

BEFORE THE

Canterbury Regional Council

IN THE MATTER OF

Proposed Variation 2 to the Canterbury Land and
Water Regional Plan

STATEMENT OF EVIDENCE OF

ROBERT EWAN MCDOWELL

ON BEHALF OF

THE HINDS PLAINS LAND AND WATER PARTNERSHIP

Dated 15 May 2015

Introduction

Qualifications and Experience

1. My name is Robert (Rab) McDowell. I hold a diploma in Agriculture (with distinction) from Lincoln College.
2. I chair the Hinds Plains Land and Water Partnership, a group formed by the community members of the Hinds Plains area to provide effective community input into the Zone Committee process.
3. I am chair of Barrhill Chertsey Irrigation Ltd. BCIL and Electricity Ashburton are members of the Joint Venture that operates the Barrhill Chertsey Irrigation Scheme.
4. I, with my wife Margaret, farm 540 hectares in the Hinds Plains catchment at Mayfield. The farm produces cereals such as wheat barley and ryecorn, seeds such as grass seed and carrot seed, finishes lambs for winter supply contracts, contract grazes dairy heifer replacements, winters dairy cows and supplies service bulls to dairy farms. Approx 300 ha is irrigated by the Barrhill Chertsey Irrigation Scheme.

HPLWP

5. The Hinds Land and Water Partnership (HPLWP) was formed towards the end of the consultation phase of the Zone Committee (ZC) process for the Hinds Plains. It was formed by the community members of the Hinds Plains area to provide effective input into the Zone Committee in response to a view widely felt within the community that the consultation process with key stakeholders was less than satisfactory.
6. Major factors in the less than satisfactory ZC consultation process
 - Lack of Hinds Plains community representation on the ZC leading to a lack of understanding of key issues.
 - A consultation process which on the surface appeared wide and encompassing but lacked understanding of or engagement with key stakeholders.
 - A lack of economic or social analysis of the consequences of proposed remedies.
7. After its formation the HPLWP was given opportunities to make representation to the ZC. Section 42a (3.43) notes 13 meetings with the HPLWP. These meetings were valued by the HPLWP and while it acknowledges it had some influence on the ZC findings, it considers it was not successful in influencing the ZC to develop a plan that was both workable and achieve the aspirations of the ZC.

HPLWP Representation

8. The HPLWP membership is drawn from throughout the Hinds Plains catchment including the Upper Plains and the coastal drains area.
9. HPLWP wishes to speak to this submission and to present witnesses to support its evidence.

HPLWP Support for Other Evidence

10. HPLWP endorses the concerns raised by those representing the Upper Plains and the Coastal Drains Area and supports the evidence they have presented.
11. It also supports the evidence presented by other rural sector groups including Federated Farmers, Beef and Lamb NZ, Dairy NZ, the Barrhill Chertsey, Mayfield Hinds, Valetta and Eiffelton Community Irrigation schemes, Irrigation NZ and others.
12. HPLWP recognises that nutrient contamination of groundwater is increasing and, in some parts of the Hinds Plains, is close to or breaching recognised guidelines. HPLWP therefore acknowledges that the community and in particular the farmers in the community need to make progress in mitigating this contamination.
13. However, HPLWP considers Var 2 to be unworkable, inequitable and, if implemented in its present form, will impose unacceptable economic social and economic costs on the community.
14. HPLWP accepts that achievable targets for reduction in contamination of ground water need to be set. Setting these targets presents problems that need to be resolved before the targets proposed in the plan can be achieved.

Catchment Load.

15. Var 2 (13.4.12) sets a catchment load target of 3400 tonnes. More recent and more robust assessments have calculated loads higher than this figure. The current load therefore needs to be subject to re-evaluation as the science and methodology improves.
16. The section 42a report (9.96) does not support recalculation of the 3400 tonne load target.
17. HPLWP strongly disagrees with this recommendation. The 3400 tonne load target is based on a starting load of 4500 tonnes. This is a reduction of 32%. The science behind this calculation was the best available at the time. More recent and more informed assessments have found the current load to be higher than this. If

subsequent assessments of show that current load is, say, 6,000 tonnes then, if the target load is not adjusted in proportion then the required reduction would be 56%. Such reductions would be much greater than the ZC intended and impossible to meet.

18. Given the uncertainty around the assessment of current load, it is essential that, if base load is updated to a more accurate figure the plan allows the target load to be adjusted proportionally to maintain a reduction regime consistent with the Zone Committee ZIP addendum goals.

Farming Class Definition.

19. The targeted reductions for Dairy, Dairy Support or Other farms in Var 2 (table 13(h)) are unworkable and inequitable.
20. HPLWP will present case studies from practicing farmers that will show that, given the large variations in farming systems and farm management in the Hinds Plains, it is not practicable to define Dairy, Dairy Support and Other Farms as required by Var 2.
21. The 3 classes of farms, Dairy, Dairy Support or Other, need to be abandoned.

Reduction Strategies.

22. HPLWP recognises that different farming systems and different soil types have differing propensity to lose nutrients to ground water. Not all farms leak high or similar amounts of Nitrogen. Some farms, because of their farming systems, soils, etc., leak only small amounts.
23. It accepts that those farming systems which have higher losses have a greater requirement to mitigate losses over time.
24. While an across the board approach may suggest that a response to the problem would see all farms making adjustments to their farming systems, in reality the loss from low leaking farms is insignificant. These farms are not part of the problem and therefore there is no need for them to be part of the solution.

HPLWP supports the introduction of a “flexibility cap”

25. HPLWP considers a Nitrogen loss cap should be established and farms that have losses that are less than the cap would not need to further reduce their N losses. Because these farms are leaking few nutrients, minor changes in management on these farms could see consequent minor increases in losses that would put them in breach of the rules prohibiting increased losses. They should therefore be allowed flexibility to change their farming practices and their N losses as long as they do not breach the cap.

26. HPLWP considers that loss targets for farms leaking nutrients at rates above flexibility cap limits should have a consistent approach to reducing nutrient losses rather than be based on the Dairy, Dairy support or Other classifications. This approach should be based on farms first achieving Good Management Practice standards based on the MGM project and then having a common regime of reductions no matter the farming system.

Intensification Allowance.

27. Var 2 allows a limited ability for intensification of farming within the overall requirement to reduce catchment loads. HPLWP considers that the major factor in the prosperity of farming in the Hinds Plains has been the ability of farmers to adapt and to respond to markets by changing their farming systems. HPLWP considers that this ability needs to be maintained and for these changes to accommodate increased losses so long as overall targets are maintained.

28. Var 2 restricts this ability to increase by both N loss tonnage and by area. HPLWP considers the key requirement is to limit tonnage losses than that therefore an area limit of 30,000 ha is unnecessary.

Reduction Regime

29. HPLWP requests that the reduction regimes in Var 2 (Table 13(h) and elsewhere) are discarded and the following regime be adopted.

30. All properties emitting greater than 20 kgN/ha/yr be required to meet a common % reduction programme. This programme to be as follows.

- Meeting GMP for that farm by 2017
- 15% reduction on GMP by 2025,
- 25% reduction on GMP by 2030,
- 36% reduction on GMP by 2035
- Once a farm has reduced its losses to 27 kg N/yr no further reductions would be required.

31. Those farms losing less than 20 kg N/yr would meet the following requirements.

- Any property losing less than 15 kgN/yr may increase up to 15 kgN as a permitted activity
- Any property between 15 and 20 kgN may apply for a consent to increase to 20 kgN.

32. Irrigation schemes with land use consents that limit N losses would continue with their consented regimes.

33. Allowing farms to make no further reductions after they have reached a level of 27kg N/yr is consistent with the limits for irrigation schemes for new irrigation post 1st October 2014 in Var 2 Table 13(l).
34. Analysis by Dairy NZ and others show that the above reduction regime is supportable within the ZC aspirations and catchment load reduction targets.

Assessing Nutrient Losses to Ground Water.

35. HPWP accepts that, if the actions required in Var 2 are to be based on identifying catchment and farm loads and setting targets for reductions in these, then there is a need to calculate or estimate loads and losses, both for the whole of the Hinds Plains and for individual farms. It also accepts that the Overseer model is the only tool currently available that can approximate these losses in a model form.
36. HPLWP will present case studies that show that, for many of the more complex farming systems in the Hinds Plains, Overseer is not sufficiently mature to do with acceptable accuracy and that the plan needs to recognise this difficulty in its reduction targets, both for quantities and in the timing for achieving reductions.
37. Ongoing development of Overseer will mean that new versions of the model will generate different loss figures than previous versions for the same farming conditions. Numbers and targets in the plan that are derived from or dependent on Overseer calculations, and in particular, target loads in Var 2 Table 13(g), therefore need to have provision to be adjusted so that the numbers and targets retain the same proportionality. This provision is already incorporated into land use consents such as the Barrhill Chertsey Irrigation land use consent.

Land Use Capability.

38. HPLWP is aware that Fish and Game have recommended a nutrient loss mitigation regime based on "Land Use Capability". This is a methodology that attempts to assess the productive capacity of soils based on defined physical soil factors. This methodology has been adopted in some other parts of the country.
39. However HPLWP considers that, in a farming environment such as the Hinds Plains where irrigation plays a major role, LUC is impracticable and in fact allocates nutrient loss allowances that are the reverse of that required under good irrigation management. HPLWP will present case studies that demonstrate that the allocation regimes already in place in the Hinds Plains provide a better solution, e.g. those implemented by irrigation schemes such as Barrhill Chertsey Irrigation with land use consents.

Managed Aquifer recharge (MAR)

40. While the overriding community concern is total catchment load, the groundwater contamination levels across the Hind Plains show some variation. HPLWP therefore endorses the concept of MAR as a method of reducing N concentration in higher concentration zones by infiltrating clean alpine water into ground water in these areas.

Targeted Stream Augmentation (TSA).

41. Some coastal streams or drains have N concentrations higher than desired. HPLWP endorses TSA, either from alpine water or from deep ground water, as a method of reducing these levels and providing other environmental benefits. HPLWP puts forward the Eiffelton Community Irrigation Scheme's use of deep ground water to augment drain flows and improve irrigation capability as an example of how TSA can provide benefits not just to farmers but also to aesthetic and environmental values.

Robert McDowell
Chair,
Hinds Plains Land and Water Partnership.
15th May 2015