearing process it is logically impossible to suggest that the cost of those limits could have been considered as part of the setting of the freshwater objective.

- 5.27 Fish and Game have not provided their own evaluation of the costs and benefits of the provisions they propose.
- 5.28 For those reasons, I do not consider that the approach of the pNRP is in any way non-compliant with the NPSFM. On the contrary, I consider that referring to the objectives of Table 3.4 as “freshwater objectives” would itself be in conflict with the Part CA of the NPSFM.

What are the obligations arising from the Act itself?

- 5.29 The second overarching question is whether there are obligations that exist to manage for water quality that sit independently of the NPSFM?
- 5.30 As I noted in my EIC, in my opinion there certainly are obligations that arise from the Resource Management Act 1991 (the Act) itself that are not extinguished by the NPSFM. Before the NPSFM we had 20 years of managing water quality under the Act. Those obligations are set out in Part 2 of the Act as well as sections 30, 69, 70 and section 107.
- 5.31 Despite that, in my opinion nothing in any of those sections *requires* councils to include provisions of the type proposed by Mr Percy and Ms Cooper at this time (although I agree that those sections *enable* councils to adopt such provisions – subject to meeting other statutory tests).
- 5.32 Certainly there are objectives set out in section 5 of the Act to safeguard life-supporting capacity but that is not unfettered sitting as it does with the rubric of the wider section 5 considerations.
- 5.33 Similarly, I do not read section 30 as prescribing a general obligation for councils to maintain and enhance water quality (notwithstanding section 30 (c)(ii) and (iii)). If that was the legislative intent, the regional council function to manage discharges and water takes (activities that equally affect water quality) would be similarly tied to the purpose of maintaining and enhancing water quality¹. I do, however accept that is a legal

¹ Rather, the reference to the purpose to which land use may be controlled serves to demarcate the boundaries of the regional function for land use control relative to the functions of territorial authorities.

matter. In the event that I am wrong on that point, I would add that the evidence is that there is not a strong likelihood of land use change and intensification that would compromise any such outcome in the period before Whaitua Plan Changes are planned to be notified.

5.34 It may also be instructive to note the fact the pre-NPSFM plans did not include provisions of the type sought by Fish and Game is proof that the pre-NPSFM legislative framework did not require them².

5.35 I address section 70 of the Act in detail from paragraph 5.42.

Do the circumstances warrant taking action now regardless that there may be no legal need to do so?

5.36 The third question is whether, notwithstanding there may be no *obligation* to implement all parts of the NPSFM now, or introduce planning provisions that seek to improve water quality by a specific amount in the interim period, such action is warranted given risks and the current state of water quality in the Region.

5.37 Ms Cooper suggested my conclusion that a stronger regulatory approach is not required now is inconsistent with the technical evidence that some catchments do not meet the Table 3.4 objectives.

5.38 With respect, I did not draw my conclusion on the basis of whether water quality is currently at, or below, the state described by Table 3.4. My starting point was whether there was a trend of rapidly deteriorating water quality and/or a likelihood that water quality would deteriorate further as a result of activities (specifically farming and associated non-point source discharges) being not fully regulated under the pNRP. For the reasons set out in my EIC, I concluded that the risk was low in the period before the whaitua plan variations/changes are planned to be notified.

5.39 I note that the joint witness statement of the water quality experts³ concluded:

- (a) The experts agree that, based on Dr Snelder's analyses and further analyses (Appendix 1), that the rate of change in water

² The very reason the NPSFM was deemed necessary.

³ Expert Conferencing Joint Witness Statement to the Hearing Panel Topic: Water Quality Trends, Date: 19 February 2018

quality is not rapid or ubiquitous over the ten-year period analysed, across the Wellington Region.

- (b) The experts agree that there is no evidence of region-wide degradation over the ten- year or five-year time periods tested by Dr Snelder.

5.40 The other matter raised by Mr Percy and Ms Cooper was that there was a risk of a “gold rush” in the interim period. I understand that this concern relates to the potential for farmers to expand and/or intensify land use now in anticipation of plan rules making that much more difficult in the future.

5.41 I agree that is an appropriate matter to consider. However, I do not believe that, having considered it, it ought to influence the Panel’s consideration in this case. I say that for two reasons.

- (a) The information supplied by Mr Percy and Ms Cooper regarding water take consents issued for pasture/crop irrigation over the past two years was that four consents for new irrigation since April 2016 have been issued. According to those consents approximately 300-400 hectares of land use intensification could be enabled by irrigation. While that is not immaterial it is not, in my opinion strong evidence of a “gold rush”. That analysis is also consistent with information provided to me by Greater Wellington’s Environmental Regulation Team that the level of surface water allocation has either reduced or stayed the same across the sub catchments of the Ruamahanga catchment since 2016.

In my EIC I referred to the published timeframes for the Water Wairapapa project, indicating that those timeframes suggested that the Ruamahanga Whitua plan change/variation will be in place well before any new large scale irrigation schemes is consented. Since that evidence was prepared Greater Wellington has received advice⁴ that there has been a substantial delay in the project as a result of the government ending financial support for large-scale irrigation schemes.

⁴ See Appendix E of the RoR evidence of Ms Pawson

- (b) I understand that the Hearing Panel is to issue its recommendations on the pNRP in late 2018. Hence, the effect of a decision to introduce provisions as per Mr Percy and Ms Cooper's suggestions would not take effect until the Panel's recommendations have been considered by the Council and a decision made to accept them. That is likely to be in early 2019. The likelihood of appeals could mean that the provisions would not, in practice, be effective for several years after that. I further understand that Mr Smaill has confirmed that the Ruamahunga Whaitua will report to Council in late May/early June 2018 with suggested freshwater objectives and limits and that the intention is to have a plan change notified by the end of 2018/early 2019. Hence, even if the Panel were concerned about a potential "gold rush" a decision now to include provisions in the pNRP to avert such a rush would be unlikely to be any more expeditious than awaiting the Whaitua plan change/variation.

Is there a breach of Section 70 of the Act?

- 5.42 The fourth question raised is whether there is a breach of section 70 of the Act in permitting certain discharges?
- 5.43 In my opinion, there is not any breach of section 70. As discussed further in section 7 of this evidence, it is not clear whether a discharge from an animal to pasture is a "discharge" for the purpose of section 15 of the Act.
- 5.44 I do, however, support drafting Rule R42 in anticipation of animal to pasture discharges (and any resulting discharge to groundwater) being a discharge for the purpose of the Act. To do otherwise would be to invite uncertainty and may render the plan unworkable should a future Court decision make that matter clear.
- 5.45 In my opinion, Rule R42 should permit such discharges, subject to conditions. That will not inhibit the Whaitua-specific plan changes introducing specific rules that regulate those discharges and/or the land uses giving rise to those discharges (in which case Rule R42 would not apply to those specifically-regulated discharges).
- 5.46 I have included wording to that effect in Appendix 1 to this evidence. In short, it limits the requirement that there be no adverse effect beyond the boundary of the property to *point source discharges*.

- 5.47 That issue aside, a key reason I do not consider rule R42 to be in breach of section 70 of the Act is that Rule R42 is itself conditional on the effects specified in section 70 not occurring⁵. While it would be inappropriate to rely on a case-by-case, discretionary assessment of those effects as a primary means of regulating farming activities (as I discuss in section 7 below), the conditions do provide a form of “back-stop” or safety net that could be used for compliance purposes in the event that there is some unforeseen adverse effect detected as a result of activities relying on rule R42. That said, with the addition of additional discharge and/or land use rules through Whaitua plan changes/variations, I do not envisage there to be any much need to rely on that “backstop” in practice.
- 5.48 Furthermore, in my opinion section 70 cannot be interpreted without regard to materiality. To do so would mean that in any catchment deemed to be over-allocated there could be no permitted discharges of the offending contaminant. That is not accepted practice in my experience. For example, even in the highly over allocated (for N) Hinds catchment referred to earlier, the decisions version of the plan change makes farming activities permitted where they occur on properties less than 5ha or where the N leaching is less than 15kgs N/ha/yr. That is despite such discharges clearly contributing to the cumulative over-allocation (and hence adverse effect on groundwater nitrate levels).

What is an appropriate response?

- 5.49 The fifth and final question is whether, if you were going to introduce a region-wide regulatory regime now, would it be as proposed in Mr Percy and Ms Cooper’s evidence? I answer that question in the following section.

6. THE FISH AND GAME NUTRIENT MANAGEMENT PROPOSAL

- 6.1 The Fish and Game nutrient management proposal includes the following:
- (a) A reliance on rules R42/69 and R68 as imposing a requirement for any discharge (not provided for in another rule in the pNRP)

⁵ Although as I discuss in paragraph 7.9 below, I would agree that applying that test in practice involves considerable discretion given the often lack of direct linkage between a diffuse animal to pasture discharge and an adverse effect in receiving waters due to the other variables in play and uncertainties involved.

that causes adverse effects beyond the boundary of the property to require consent as a discretionary activity.

- (b) New Policy P##1 refers to Table XXX that sets nutrient load limits (in tonnes per year for both N and P) at 13 different monitoring points on the Region's main rivers.
- (c) A new policy framework in the form of P##2, P##3 and P##4 that requires:
 - (i) land use activities and associated discharges to be managed to achieve the nutrient loads;
 - (ii) land use activities to "contribute proportionally" to reductions required to meet load limits in catchments where those limits are already exceeded; and
 - (iii) exceedances of load limits to be phased out by 2030.

- 6.2 The other notable dimension to the approach is that all permitted discharges on production land would have to provide OVERSEER N loss data on an annual basis or farm management/input data on an annual basis (down to monthly records). Policy P65 is proposed to be amended so that the same information could be sought from consent holders.
- 6.3 Finally the proposal includes Policy P##5 that would establish "principles" and considerations to be applied to the determination of how sub-catchment load limits should be allocated (through a future variation to the pNRP).
- 6.4 When questioned by the Panel on the Fish and Game proposal during the HS4 hearing, I indicated that I had only had an opportunity to take a very preliminary look at the proposal at that time but that my initial opinion was that, with due respect to the authors, the proposal was unworkable.
- 6.5 I have since given the matter more detailed consideration and can advise that my initial assessment remains unchanged. The reasons for that opinion are set out below.

7. RELEVANCY OF RULES R42 AND R69

- 7.1 Mr Percy and Ms Cooper's approach rests on an understanding that Rules R42 and/or R69 (now proposed to be combined) do not permit discharges to land where contaminants may enter groundwater because such a discharge would likely have an adverse effect beyond a property boundary. Certainly, they argue, that would be the case where a catchment is over-allocated (in the terms derived from Fish and Game's proposed load limits). Because they argue that discharges caught by Rule R42 include animal to pasture nutrient losses, they also assert that the Council will inevitably need to deal with resource consent applications from farming activities and there is currently no policy framework to manage any such applications.
- 7.2 My understanding is that Rules R42 and/or R69 were never intended to capture animal to pasture discharges. In my opinion that is abundantly clear from the absence of:
- (a) any policy framework in the pNRP that recognises such discharges and establishes a framework to assess the acceptability of such discharges.
 - (b) any link to/integration with other rural production rules (in my experience, a plan seeking to manage diffuse animal to pasture discharges would not also have cultivation and break-feeding rules as those risks would be managed within a single rule framework - because those activities are key contributors to overall N and P losses).
- 7.3 That said, I entirely agree with Mr Percy and Ms Cooper that, as proposed and as redrafted in the section 42A Report: Water quality, Rule R42 could indeed capture animal to pasture nutrient losses assuming, those losses are "*discharges*" under section 15 of the Act⁶.
- 7.4 However, it is not at all clear that animal to pasture nutrient losses are discharges under the Act. As previously advised, the Court has assiduously refrained from confirming that matter one way or the other.

⁶ That is the reason I expressed residual concern about R42 at the HS4 hearing when asked whether I supported the recommended changes to the discharge provisions proposed in the s42A report.

- 7.5 This also supports my opinion that Rules R42 and R69 were never intended to address such discharges. If you were going to draft a rule designed to address those diffuse discharges from land use you would do so explicitly (using a land use rule) and not in a manner that relies on an unresolved legal interpretation⁷. In short, I believe the Fish and Game proposal attempts to apply Rule R42 outside its intended use.
- 7.6 There is a danger in interpreting and applying Rule R42 as suggested by Fish and Game. The Panel is being asked to accept that any discharge from an animal to land (that may find its way to groundwater) could potentially breach Rule R42 and become a discretionary activity. This potentially affects every pastoral farm and every lifestyle block (that grazes any livestock) in the Region. It also potentially captures other activities such as, for example, dog kennels where outdoor runs allow dogs to toilet to land⁸.
- 7.7 The first reason why I think that regime is unworkable is that it relies on an assessment against the conditions of Rule R42 and an assessment that certain effects will (or will not) result. In my opinion, that would be a very administratively inefficient way to regulate animal to pasture discharges since it is bound to result in on-going challenges to the Council's interpretations that one or other condition is or is not complied with for any particular farm. I consider that it would also involve the exercise of a degree of discretion inappropriate for a permitted activity.
- 7.8 If the rule was applied broadly and rigorously (on the assumption that *any* discharge to groundwater would have an adverse effect), Rule R42 would be the most stringent water quality management rule in the country. It would capture any discharge from an animal to land (that may find its way to groundwater) regardless of scale, location and duration of the discharge or the state of water quality in the receiving environment. It would also create anomalies. For example, a dairy farm needs to hold a controlled activity consent to apply farm dairy effluent to land but under the Fish and Game proposal might also require a discretionary consent to allow animals to discharge effluent directly to land.

⁷ All other regions that have sought to control diffuse discharges have used a land use rule or a combination of land use and discharge rules.

⁸ At some point the *de minimis* principle would probably apply but there is much doubt about when and how that might operate.

7.9 If the rule was applied with discretion it would be highly problematic. I do not consider it would be as simple as determining whether the activity is in an area/zone that is theoretically over-allocated for nitrogen (**N**) or phosphorus (**P**) according to Table XXX in the Fish and Game proposal. Whether an adverse effect is occurring, from a particular discharge or in combination with other discharges, (and whether that has a significant adverse effect on aquatic life) is far more complex and debateable than whether a load limit in the zone is, or is not, exceeded. Accordingly, resource users (and/or the Council upon challenge) could face a significant burden of proof to demonstrate their permitted status. In practical terms, I do not regard that to be feasible. In any event, I note that the technical caucusing on Table 3.4 did not result any a consensus view as to:

- (a) Whether the correlation between nutrients and MCI in Prof. Death's evidence is appropriate for establishing nutrient limits to achieve specific MCIs.
- (b) Whether we can predict the MCI level that will be achieved from achieving specific nutrient concentrations

7.10 In addition, the right of reply evidence of Dr Sandy Elliot continues to raise concerns and identify uncertainties regarding the derivation of load limits from Professors Death's proposed nutrient concentration limits.

Amendment of R42

7.11 It is for those reasons that I consider that Rule R42 should be amended so that it the requirement that there be no adverse effect beyond the boundary does not apply to diffuse discharges (because of the practical difficulties of demonstrating that one way or the other). I believe that would ensure that the rule can operate in the manner initially intended even if there is a subsequent Court determination that diffuse discharges from animal to pasture are discharges for the purpose of section 15 of the Act. I include a proposal for such an amendment in Attachment 1. If that amendment is accepted then the Fish and Game proposal cannot function as proposed since the regulatory "hook" to require consent would not exist.

7.12 For completeness, and because the Panel may determine that Rule R42 should operate as suggested by Mr Percy and Ms Cooper (or some other

land use rule be introduced⁹), I set out below other planning and implementation difficulties with the approach proposed on behalf of Fish and Game.

8. THE TABLE XXX LOAD LIMITS AND THEIR APPLICATION TO CONSENT DECISION-MAKING

8.1 Table XXX indicates that the Fish and Game N and P load limits are exceeded at three of the 13 monitoring sites and fully “taken up” at the other ten sites. This suggests that no new and additional discharges would be allowed under this regime in the zones represented by those monitoring sites (i.e. no intensification or land use change that would increase N or P discharges across the A to M zones). In some zones very significant reductions would be required over the next 12 years.

8.2 The first point I would make is that I am not aware of any analysis of the benefits and costs of this proposal. Clearly the scale of N reductions required in the Ruamahunga catchment (48.4%) and the timeframes for achieving them are very ambitious by the standards applied elsewhere. By comparison, the Hinds catchment in Canterbury is widely regarded as the most over-allocated catchment for N in the country. Nitrate levels routinely exceed drinking water in many groundwater bores across the Hinds catchment. Accordingly, it has the most onerous reduction obligation of any catchment in the country (as far as I am aware). In that case, farms are required to reduce N losses by 36% over a 20-year period (2015 to 2035). Considerable economic analysis contributed to that decision. By contrast the Fish and Game proposal for Wellington seeks far greater reductions over a far shorter timeframe with no economic analysis.

8.3 Setting that issue aside, I consider that practical implementation of the approach to be highly uncertain for a number of reasons.

Uncertainty about the geographic scope of applicability of policy framework

8.4 First, it is not clear why Table XXX includes some but not all catchments (zones) or all parts of catchments. It does not, for example, include the Kapiti or Wairarapa Hills whitua. Further, it does not appear to include the Ruamāhanga below the Waihenga Bridge (Martinborough)¹⁰. Hence it

⁹ Although I am not aware that there is scope to introduce such a rule.

¹⁰ Dr Elliot provides a map of the area which is and is not covered by the proposed load limits.

is not clear what would guide consent decision-making in those areas. (It should be noted that the Fish and Game proposal would potentially still see consents required in *all* catchments).

Inability to model P losses at the property scale

- 8.5 Second, the approach includes a requirement for consent holders to reduce P loss by quantified amounts. However, loss of P cannot be readily quantified on a property scale. OVERSEER does generate a P loss number (it actually models all seven major nutrients not just N) but the technical advice is that OVERSEER's P loss results should not be used for regulatory compliance purposes at an individual property scale. That is because there are many sources of P loss that are not modelled by OVERSEER. While OVERSEER could be used to model some farm system P losses, it cannot be used to estimate whole farm losses.

Applicability of limits relative to surface water catchments

- 8.6 Third, it is not clear to me how a property will be assessed relative to a limit that applies at a surface water monitoring point. Two issues are particularly unclear:
- (a) The effect of a loss of N to groundwater (through drainage/leaching as the main pathway) will occur in the groundwater and in any connected surface water feature. The effect of P loss is generally to surface water since overland flow is the primary pathway. Groundwater (aquifers) do not, however, necessarily match to surface water catchments or features. Hence it possible that a property upstream from a surface water measuring point does not have a nitrogen effect on surface water until below a surface water measuring point. The reverse situation is also theoretically possible. The catchment area of properties that are accountable to particular surface water measuring point load limits is not clear. It may be assumed that it is all properties in the *surface water* catchment upstream of the measuring point to the next upstream measuring point (if there is one). If that is the case it would be making an assumption about groundwater flows that may not be accurate and hence the management of the effects of N on surface water may not be well targeted.

- (b) Some rivers have more than one measuring point or have tributaries which have their own measuring point in Table XXX (such as the Kopuaranga, Waiohine and Taueru Rivers which are tributaries of the Ruamāhanga but have their own load limits). Similarly, the Hutt River, has load limits at three separate points up the system. It is assumed that activities are not accountable against load limits further downstream than the closest downstream load limit. But that is not clear. In water *quantity* management it is usual for abstractors to be limited by the level of allocation at the bottom of a catchment. In other words even though there may be water to be allocated in the upper catchment – according to the allocation limits in the upper catchment- if the river system is fully allocated at the mouth - or at any point further downstream - no further allocation is allowed. It is not clear whether a similar approach is anticipated by Table XXX.

Lack of clarity about what land use and what discharges are caught by the proposed regime

- 8.7 Fourth, what discharges require consent and will be subject to Policies P##2 to Policy##4 is not clear. Policy##2 refers to “*Land use activities and associated discharges in sub-catchment Zones A-M*”. Policy ##3 does make clear that the load limits of Table XXX are to apply to “*all non-point source discharges of contaminants from farming activities*”. However, uncertainty remains about whether discharges of N and P from non-livestock farming activities (e.g. cropping, horticulture, viticulture) would be caught by the regime. That uncertainty arises from:
- (a) cultivation (which includes cropping and commercial vegetable growing) being subject to specific rules; and
- (b) the main sources of N discharges from horticulture (fertiliser) also being subject to separate rules.
- 8.8 Rule R42 states that it applies to activities that are not “*specifically provided for by another rule in this Plan*”.
- 8.9 More fundamentally, the problem arises because Rule R42 is a discharge rule and not a land use rule. My interpretation is that those land use activities in (a) and (b) above would only be caught by the regime if they

have a discharge that fails to meet the permitted activity conditions and hence requires resource consent. The main discharge to land that would result in nutrient losses to water associated with those land uses is the application of fertiliser. Given that the conditions of the fertiliser rule (R82) are not limiting as to application rates, those activities would (I assume) have little difficulty complying with the rule – in which case my understanding is the R42/R68 would not apply. This may lead to the effect of rules being skewed towards livestock farming while other activities are not required to contribute to N and P reductions sought¹¹.

Inequity and impracticality of seeking proportional reduction

- 8.10 Fifth, I consider that the notion of requiring a *proportional reduction* would be near impossible to apply fairly in practice. I understand that a “proportional reduction” is one where every applicant would reduce the N leaching by the proportion required to return the aggregate discharge to the load limit. Above the Ruamāhanga at the Waihenga Bridge site, for example, I assume the required proportional reduction would be 48.4%. Several problems arise from that. One is that because Rule R42 does not capture every activity contributing to the N load (as discussed above) the burden of reduction would fall unevenly and unfairly on a select group of dischargers. If not all N discharges are caught by this obligation then those that are caught will have to reduce N loss by more the 48.4% to achieve the load limit. If that is not the intent then requiring 48.4% reduction from only a subset of N discharges in the catchment will not be effective in achieving the load limit and, in my opinion, the policy would accordingly fail on section 32 grounds.
- 8.11 Another problem is that, for those existing dischargers who have a very low level of N loss (for example, extensive hill country drystock farming) there will be very few opportunities to lower that loss rate. The marginal cost of making reductions will likely be much higher for such activities relative to those existing dischargers who have very high N leaching rates (and for whom there are many more opportunities to make reductions). Again, the burden of making reductions would therefore fall unevenly –

¹¹ It is also important to recall that the presumption of section 9 of the Act is that a person may use land unless a rule in a plan states otherwise. There is no land use rule in the pNRP controlling land use for general farming purposes (only for the specific activities such as cultivation and breakfeeding).

even by an across-the-board proportional reduction obligation¹². There is nothing in the policy framework that would allow that matter to be considered in decision-making.

Proposed information provision requirements

- 8.12 Mr Percy and Ms Cooper have also proposed amendments to Rules R42/69 and to Policy P65 to require information to be supplied to Council on an annual basis. Again, it is not entirely clear which activities would have to meet this information requirement but it appears it would be all activities whose nutrient discharge:
- (a) meets the requirements of Rule R42 (which I assume is intended to be those activities not in the A-M zones – although that is not clear to me); or
 - (b) does not meet the conditions of Rule R42 and requires discretionary activity consent under Rule R68; or
 - (c) is a consented discharge (under other rules of the pNRP) from rural land use activities that discharge onto production land. (I assume this would include discharges of collected animal effluent, as well as biosolids, fertiliser, farm dumps, offal pits, pit latrines, silage, compost, cultivation and breakfeeding earthworks and vegetation clearance and plantation forestry that do not meet the conditions of the relevant permitted activity rules).
- 8.13 The information requirements sought on behalf of Fish and Game are taken from Part D of Schedule 7 of the Canterbury Land and Water Regional Plan (CLWRP). In Canterbury those provisions apply only to permitted farming activities (those <20kgs N/ha/yr) in those few parts of the region where there is currently no over-allocation. Unlike in Canterbury, Mr Percy proposes that the full farm information be provided to Council each year (rather than just “on request”). In my opinion, Mr Percy has significantly under-estimated the burden of providing the range of information to Council on an annual basis and the ability of the Council to manage that information and use it in a meaningful way.

¹² Other regional plans have addressed this problem in the design of the provisions. In the Hinds catchment, for example, the 36 percent reduction obligation only applies to activities leaching more than 20kgs N/ha/yr.

- 8.14 It is instructive that Environment Canterbury's Plan Change 5¹³ to the CLWRP proposes to *delete* Part D of Schedule 7. There are a number of reasons for that. Environment Canterbury has found there to be capacity issues in that there are not sufficient qualified persons to undertake all the OVERSEER modelling required for consents let alone for permitted activities. It has also moved away from OVERSEER measured limits for permitted activities generally. Part D of Schedule 7 is effectively replaced by a requirement to register on the Farm Portal¹⁴ (being an online information management tool run by Environment Canterbury). Landowners who previously had to provide the Schedule 7 Part D information must now simply complete some relatively straightforward questions (i.e. they will no longer need to provide the information previously sought by Schedule 7 Part D).
- 8.15 Experience in Canterbury has also demonstrated that information supplied by landholders must be subject to audit to ensure reliability. In Canterbury, consent holders must maintain a particular *audit grade* under conditions of consent. The audit grade will determine how frequently OVERSEER files need be provided. For farms that run relatively stable farming systems (where very little changes year to year) requiring annual OVERSEER reporting has proven an unnecessary cost.
- 8.16 For all those reasons I do not support the information supply conditions proposed by Mr Percy and Ms Cooper.
- 8.17 I do accept that there is ordinarily some merit in ensuring a "baseline" leaching rate can be determined. That provides an option for future management to require performance relative to that baseline. However, there is always some risk in providing an opportunity for landholders to inflate leaching rates in order to establish a baseline before limits apply (in hope that may result in a greater nitrogen loss allowance in the future)¹⁵. I note again that there is no audit proposed on the information gathered (and nor would that likely be feasible given the very large amount of information involved). I consider, therefore, that there is likely to be a low level of reliability in information gathered and a risk that the approach would impose significant cost for little or no value (particularly in the absence of other controlling rules in the interim period).

¹³ PC5 remains subject to appeals but appeals are not on this point.

¹⁴ The per kg/ha/yr limits for permitted activities have also being replaced by input controls (on winter grazing and irrigation)

¹⁵ For that reason baseline leaching rates are generally determined by looking back in to time rather than determining those rates based on performance in future years.

- 8.18 I understand that dairy farming should have N loss OVERSEER records already (required under the Sustainable Dairy Accord¹⁶) and hence a baseline could already be determined (if needed) for that farming activity at least - without the need for the information supply conditions. I accept that will generally not be the case for drystock farming but it would be presumptive to suggest that such farming would be managed to a baseline leaching rate in any event. Waitua committees have various other options to control/limit nutrient losses from those farming systems.
- 8.19 Finally, technical advice on the use of OVERSEER suggests that five years of data is desirable to establish an average leaching rate for a farm system. That being the case, the Waitua limits will be established well before the information gathering conditions would generate sufficient data to establish a reliable baseline leaching rate in any event.

9. ALLOCATION PRINCIPLES

- 9.1 Finally, Mr Percy and Ms Cooper also propose a new and additional P##5 that would set out allocation “principles” and matters to be considered when applying those “principles”.
- 9.2 In my EIC I indicated that I did not support such a list of principles. That remains my opinion.
- 9.3 The apparent purpose of including such principles in the pNRP at this time is to constrain future plan changes from adopting an approach to allocation that might in some way be different to that supported by the principles.
- 9.4 Without critiquing each individual principle in detail, I can advise that some of the principles appear sensible and are probably broadly supported by a range of potentially affected parties. However, in my analysis, the fundamental point of the principles is to favour one approach to allocation and rule out another.
- 9.5 To put it bluntly, one of the key aims of the principles is to ensure that a future allocation regime allocates nitrogen leaching “rights” on the basis of the quality (“natural capital”) of the underlying land rather than paying

¹⁶ Under the Accord dairy companies committed to collect information allowing them to model N loss from those farms with 100% of dairy farms to be modeled by 31 May 2015. The progress report sustainable Dairy Water Accord – Three Years On (DairyNZ 2016) indicated that 83% of Dairy Farms (nationwide) had nitrogen budgets processed for the 2015/16 season.

attention to the use that may be established on that land at the time the limit is set. It is an approach that favours those with good quality land who may not be using that land to its full potential. It disadvantages those with existing high leaching activities particularly if they are using that land beyond its natural capital (i.e. its inherent ability to produce with no or low external inputs). In short, the proposed principles support a regime that would redistribute leaching rights with little or no regard to existing land use. Further, they also support transfer of leaching entitlement which is designed to facilitate “wealth transfer” from those who need leaching rights (under the proposed allocation system) but do not have them, to those who have the leaching rights (because of the quality of the land they own) but do not need them.

- 9.6 At an academic, or theoretical, level there is much to commend the approach represented by these principles. But at a pragmatic planning level such an approach is highly problematic and has seldom been implemented¹⁷. Rather, the approach to date is generally to set limits with regard to the leaching that occurred on the property at or before the time the limits were set (at, or relative to, some baseline year). This is sometimes referred to as “grandparenting”. In practice, grandparenting (or, more accurately, partial grandparenting), at least for the initial years, has been found to be a necessary way to ensure progress can be made. That is largely because of the concern of the economic disruption that would be caused by strict application of the alternative approach. Naturally, those that have not taken the opportunity to intensify land use (and increase leaching) prior to limit setting are often aggrieved by this approach.
- 9.7 I do not wish to express a professional opinion on the natural capital v grandparenting debate. It is important only that the Panel is aware that this is a very controversial issue and one on which various primary sector industries generally hold strong opinions (which naturally vary according to how their particular industry sector would likely be affected). Frankly, the question of allocation is a policy mire which, in my opinion, the pNRP need not step into at this point (particularly in the absence of information on the costs and consequences of the application of the proposed principles relative to alternative principles that could potentially apply).

¹⁷ One of the few examples I am aware of is Horizons One Plan - the implementation challenges of which I described in my EIC

- 9.8 In my opinion, the most appropriate approach to allocation will be largely dependent on the circumstances faced in each Whaitua – including what the level of heterogeneity of land use is in a catchment and what level of leaching reductions may be required - and therefore this should be determined through the limit setting process for each Whaitua. It is also important to note that new and evolving science may also strongly influence what future allocation regimes are possible¹⁸ and hence fixing “principles” now in the pNRP may be foreclosing other potential, more appropriate approaches.
- 9.9 I also note that there is no policy imperative in either the NPSFM or the RPS to include such a policy.
- 9.10 For all those reasons, I do not support the inclusion of Policy##5 in the pNRP but suggest that the question of allocation is one that is best determined as part of the individual limit setting process for each Whaitua.

10. CONCLUSION AND SECTION 32 EVALUATION

- 10.1 I have considered the question of whether the planning provisions (notably the policies and rules as discussed in this evidence) put forward by Mr Percy and Ms Cooper are necessary to given effect to the NPSFM. I have concluded that they are not.
- 10.2 I have also evaluated whether, the Fish and Game planning provisions would be effective and efficient in achieving the apparent aims of those provisions (including the objectives of the NPSFM). Again, I conclude that they will not be.

Effectiveness

- 10.3 The alternative planning provisions would not be effective for nutrient management because:
- (a) It is not clear to me that Rule R42 could work as presumed. That is, it is not clear whether the discharges assumed to require consent would require consent;

¹⁸ Particularly if a more detailed and comprehensive understanding of inter and intra-catchment attenuation is developed, allowing allocation to be matched to the denitrification potential of underlying soils.

- (b) Even if Rule R42 did operate as presumed by Mr Percy and Ms Cooper, there would be no policy framework to guide decision making in some areas;
- (c) In those areas where it could apply, it is not clear that the reductions and timeframes proposed are realistic and manageable in practical terms; and
- (d) Some N discharging activities do not appear to be caught by the regime (non livestock farming).

10.4 In addition to the above, it would not be effective for P management because OVERSEER cannot be used to model P loss in quantitative terms from individual properties and hence accounting for discharges against the load limits and reduction targets is not feasible at the property scale.

Efficiency

10.5 There is considerable doubt about the efficiency of the nutrient management provisions put forward because of the following:

- (a) Implementation is bound to involve complex administration because of the lack of clarity around when an activity might breach Rule R42 (and the potential need to determine that on a case by case basis);
- (b) Not all N and P discharging activities appear to be caught by the regime and hence cost of achieving reductions may be spread across a less than comprehensive set of dischargers;
- (c) A requirement for proportional reductions means that:
 - (i) the baseline N and P loss rates need to be known so that the proportional reduction can be calculated. In many cases that will not be known¹⁹; and
 - (ii) even when and if the above issue could be overcome, the very different marginal cost of N mitigation (amongst land use activities/dischargers) will not be taken into account meaning that high cost reductions

¹⁹ For P it cannot be known with current modeling capability. For N it can be modeled but will require multiple years data (preferably five years of OVERSEER data) to determine reliably. Resolving those issues would involve a lengthy and administratively complex process

may be required when lower cost reductions are possible.

- 10.6 Mr Percy appeared to concede at the hearing that the set of provisions put forward were not ideal. He proposed that a variation be notified to promote a fuller and more considered limits/allocation regime. From an administrative perspective, that proposal is highly inefficient since the Council is on track to notify a plan change/variation to introduce freshwater objectives and limits for two of the highest priority whaitua at the same time or before any variation could be prepared and notified.
- 10.7 Accordingly, while I agree that considerable further work is required to make the pNRP fully NPSFM compliant, it is my opinion that giving effect to Part CA of the NPSFM is most appropriately, effectively and efficiently achieved through the programmed whaitua plan change/variation process.



Gerard Matthew Willis

25 September 2017

ATTACHMENT 1

Amendments recommended in the section 42A Report: Water Quality shown in red font.

Ms Conland's recommended changed in her right of reply shown in green font.

My recommended change shown in blue font.

Water dDischarges to water and land

Rule R42: Minor discharges – permitted activity

The discharge of contaminants into water, or onto or into land where it may enter water that is not ~~permitted controlled, restricted discretionary, discretionary, non-complying or prohibited specifically provided for~~ by any other rule in this Plan is a permitted activity provided the following conditions are met:

- (a) the discharge is not a hazardous substance
- ~~(a)~~(b) where the discharge is onto or into land where it may enter groundwater,
- (i) the discharge is not located within 50m 20m of a bore used for water abstraction for potable supply or stock water, and
- (ii) where the discharge is a point source discharge, the discharge shall not cause an adverse effect beyond the boundary of the property, and
- (b) where the discharge may enters a surface water body or coastal water,
- (i) the concentration of total suspended solids in the discharge shall not exceed:
- ~~(i)~~ 1. 50g/m³ where the discharge enters a site of habitat identified in Schedule C (mana whenua), Schedule F1 (rivers and lakes), Schedule F3 (significant wetlands), or Schedule F4 (coastal sites), except when the background total suspended solids concentration in the receiving water is greater than 50g/m³ in which case the decrease in water clarity after the zone of reasonable mixing shall not exceed 20%, or
- ~~(ii)~~ 2. 100g/100m³ where the discharge enters any other water, except when the background total solids concentration in the receiving water is greater than 100g/m³ in which case the decrease in water clarity after the zone of reasonable mixing shall not exceed 33%, and
- ~~(c)~~ if the discharge is from dewatering, the discharge is not from contaminated land, and
- ~~(d)~~ (ii) The discharge shall not cause any erosion of the channel or banks of the receiving water body or the coastal marine area, and
- (iii) the discharge shall not give rise to the following effects after the zone of reasonable mixing:
- ~~(i)~~ 1. A change in the pH of +/-0.5pH unit, or
- ~~(ii)~~ 2. the productions of conspicuous oil or grease film, scums or foams, or floatable or suspended material, or
- ~~(iii)~~ 3. any conspicuous change in the colour or visual clarity, or
- ~~(iv)~~ 4. any emission or objectionable odour, or
- ~~(v)~~ 5. the fresh water is unsuitable for consumption by farm animals. Or
- ~~(vi)~~ 6. any significant adverse effects on aquatic life