

IN THE MATTER

of the Resource
Management Act 1991
(RMA)

AND

IN THE MATTER

of proposed Variation 6
to the Proposed Natural
Resources Regional
Plan – Chapter 4 Water
Quality Hearing

TO BE HEARD BY

Environment
Canterbury

HEARING DATE

14th April 2010.

**Statement of Evidence of Christopher Adrian Hansen on Behalf of
Ravensdown Fertiliser Co-operative Ltd**

14 April 2010

Introduction

1. My name is Christopher Adrian Hansen and I am SKM's National RMA Planning Manager based in its Wellington Office. 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 certified RMA Hearings Commissioner. I have over 28 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 lodged by Ravensdown Fertiliser Co-operative Ltd (Ravensdown) on proposed Variation 6 to Chapter 4 – Water Quality of the proposed Natural Resources Regional Plan. I assisted Ravensdown prepare its submission and further submissions on these matters.
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 from a planning perspective of the relief sought by Ravensdown and making comment on the Officer Report's recommendation on that relief. In my evidence I will first address concerns with the overall approach of the variation. I will then follow this with comments on specific proposed Variation 6 provisions that Ravensdown have submitted on. These provisions generally relate to the following key areas:
 - Hazardous substance control and use of non-complying status
 - Control of land use development to existing land uses
 - Agricultural land use intensification limits and non-complying status for using of water for irrigation within the groundwater protection zones
6. Also in attendance at the hearing for Ravensdown are Mr Richard Christie, General Manager - Strategic Development, and Mr Matthew Ellen - Process Manager at Hornby. Mr Ellen will be providing evidence on: the history of

Ravensdown's operations at the Hornby site, located in Zone 1A; the current hazardous substance requirements Ravensdown adheres to and systems it has in place; and the potential impacts upon this site of the proposed Variation 6 provisions. Mr Christie will address potential impacts of the provisions for Zone 1 on agriculture.

General Submission – Approach of Proposed Variation 6 (Submission Statement #11.1 and 11.7)

Overview of Ravensdown Submission

7. In its submission, Ravensdown requested that Council review and revise the policies and rules of proposed Variation 6 to adopt a risk based approach to management of the issue.
8. In particular Ravensdown sought for Council to:
 - Review and rewrite Variation 6 to ensure that proposed Plan provisions balance the managing of the specific resource management issues targeted and the social and economic and cultural well being of the community; and
 - Ensure that provisions are enabling by using the controlled activity and restricted discretionary activity status for activities that are unable to meet permitted activity performance standards.

Officer Report

9. The Officer Report commented that the overall aim of the provisions is to establish a risk-based approach to protecting Christchurch's groundwater, while recognising that existing land uses expose the groundwater to a level of risk of contamination that would otherwise not be acceptable. By requiring a high level of management practices, the risk may be reduced but it will not be eliminated. Therefore, Council is taking a pragmatic response which is not extended to those land areas where the risk is still avoidable through not allowing new land uses to establish where these land uses have the potential to increase the risk. In summary, the Officer Report states that avoidance is the surest way to achieve the objectives and protect the high quality untreated groundwater resource.

Comment

10. I note that the policy provisions of proposed Variation 6 have been recommended to be rewritten as a result of the consideration of submissions.

Overall I consider that this revision does aid clarity and understanding of the variation and it has satisfied some concerns Ravensdown originally raised. However the overall approach is still a concern to me.

11. Council's approach to this issue is set out quite succinctly in the legal submission of Margo Perpick and planning evidence of John Talbot. Where Christchurch groundwater is vulnerable to pollution from surface activities Council has taken, in my view, a very risk averse approach of allowing no new development or intensification of existing development beyond levels already provided for. Council acknowledge that the potential effect is low probability but high impact. The legal submission and evidence clarifies this approach is based on the implication to the groundwater supply should contamination occur, the difficulty in remediating pollution and the cost of treating or providing alternative water supply. Council acknowledge that there is scientific uncertainty regarding how much, if any, new development or intensification of existing development could occur without creating a significant risk of the potential adverse effect. Due to this uncertainty, Council have used the precautionary principle as a reason to prohibit new development or intensification of existing development that presents a risk to groundwater in highly vulnerable areas.
12. Ravensdown's submissions and further submissions generally relate not to whether groundwater is of value, it is accepted that it is, but instead to the appropriate way to manage the risk and the cost and implications to industry with the approaches taken. In particular, I understand that proposed Variation 6 has eventuated from the need to address stormwater control from new subdivision being experienced along the western side of Christchurch, and Council has extended the groundwater recharge zones to address these issues. While this is understandable, there appears to be no consideration of existing lawfully established industrial activities, and other mechanisms that may achieve the same purpose. In addition, the presumption that no risk in vulnerable areas is not, in my view, consistent with the RMA, which requires the risks to be identified and the environmental effects to be managed.
13. Mr Ellen will provide in his evidence details of the current and future operations on the site, and will comment how the effect of potentially allowing no change in existing land uses at the site would constrain future operations.

There appears to be little allowance for the fact that existing industrial landuses are dynamic not static with changes in process over time to suit markets, raw materials supply, advances in manufacturing and industry practises. Nor does there seem to be any recognition of existing HZNO requirements that industry, such as Ravensdown, currently comply with that minimises the risk of any hazardous substances reaching the groundwater recharge zones. As Mr Ellen points out, Ravensdown also has Best Practice procedures relating to the operations on its site that supplements the HZNO requirements. The approach taken by Council in proposed Variation 6 is not, in my view, justified nor necessary when considering the above mechanisms.

14. In a similar fashion, proposed Variation 6 looks to limit intensification of agriculture. As Mr Christie points out, this will place unnecessary and inappropriate constraints on the ability of rural industry to adapt to future farming and economic needs.
15. The proposed approach of avoiding risk is, in my view, very constraining and fails to balance social and economic factors regarding the use of the area. I consider that alternative approaches could be used to achieve the same management aim *protection of Christchurch's groundwater supply* without the need for such limiting controls on activities. Two approaches that could be used include:
 - Use of best practises and guidelines for hazardous substance and agricultural land use control to manage risks
 - Setting limits around the allowable effects that can occur as a result of land uses and then allow land uses such as farming to adopt appropriate practises to meet these limits
16. In addition, I consider the approach taken is not consistent with some of the wording from the explanation and principle reasoning to Objective WQL4. This provides the following comment regarding the Christchurch Groundwater resource: *“The existing overall water quality within the Christchurch Groundwater System is high, but not pristine. This reflects the long history of human activities in this location. Objective WQL4 anticipates that, with appropriate mitigation, activities will be able to continue and develop as provided for in the Canterbury Regional Policy Statement, City of Christchurch District Plan and Proposed Selwyn District Plan. Central to this*

is ensuring that activities that increase the risk of further decline in groundwater quality are managed.”

17. I consider that this implies that management options should be available to allow all activities to continue and importantly develop and thus enables the community to allow for future developments. However, the proposed provisions, including use of non-complying status for agricultural land use and hazardous substance storage in large quantities, will cause significant costs and delays in consenting and introduce uncertainty in outcomes that will limit the ability to “develop” land use that the Objective intends to allow for. It could potentially result in long established Christchurch businesses considering relocation.

Other submissions that relate to this point

18. The following submissions by Ravensdown and further submissions relate to similar points about the overall approach and potential alternatives to that approach:
19. Ravensdown’s submission 11.5 sought for Council to review the management approach of Policy WQL13 and recognise within the explanation and principle reasons that it may be possible to manage to risk to an appropriate level through compliance with regulations and adherence to Best Practice.
20. Ravensdown (F123.8, F123.14 and F123.15) supported submissions by Shell NZ Ltd, BP Oil NZ Ltd, Chevron NZ and Mobil Oil NZ Ltd (31.3), Belfast park Ltd and Tyrone Estates ltd (33.3) and Winstone Aggregates (32.5) that sought in general to reword the explanation and principal reasons to Policy WQL13 to ensure that the risk of contamination of groundwater is properly assessed and that risk assessment will involve consideration of probability as well as consequence.
21. Ravensdown (F123.61) supported submission 6.1 by RC Carter, PM Carter and EJ Taylor to delete all references to avoidance of urban residential, commercial or other uses of land in the recharge zone from Policy WQL17 and replace them with a regime of controls that relate to the management of the risk instead.
22. The Officer Report recommends these submissions be rejected.

23. I therefore **seek** that the Commissioners review and revise the policies and rules of proposed Variation 6 to adopt a risk based approach to management of the issue as sought by Ravensdown and other parties in submissions.

Policy WQL14 General Control of Activities (Submission Statement #11.6)

24. In its submission, Ravensdown requested that Council revise the Policy to allow for existing lawfully established activities to undertake new developments in line with its current business operations at existing sites.

Comment

25. The Officer Report recommends that Policy WQL 14 be replaced as a result of consideration of other submissions. In respect of Ravensdown's interests in proposed Variation 6, new Policies WQL13 and WQL14 are considered relevant as these relate to the following:

- Policy WQL13 Activities in Christchurch Groundwater Protection Zone 1, and;
- Policy WQL 14: Activities in Christchurch Groundwater Protection Zone 1A (Urban).

26. Zone 1 is to the west of Christchurch and is mainly rural therefore affects agricultural landuses and Zone 1A includes Ravensdown's Hornby fertiliser manufacturing site.

27. In Zone 1A (that relates to the Hornby site) the following policy approach is outlined:

28. *“(1) Enable the establishment of activities provided for in the City of Christchurch District Plan or Selwyn District Plan on 1 August 2007, or the Canterbury Regional Policy Statement, to the extent that: (a) the activity is consistent with the protection of groundwater quality; and (b) best management practice measures are implemented.*

29. *(2) For existing lawfully established activities occurring in existing urban areas, require implementation of all practicable management measures to protect groundwater quality, including: (a) current industry design standards; and (b) where appropriate, any relevant codes of practice.*

30. *(3) Enable the City of Christchurch to develop for urban purposes on: (a) land yet to be developed for urban purposes but which is zoned for such purposes in the City of Christchurch District Plan on 1 August 2007; and (b) land yet to*

be zoned for urban purposes within City of Christchurch District Plan but which is within the Urban Limits identified in the Canterbury Regional Policy Statement.

31. *(4) Ensure that for all new activities in the areas identified in (3) above: (a) any sewage collection, treatment and disposal system is designed, constructed and maintained in accordance with best management practices; and (b) any stormwater collection, treatment and disposal system is designed, constructed and maintained in accordance with best management practices.*
32. *(5) Any extension to existing lawfully established hazardous facilities, or any new hazardous facility, must provide adequate measures to prevent toxic mobile or persistent contaminants entering groundwater as a result of: (a) the routine use of a hazardous substance; or (b) leakage or spill from a hazardous facility or pipeline; or (c) seismic activity that is likely to result in structural damage from ground motion; or (d) emergency situations.*
33. *(6) All hard surfaces and vehicle standing areas associated with urban activities must be designed, constructed and maintained so as to avoid hazardous substances and contaminants entering groundwater.*
34. *(7) Mobile hazardous facilities associated with urban activities must be managed so as to avoid hazardous substances entering land or groundwater including during machinery refuelling, hazardous substance transportation, hazardous substance use and handling, and in the event of accidental spillage.”*
35. Parts (1) and (5) are of concern to Ravensdown regarding its Hornby site and will be assessed in turn:

Part (1) Establishment of activities as provided for in the CCC plan or RPS

36. Part (1) relates to the allowance of activities to establish that are allowed for in the existing CCC plan or RPS. As outlined in the evidence of Mr Ellen, activities at the Hornby plant have changed over time and it is logical to assume further change in the future to keep the business operational. From the wording currently outlined in the proposed Variation 6, it is unclear at what point any land use activity changes on site may be considered to be not provided for and thus not allowed. The methods outlined in the variation include method WQL 13(j) that states: *“Territorial authorities shall, in the preparation, variation, change or review of their district plans, and the*

exercise of their functions under Resource Management Act 1991, make provision for the prevention or mitigation of adverse effects on Christchurch groundwater quality by, in Christchurch Groundwater Protection Zone 1, and Zones 1A, 1 B, 1 C and 1 D, controlling:.....2. the type of land uses that may be established....”. I consider it is appropriate for Ravensdown to have clarity regarding the restrictions this will place on its ongoing use of its site for fertiliser manufacture and/or any other land uses it may consider the site suitable for in the future. I consider that clarity of what “*land use activities*” would and would not be established would be of value. That will allow the Commissioners to assess and understand real impacts on businesses in these zones.

37. I therefore **seek** the Commissioners to ensure that the provisions do not limit existing landowners from using their land and modifying existing practises such as necessary to operate their businesses.

Other submissions that relate to this point

38. The following submissions by Ravensdown and further submissions relate to similar points about the overall approach and potential alternatives to that approach:
39. Ravensdown (F123.64 and F123.30) supported submission 15.8 by Selwyn District Council and 25.31 by Christchurch City Council that sought to amend Policy WQL17(1)(b) so that any other residential, commercial or industrial development is only allowed if it avoids, remedies or mitigates any adverse effects on groundwater quality to acceptable levels.
40. The Officer Report recommends these submissions be rejected and stated that the physical removal of pollution from the groundwater is virtually impossible, therefore, the remedying of pollution events is not a practical option. Some land use activities will be able to be designed to mitigate against pollution, however, intensification of land use will result in degradation of unconfined groundwater. The policy recognises situations where mitigation could be acceptable. The highly vulnerable Zone 1 requires a highly protective management approach. The risk of pollution and consequences for all Christchurch’s drinking water supply leads to a policy approach of avoiding unnecessary risk. This is implemented through not allowing further

development where there is no valid expectation as a result of an approved plan. The dates in the policy fix such an expectation.

41. The submitters sought for an approach that future land uses not already envisaged in their plans be allowed to develop if they can demonstrate that the adverse effects can be managed. It is considered that the relief sought is broadly in line with Ravensdown's regarding the allowance for activity development.
42. I therefore **seek** for the Commissioners to adopt the relief originally sought.

Part (5) Extension to lawfully established hazardous facilities

43. Part (5) provides for the extension of lawfully established hazardous facilities. As Mr Ellen has stated in his evidence, Ravensdown's fertiliser manufacturing site uses and stores many materials and these will change over time. Recognition that their hazardous substance use will change over time and that the stores may need to be and can be extended and modified is welcomed.
44. Ravensdown submitted on the rules relating to the use of land for storing and using hazardous materials. These have been replaced with a new Rule WQLYY and my comments are directed at that. I note that the use or storage of hazardous materials in large quantities in Zone 1A is a non-complying activity.
45. I consider that if the intention of the proposed Variation 6 is to allow for existing lawfully established storage activities to be extended, then adopting a non-complying activity status does not achieve this intention as the effort required to meet the two 'gateway' tests for a non-complying activity is too high and unnecessary. I consider a more reasonable activity status would be restricted discretionary, with discretion limited to the potential effect on Christchurch's Drinking Water Supply and the need for adoption of best practise guidelines and measures to manage the risk the change in activity may pose. This will allow Council to protect the features of interest without creating excessive delays and costs for resource users
46. I therefore **seek** for the Commissioners to adopt restricted discretionary status for the extension of an existing lawfully established hazardous materials store in Zone 1A.

Other submissions that relate to this point

47. The following submissions by Ravensdown and further submissions relate to similar points about the overall approach and potential alternatives to that approach:
48. Ravensdown (F123.65) supported in part submission 31.25 by Shell NZ Ltd, BP Oil NZ Ltd, Chevron NZ and Mobil Oil NZ Ltd who sought from Council that if there are to be any changes to the rules, ensure they enable existing hazardous facilities to continue to operate as a permitted activity, that any additions or extensions to such facilities can be undertaken (irrespective of aggregate volume) by way of a restricted discretionary activity consent, and that there be no prohibited activities (except for landfills as identified in the policy framework). See submission points 31.26 to 31.32. The Officer Report recommended that these submissions be rejected.
49. Ravensdown supported the approach to hazardous facilities and the relief sought as it aligns with their requested approach. I therefore **seek** the Commissioners to adopt the relief sought in these submissions.

Policy WQL16 Control of Rural Production (Submission Statement #11.8)

50. Ravensdown's original submission raised the concerns that the approach proposed was restrictive as it could require large time delays and costs to demonstrate that there will be no adverse effect as a result of land use changes and does not enable the community to change land use types over short time scales to reflect economic conditions and respond to climatic events.
51. Policy WQL 16 has now been replaced as a result of other submissions. In respect of Ravensdown's interests in this Variation new Policy WQL13 is considered relevant as it relates to the following:
- Policy WQL13 Activities in Christchurch Groundwater Protection Zone 1
52. This policy contains the following direction to control on agricultural land use
“(8) Existing lawfully established rural production land uses must minimise the potential for contaminants to reach groundwater by instituting all practicable management measures relating to: (a) the application of water; and (b) the use and storage of fertilizer; and (c) agrichemical storage and application; and (d) incidental farm management activities such as farm landfills and offal pits.

53. *(9) Rural production land uses must not be intensified, or new rural production uses established, that increase the potential for nutrient, chemical and microbiological contaminants to adversely affect groundwater quality, including by the take and use of water not authorised as of 3 July 2004.”*
54. The provisions appear have the same intent as in the original Policy WQL13. Overall, in my view, the proposed provisions will still place significant limits on agricultural land use change in this zone.
55. The intention is to not allow the intensification of any land use still and the explanation and principle reasons to the plan state that this will be undertaken using the use of water for irrigation as the main indication of intensification. Chapter 5 (Water Quantity) of the NRRP contains rules covering the use of water for irrigation (Rules WQN25, WQN26 and WQN32). Under these rules the using of water for irrigation in the groundwater protection zones is classed as a non-complying activity.
56. Therefore it appears that the current approach is to require land use intensification, as indicated by using water for irrigation, to obtain consent as a non-complying activity. This is likely to require complex assessments and be restrictive to farming activities. I consider that a restricted discretionary consent may be more appropriate with discretion limited to the potential impact on the Christchurch groundwater protection zones. That would allow consent to be obtained without excessive costs where farming methods can be identified to not cause risk to the drinking water supply. This approach would give rural landowners the ability to adopt practises that allow them to change land uses over time in accordance with economic conditions as long as they can demonstrate that their practises will protect groundwater quality.
57. I therefore **seek** for the Commissioners to adopt restricted discretionary status in the Chapter 5 rules relating to the use of water for irrigation in the Christchurch Groundwater Protection Zones and use this as the only approach to control of rural production and the intensification of land use.

Other submissions that relate to this point

58. The following submissions by Ravensdown and further submissions relate to similar points about the overall approach and potential alternatives to that approach:

59. Ravensdown (F123.54) supported submission 34.16 by Federated Farmers North Canterbury Province to amend the second sentence of item 1 of the explanation and principal reasons to Policy WQL14 to recognize that the potential number of contaminants and contaminant pathways is dependent on the nature of the activity and quality of management of the activity, as well as the intensity of the activity.
60. Ravensdown (F123.25 to 28) supported submission 41.20 by Gillman Wheelans Ltd and four other parties that sought to amend Policy WQL16 to recognise that not all intensification of rural productive use results in actual or potential contamination of groundwater.
61. Ravensdown (F123.59 and 60) supported submission 15.7 by Selwyn District Council and 25.28 by Christchurch City Council that sought to amend Policy WQL16(2) to read or similar: "Ensure that the effects of any intensified or new rural productive land use that may increase the potential for nutrient, chemical and microbiological contaminants entering groundwater avoids, remedies or mitigates adverse effects on Christchurch groundwater quality."
62. These further submission points relates to agricultural land uses and the risk of impacts arising from them and their management. The Officer Report recommend these submissions be rejected.
63. I therefore **seek** for the Commissioners to adopt the relief sought in Ravensdown's original submission and the other submissions addressed above.

Additional submission and further submission points

64. The following points relate to relief sought by Ravensdown in other submission and further submission points. I **seek** for the Commissioners to consider and adopt these points.

General Further Submission on Proposed Variation 6

Further Submission F123.1

65. Ravensdown F123.1 supported Submission 18.3 by Westmorland Heights Partnership. This submission requested Council to amend the explanation and principal reasons of Variation 6 to provide more guidance as to how 'best management practice' is decided and remove the suggestion that the best

management practice must be implemented irrespective of the impact on the economic viability of the development.

Officer Report

66. The Officer Report recommended that Ravensdown's further submission be rejected and stated that there is a description of the phrase in the explanation to Policy WQL14 as to the meaning of this term. The words are to be read in their normal meaning to provide flexibility of measures so long as the outcome is achieved.

Comment

67. This relates solely to new activities, the explanation currently reads "*In this context "best management practice measures" means those mitigation measures or practices that would be expected to be implemented as part of an environmentally responsible activity in order to avoid the potential for groundwater contamination, irrespective of the implications for the financial viability of the proposed activity.*"
68. Therefore the intent of Council appears to be to require the installation of anything that avoids the potential for groundwater contamination that may arise from new activities with no consideration of cost versus risk. While the desire to protect groundwater is understood this wording leaves uncertainty in terms of what level of protection may be required which may affect future decisions to invest in new activities. This can affect both agricultural and industrial activities.
69. I therefore **seek** for the Commissioners to ensure that the plan provisions allow for some balancing of the best management practises and the financial implication of these.

Further Submissions F123.4 and F123.5

70. Ravensdown supported Submission 40.3 by KB Contracting and Quarrying Ltd and Submission 43.2 by Clearwater Land Holdings Ltd. These submission requested Council to clarify the terms "legally established", "authorised" and "provided for in the Christchurch District Plan" including Plan Variations and Plan Changes, and to clarify whether the term "legally established" otherwise has the same meaning as "lawfully establish".

Officer Report

71. The Officer Report recognises that the terminology must be clear and unambiguous. Therefore, the report recommends an amendment is required to ensure that the term “lawfully established” is used consistently.

Comment

72. I therefore support the Officer Report’s recommendation and **seek** that the Commissioners adopt it.

Further Submission F123.10

73. Ravensdown opposed submission 2.1 by the Halswell Residents Association seeking to replace the word avoiding with prohibiting in Policy WQ13(i).

Officer Report

74. The Officer Report recommended that Ravensdown’s further submission be accepted and states: *“The two words may have the same effect when it comes to the rules (where prohibited status is given effect). However, the word “avoid” is preferred in the policy level as it is consistent with the RMA. It may be achievable to avoid something without actually prohibiting the activity.”*

Comment

75. I therefore support the Officer Report’s recommendation and **seek** for the Commissioners to adopt it.

**Policy WQL17: Control of the intensity of activities within Christchurch
Groundwater Protection Zones 1 and 2**

Further Submissions F123.62 and F123.63

76. Ravensdown opposed submission 4.8 by Yaldhurst Rural residents Association and 5.8 by Neil A McCracken and Jenifer M Nepton that sought for Council to replace the word "avoid" with "prohibit" in Policy WQL17(1)(b).

Officer Report

77. The Officer Report recommended that Ravensdown’s further submission be accepted and stated that the word “avoid” is appropriate because the implementation of “avoid” is to formulate rules which set out provisions to ensure there is no contamination. This allows appropriate classification from permitted through to prohibited. Depending on the risk and consequences. Using the word “prohibit” in the policy would imply that all such activities would be prohibited and no resource consent could be applied for.

Comment

78. I support the Officer Report's recommendation and **seek** for the Commissioners to adopt it.