

IN THE MATTER

of the Resource
Management Act 1991
(RMA) and the
Environment
Canterbury Temporary
Commissioners and
Improved Water
Management) Act 2010

AND

IN THE MATTER

of the Environment
Canterbury: Proposed
Canterbury Land &
Water Regional Plan
(PCLWRP)

TO BE HEARD BY

Canterbury Regional
Council

HEARING DATE

20 May 2013

**Statement of Evidence of Christopher Adrian Hansen on Behalf of
the Hurunui Water Project – Hearing Group 2 Matters**

2 April 2013

Statement of evidence of Chris Hansen

Chris Hansen Consultants Ltd
Page 1 of 64

Introduction

1. My name is Christopher Adrian Hansen and I am a Director and Senior Planning Consultant with Chris Hansen Consultants Ltd. My qualifications are a Bachelor of Regional Planning (Hons) from Massey University (1980). I am a full member of the New Zealand Planning Institute and a member of the Resource Management Law Assoc. I have over 30 years' experience in planning and resource management.
2. I have particular experience in the review and assessment of regional plans and the preparation of submissions, attendance at hearings providing expert planning evidence, and in mediation to resolve appeals.
3. I provide the following statement of evidence in support of the submission and further submission lodged by the Hurunui Water Project (HWP) to the Proposed Canterbury Land & Water Regional Plan (PCLWRP/proposed Plan). I assisted HWP to prepare its submission(s).
4. I have read the Code of Conduct contained in the Environment Court's Practice Notes for Expert Witnesses and agree to comply with it.

Outline of Evidence

5. My approach today is to provide you with an overview of the planning matters raised by HWP, and the relief they sought. I will also comment on the Officer Report's recommendation on that relief.
6. I note that the hearings on the PCLWRP are divided into 4 groups, and my evidence today relates to Hearing Group 2 and in particular the following matters:
 - Nutrients: Chapter 9 of the Officer Report and in particular:
 - Farming and nitrogen discharges Rules 5.39 – 5.54
 - Policies 4.28 to 4.38, 4.76
 - Schedule 7
 - Map layers
 - Other: Definitions

7. The Officer Report has recommended substantial changes to the policies and rules relating to Nutrient Discharges. My approach today is to provide you with a commentary on the recommended changes to the objectives and policies in the Officer Report in PART ONE of my evidence.
8. In PART TWO of my evidence I will provide an overview of the planning matters raised by HWP, and the relief they sought, in relation to the provisions contained in the notified Plan.
9. Of particular interest to the HWP is the Waitohi Irrigation and Hydro Project that it has applied for resource consents for, and the hearings are currently being held (between 18 March through to 5 April 2013). This project involves the irrigation of up to 58,500ha of land in a Command Area that includes the Hurunui, Waipara and Kowai Catchments. The relevance of this point is that this Command Area is currently covered by 4 relevant plans – the Operative Natural Resources Regional Plan (NRRP); the operative Waipara Catchment Environmental Flows & Allocation Regional Plan (WCEF&ARP); the Proposed Hurunui Waiau River Regional Plan (PHWRRP) and the Proposed Canterbury Land & Water Regional Plan (PCLWRP). HWP therefore has first-hand experience of trying to work its way through the different regional plans for a live project, and in particular plans that cover different geographical areas, different areas of jurisdictional areas, and different policy and rule approaches to the same activities.
10. To add to the complexity, the HWP has applied for consents in two phases. The Phase One consents have been determined to be the ‘critical consents’ – those that are required to determine whether the water resource is available for the project. These are the take, divert, discharge and use water from the Hurunui River and the reservoirs to be created in the Waitohi River. The Phase Two of consents relating to the detail design of the dams, infrastructure, and changes in land uses that may arise from the irrigation project being completed, are yet to be applied for.
11. The above provide a context by which HWP has assessed the PCLWRP as it endeavours to determine what impacts it may have on its project. For the Phase One consents, the PCLWRP has limited application relating to the Waipara Catchment. However, in the Phase Two consents, the PCLWRP has

a greater application relating to the Waipara Catchment and Kowai Catchment (which is not covered by the PHWRRP) in relation to nutrient discharges.

PART ONE - Officer Report Approach to Nutrient Discharges Policies & Rules

12. As mentioned above, the Officer Report has recommended substantial changes to the approach relating to Nutrient Discharges (Chapter 9 of the Officer Report). In PART ONE of my evidence I will provide comment on the overall approach to nutrient discharges, and the more detailed objectives and policies that are to implement this approach.

Officer Report – Introduction (Pages 69 – 70)

13. In my view, the key points (as stated in the Officer Report) are:
- There are a variety of mechanisms used to manage nutrients – submissions have canvassed these mechanisms;
 - The PCLWRP approach adopted a form of *‘enhanced grand-fathering’* for the management of nutrients – there is a significant reliance on *‘industry articulated good practice’* overlaid by a sub-regional framework which enables location specific solutions to be developed and implemented;
 - The PCLWRP provisions are strongly based on a *‘pre-2017 and post-2017’* framework which provides a holding pattern and the opportunity for Schedule 8 provisions to be completed;
 - After 2017 the region-wide controls would shift to an *‘industry articulated good practice’* framework based on different stocking types, climate and soil characteristics, and whether or not the property is irrigated;
 - The PCLWRP framework focussed strongly on nitrogen whereas other nutrients also contribute to water quality issues;
 - OVERSEER™ is most developed with respect to nitrogen but subject to limitations of both accuracy and input management and may be inappropriate to use in a number of farming situations.

14. **Comment:** In my view, the above provides a good summary of the notified PCLWRP approach to nutrient discharges. The matters raised fairly represent the matters raised in submissions.

Officer Report – Overall Analysis (Pages 70 – 76)

15. The Officer Report provides an analysis of the nutrient discharge issues facing the region. One conclusion is that: *“Overall, it is difficult to avoid the simple logic of increased irrigation leading to increased water and nutrient leaching through the root zone or surface run-off”*. This is contrasted by the NPS requirement to identify water bodies that are degraded from a water quality perspective, the setting of water quality limits, maintaining or improving the overall quality of fresh water within a region, and the requirement for resource consents to ensure those water quality limits will be met.
16. The Officer Report goes on to state: *“The dichotomy between providing for significant additional irrigation and the inherent effects with respect to nutrients, along with requirements to set allocation limits and avoid over-allocation with respect to water quality, is the fundamental difficulty to be addressed through the pLWRP provisions.”*
17. **Comment:** I am concerned about the simplistic nature of the ‘*simple logic*’ that increased irrigation can lead to increased water and nutrient leaching through the root zone or surface run-off. There appears to be an inherent assumption that irrigation will automatically lead to increased nutrient discharges and water quality issues. While it is accepted that irrigation may lead to land use change, in my view it is not correct to make the quantum leap that all land use change resulting from irrigation leads to water quality issues. In particular this does not recognise the opportunity to adopt best management practices or mitigation, and also does not recognise that in time there will be an improvement in technology and knowledge that all may contribute to reducing nutrient discharges. There are also a range of factors that need to be included when forming a view including the receiving environment; the nature of the land use activity; the degree of change; other factors that contribute to water quality issues; and other nutrients. I acknowledge the contrast expressed in the Officer Report regarding water quality outcomes. I consider there is an overall ‘*balancing*’ required between meeting the enabling principles of the

Resource Management Act regarding social and economic wellbeing and the need to safeguard the life-supporting capacity of fresh water.

18. The Officer Report continues by providing a commentary on the nature of submissions received, and noted submissions often expressed the need for fundamental changes to the nutrient management provisions and philosophy but only requested relatively minor word changes to existing policies and rules. I believe this is a product of the current requirement that a submitter is expected to state what response is required to the issue they raise – this is most difficult if the issue raised is fundamental and cannot be addressed through simply amending objectives, policies and rules. Often the submitter does not have the resources, or expertise, to provide a comprehensive review that may be necessary.
19. The Officer Report identified a range of issues that have consistently attracted a significant number of submissions. These include:
 - use of various forms of audited self-management or other voluntary mechanisms;
 - the use of OVERSEER™;
 - the focus on nitrogen alone;
 - the complexity or inability to manage some farming types;
 - the need to allow for some development and investment certainty;
 - a lack of connection between outcomes in Table 1 and the rule framework.
20. **Comment:** Addressing these issues forms the basis for the revised approach recommended in the Officer Report. I will summarise each area and comment accordingly below.

Use of various forms of audited self-management or other voluntary mechanisms

21. The Officer Report identifies that a range of submitters have suggested that various self-management, voluntary approaches or audited self-management ought to be adopted, instead of policy and rule regimes that may require resource consents or set limits. The Officer Report concludes: *“Overall, the industry-led initiatives are seen to be a significant and positive contribution towards managing nutrients. However, there needs to be a regulatory*

framework within which all parties, whether they choose to adopt an industry-led initiative, or operate outside of a voluntary process, are accommodated.”

22. The Officer Report notes that many of the audited self-management or industry-led initiatives are at present in a relatively early state or still under development. On this basis, the Officer Report recommends, as a part of the policy and rule regime, that “... *industry initiatives and a form of audited self-management be provided for, with a regulatory backstop managed by the Council to manage poor performance, people who choose to not adopt an audited self-management framework or where such a framework does not exist.*” The Officer Report recommends permitted activity status be provided due to the number of farms affected.
23. **Comment:** Overall I support the views expressed on this matter and the recommendation to adopt a self-management and industry-led approach backed up by a regulatory approach that includes provision for permitted activities.

The use of OVERSEERTM

24. The Officer Report comments on the purpose of OVERSEERTM, and highlights issues including: the margin of error, subject to manipulation of inputs; introduction of Version 6; and how it is unsuited to use with some farming types, particularly arable, horticulture, and pig farming. The Officer Report suggests the “... *confidence in the nutrient management system and its applicability across all farms in Canterbury has been brought into question.*”
25. As a result, the Officer Report recommends that in the transitional phase, before the introduction of a “*lookup table*” in Schedule 8, there is an opportunity to step back from OVERSEERTM in the interim period to enable it to be developed more fully and gain the required confidence. On this basis, thresholds in the recommended definitions and rules are based on measures other than modelled outputs from OVERSEERTM.
26. **Comment:** While I accept that there is criticism of the OVERSEERTM tool, I consider it is still the best available method for determining nutrient budgets and to assist with the preparation of farm environment plans. This tool is widely used, and has been endorsed by the Environment Court (the recent

Horizons Environment Court interim decision being an example). Notwithstanding this, I accept there are farming activities that are not suited to the use of OVERSEER™ to determine their nutrient discharges, and I accept that an interim position while the look up table is being developed is a pragmatic approach.

The focus on nitrogen alone

27. The Officer Report notes that it became apparent through the submissions and subsequent analysis that the focus on nitrogen, while being comparatively easy when numeric thresholds and the use of OVERSEER™ are utilised, is not appropriate for all waterbodies.
28. The emphasis in the revised recommended policy and rule framework in the Officer Report is toward good practice implemented through farm environment plans. These are not specifically nitrogen focused, and indeed other environmental effects, beyond nutrient management, are intended to be managed through farm environment plans.
29. **Comment:** I am aware that it became clear from the conferencing of scientific experts as part of Hearing Group 1 that the concentration on nitrogen solely was not appropriate, and that other elements, such as phosphorous, contributed significantly to water quality issues. The review of the concentration on nitrogen is supported, as is the adoption of good practice through farm environment plans.

The complexity or inability to manage some farming types

30. The Officer Report records that a number of submitters (particularly in the arable and horticultural sectors along with some intensive farming activities) consider their activities are too complex to be managed under the nitrogen and OVERSEER™ focused policy and rule regime in the PCLWRP – this point is accepted by Council.
31. The Officer Report response is that: “... *broadening of the provisions toward farm environment plans and wider nutrient management may assist this matter*”. Notwithstanding this, the Officer Report notes that: “...*the horticultural sector, in particular with movement around different properties*”

leased seasonally, will be difficult to manage and no obvious solution to this problem is foreseen.”

32. **Comment:** As stated above, I accepted that there are some farming sectors that require specific management policies and rules to provide for their circumstances. The broadened farm management plans approach with good management practices is supported to manage these activities.

The need to allow for some development and investment certainty

33. The Officer Report records concerns of submitters that undue restriction on further development of individual properties and irrigation scheme areas, particularly in areas marked as “Red” on the nutrient allocation status mapping. The Officer Report notes this approach was to be a ‘holding’ pattern until sub-regional sections are completed. This approach is now considered potentially unrealistic, some policies are unachievable even with mitigation, and the non-complying status for activities is too high a hurdle. Submitters considered such an approach will not encourage on-going investment in primary production in Canterbury, and the need for investment certainty.
34. The Officer Report response is to have further development by providing it is based on the adoption of “*advanced mitigation activities*”, so that the nutrient discharges are minimised. The Officer Report considers this framework, along with additional requirements for existing high nutrient risk activities, will provide the basis that improvements across farming in an entire area will be a relatively low cost opportunity to allow for some additional development to occur prior to comprehensive solutions developed at a sub-regional level.
35. **Comment:** I agree that the existing policy and rule regime places undue restrictions on further development on properties, not only in the ‘Red’ zone, and has the potential to hinder investment in the industry in the future. I support an alternative approach that would provide for low cost opportunities while the sub-regional regime is worked through.

A lack of connection between outcomes in Table 1 and the rule framework

36. The Officer Report identified submitters have raised questions regarding whether Table 1 will ever be able to be achieved, particularly given the rule

framework that is based on good practice and managing high risk activities. The Officer Report acknowledges that the lack of connectivity between the Table 1 outcomes and the nutrient rule regime is an issue for the region-wide regime and could be overcome with further work on these matters, particularly with a movement toward sub-regional planning.

37. **Comment:** I agree with the concerns that the Table 1 outcomes will not be achieved while a region wide regime is proposed. Individual catchments need to be assessed, and the sub-regional approach is intended to achieve this. Only then will achieving the Table 1 outcomes be possible. Until then, the proposed Plan needs to make it clear the Table 1 outcomes are aspirational and the sub-regional approach will establish the regime to meet these outcomes.

The timeframe for implementation

38. In this section the Officer Report addresses the question the timeframes associated with implementing the rule regime post-2017. The Officer Report recognises that developing Schedule 8 and the rule regime post-2017 may not be achievable, the net result being uncertainty at this point for the long term nature of the policy and rule regime at a region-wide level. To respond to this, it is recommended there be more emphasis on the interim framework in the policy and rules, with only limited identification of how the policy and rule framework may appear under a future regime.
39. **Comment:** I agree with the concerns of submitters that the implementation of the rule regime post-2017 is a concern, with not enough time to develop the regime properly. I therefore support an emphasis of ensuring Schedule 8 and the final rule regime is done properly, and moving away from the 2017 requirements.

A minimum size limit or discharge quantity below which there are no compliance requirements

40. The Officer Report notes a large number of submitters requested a change to the rule regime such that particularly small properties, or those undertaking low risk activities, be omitted from the rule regime. The Officer Report records that there are approximately 17,000 “farms” in Canterbury and

accepts the need for the rule regime to more particularly focus on the significant nutrient contributors.

41. On this basis, it has been recommended that the regime not apply to small properties (less than 5 hectares) and also to larger properties (up to 50 hectares) that are undertaking low risk activities, such as dry-land sheep and beef farming. The Officer Report estimates this is likely to remove around 10,000 “*farms*” from the rule regime, and make for a far more implementable framework.
42. The Officer Report also acknowledges that a minimum nitrogen leaching value (for example 10kg/ha/pa as requested by many submitters) could also be used, meaning that large properties with low contribution to catchment nutrient levels could be excluded. The Officer Report notes this option would require more people to use OVERSEER™, which raises issues as have been identified above. Some combination of the two options may also be workable.
43. **Comment:** Overall I agree with the intent which is to only focus on properties that are significant contributors to nutrient discharges. I note the Officer Report uses the term ‘*farms*’ which is not defined in the PCLWRP – the Hearing Group 1 s.42A Officer Report has recommended a definition of ‘*property*’ instead of ‘*farms*’, and I assume the results of the assessment using the ‘*property*’ definition is the same or similar. I am concerned with the suggestion that 10,000 “*farms*” in Canterbury are 50ha or under and can be taken out of the rule regime as proposed. I understand these numbers are derived from Table 3 of Appendix 1 of the Section 32 Report. As I understand, the interpretation that 10,000 are under 50ha based on the Table 3 numbers is flawed and questionable. While I support the intent of the Officer Report, I believe the interpretation needs to be reviewed.

The difference between “site” and “property”

44. The issues around ‘*property*’ and ‘*site*’ have been addressed in the Volume 1 Section 42A Report, and it was concluded in that Report that a definition of ‘*property*’ needed to be included, and for it to be used within the policy and rule framework. The Officer Report notes there has been a strong theme in the submissions that many farms are operated as a single unit, but may comprise

various land holdings (sites). The property definition proposed in the Volume 1 Report required these land holdings to be adjacent. This is supported, but it is recognised that such a definition will not satisfy all parties, particularly those in the horticultural and arable sectors, who often lease a range of properties.

Officer Report – Recommended Policies

45. As can be seen from the above analysis, the recommended policy framework on Nutrient Management is a substantial refinement of the as-notified policy position. In particular it intends to:

- Reduce the emphasis on the pre-2017/post-2017 framework in the PLWRP;
- Increase certainty for consent applicants and processing officers as to the acceptability of different types of proposals in different areas;
- Increase the emphasis on farm environment plans and increase flexibility in areas that are near or over-allocated in terms of nutrients.

46. The following are comments on the particular policy and rule recommendations contained in the Officer Report:

Recommended Policies

47. The Officer Report recommends new Policies 4.27A and 27B:

“Policy 4.27A

To meet water quality outcomes, implement an approach to the management of nutrient discharges from farming activities that incorporates:

1. Raising awareness, gathering information and encouraging good practice through the preparation, implementation and auditing of farm environment plans;

2. Identifying relevant limits for nutrient discharges, based on good practice;

3. Promulgating a plan change that introduces into Schedule 8 nutrient discharge limits based on good practice, along with a rule regime to implement the limits, so that the limits and rule regime have effect from 1 July 2017; and

4. Engaging in catchment-based collaborative planning processes which will result in plan changes being promulgated to introduce catchment-specific solutions that prioritise those areas that currently do not meet water quality outcomes and, when it is incorporated into this Plan, use Schedule 8 as the starting point for catchment specific limit setting.”

“Policy 4.27B

Base the good-practice limits in Schedule 8 on the nutrient discharges resulting from good practice farming activities, taking into account the variety of farming types, climatic conditions and soil types across Canterbury.”

48. **Officer Report:** The Officer Report states: *“These two recommended policies outline the overall framework for nutrient management in the LWRP, including the criteria for identification of limits in the currently blank Schedule 8, the promulgation of a rule regime to take effect after 1 July 2017, and emphasis on sub-regional solution development for areas currently identified as over-allocated for nutrients.”*
49. **Comment:** Overall I support the intent of the new recommended Policies 27A and 27B. In particular I support the mix of non-regulatory and regulatory mechanisms that are intended to be used, and the setting of a timeframe for the setting of limits based on good practice, along with a rule regime to implement the limits, after 1 July 2017. While I consider it would also be useful and provide certainty if a target date for the introduction of catchment-specific solutions was established, I accept the emphasis to concentrate on the Schedule 8 process in the interim. I do consider there is a need to prioritise those areas that currently do not meet water quality outcomes in the plan change process once the limits in Schedule 8 are established.
50. **Recommendation:** I recommend the Commissioners adopt the new Policies 27A and 27B recommended in the Officer Report, subject to consideration of a target date for the introduction of catchment-specific solutions that prioritise those areas that currently do not meet water quality outcomes.
51. The Officer Report recommends a new Policy 4.28:

“Policy 4.28

In all areas, the loss of nutrients to water is minimised through:

1. raising awareness of the nutrient losses by requiring record-keeping;

2. all activities that discharge nutrients operating at good practice or better;
3. requiring the provision of information to enable better decision-making;
and
4. supporting the use of farm environment plans to achieve and demonstrate good practice or better.”

52. **Comment:** In general I consider the amended Policy 4.28 recommended in the Officer Report is consistent with the general themes of HWP’s submission and has included support for good management practice, and the use of farm management plans. Overall I support this amended policy.

53. **Recommendation:** I recommend the Commissioners adopt the Officer Report recommendation to introduce the amended Policy 4.28.

54. The Officer Report recommends a new Policy 4.29:

“Policy 4.29

55. Prioritise improving the performance of higher nutrient risk activities and farming and other activities in the catchments of waterbodies that are more sensitive to increases in nutrients.”

56. **Comment:** Overall I support in principle the need to prioritise improving the performance of high nutrient risk activities (a new definition is recommended – I discuss this in PART TWO of my evidence). This support is subject to clearly defining ‘catchments of waterbodies that are more sensitive to increases in nutrients’ – should this refer to the ‘Red’ zone in the first instance?

57. **Recommendation:** It is recommended the Commissioners adopt the new Policy 4.29 recommended in the Officer Report, subject to a clear statement defining ‘catchments of waterbodies that are more sensitive to increases in nutrients’ – presumably the ‘Red’ zone in the first instance.

58. The Officer Report recommends a new Policy 4.30:

59. “Policy 4.30

Support industry and irrigation scheme-based initiatives to improve land and water use practices, reduce nutrient discharges and facilitate consenting, including group and irrigation scheme-wide initiatives, reporting and auditing of their constituent farmers.”

60. **Comment:** Overall I support in principle the intent of the new policy, and in particular the support stated for irrigation scheme-based initiatives to improve

land and water use practices and to reduce nutrient discharges. It is not entirely clear what form this support will take, and clarification of the Council's role would be helpful.

61. **Recommendation:** I recommend the Commissioners adopt the intent of the new Policy 4.30 recommended in the Officer Report, and clarify the nature of the support Council intends to provide to irrigation scheme-based initiatives.

62. The Officer Report recommends a new Policy 4.31:

63. *“Policy 4.31*

In areas where regional water quality outcomes are at risk of not being met, as shown by an Orange colouring on the Series A Planning Maps, a changed or new farming activity will be required to show that there is no net increase in nutrients discharged from the property or that advanced mitigation farming practices are applied such that the property operates in the top quartile of nutrient discharge minimisation practices when measured against practices in the relevant farming industry, and that in any event the regional water quality outcomes are still being met.”

64. **Comment:** I note this new Policy 4.31 relates to the requirements of Rule 5.45 (new or changed farming activities in the ‘Orange’ zone). I also note the new policy seems to link the farming activity with proving that there will not be a net increase in nutrient loss from the property. It is not entirely clear how a farm is to demonstrate ‘no net increase’ in nutrient discharges - presumably there will be a benchmarking of the previous land use activity (grand parented to 2010 – 2013) or that the farm adopts one or more of the defined advanced mitigation measures (I address these measures in PART TWO of my evidence) so that it operates in the top 25% of nutrient discharge minimisation practices when measured against practices in the relevant farming industry, which I presume is reference to the Schedule 8 process.

65. While overall in principle I support the intent of the new Policy 4.31, I consider clarification is needed regarding how Council will determine how a farm operates in the top 25% of its industry best practice, as the Schedule 8 process is not due for completion until July 2017.

66. **Recommendation:** I recommend the Commissioners adopt the new Policy 4.31 recommended in the Officer Report, subject to clarification regarding how Council will determine how a farm operates in the top 25% of its industry

best practice, as the Schedule 8 process is not due for completion until July 2017.

67. The Officer Report recommends a new Policy 4.32:

68. “Policy 4.32

In areas where regional water quality outcomes are not being met, as shown by a Red colouring on the Series A Planning Maps and in Lake Zones as shown on the Series A Planning Maps, a changed or new farming activity will be required to show that there is no net increase in nutrients discharged from the property or that advanced mitigation farming practices are applied such that the property operates in the top 10% of nutrient discharge minimisation practices when measured against practices in the relevant farming industry.”

69. **Comment:** I note Policy 4.32 addresses similar matters as Policy 4.31 in the notified Plan. Overall I support the intent of the new Policy 4.32 which introduces a best practice and good performance approach. However, clarification is required regarding how reporting on the ‘*advance mitigations*’ is to be achieved (refer to PART TWO of my evidence for discussion on the measures).

70. **Recommendation:** I recommend the Commissioners adopt the new Policy 4.32 recommended in the Officer report subject to clarification regarding how reporting on the ‘*advance mitigations*’ is achieved.

71. The Officer Report recommends a new Policy 4.33:

“Policy 4.33

In areas where regional water quality outcomes are not being met, as shown by a Red colouring on the Series A Planning Maps, priority will be given to collaborative catchment management processes that culminate in the promulgation of plan changes to set local water quality outcomes, and methods and timeframes to achieve those outcomes, including nutrient discharge allowances, pro-rata reductions in nutrient discharges, or other methods beyond good practice.”

72. **Comment:** Overall I support the collaborative catchment management processes intent of new policy (which is similar to Policy 4.29 in the notified Plan).

73. Notwithstanding this support, as Policy 4.33 provides for plan changes which have a statutory process including public notification, the most appropriate

methods do not need to be proposed and agreed at that stage. In my view they do not need to be written into the policy at this stage.

74. **Recommendation:** I recommend the Commissioners adopt the new Policy 4.33 recommended in the Officer Report, subject to the following amendment:

75. *“In areas where regional water quality outcomes are not being met, as shown by a Red colouring on the Series A Planning Maps, priority will be given to collaborative catchment management processes that culminate in the promulgation of plan changes to set local water quality outcomes,~~—and methods and timeframes to achieve those outcomes including nutrient discharge allowances, pro-rata reductions in nutrient discharges, or other methods beyond good practice.~~”*

76. The Officer Report recommends an amendment to the notified Policy 4.35 to read (now Policy 4.34):

77. *“Policy 4.34~~5~~*

To minimise the loss of nutrients ~~nitrogen~~ to water prior to 1 July 2017, where the land owner holds an existing water permit to take and use water, or is a shareholder in an irrigation scheme that holds a water permit to take and use water, and there are conditions on the water permit that address nutrient management, any change in farming activities will be enabled subject to requirements to prepare and implement a farm environment plan that, as a minimum, enables compliance with the nutrient management conditions and ensures good practice is being achieved, ~~the regular audit of that plan and to record, on a per enterprise basis, nitrogen discharges.~~”

78. **Comment:** I note Policy 4.34 amends Policy 4.35 of the notified Plan. HWP supported the intent of the original policy as it proposed the use of pragmatic methods (including Farm Environment Plans, Nutrient Management Plans and Best Management Practices) to maximise farm production and minimise adverse effects. I note the new policy has changed in 3 ways: firstly it applies to nutrients not nitrogen; secondly the prior to 2017 has been deleted; and thirdly, it intends as a minimum compliance with the nutrient management conditions and ensuring good practice is being achieved.

79. **Recommendation:** It is recommended the Commissioners adopt the amendments to Policy 4.34 (was Policy 4.35) as recommended in the Officer Report.

80. The Officer Report recommends an amendment to the notified Policy 4.37 (now Policy 4.36):
81. *“Policy 4.37~~6~~*
All activities shall achieve the nutrient load limit and nutrient discharge allowance for the catchment where a load limit or nutrient discharge allowance is set in Sections 6-15 of this Plan.”
82. **Comment:** The HWP submitted on Policy 4.37 seeking the policy to reflect the ‘default’ position until nutrient load limits are set, and to define ‘catchment’. The amendments recommended in the Officer Report address the first matter, but the definition of ‘catchment’ is still required.
83. **Recommendation:** It is recommended the Commissioners adopt the amendments to Policy 4.36 (was Policy 4.37) recommended in the Officer Report, and define ‘catchment’ to provide clarity.
84. The Officer Report recommends an amendment to the notified Policy 4.38 (now Policy 4.37):
85. *“Policy 4.38~~7~~*
If the measured or predicted nutrient load from land uses and discharges exceeds the nutrient load limit for the catchment, where a load limit or nutrient discharge allowance is set, in Sections 6-15 of this Plan, the loss to water of nutrients from land uses in the catchment will be reduced to achieve the nutrient load limit for the catchment.”
86. **Comment:** Similar to Policy 4.37 above (now Policy 4.36), I note while HWP supported the intent of Policy 4.3.8, in seeking the policy to reflect the ‘default’ position until nutrient load limits are set, and to define ‘catchment’. The amendments recommended in the Officer Report address the first matter, but the definition of ‘catchment’ is still required.
87. I also note HWP considered it is not clear how existing consents that may be held will be treated should a reduction in the loss of nutrients be needed. HWP considered it is impossible to ‘measure’ nutrient load from land users and ‘estimated’ is a more appropriate term.
88. **Recommendation:** It is recommended the Commissioners adopt the amendments to Policy 4.37 (was Policy 4.38) recommended in the Officer Report, define ‘catchment’ to provide clarity, and replace the term ‘measure’ with the term ‘estimated’.

89. The Officer Report recommends a new Policy 4.38:
“Policy 4.38
Farm environment plans are used as a primary means of identifying and delivering good practice across a range of farming activities, including nutrient discharge management, efficient and effective use of water for irrigation, stock movements across waterways, offal and farm rubbish pits, effluent storage and application and fertiliser use.”
90. **Comment:** I note this new policy directs that a FEP will be used as the main tool to monitor on-farm good management practice. I support this new policy in principle, although the concerns I raised earlier over the capacity of resources for auditing of the FEPs remain.
91. **Recommendation:** It is recommended the Commissioners adopt the new Policy 4.38 recommended in the Officer Report.
92. The Officer Report recommends a new Policy 4.38A:
“Policy 38A
Resource consents are required for activities that discharge nutrients where:
1. auditing of farm environment plans shows the farm environment plan is inadequate or there is poor performance in terms of its implementation;
2. farm environment plans are not prepared or audited; or
3. where the potential effects of nutrient discharges are greater.”
93. **Comment:** I note this new policy is related to the FEP audit process which places emphasis on the importance of the FEP. While I support in principle the first two points of Policy 4.38A, it is not clear what point 3 intends to achieve. If a resource consent has been granted for an activity, then any potential effects of the nutrient discharges has been assessed for the activity consented (even if the potential effects are ‘greater’). If the activity changes so that the effects of the nutrient discharge changes to be greater than the activity originally consented, then a new consent is required.
94. In relation to point 1, presumably the audits will assess the adequacy of the FEP against Schedule 7 Grades A B C? If so, it may be appropriate for the policy to define the grade which triggers ‘inadequate’.
95. **Recommendation:** It is recommended the Commissioners adopt the new Policy 4.38A as recommended in the Officer Report, and amend it by

clarifying how a FEP will be assessed as being ‘inadequate’ and either clarifying the intent of point 3, or deleting it.

96. The Officer Report recommends a new Policy 4.38B:

“Policy 4.38B

Applications for resource consents for farming activities will routinely be accompanied by a farm environment plan and the conditions of any resource consent granted will specify:

1. Procedures and criteria for timely review and updating of the Farm Environment Plan;

2. A requirement to meaningfully implement the Farm Environment Plan;

3. Monitoring and information provision; and

4. Requirements for the independent auditing of the Farm Environment Plan and the implementation of it and remedying of compliance issues raised.”

97. **Comment:** I note this new policy is directly related to the requirements of a FEP for consent applications. While I support the overall intent of Policy 4.38B, I consider the term “A requirement to meaningfully implement the Farm Environment Plan” included in point 2 either needs to be clarified or deleted. I also consider it is necessary to clarify which resource consents require a FEP. Presumably there will be farming activities that might need consent that do not relate to nutrient discharges and therefore the FEP may have no relevance.

98. **Recommendation:** It is recommended the Commissioners adopt the new Policy 4.38B recommended in the Officer Report subject to either clarifying or deleting point 2, and clarifying the nature of resource consent that requires a FEP.

Officer Report – Recommended Rules

99. The Officer Report recommends Rules 5.39 – 5.51 be amended as follows:

Recommended Rules

100. The Officer Report recommends a new Rule 5.39 as follows:

101. “Rule 5.39:

The use of land for an existing farming activity, a changed farming activity or a new farming activity is a permitted activity provided the following conditions are met:

1. If the land is not in a Lake Zone as shown on the Series A Planning Maps and:

(a) the area of the property is less than 5 ha; or

(b) the area of the property is more than 5 ha and less than 50 ha and there is no high nutrient risk farming activity occurring on the property.

2. If the land is in a Lake Zone as shown on the Series A Planning Maps and:

(a) the area of the property is less than 5 ha; and

(b) there is no high nutrient risk farming activity occurring on the land.”

102. **Comment:** I support the permitted activity status of this new rule, the principle of setting a minimum area for a property (and a maximum for properties that are not ‘high nutrient risk farming activities’), and that there is no requirement for a permitted activity to submit any nutrient information to Council. I have raised concerns above regarding whether the number of properties that will be included in this rule is accurate, and this matter may need to be revisited.
103. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.39 recommended in the Officer Report, subject to confirmation that the number of properties that will qualify for permitted activity status is as the Officer Report suggests in the introduction to the Nutrient Discharge provisions.
104. The Officer Report recommends a new Rule 5.40 as follows:
105. “Rule 5.40
The use of land for an existing farming activity that is not permitted by Rule 5.39 in an area coloured Orange, Green or Pale Blue on the Series A Planning Maps is a permitted activity provided the following conditions are met:
1. Information on the farming activity, in accordance with Schedule 7 Part D is provided to the Canterbury Regional Council.”
106. **Comment:** I support the permitted activity status of this new rule, and the reporting on farm information to Council as the only condition.

107. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.40 as recommended in the Officer Report.
108. The Officer Report recommends a new Rule 5.41 as follows:
109. *“Rule 5.41*
The use of land for an existing farming activity that is not permitted by Rule 5.39, where the property is partly or wholly in an area coloured Red on the Series A Planning Maps, is a permitted activity provided the following conditions are met:
- 1. If there is no high nutrient risk farming activity occurring on the property, information on the farming activity, in accordance with Schedule 7 Part D is provided to the Canterbury Regional Council.*
 - 2. If there is high nutrient risk farming activity occurring on the property, then a farm environment plan is prepared and audited in accordance with Schedule 7 Parts A and C and the audit grade is “A-B” or better.”*
110. **Comment:** I support the permitted activity pathway for existing farming in the ‘Red’ zone, subject to clarification of matters relating to the FEP discussed below in this evidence.
111. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.41 subject to addressing matters regarding the FEP raised below in this evidence.
112. The Officer Report recommends a new Rule 5.42 as follows:
113. *“Rule 5.42*
The use of land for an existing farming activity that is not permitted by Rule 5.39, where the property is partly or wholly in a Lake Zone as shown on the Series A Planning Maps, is a permitted activity provided the following conditions is met:
- 1. There is no high nutrient risk activity occurring on the land; and*
 - 2. A farm environment plan is prepared and audited in accordance with Schedule 7 Parts A and C and the audit grade is “A-B” or better.”*
114. **Comment:** Similar to above, I support the permitted activity status provided in Rule 5.42, subject to addressing a number of matters relating to the FEP discuss below in my evidence.

115. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.42 recommended in the Officer Report subject to addressing matters regarding the FEP raised below in this evidence.

116. The Officer Report recommends a new Rule 5.43 as follows:

117. “Rule 5.43

The use of land for an existing farming activity, where the property is partly or wholly in a Lake Zone as shown on the Series A Planning Maps and there is a high nutrient risk farming activity occurring on that part of the property within the Lake Zone, is a restricted discretionary activity provided the following conditions is met:

1. A farm environment plan is prepared, implemented and audited in accordance with Schedule 7 Parts A and C.

The CRC will restrict the exercise of discretion to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan;

2. The potential effects of the land use on surface and groundwater quality, and sources of drinking water;

3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.

4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.”

118. **Comment:** I support the restricted discretionary activity status and the focus on FEPs (subject to FEP matters being clarified as discussed below in my evidence) for high nutrient risk activity that occurs on the property within the Lake Zone as this is appropriate and pragmatic.

119. **Recommendation:** I recommend the Commissioners adopt the new Rule 5.43 as recommended in the Officer Report, subject to addressing the matters relating to FEPs discussed below in my evidence.

120. The Officer Report recommends a new Rule 5.44 as follows:

121. “Rule 5.44

The use of land for a changed or new farming activity that is not permitted by Rule 5.39, where the property is wholly in an area coloured Green or Pale

Blue on the Series A Planning Maps, is a permitted activity provided the following condition is met:

1. Information on the farming activity, in accordance with Schedule 7 Part D is provided to the Canterbury Regional Council.”

122. **Comment:** I support the permitted activity pathway for changed and new farming activities in the ‘Green’ and ‘Blue’ Zones that are not defined as high nutrient risk activities, and the information to be provided to Council does not include a nutrient budget.

123. **Recommendation:** I recommend the Commissioners adopt the new Rule 5.44 as recommended in the Officer Report.

124. The Officer Report recommends a new Rule 5.45 as follows:

125. “Rule 5.45

The use of land for a changed farming activity or a new farming activity, where the property is partly or wholly in an area coloured Orange on the Series A Planning Maps, is a restricted discretionary activity provided the following condition is met:

1. A farm environment plan is prepared, implemented and audited in accordance with Schedule 7 Parts A and C.

The CRC will restrict the exercise of discretion to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan;

2. The potential effects of the land use on surface and groundwater quality, and sources of drinking water;

3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.

4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.”

126. **Comment:** I support the restricted activity status provided for in the new Rule 5.45, subject to the FEP matters identified below in my evidence being addressed. I also consider Rule 5.45 needs to apply to those activities not already permitted under Rule 5.39, as Rule 5.44 does.

127. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.45 recommended in the Officer Report, subject to addressing the matters relating to FEPs discussed below in my evidence, and amending the rule to read (additional words in **bold**):

*“The use of land for a changed farming activity or a new farming activity **that is not permitted by Rule 5.39**, where the property*

128. The Officer Report recommends a new Rule 5.46 as follows:

129. *“Rule 5.46*

The use of land for a changed farming activity or a new farming activity, where the property is partly or wholly in a Lake Zone as shown on the Series A Planning Maps or coloured Red on the Series A Planning Maps is a discretionary activity.”

130. **Comment:** I support the discretionary activity status provide for in the new Rule 5.46. Similar to above, I consider it is appropriate for the new Rule 5.46 to apply to those activities not already permitted under Rule 5.39.

131. **Recommendation:** It is recommended the Commissioners adopt the new Rule 5.46 recommended in the Officer Report, subject to amending the rule to read (additional words in **bold**):

*“The use of land for a changed farming activity or a new farming activity **that is not permitted by Rule 5.39**, where the property*

132. The Officer Report recommends a new Rule 5.47 as follows:

133. *“Rule 5.47*

The use of land for an existing farming activity, a changed farming activity or a new farming activity that does not meet the relevant conditions of Rules 5.39 to 5.45 or is not classified by Rules 5.39 to 5.45 is a discretionary activity.”

134. **Comment:** I do not support the principle that any condition that cannot be complied with in Rules 5.39 – 5.42 and Rule 5.44 defaults to a discretionary activity. I would have thought controlled activity status would be appropriate in some instances, and restricted discretionary activity being the default status, with Council’s discretion restricted to the matter of non-compliance.

135. **Recommendation:** I recommend the Commissioners review the activity status for those activities that cannot comply with one or more of the permitted activity standards in Rules 5.39 – 5.42 and Rule 5.44, and adopt controlled activity or restricted discretionary activity as appropriate, with Council’s

discretion being restricted to the permitted activity condition that is not complied with.

PART TWO – HWP Original Submission Points

136. The following evidence addresses specific matters raised by HWP in its submission and identified the Officer Report comment and recommendation, my comment, and a recommendation.

Policies Contained in Notified Plan

Plan Provision: Policy 4.28 (Page 4-7)

137. *“The loss of nitrogen to water is minimised through first, raising awareness of the nitrogen losses from farming by requiring record-keeping on existing farms, secondly, supporting the use of industry articulated good practice and finally, introducing, through plan changes to Sections 6-15 of this Plan, nutrient discharge allowances to achieve collaboratively agreed catchment-based water quality outcomes.”*
138. **Submission:** Overall HWP considered the general intent of this policy is pragmatic and reasonable and is supported. The approach promotes a form of ‘*audited self-management*’, allowing an acceptable degree of flexibility and innovation, while also providing for ongoing farm production and growth in the farming sector. The support given to good practice (as defined by industry) in addressing nutrient management and the ability to achieve nutrient discharge allowances through a collaborative process is supported.
139. Notwithstanding this, as discussed above, there is a need to better define the terms ‘*nutrient discharge*’ and ‘*catchments*’. In addition, HWP considered alternative methods also need to be provided for as well as determining nutrient discharge allowances.
140. HWP supported the overall intent of Policy 4.28, subject to better defining the terms ‘*nutrient discharge*’ and ‘*catchments*’ and the following amendment (or similar):
- “...introducing, through plan changes to Sections 6-15 of this Plan, nutrient discharge allowances and/or established alternative methods to achieve collaboratively agreed catchment-based water quality outcomes.”*
141. **Officer Report:** The Officer Report acknowledges the relief sought by HWP relating to Policy 4.28, but not the request for better defining the terms ‘*nutrient discharge*’ and ‘*catchments*’.

142. The Officer Report recommends a definition of ‘*nutrient discharge*’ but not ‘*catchments*’.
143. The Officer Report recommends a new suite of Policies as discussed above in PART ONE of this evidence.
144. **Comment:** In essence Policy 4.28 is replaced by the new policies discussed in PART ONE above. A new definition of ‘*nutrient discharge*’ has been recommended, and I comment on that matter below when considering the definitions. In relation to the definition of ‘*catchment*’, I note I have addressed this matter in my Hearing Group 1 evidence.
145. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.28, I would recommend the amendment be adopted as sought by HWP in its submission.

Plan Provision: Policy 4.29 (Page 4-7)

146. *“Priority will be given to collaborative catchment management processes to introduce plan changes to set nutrient discharge allowances where regional water quality outcomes are not being met, as shown on the Planning Maps, and in the interim risks to the environment from the loss of nitrogen to water will be managed through compliance with industry articulated good practice or, in the absence of any such articulation, granting, subject to conditions, or refusing applications for resource consents.”*
147. **Submission:** Similar to above, the general intent of Policy 4.29 to set nutrient discharge allowances through a collaborative process was supported by HWP, subject to better defining the terms ‘*nutrient discharge*’ and ‘*catchments*’. In addition, HWP considered alternative methods also need to be provided for as well as determining nutrient discharge allowances.
148. HWP supported the overall intent of Policy 4.29, subject to better defining the terms ‘*nutrient discharge*’ and ‘*catchments*’, and the following amendment (or similar):
- “... introduce plan changes to set nutrient discharge allowances and/or established alternative methods where regional water quality outcomes are not being met, ...”*

149. **Officer Report:** The Officer Report does not directly acknowledge the relief sought by HWP relating to Policy 4.29.
150. The Officer Report recommends a new definition of ‘*nutrient discharge*’, but not ‘*catchments*’. The Officer Report recommends a new suite of Policies as discussed above in PART ONE of this evidence.
151. **Comment:** The same comments above relating to Policy 4.28 apply.
152. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.29, I would recommend the amendment be adopted as sought by HWP in its submission.

Plan Provision: Policy 4.30 (Page 4-7)

153. *“Until 1 July 2017 the loss of nitrogen to water from existing farming activities will be minimised by raising awareness of the actions and activities that give rise to these discharges and the effects of these discharges on the environment and as a result of nitrogen discharges being recorded by each farming enterprise.”*
154. **Submission:** HWP considered the general intent of Policy 4.30 to take a non-regulatory approach to existing farming activities that discharges nitrogen to water prior to 2017 is appropriate and supported Policy 4.30.
155. HWP supported the overall intent of Policy 4.30 as it is currently written.
156. **Officer Report:** The Officer Report does not directly acknowledge HWP’s support for Policy 4.30.
157. **Comment:** The Officer Report recommends a new suite of policies as discussed above in PART ONE of this evidence.
158. **Recommendation:** It is recommended the Commissioners either adopt the new policies as discussed in PART ONE above, or, should the Commissioners decide to retain the existing Policy 4.30, retain the intent of policy as it is currently written.

Plan Provision: Policy 4.31 (Page 4-7)

159. *“Minimise the loss of nitrogen to water from any change in farming activities in an area coloured red on the Planning Maps, by demonstrating the nitrogen*

loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not prevent the water quality outcomes of Policy 4.1 being achieved or the nitrogen discharges from the property are a significant and enduring reduction from existing levels.”

160. **Submission:** The HWP was concerned about the determination of the Nutrient Zones as shown on the Planning Maps (Nutrient Zone Map Page 4-8), and in particular the ‘Red’ zoning for the Waipara Catchment. In particular HWP considered this ‘Red’ zoning needed reassessment.
161. In addition, while HWP understands the intention of Policy 4.31 is to limit a further reduction in water quality within areas already identified as ‘*Not meeting Water Quality Outcomes*’, there was concern with the terminology used within Policy 4.31. The phrase ‘*significant and enduring reduction*’ in Policy 4.31 is not easily defined or frequently used in resource management instruments, such as the CRPS or National Policy Statement Fresh Water Management. While it is appreciated that policies are not rules, and thus should not have to be definitive, they do, however, need to import as much certainty as they can and avoid ambiguity.
162. In addition to not being clear how “*a significant and enduring reduction from existing levels*” might be measured, HWP considered the policy would be difficult to achieve as there is a need for any farming activity to know and understand the effects of other land use or discharges. It may be difficult if not impossible to determine whether the water quality outcomes of Table 1 are not prevented, and there are no timeframes for the policy.
163. HWP sought either Policy 4.31 to be amended to address the concerns raised above, and in particular by deleting the phrases “*when assessed in combination with the effects of other land uses or discharge*” and “*or the nitrogen discharges from the property are a significant and enduring reduction from existing levels*”, and add timeframes agreed to with the community through the Zone Committee process.
164. **Officer Report:** The Officer Report records that HWP seeks to delete the references to the timeframe, they seek that the timeframes should be agreed to through the Zone Committee process. The Officer Report does not record HWP’s concerns about the terminology used in the policy.

165. **Comment:** The concerns raised by HWP in relation to Policy 4.31 appear to have been removed as a result of the new suite of policies proposed in the Officer Report. Should the Commissioners decide to reject the Officer Report recommendation, the concerns raised by HWP would be valid, and in my view should be addressed in order to ensure clarity and to ensure the policy is workable. The amendments sought by HWP should be adopted accordingly.
166. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.31, I would recommend the Commissioners amend Policy 4.31 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Nutrient Zone Planning Map (Page 4-8)

167. **Submission:** The HWP noted the Nutrient Zones Planning Map sets out Nutrient Allocation Zones for the Canterbury Region. These zones determine activity status for the use of land for farming activities in the rules.
168. It is noted that the determining of the Nutrient Zones is a key mechanism in the proposed Plan, and requires high level of confidence in the robustness of zone allocation and how the boundaries are decided.
169. It is unclear how the Nutrient Zones were determined, and how accurate they are. It is also not clear what process is in place to address those nutrient zones that are *'unclassified'*.
170. In particular HWP questioned the *'Red'* classification of the Waipara Catchment and considered this classification is incorrect.
171. The HWP sought clarification of the process of determination and accuracy of the Nutrient Zones, and in particular sought a review of the *'Red'* classification of the Waipara Catchment.
172. **Officer Report:** The Officer Report does not appear to directly refer to HWP's submission points, and the relief it seeks. The Officer Report notes that overall the framework behind the mapping was outlined in a Memo titled *"Derivation of nutrient status zones"* attached as Appendix 6 the Section 32 Report. The Officer Report considers the basic criteria and analysis contained in that memo continues to stand, and Dr Adrian Meredith, as the primary

scientist responsible for the mapping continues to stand behind both the methodology and the outcomes. The Officer Report recommends that the Nutrient Allocation Zone mapping be retained without amendment.

173. **Comment:** While I note that the Officer Report does not really address the matters raised by HWP in its submission, it has recommended substantial changes to the rules and subsequent activity status associated with the various Nutrient Allocation Zones contained on the map. As discussed above in PART ONE of my evidence, I generally support the rules recommended in the Officer Report, subject to some matters that need to be addressed.
174. I am conscious that the policies and rules contained in the Officer Report are recommendations, and you as Commissioners are not obliged to accept these recommendations. Should you decide not to accept the new rules recommended in the Officer Report, the matters raised in HWP's submission would remain, and I would continue to question level of confidence in the robustness of zone allocation and how the boundaries are decided. In addition, I would support HWP's request for clarification of the process of determination and accuracy of the Nutrients Zones, and in particular I would seek a review of the 'Red' classification of the Waipara Catchment.
175. **Recommendation:** It is recommended the Commissioners in the first instance accept the new rules recommended in the Officer Report relating to nutrient discharges. However, should these new rules not be adopted, I recommend the Commissioners address the concerns raised regarding the robustness of the zone allocation and how the boundaries are decided, and I would seek for clarification of the process of determination and accuracy of the Nutrients Zones, and in particular seeks a review of the 'Red' classification of the Waipara Catchment.

Plan Provision: Policy 4.32 (Page 4-9)

176. *"To minimise the risk of the outcomes in Policy 4.1 not being achieved, where there is no industry articulated good industry practice nitrogen discharge limit for a particular industry sector included in this Plan prior to 1 July 2017 then all farming activities in that industry sector will be required to obtain a resource consent to continue the farming activity and any proposal will be*

required to demonstrate the nitrogen loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not prevent the water quality outcomes of Policy 4.1 being achieved or the nitrogen discharges from the property are a significant and enduring reduction from existing levels.”

177. **Submission:** HWP considered this is a confusing policy and seems to contradict the Rules 5-39, 5-40 and 5-42 which provide for permitted activities prior to 2017 and without the Schedule 8 Industry Derived Nitrogen Discharges limit. Similar comments above on Policy 4.31 also apply.
178. HWP opposed the intent of Policy 4.32 and seeks for it to either be deleted or re-written to reflect the provisions of Rules 5-39 and 5-40. If it is retained, the terms ‘*significant*’, ‘*enduring*’, and ‘*industry sector*’ need defining and the following phrases should be deleted:
- “when assessed in combination with the effects of other land uses or discharge”*
- “will be required to obtain a resource consent to continue the farming activity”* and
- “or the nitrogen discharges from the property are a significant and enduring reduction from existing levels.”*
179. **Officer Report:** The Officer Report does not record HWP’s submission or the relief it seeks. The Officer Report recommends a new suite of Policies as discussed above in PART ONE of this evidence.
180. **Comment:** The concerns raised by HWP in relation to Policy 4.32 appear to have been removed as a result of the new suite of policies proposed in the Officer Report. Should the Commissioners decide to reject the Officer Report recommendation to adopt the new suite of policies, the concerns raised by HWP would be valid, and in my view should be addressed in order to ensure clarity and to ensure the policy is workable. The amendments sought by HWP should be adopted accordingly.
181. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.32, I would recommend the Commissioners amend Policy 4.32 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Policy 4.33 (Page 4-9)

182. *“Prior to 1 July 2017, to minimise the risk of the outcomes in Policy 4.1 not being achieved the loss of nitrogen to water from any change in farming activities in an area coloured green, orange or light blue on the Planning Maps, will be managed through resource consent conditions requiring, as a minimum, the preparation and implementation of a farm environment plan and the regular audit of that plan.”*
183. **Submission:** HWP supported nutrient management on farms by means of permitted activity, particularly in those zones where minimal risk of nutrient loss has been identified (green, orange and light blue areas on the Planning Maps).
184. This policy identifies resource consent for any change in farming activity, and the current definition of ‘change’ is opposed.
185. HWP opposed this policy under the current definition of “change” and reserves its position pending a change to that definition.
186. **Officer Report:** The Officer Report does not record HWP’s support for the policy subject to the definition of ‘changed’ being finalised. As discussed in PART ONE of my evidence above, the Officer Report introduces a new suite of policies, and the matters supported by HWP have been incorporated into those new policies.
187. **Comment:** As already stated, in general I support the new suite of policies, subject to some minor amendments, and the matters supported by HWP have been incorporated into the new policies recommended. I discuss the new definition of ‘changed’ below in this evidence.
188. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.33, I would seek the Commissioners to retain the policy as it is currently written, subject to matters regarding the definition of the term ‘changed’ discussed below in my evidence.

Plan Provision: Policy 4.34 (Page 4-9)

189. *“Prior to 1 July 2017, to minimise the loss of nitrogen to water from any change in farming activities in an area coloured red or within a Lake Zone as*

shown on the Planning Maps, an applicant for resource consent must demonstrate that the nitrogen loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not prevent the water quality outcomes of Policy 4.1 being achieved and show that the nitrogen discharges from the property are a significant and enduring reduction from existing levels.”

190. **Submission:** HWP expressed concerns with Policy 4.34 that are the same as for Policy 4.31 above. In particular, it is not clear how “*a significant and enduring reduction from existing levels*” might be measured, and the policy would be difficult to achieve as it is currently not possible for any farming activity to know and understand the effects when assessed in combination with the effects of other land use or discharges. It is not clear why this policy requires a consent application to demonstrate it will not prevent Water Quality outcomes of Policy 4.1 being achieved AND to show that nitrogen discharges are a significant and enduring reduction.
191. Furthermore, there are no timeframes for implementation of this policy. At this stage it is difficult to determine what amendments to the policy may satisfy these concerns as a re-write is required.
192. HWP sought either Policy 4.34 be deleted, or amended to address the concerns raised above, and in particular by deleting the phrases “*when assessed in combination with the effects of other land uses or discharge*” and “*or the nitrogen discharges from the property are a significant and enduring reduction from existing levels.*”
193. **Officer Report:** The Officer Report identifies that HWP seeks clarification of the process of determination and accuracy of the Nutrient Zones and in particular a review of the 'red' classification of the Waipara catchment. This seems to be an error as that matter was raised by HWP in relation to the Nutrient Zone Maps (discussed above). The Officer Report does not record the matters in HWP’s submission related to Policy 4.34. Notwithstanding this, the Officer Report recommends a new suite of Policies as discussed above in PART ONE of this evidence.
194. **Comment:** The same comments relating to Policies 4.31 and 4.32 above apply, and the same amendments are sought to address the issues raised.

195. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.34, I would recommend the Commissioners amend Policy 4.34 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Policy 4.35 (Page 4-9)

196. *“To minimise the loss of nitrogen to water prior to 1 July 2017, where the land owner holds an existing water permit to take and use water, or is a shareholder in an irrigation scheme, and there are conditions on the water permit that address nutrient management, any change in farming activities will be enabled subject to requirements to prepare and implement a farm environment plan, the regular audit of that plan and to record, on a per enterprise basis, nitrogen discharges”.*
197. **Submission:** HWP supported the intent of Policy 4.35, and in particular the enabling intent subject to pragmatic methods, including the use of ‘*Farm Environment Plans*’ and ‘*Nutrient Management Plans*’ and employing ‘*best management practices*’ in order to maximise farm production and minimise adverse effects of nutrient in the environment.
198. HWP supported the enabling intent of Policy 4.35 and the use of pragmatic methods.
199. **Officer Report:** The Officer Report does not record the support provided by HWP in its submission on Policy 4.35. Notwithstanding this, the Officer Report recommends a new suite of Policies as discussed above in PART ONE of this evidence.
200. **Comment:** As already stated, in general I support the new suite of policies, subject to some minor amendments, and the matters supported by HWP have been incorporated into the new policies recommended.
201. **Recommendation:** It is recommended the Commissioners adopt the new policies as discussed in PART ONE above. Should the Commissioners decide to retain the existing Policy 4.35, I would seek the Commissioners retain the policy as it is written in the notified plan.

Plan Provision: Policy 4.37 (Page 4-9)

202. *“All activities shall achieve the nutrient load limit and nutrient allowance for the catchment in Sections 6-15 of this Plan.”*
203. **Submission:** As discussed above, HWP sought for the definition of ‘catchment’ to be defined. As nutrient load limits are yet to be set (through a plan change process), Rules 5.39 – 5.51 apply in the sub-regions, and HWP considers the policy should reflect this ‘default’ position. The overall approach of catchment limits is supported.
204. HWP sought amendments to Policy 4.37 to identify the interim position as no nutrient load limits exist in the sub-regions at present, with any amendments also subject to clarity around how ‘catchment’ is defined.
205. **Officer Report:** The Officer Report records the matters raised by HWP in its submission in relation to Policy 4.37. The Officer Report recommends amendments to Policies 4.37 (now 4.36) as discussed in PART ONE above.
206. **Comment:** The comments on the amendments recommended in the Officer Report in PART ONE above apply.
207. **Recommendation:** It is recommended the Commissioners adopt the amendments to Policy 4.37 (now Policy 4.36) recommended in the Officer Report, and define ‘catchment’ as discussed in my Hearing Group 1 evidence.

Plan Provision: Policy 4.38 (Page 4-9)

208. *“If the measured or predicted nutrient load from land uses and discharges exceeds the nutrient load limit for the catchment in Sections 6-15 of this Plan, the loss to water of nutrients from land uses in the catchment will be reduced to achieve the nutrient load limit for the catchment.”*
209. **Submission:** As discussed above, the definition of ‘catchment’ needs clarity. In addition, similar to Policy 4.37 above, as nutrient load limits are yet to be set (through a plan change process), Rules 5.39 – 5.51 apply in the sub-regions, and the policy should reflect this ‘default’ position.
210. The overall approach of catchment and sub-regional limits was supported.
211. It is also not clear with this policy how existing consents that may be held will be treated should a reduction in the loss of nutrients to water is needed. It is currently not possible to ‘measure’ nutrient load from land users and ‘estimated’ is a more appropriate term.

212. HWP sought amendments to Policy 4.38 to identify the interim position as no nutrient load limits exist in the sub-regions at present, with any amendments also subject to clarity around how 'catchment' is defined. HWP also seeks clarity regarding how existing consents may be dealt with should a reduction in the loss of nutrients to water be needed, and the term 'measured' should be amended to 'estimated'.
213. *"If the ~~measured~~-estimated or predicted nutrient ~~load~~-loss from land uses and discharges exceeds the nutrient ~~load~~-loss limit for the catchment in Sections 6-15 of this Plan, the loss to water of nutrients from land uses in the catchment will be reduced to achieve the nutrient ~~load~~-limit for the catchment."*
214. **Officer Report:** The Officer Report does not record the matters raised by HWP in its submission on Policy 4.38.
215. **Comment:** I note the comments made in relation to Policy 4.38 in PART ONE of my evidence above apply.
216. **Recommendation:** It is recommended the Commissioners adopt the amendments to Policy 4.38 (now Policy 4.37) recommended in the Officer Report, define 'catchment' to provide clarity as discussed in my Hearing Group 1 evidence, and replace the term 'measure' with the term 'estimated'.

Plan Provision: Policy 4.76 (Page 4-13)

217. *"Resource consents for the use of land for farming activities and the associated discharge of nutrients in catchments that are coloured red on the Planning Maps and resource consents for water take and use in catchments or groundwater allocation zones that are over-allocated will generally be subject to a 5 year duration if the land use and associated nutrient discharges or water take and use may impede the ability of the community to find an integrated solution to manage water quality and the over-allocation of water."*
218. **Submission:** As discussed above in this submission, the HWP questioned how the Nutrient Zones have been determined and their accuracy, and sought for the 'Red' classification over the Waipara Catchment to be reviewed. The HWP opposed this policy while the current Nutrient Zone classifications are being used to determine whether resource consent is required.

219. The HWP opposed Policy 4.76 as it is currently written and seeks clarification of the process of determination and accuracy of the Nutrients Zones, and in particular seeks a review of the 'Red' classification of the Waipara Catchment.
220. **Officer Report:** The Officer Report does not appear to address Policy 4.76.
221. **Comment:** I note the Hearings Group 2 'Farming' topics on the Environment Canterbury website identified Policy 4.76 as being dealt with under the Nutrients section. However, the Officer Report does not appear to address Policy 4.76. Without a commentary and recommendation in the Officer Report, it is difficult to comment on the issues raised with the policy. I consider the matters of concern raised by HWP as important to get clarity and certainty with the policy, should it remain in the PCLWRP.
222. **Recommendation:** It is recommended the Commissioners clarify the Officer Report position on Policy 4.76 and, should it remain in the proposed Plan, amend the policy to address the concerns raised by HWP accordingly.

Rules Contained in Notified Plan

Plan Provision: Rule 5.39 (Page 5-11)

223. *"Prior to 1 July 2017, the use of land for any farming activity existing at 11 August 2012 and outside of the Lake Zone shown on the Planning Maps, is a permitted activity if the following condition is met:*
- 1. A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model, is kept and is provided to the CRC upon request."*
224. **Submission:** HWP noted that it is possible this rule can be interpreted to apply to the Hurunui Catchment as the PHWRRP does not address any farming activities prior to 2017. Similar to above, HWP sought clarification regarding whether this rule prevails over the PHWRRP. In addition, HWP noted that this rule does apply to the Waipara Catchment which is outside of the PHWRRP area, and is in the 'Red' Nutrient Zone. HWP also questioned why farming activities that may not calculate an annual amount of N loss from land using OVERSEERTM but have low nitrogen leaching rates are not included in this permitted activity rule.

225. Overall HWP supported a planning process which allows farming activities to proceed under permitted activity status. However, while HWP considered that while this rule is pragmatic and reasonable, there are a number of uncertainties that arise from the terms used. For example, it is not entirely clear what the '*Lake Zone shown on the Planning Maps*' refers to, and there is no definition included in the proposed Plan. The Nutrient Zones Planning Map (refer Attachment A) includes '*Sensitive Lake Catchments*', and this could be what the rule refers to as the Lake Zone. In addition, the rule uses the term '*any farming activity*' which is also not defined, and is all-inclusive – this matter has been addressed above.
226. HWP supported the general intent of Rule 5.39, while seeking:
- Clarification of whether the rules in the PHWRRP prevail over these rule, and whether these rules prevail over the WCEF&WARP;
 - Clarification regarding what the Lake Zone is, certainty regarding what '*any farming activity*' might mean; and
 - Clarification regarding the activity status of farm activities that do not calculate an annual amount of N loss from land using OVERSEER™ but have low nitrogen leaching rates and are not included in this permitted activity rule i.e. all low intensity dry land activities.
227. **Officer Report:** The Officer Report does not record HWP's submission points or the relief it seeks. The Officer Report recommends a new suite of Rules as discussed above in PART ONE of this evidence.
228. **Comment:** I note the comments in PART ONE of my evidence on the proposed new Rules recommended in the Officer Report apply. While a number of the matters raised by the HWP are not relevant to the new rules, I note '*Lake Zone*' is still used in the new rules, and clarification that this means '*Sensitive Lake Catchments*' is required. Notwithstanding this, should the Commissioners not adopt the new rules proposed in the Officer Report and retain Rule 5.39 as written, I consider the matters raised by HWP are important and need to be addressed.
229. **Recommendation:** It is recommended the Commissioners adopt the new Rules recommended in the Officer Report subject to the clarification regarding what '*Lake Zone*' refers to, or alternatively should the Commissioners decide

to retain Rule 5.39 as notified, retain the intent of the rule to provide for permitted activities subject to addressing the matters raised by HWP.

Plan Provision: Rule 5.40 (Page 5-12)

230. *“Prior to 1 July 2017, the use of land for a farming activity existing at 11 August 2012 and within the Lake Zone shown on the Planning Maps, is a permitted activity if the following conditions are met:*

1. A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model;

2. A Farm Environment Plan is prepared and implemented in accordance with Schedule 7;

3. The Farm Environment Plan is externally audited each year for the first three years by a Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and

4. A record of the audit compliance grading and the average annual loss of nitrogen for the property is provided to the CRC by 31 August of that year.”

231. **Submission:** HWP had similar concerns as above for Rule 5.39 regarding defining what the ‘Lake Zone’ is and what ‘a farming activity’ may be. In addition, HWP had similar concerns as above regarding the need to accommodate farming activities that may not be calculating an annual amount of N loss from land using OVERSEERTM but have low nitrogen leaching rates and are not included in this permitted activity rule.

232. HWP supported the general intent of Rule 5.40 while seeking clarification of what the Lake Zone is, and certainty regarding what ‘a farming activity’ might mean, and clarification regarding the activity status of farm activities that do not calculate an annual amount of N loss from land using OVERSEERTM but have low nitrogen leaching rates and are not included in this permitted activity rule.

233. **Officer Report:** The Officer Report records the matters raised by HWP in its submission, and the relief sought. The Officer Report recommends a new suite of Rules as discussed above in PART ONE of this evidence.

234. **Comment:** I note the comments in PART ONE of my evidence on the proposed new Rules recommended in the Officer Report apply. While a number of the matters raised by the HWP are not relevant to the new rules, I note ‘*Lake Zone*’ is still used in the new rules, and clarification that this means ‘*Sensitive Lake Catchments*’ is required. Notwithstanding this, should the Commissioners not adopt the new rules proposed in the Officer Report and retain Rule 5.40 as written, I consider the matters raised by HWP are important and need to be addressed.
235. **Recommendation:** It is recommended the Commissioners adopt the new Rules recommended in the Officer Report subject to the clarification regarding what ‘*Lake Zone*’ refers to, or alternatively should the Commissioners decide to retain Rule 5.40 as notified, retain the intent of the rule to provide for permitted activities subject to addressing the matters raised by HWP.

Plan Provision: Rule 5.41 (Page 5-12)

236. *“The use of land for a farming activity that does not comply with one or more of the conditions of Rules 5.39 or 5.40 is a restricted discretionary activity.”*
237. *The CRC will restrict discretion to the following matters:*
- 1. The proposed management practices to avoid or minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land;*
 - 2. The potential effects of the land use on surface and groundwater quality, sources of drinking water;*
 - 3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.*
 - 4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.*

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary where relevant, under section 95B(3) of the RMA.”

238. **Submission:** Overall HWP considered the restricted discretionary activity status of the rule is pragmatic and reasonable, and is supported. Notwithstanding this, HWP noted the term ‘*management zone*’ is not defined, and needs to be clarified.
239. HWP supported the intent of Rule 5.41 as a restricted discretionary activity, while seeking the term ‘*management zone*’ to be defined.
240. **Officer Report:** The Officer Report does not record the support for the rule or the matter raised by HWP in its submission. The Officer Report recommends a new suite of Rules as discussed above in PART ONE of this evidence.
241. **Comment:** I note the comments in PART ONE of my evidence on the proposed new Rules recommended in the Officer Report apply. Notwithstanding this, should the Commissioners not adopt the new rules proposed in the Officer Report and retain Rule 5.41 as written, I consider the support for the rule by HWP should be noted, and the term ‘*management zone*’ be defined.
242. **Recommendation:** It is recommended the Commissioners adopt the new Rules recommended in the Officer Report, or alternatively should the Commissioners decide to retain Rule 5.41 as notified, retain the intent of the rule and define the term ‘*management zone*’ as requested by HWP.

Plan Provision: Rule 5.42 (Page 5-12)

243. *“Prior to 1 July 2017 the use of land for a change to an existing farming activity is a permitted activity if the following conditions are met:*
- 1. The land holder has been granted a water permit, or holds shares in an irrigation company that has been granted a water permit, that authorises irrigation on the land and the land is subject to conditions that specify the maximum amount of nitrogen that may be leached;*

2. *The property is outside a Lake Zone as shown on the Planning Maps;*
3. *A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model;*
4. *A Farm Environment Plan is prepared and implemented in accordance with Schedule 7;*
5. *The Farm Environment Plan is externally audited each year for the first three years by a Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and*
6. *A record of the audit compliance grading and the average annual loss of nitrogen for the property is provided to the CRC by 31 August of that year.”*

244. **Submission:** Several of the comments made above in relation to Rules 5.39 and 5.40 apply, in particular relating to defining the ‘Lake Zone’, the purpose of the ‘audit compliance grading’, the definition of ‘change’, and the need to accommodate farming activities that may not be calculating an annual amount of N loss from land using OVERSEERTM but have low nitrogen leaching rates and are not included in this permitted activity rule.
245. HWP also noted that a key factor in Condition 1 is whether the land holder has a water permit that is subject to conditions that specify the maximum amount of nitrogen that may be leached. HWP has a concern regarding the practicality and legality of this requirement, as it is likely not many existing farming operations (that may wish to change) would have a maximum amount of nitrogen that could be leached on any water permit they hold.
246. HWP supported the intent of Rule 5.42 subject to clarification of a number of terms used and matters identified above, and establishing the practicality of the requirement for a maximum amount of nitrogen that could be leached being on an existing water permit.
247. **Officer Report:** The Officer Report does not record the matters raised by HWP and the relief it sought. The Officer Report recommends a new suite of rules to address nutrient discharges as discussed in PART ONE above.
248. **Comment:** In essence Rule 5.42 is replaced by the new rules discussed in PART ONE above, and the matters raised by HWP no longer apply to these new rules. However, should the Commissioners decide to reject the Officer Report recommendation, the concerns raised by HWP would be valid, and in

my view should be addressed in order to ensure clarity and to ensure the rule is workable. The amendments sought by HWP should be adopted accordingly.

249. **Recommendation:** It is recommended the Commissioners adopt the new rules as discussed in PART ONE above. Should the Commissioners decide to retain the existing Rule 5.42, I would recommend the Commissioners amend Rule 5.42 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Rule 5.46 (Page 5-13)

250. *“From 1 July 2017, the use of land for any farming activity, is a permitted activity if the following conditions are met:*

- 1. The land is outside a Lake Zone shown on the Planning Maps; and*
- 2. The average annual loss of nitrogen does not exceed the rate for the relevant farming activity in Schedule 8; and*
- 3. The annual average loss of nitrogen, averaged over three consecutive years is less than 20 kilograms per hectare a record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model, is kept and is provided to the CRC upon request;*

or

- 4. If the annual average loss of nitrogen, averaged over three consecutive periods from 1 July in one year to 30 June in the following year, is 20 kilograms per hectare or more:*

(a) a Farm Environment Plan is prepared and implemented in accordance with Schedule 7;

(b) the Farm Environment Plan is externally audited each year for the first three years by a Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and

(c) a record of the audit compliance grading and the average annual loss of nitrogen for the property is be provided to the CRC by 31 August of that year.”

251. **Submission:** As noted above, HWP understood this rule (as well as Rules 5.47 – 5.49) would apply to the Waipara Catchment which is within its project area, and is in the ‘Red’ Nutrient Zone. The HWP has questioned the accuracy of the Nutrient Zones, and seeks the ‘Red’ classification for the Waipara Catchment to be reviewed.
252. While the general intent of the rule to provide for the use of land for farming activities after 1 July 2017 was supported, HWP was also concerned with the 20 kg N/ha/yr limit included in the rule. It is understood Council believes the 20 kg N loss limit will provide for 92 % of land area to continue with existing land use as a permitted activity. HWP does not have confidence that this is the case, as discussed above in this evidence. Comments above regarding how to better define the ‘Lake Zone’ applies to this rule also.
253. HWP considered there are some uncertainties regarding the implications of this rule as it is not known what will be in Schedule 8, and the limit of 20kg limit is considered to be unduly restrictive. HWP considered that compliance with Schedule 8 should be all that is required. If nitrogen loss is over Schedule 8 limits then further requirements may be appropriate.
254. While HWP supported the intent of the rule to provide for land uses for farming after 1 July 2017 as a permitted activity, it sought clarification of the matters outlined above including clarification around the accuracy of the Nutrient Zones, the review of the ‘Red’ classification for the Waipara Catchment, and replacement of the 20 kg N limit with a more practical nitrogen discharge value which will provide for permitted activity for existing farm practices when following best management practices for nutrient management. This will likely be provided by Schedule 8 values, and no other values would be required.
255. **Officer Report:** The Officer Report does not record the matters raised by the HWP in its submission. The Officer Report recommends a new suite of rules to address nutrient discharges as discussed in PART ONE above.
256. **Comment:** In essence Rule 5.46 is replaced by the new rules discussed in PART ONE above, and the matters raised by HWP no longer apply to these new rules. However, should the Commissioners decide to reject the Officer Report recommendation, the concerns raised by HWP would be valid, and in my view should be addressed in order to ensure clarity and to ensure the rule

is workable. The amendments sought by HWP should be adopted accordingly.

257. **Recommendation:** It is recommended the Commissioners adopt the new rules as discussed in PART ONE above. Should the Commissioners decide to retain the existing Rule 5.46, I would recommend the Commissioners amend Rule 5.46 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Rules 5.49 (Page 5-12)

258. *“From 1 July 2017, the use of land for any a farming activity that does not meet Condition 2 in Rule 5.46 or where there is no rate for the relevant farming activity specified in Schedule 8 and where the property is within an area coloured red or within a Lake Zone shown on the Planning Maps is a non-complying activity.”*

259. **Submission:** As discussed above, the HWP had questioned the accuracy of the Nutrient Zones, and seeks the ‘Red’ classification for the Waipara Catchment to be reviewed.

260. HWP sought clarification around the accuracy of the Nutrient Zones, the review of the ‘Red’ classification for the Waipara Catchment.

261. **Officer Report:** The Officer Report does not record the matters raised by HWP and the relief it sought. The Officer Report recommends a new suite of rules to address nutrient discharges as discussed in PART ONE above.

262. **Comment:** In essence Rule 5.49 is replaced by the new rules discussed in PART ONE above, and the matters raised by HWP no longer apply to these new rules. In particular the Officer Report recommendation changes the activity from non-complying to discretionary activity. However, should the Commissioners decide to reject the Officer Report recommendation, the concerns raised by HWP would be valid, and in my view should be addressed in order to ensure clarity and to ensure the rule is workable. The amendments sought by HWP should be adopted accordingly.

263. **Recommendation:** It is recommended the Commissioners adopt the new rules as discussed in PART ONE above and in particular the discretionary activity status for the activity. Should the Commissioners decide to retain the existing

Rule 5.42, I would recommend the Commissioners amend Rule 5.42 as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Auditing of Information flowing out of Nutrient Management Rules (Rules 5.39 – 5.54)

264. **Submission:** HWP noted that the rules implementing the ‘*nutrient discharges*’ policy framework are principally 5.39 to 5.54. While supporting the general approach advanced in providing for the continuation of farming activities under Rule 5.40, 5.42, and 5.46, HWP wondered whether low intensity farms need to undertake the Nutrient Budgets and Nutrient Management Plans on a yearly basis. Perhaps this information could be required from low intensity farming operations for the first initial three years and then only if there has been a significant farm system change.
265. HWP sought some recognition that low intensity farming operations may not need to complete the auditing requirements for nutrient budgets and nutrient management plans in Rules 5.40, 5.42, and 5.46 on an annual basis once a baseline has been established.
266. **Officer Report:** The Officer Report does not record the concerns raised by HWP and the relief it sought. The Officer Report recommends a new suite of rules to address nutrient discharges as discussed in PART ONE above.
267. **Comment:** In essence the new rules discussed in PART ONE above, and the matters raised by HWP no longer apply to these new rules, apart from the concern regarding auditing. However, should the Commissioners decide to reject the Officer Report recommendation, the concerns raised by HWP would be valid, and in my view should be addressed in order to ensure clarity and to ensure the rule is workable. The amendments sought by HWP should be adopted accordingly.
268. **Recommendation:** It is recommended the Commissioners adopt the new rules as discussed in PART ONE above. Should the Commissioners decide to retain the existing auditing regime in the Rules, I would recommend the Commissioners amend this auditing regime as sought by HWP in its submission to address the particular concerns raised.

Plan Provision: Schedule 7 – Farm Environment Plans

269. Schedule 7 provides the requirements of a Farm Environmental Plan which are required by a number of rules relating to farming activities.
270. **Submission:** Overall HWP supported the voluntary use of farm planning tools and audited self-management.
271. In order to achieve successful, practical application of farm planning tools and audits HWP considered it is important that there is national consistency for the industry systems and procedures. Therefore it is necessary that Regional Council have regard to national consistency and consistency in industry programmes when ratifying sub regional schemes.
272. HWP supported the principles included in the Farm Environment Plan and the voluntary use of farm planning tools and audited self-management.
273. **Officer Report:** The Officer Report does not record the support provided by HWP in its submission and the call for national consistency. The Officer Report notes that: *“With the increased focus in the submissions on wider application of farm environment plans, greater emphasis on audited self-management and industry developed farm environment plans, it has been necessary to recommend relatively significant changes to the farm environment plan framework.”* The Officer Report goes on to state that: *“Overall, the changes to Schedule 7 are not significant with respect to the requirements for farm environment plans, but they have been broadened to allow other industry based farm environment plans, wider application beyond just nutrient management and have set out a tighter framework with respect to auditing.”*
274. **Comment:** The Officer Report recommends Schedule 7 be significantly amended to provide greater guidance to resource users, and to provide a hierarchy for the recommended new policies and rules. Overall I support the recommendations, subject to specific matters being addressed, as discussed below in regards to the four new recommended parts of Schedule 7.

Part A – Farm Environment Plans

275. *“A Farm Environment Plan can be based on either of:*
- 1. Industry prepared Farm Environment Plan templates and guidance material that:*

(a) Include the following minimum components:

(i) The matters set out in 1, 2, and 3 of Part B below;

(ii) Contains 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;

(iii) Performance measures that are capable of being audited as set out in Part C below; and

(b) Has been approved as meeting the criteria in (a) and being acceptable to the Canterbury Regional Council by the Chief Executive of the Canterbury Regional Council.

OR

2. The material set out in Part B below.”

276. **Comment:** Overall I support the recommended Part A. In particular I support the allowance to use industry-prepared FEP templates and guidance, either in part or in full. I also support the intention of the FEP's to support industry good practice, audited self-management and development of industry defined limits. In my view, these are all important components of a FEP that will ensure they are effective and appropriate.
277. The only one concern I have is expressed in PART ONE of my evidence above, which relates to whether there is capacity within the primary industry to prepare and audit these FEP, and an evaluation of the costs (in terms of a Section 32 evaluation) of building capability to comply with the requirements and timeframes set. I consider these matters need to be taken into account, particularly if seeking annual reporting and annual auditing with consideration of auditing being extended to once every three years once a FEP is in place and working.
278. **Recommendation:** I recommend the Commissioners adopt Part A as recommended in the Officer report, subject to a s.32 evaluation that considers the costs of building the capacity of the primary industry to prepare and audit these FEPs, and consideration of extending the auditing of FEPs to once every three years once a FEP is in place and working.

Part B – Farm Environment Plan Default Content

279. *“The plan requirements will apply to:*

- (a) a plan prepared for an individual property; or*
- (b) a plan prepared for an individual property which is part of a collective of properties, including an irrigation scheme, an Industry Certification Scheme, or catchment club.*

The plan shall contain as a minimum:

1. Property details

- (a) Physical address*
- (b) Description of the ownership and name of a contact person*
- (c) Legal description of the land and farm identifier*

2. A map(s) or aerial photograph at a scale that clearly shows:

- (a) The boundaries of the property*
- (b) The boundaries of the main land management units on the property.*
- (c) The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.*
- (d) The location of riparian vegetation and fences adjacent to water bodies.*
- (e) The location on all waterways where stock access or crossing occurs.*
- (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.*

3. The full text of any resource consents held for the property and the conditions of the consents.

4. An assessment of the environmental effects and risks associated with the farming activities on the property and how the identified effects and risks will be managed, including irrigation, application of nutrients, effluent application, stock exclusion from waterways, offal pits and farm rubbish pits.

5. A description of how each of the following will, where relevant, be met.

- (a) Nutrient management: To maximise nutrient use efficiency while minimising nutrient losses to water.*

(b) Irrigation management: To operate irrigation systems efficiently and ensuring that the actual use of water is monitored and is efficient.

(c) Soil management: To maintain or improve the physical and biological condition of soils in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.

(d) Collected animal effluent management: To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year.

(e) Livestock management: To manage wetlands and water bodies so that stock are excluded as far as practicable from water, to avoid damage to the bed and margins of a water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

(f) Offal pits and rubbish pits: To manage the number and location of pits to minimise risks to health and water quality.

6. *The plan shall include for each issue in 5 above:*

(a) detail commensurate with the scale of the environmental effects and risks;

(b) defined measurable targets that clearly set a pathway and timeframe for achievement, and set out defined and auditable “pass/fail” criteria;

(c) a description of the good management practices together with actions required;

(d) the records required to be kept for measuring performance and achievement of the target.

7. *Nutrient budgets are prepared by a suitably qualified person using a nutrient budget model, (such as OVERSEERTM), for each of the identified land management units and the overall farm.”*

280. **Comment:** Overall I support in principle Part B. The reason for this partial support is because there are a number of matters that need clarification, including the following:

281. In clause (b) there is a reference to an “*irrigation scheme, Industry Certification Scheme or catchment club*” – there is no definition in the Proposed Plan relating to a ‘*catchment club*’;

282. Clauses 5 and 6 of the FEP are very descriptive and require a high level of detailed information – the issue raised above regarding the capability of preparing and auditing these FEPs is relevant when considering these information requirements;
283. Clause 6 (b) requires that for each issue in (5) defined measurable targets that clearly set a pathway and timeframe for achievement and set out defined auditable “pass/fail” criteria. An auditable process that demonstrates nutrient use efficiency is being sought and achieved should be meaningful. The Freshwater Reform 2013 document seeks national guidance on accounting systems for nutrient management, so in my view some caution is needed in progressing these criteria;
284. **Recommendation:** It is recommended the Commissioners adopt the intent of Part B of Schedule 7 as recommended in the Officer Report, subject to addressing the particular concerns raised above (including capability and timeframes to achieve requirements).

Part C – Farm Environment Plan Audit Requirements

285. *“The Farm Environment Plan must be audited by a Farm Environment Plan Auditor who is independent of the farm being audited (is not a professional adviser for the property) and has not been involved in the preparation of the Farm Environment Plan, either personally or as an employee or contractor of the industry group, supplier or consultancy that has prepared the Farm Environment Plan.*

The Audit framework will give a grade of A, B or C for the Farm Environment Plan itself, and a grade of A, B or C for performance against the Farm Environment Plan actions.

The Farm Environment Plan will be assessed against the following minimum criteria:

- 1. Whether the Plan is technically sound and feasible*
- 2. Does the Plan identify and address the principal environmental effects and risks?*
- 3. Does the Plan enable all statutory obligations, including resource consents, to be met?*

4. Is the detail in the Plan, actions and timeframes for achievement commensurate with the scale of the environmental effects and risks?

The farming activity occurring on the property will be audited against the following minimum criteria:

- 1. Compliance with all relevant statutory requirements;*
- 2. An assessment of the performance against the targets, good practices and timeframes in the Farm Environment Plan;*
- 3. An assessment of the robustness of the nutrient budget/s;*
- 4. An assessment of the efficiency of water use (if irrigated).*

Farm Environment Plans shall be audited annually and the audit results provided to the CRC no later than 31 December for the previous 1 July to 31 June year, or such other annual period nominated. Once a farm environment plan review and audit period is nominated, each successive audit may be no more than 12 months apart.

286. *A grade of “A” for the Farm Environment Plan itself and “B” for performance against the Farm Environment Plan actions is considered an “A-B” grade in terms of Rules 5.39-5.51.*
287. *Any audit result that does not result in an “A-B” grade may be submitted with a revision of the farm environment plan, a list of corrective actions and a follow-up audit that shows an “A-B” grade within 6 months of the original audit without penalty under Rules 5.39 to 5.51.”*
288. **Comment:** Overall I support in principle Part C. This support is subject to a number of matters that require clarification or comment.
289. I consider there is a strong emphasis on the qualifications of the auditor, more so than who prepares the FEP. As mentioned in PART ONE of my evidence above, the audit process is perhaps an area where Council should take the lead, particularly for activities where the industry does not self-audit. Issues raised above regarding the capability of industry to audit the FEPs also apply.
290. It appears that is a requirement to only prepare on FEP, and to audit this FEP annually - presumably once the FEP is prepared it will only need to be updated with the relevant information, such as nutrient budgets and other variables.
291. I consider the nutrient management plan component (and nutrient budget) should be valid for at least 3 years unless there is a significant change in the

farm system. An annual audit can be conducted to ensure the farm is operating as described.

292. As discussed above in relation to Part A, I am also concerned whether there is capacity within the industry to prepare and audit these FEP, and an evaluation of the costs (in terms of a Section 32 evaluation) of building capability to comply with the requirements and timeframes set is required. I consider these matter need to be taken into account, particularly if seeking annual reporting and annual auditing.
293. **Recommendation:** It is recommended the Commissioners adopt the intent of Part C of Schedule 7 as recommended in the Officer Report, subject to addressing the particular concerns raised above.

Part D – Farming Information

294. *“Whenever one of Rules 5.39-5.51 requires information to be submitted, the following information is to be provided either in writing or via the Canterbury Regional Council’s website:*

1 The site area to which the farming activity relates;

2 A map or aerial photograph marked to identify the different blocks within the farm and the area in hectares of each;

3 Identification of any wetlands, watercourses, drains and swales on or adjacent to the property;

4 Monthly stocking rates (numbers, types and classes) including breakdown by stock class;

5 Annual yield of arable or horticultural produce;

6 A description of the farm management practices used on each block including:

(a) Ground cover – pasture, crops, fodder crops, non-grazed areas (including forestry, riparian and tree areas);

(b) Stock management – lambing/calving/fawning dates and percentages, any purchases and sales and associated dates, types and age of stock;

(c) Fertiliser application – types and quantities per hectare for each identified block;

(d) Quantities of introduced or exported feed;

7 Farm animal effluent, pig farm effluent, feed pad and stand-off pad effluent management including:

(a) Area of land used for effluent application;

(b) Annual nitrogen loading rate and nitrogen load rate per application;

(c) Instantaneous application rate;

8 Irrigation – areas, rates, monthly volumes and system type.

The information is to collated for the period 1 July to 31 June in the following year and be provided annually, or such other annual period nominated, no later than the 31st of October.”

295. **Comment:** Overall I support in principle Part D. This support is subject to addressing the concerns raised in Part A in relation to capacity within the primary industry to prepare and audit these FEP, and an evaluation is needed of the costs and benefits (in terms of a Section 32 evaluation) of providing detailed monthly farm information for each year’s activity.
296. **Recommendation:** It is recommended the Commissioners adopt the intent of Part D of Schedule 7 as recommended in the Officer Report, subject to addressing the particular concerns raised above.

Definitions

Plan Provision: Section 2.10 Definitions

297. The following definitions are of particular interest to HWP:

Plan Provision – Definition of ‘Changed’

298. *“**Changed** (in terms of Rules 5.42 to 5.45): means a change in land use, calculated on a per property basis that arises from either:*
- 1. a resource consent to use, or increase the volume of, water for irrigation on a property; or*
 - 2. an increase of more than 10% in the loss of nitrogen from land used for a farming activity above the average nitrogen loss from the same land for the period between 1 July 2011 and 30 June 2013. The amount of nitrogen loss shall be calculated using the OVERSEERTM nutrient model for the 12 months*

preceding 1 July in any year and expressed as kilograms per hectare per year.”

299. **Submission:** HWP was concerned as to the practicable application of this definition as it relates to Rules 5.42 to 5.45. In particular HWP was of the view a 10 % change is an arbitrary number, and is not necessarily linked to adverse effects. Such a change may be of quite variable significance (depending on the current land use).
300. In addition, considering the accepted margin of error for OVERSEERTM of 20-30 %, the selection of 10 % N loss as a definition of land use change seems inconsistent with accepted bounds of system variability.
301. Furthermore the establishment of the data inputs for the period 1 July 2011 to 30 June 2013, will in some cases be difficult to verify, making the requirement difficult to enforce.
302. The above matter may mean resource consents become unduly onerous and costly to gain.
303. It is also noted *‘changed’* is to be measured on a *‘per property’* basis, and the definition of *‘property’* is not included in the proposed Plan. HWP believes a broad definition of *‘property’* is needed (for example it would not be restricted to land title but area of farm operations) to ensure the determination of change is appropriate and associated with a particular farming activity.
304. HWP sought for the deletion of the definition of *‘changed’* within the proposed Plan and consideration of an alternative approach/definition, with any definition adopting a broad definition of *‘property’* that relates to the area being farmed.
305. **Officer Report:** While the Officer Report does not specifically record HWP raising the matters it has, it is clear that a number of submissions raised the same concerns that HWP did, and sought the definition of *‘changed’* to be deleted. The Officer Report states: *“Overall, the definition of changed is critical to the interpretation of the rules, and the thresholds beyond which resource consent is required for activities, particularly in orange and red zones and sensitive lake catchments as shown on the planning maps. The definition of changed is therefore required to be particularly certain and not open to interpretation or input errors.”*

306. The Officer Report goes on to state that the recommendation is to move away from the use of OVERSEER™ as a mechanism to calculate whether a threshold has been reached, and instead have a mechanism based on stocking rates or arable production, or an increase in the amount of water consented to be applied to the property. The definition along with the other aspects of the policy and rule framework is recommended to be based on a property rather than site.
307. The other notable change is to an increase in the averaging timeframe, so that greater variability in seasons can be accommodated within the changed definition. The Officer Report recommends the deletion of the previous definition, and replacing it with the following:
308. “Change in farming activity means any one or more of:
1. irrigation of all, or any part of, a property that was un-irrigated at 11 August 2012;
 2. an increase in the consented volume of water available to be used on the property compared with that consented at 11 August 2012;
 3. greater than a 10% increase in the annual average stock units carried on the property, compared with the annual average stock units averaged over 1 July 2010 to 30 June 2013; or
 4. greater than a 20% increase in the annual horticultural or arable yield, compared with the annual horticultural or arable yield averaged over the period 1 July 2010 to 30 June 2013.
- and “Changed” in relation to the nutrient management policies and rules has the same meaning.”
309. **Comment:** Overall I support in principle the new definition of ‘change’. I also note the term ‘property’ is addressed in my Hearing Group 1 evidence. I agree with the Officer Report that this definition is a critical for defining the activity status for rules. I consider the new definition is more appropriate than the notified Plan definition as it includes stock unit and horticultural/arable yield increases which are more of a true land use change.
310. Notwithstanding this support in principle, there are a number of matters that require addressing in order to ensure an appropriate definition is achieved. These matters include:

- I note that some farming activities (such as arable/horticulture) may still require some allowance for long term crop rotation cycle;
- I am concerned that Council are seemingly '*grand parenting*' inputs to the farming system, and not placing any focus on adverse effects;
- The removal of the 2017 timeframe may mean that a large number of FEPs are required relatively quickly – as I have already discussed in my evidence above, this may put pressure the capability of the industry to respond with appropriately certified people – a strategy may be required where initially the preparation of FEP's target '*Red*' nutrient zones and there is a 5 year build up period for the preparation of FEPs in other zones.

311. **Recommendation:** It is recommended the Commissioners adopt the new definition of '*change*' recommended in the Officer Report, subject to addressing the matters raised above and elsewhere in this evidence

Plan Provision: Definition - Environmental Management Strategy for Irrigation

312. **Submission:** HWP opposed the definition of '*Environmental Management Strategy for Irrigation*' being included in the Plan. HWP noted that the term does not appear in the objectives, policies or rules and thus questions why it has been defined within the proposed Plan.
313. HWP was concerned that should it be used to inform the development of Farm Environment Plans (including nutrient management plans), that adopting the template contained in the material "*An Environmental Management System for Irrigation in NZ*" for auditing and standards for nutrient management may cause a fragmented approach within the industry.
314. **Officer Report:** While the Officer Report does not record HWP's submission, it does identify a number of submitters sought deletion of the reference to the '*Environmental Management Strategy for Irrigation*'. The Officer Report recommends this definition be deleted.
315. **Comment:** I support the deletion of the definition of '*Environmental Management Strategy for Irrigation*'.

316. **Recommendation:** It is recommended the Commissioners accept the Officer Report recommendation and delete the definition ‘*Environmental Management Strategy for Irrigation*’.

Plan Provision – Definition “Nutrient Discharge”

317. “**Nutrient discharge:** means the modelled discharge of nutrients using OVERSEERTM.”
318. **Submission:** HWP expressed concern that the definition in the context of the wider plan may not be practical. HWP understood that not all land use activities are included in OVERSEERTM, and therefore, by this definition those land use activities not in OVERSEERTM would remain outside the definition for nutrient discharge.
319. HWP sought for the definition of Nutrient Discharge to be deleted and replaced with a meaning that refers to nutrient loss from the farms by surface runoff or by leaching below the root zone.
320. **Officer Report:** The Officer Report records the matters raised by HWP and the relief it sought, and recommends the definition be amended as follows:
321. “**Nutrient discharge** means nutrient loss from the property by surface runoff or by leaching below the root zone ~~the modelled discharge of nutrients using OverseerTM.~~”
322. **Comment:** I support the definition recommended in the Officer Report.
323. **Recommendation:** I recommend the Commissioners amend the definition of ‘*nutrient discharge*’ as recommended in the Officer Report.

Plan Provision: Definition of ‘Farm’

324. **Submission:** HWP noted that throughout the policies and rules there is reference to ‘*farm*’, ‘*a farming activity*’, or ‘*any farming activity*’. Interpretation of these terms will have a significant impact on resources and capability needed to meet the requirements of rules which apply to nutrient management and nutrient losses from farming activities. If defined by area, a minimum of 10 ha at least should apply.

325. HWP sought the introduction of a new definition for interpretation of *'farm'*, *'a farming activity'*, or *'any farm activity'* as they are applied in the rule regime. In particular this definition should include a minimum area of 10 ha.
326. **Officer Report:** The Officer Report does not record HWP's submission point and the request for a new definition of *'farm'*, *'a farming activity'*, or *'any farm activity'* as they are applied in the rule regime. Notwithstanding this, the Officer Report does include some new definitions that include *'new farming activity'* and *'existing farming activity'* which does assist to address the concerns expressed by HWP. I cover these new definitions below.
327. **Comment:** I note the term *'property'* has been introduced as part of the s.42A Report for Hearing Group 1 as an alternative to defining *'farm'*, and I address that definition in my Hearing Group 1 evidence. I consider the new definitions are helpful in clarifying what is existing and new farming activities and I support the recommendation to include these definitions in the proposed Plan.
328. **Recommendation:** I recommend the Commissioners note that the HWP submission has been addressed through the recommendation to define *'property'* as discussed in Hearing Group 1.

New Definitions Added

329. The Officer Report recommends the following definitions be added to the proposed Plan.

Plan Provision: Existing farming activity

330. *"Existing farming activity means the use of land for primary production (excluding forestry) that is not a "changed farming activity".*
331. **Comment:** This is a new definition that is required following the new *'changed'* definition. I support the recommended definition as I consider it is appropriate and necessary.
332. **Recommendation** It is recommended the Commissioners adopt the new definition of *"Existing farming activity"* as recommended in the Officer Report.

Plan Provision: New farming activity

333. *“New farming activity means the use of land for primary production (excluding forestry) where no primary production has occurred on that land in the previous three years.”*
334. **Comment:** This is a new definition that is required following the new ‘*changed*’ definition. I support the recommended definition as I consider it is appropriate and necessary.
335. **Recommendation** It is recommended the Commissioners adopt the new definition of “*New farming activity*” as recommended in the Officer Report.

Plan Provision: High nutrient risk farming activity

336. *“High nutrient risk farming means any one or more of:*
- *Feeding cattle on a fodder crop that has been established on irrigated land;*
 - *Arable farming or horticulture (excluding grapes);*
 - *Farmed pigs; or*
 - *Irrigated dairy.”*
337. **Comment:** Overall I support in principle the new definition of “*High nutrient risk farming*”. However, I note there may be uncertainty about how the rules apply to a mixed operation where an extensive sheep or cattle farm has an area of arable or horticulture crops or an area where fodder crops are feed to cattle.
338. **Recommendation:** It is recommended the Commissioners adopt the new definition of ‘*High nutrient risk farming activities*’ as recommended in the Officer Report, while clarifying how a mixed operation may be considered.

Plan Provision: Advanced mitigation measures

339. *“Advanced mitigation measures means the adoption of multiple techniques from the following list to minimise nutrient losses from a property:*
1. *Winter shelter*
 2. *Restricted grazing*
 3. *No winter grazed fodder crops*
 4. *Reduced stocking rates*
 5. *Low N feed*
 6. *Reduced/Nil fertiliser*

7. *Improved animal efficiency*
8. *Improved irrigation efficiency (better than 80%)*
9. *Nitrification inhibitors*
10. *Optimum Olsen P*
11. *Low solubility P fertiliser*
12. *Effluent management*
13. *Reduced water use*
14. *Catch cropping*
15. *Improved soil physical condition to reduce erosion*
16. *Natural wetlands*
17. *Floodplain wetlands*
18. *Constructed wetlands*
19. *Riparian margins*
20. *Grass buffers*
21. *Swales*
22. *Sediment traps/ponds”*

340. **Comment:** I note the purpose of this new definition seems to be to provide farmers with a list of techniques for higher levels of nutrient loss mitigation than can be adopted into their FEP and implemented. While overall I support the intent of the new definition to provide a list of advanced mitigation measures for what it is, I question whether a number of the mitigation measures identified are ‘*advanced*’ as a number of them are ‘*business as usual*’.
341. I consider it would be more useful if the mitigation identified was categorised (similar to the proposal for Horizons One Plan) where there are Tier 1, Tier 2 and Tier 3 levels of mitigation identified, and it was clear to a farmer what level of mitigation was expected, depending on the level of nutrient discharges they proposed. If there is a net increase in nutrient discharge, then high Tier mitigation is required and that would assist the farmer if they intend to adopt a change in farming activities.
342. **Recommendation:** I recommend the Commissioners adopt the proposed new definition of “*Advanced mitigation measures*” recommended in the Officer Report while giving consideration to categorising the measures to clearly identify what is ‘*basic*’ and what is ‘*advanced*’.

Chris Hansen

2 April 2013