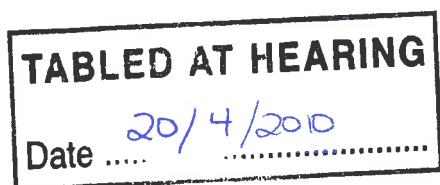


**BEFORE THE CANTERBURY  
REGIONAL COUNCIL**

**IN THE MATTER** of the  
Resource Management Act 1991

**AND**

new information provided on resource  
consent applications in the Upper  
Waitaki River Catchment.



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**EVIDENCE OF DEVON CHRISTENSEN ON BEHALF OF  
CENTRAL SOUTH ISLAND FISH AND GAME COUNCIL**

20 April 2010

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**APPLICANT Southdown Holdings Limited, Five Rivers Limited and Williamson  
Holdings Limited**

## **INTRODUCTION**

1. My name is Devon Danielle Christensen. I hold the qualification of Bachelor of Science from Canterbury University. I am employed by the Central South Island Fish and Game Council (Fish and Game) as a Resource Officer. I graduated in 2008 after working briefly for the forestry department. I joined Fish and Game one year ago.
2. As Resource Officer I am required to provide direction and professional advice to the Chief Executive and the Council on the impacts on sports fish and game birds and their habitat resulting from water resources and land use proposals and related local, regional and national planning provisions.
3. I have read the amended Farm Environmental Management Plans (FEMPs) and the additional information provided by the applicants.
4. I am familiar with the Waitaki Catchment Water Allocation Regional Plan (the Plan). I have been involved in the hearings on the Proposed Natural Resources Regional Plan (NRRP) process.
5. I am familiar with the relevant provisions of the Conservation Act 1987 that relate to the statutory functions, responsibilities and powers of Fish and Game Councils.
6. I have read the Environment Court's Code of Conduct for Expert Witnesses, as contained in the Consolidated Practice Note 2006, and have prepared my evidence accordingly.

## **SCOPE OF EVIDENCE**

- My evidence will cover:
  - Statutory functions of Fish and Game Councils
  - Proposed farming activities
  - Alterations of consent applications after notification

Comments on the FEMP in relation to:

- Water quality concerns
- Planning matters in relation to water quality standards
- Adaptive management
- General concerns:
  - Wording used in FEMP

### **STATUTORY FUNCTIONS OF FISH AND GAME COUNCILS:**

7. Fish & Game Councils are statutory bodies with functions to-

"manage, maintain and enhance the sports fish and game bird resource in the recreational interests of anglers and hunters"

In relation to planning-

"to represent the interests and aspirations of anglers and hunters in the statutory planning process...; and

*"to advocate the interests of the Council, including its interest in habitats..."* Section 26Q, Conservation Act, 1987.

8. Fish & Game has a defined responsibility relating to managing certain aspects of the natural environment. Fish & Game Councils are Public Entities with specific functions, responsibilities and powers to manage sports fish and game nationally and regionally. Sections 26Q, 26R and 26S of the Conservation Act set these out in detail (see appendix 1). Fish and Game is funded solely through licence sales.

9. Other legislative provisions that direct or impact the activities of Fish & Game include:
- a) Wildlife Act 1953. This act essentially provides for the regulatory functions of Fish and Game as it relates to gamebirds as defined in Schedule 1
  - b) Conservation Act, 1987. This is the principle legislation governing the activities of Fish and Game, as indicated in paragraphs 7 and 8.
  - c) The Resource Management Act 1991. This act governs amongst other things, the management of natural resources in New Zealand, including groundwater and wetlands and the use of riparian margins associated with water bodies; water use, particularly out-of-stream abstraction for municipal and agricultural use; impacts directly on the aquatic resources and habitat; and subsequently on the ability of Fish and Game to fulfil its statutory requirements.
  - d) Te Tiriti O Waitangi. Section 4 of the Conservation Act requires Fish and Game to give effect to the principles of the Treaty of Waitangi.

### **The Proposed Farming**

10. Southdown Holdings Ltd, Williamson Holdings Ltd and Five Rivers Ltd have applied for water takes to enable irrigation within the Upper Waitaki catchment. The three farms applied for separate effluent consents to intensify farming on the site and include a cubicle stabling of dairy cows. Due to the additional consents being lodged, amendments to the applicant's Farm Environmental Management Plans were necessary. Since these amendments have been made, the effluent applications have been withdrawn.
11. The applicants have requested that the options proposed by Melissa Robson in her evidence relating to the Section 92 request and amended FEMPs to be considered through the consent for water take process. I will therefore be presenting my evidence on what has been provided thus far, with

the possibility our concerns will be addressed by the applicant's in their presentation to these hearings.

### **Alterations of Consent Application**

12. A water use consent is limited by law to what was originally applied for. In this case the use of water has been specified in the original applications. Two of the applicants are now proposing a further use, which they did not apply for. This is outside the scope of the applications, and any water permit granted in the current process should only be used for the specified purposes.
13. The later changes in specified water use are very concerning. It is required by the RMA that the use of the water is specified to enable a thorough analysis of efficiency, appropriateness of use and environmental effects. Different farming practices require differing amounts of water and have varying impacts on the environment. Due to this, it is important that an application is explicit about their intended farming practice. It is well known that dairying as a high intensity farming system, compared to many other farming systems, involves large inputs and large outputs. Therefore dairying is a large consumer of natural resources and most often a generator of large amounts of pollutants and waste. Therefore, detail provided on farming practice is imperative and the intended farming practice should be stated when the consent is lodged without the opportunity to review later.
14. Section 88(4)(a) of the RMA<sup>1</sup> requires a description of the activity for which the consent is sought. The PNRRP 5.7.3.1 (e)(i) requires demonstration of reasonable use through considering the intended land use.
15. In the three amended FEMPs, all of the applicants propose an option to farm dairy cows however two of the applicants did not apply for this in their initial applications. As I will describe below.

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<sup>1</sup> Resource Management act 1991 section 88: Making an application.

16. The initial applications for irrigation at Killermont (Southdown Holdings CRC041788, CRC073115, CRC073114) state the water taken will be used for the "irrigation of up to 1,100Ha of pasture and crops, stock water and domestic purposes". There is no mention of stock grazing the pasture.
17. I have reviewed the Killermont FEMP and four different methods of farming are suggested. Three of the options involve stock grazing, two of these three options involve dairy grazing. This was not specified in the initial application.
18. The original application lodged by Five Rivers for irrigation at Ohao Downs (CRC061154) stated that the water would be used for "the spray irrigation of 1,500 hectares of crops and pasture for stock **excluding** dairy cows". Therefore proposed system 1 is not consistent with the original application.
19. Now that the effluent consents have been withdrawn, the current hearing for water takes should not need to consider the cubical farming proposal, and any consent granted should expressly exclude the use of water for that purpose.
20. If the applicants choose to revive the cubicle proposal in the future they should reapply for the necessary discharge consents and that would be the right time for them to also apply for companion water consents- either new consents or perhaps a variation to the existing consents to bring in a new use.
21. In the Memorandum of Counsel 25 March 2010, Mr Whata states that the dairy farming with stables is still the preferred farming method of applicants and the applicants would like to ascertain whether they can be granted the water permits to enable any of the farming systems proposed. If the cubicle option of farming is to be decided in this hearing process, the granting of water consents will open the gate for expansion of more intensive development later.
22. The main issue with the applicant applying to expand the activity in the future is the reliance on the "existing environment" argument. A few years down the track the existing environment may have altered significantly therefore allowing for greater degradation than what is permissible now.

23. This "planning creep" can be avoided through clear limits in the relevant plans that must have enough teeth to avoid future debate. Unfortunately in this situation, the only operative plan is the WCWARP and it appears that the adequacy of the numerical objectives within the plan have been questioned and may not be appropriate in this situation.
24. Due to this, it is necessary that clear limits are established through the consenting process to avoid cumulative effects. If accurate limits cannot be set, or may be debateable further down the track, perhaps a preventative consent clause is needed to prevent this from happening. However it is my understanding that the applicant is in a position to later review the consent conditions. Therefore the only way to lock an applicant into their initial farming proposal is by placing a covenant on the land (s108(c)). This is an unlikely option.

## **Water Quality**

25. Fish and Game submitted in opposition to all notified consent applications in Upper Waitaki Catchment. We presented evidence on the 10th of December 2009 in support of our submission. While Fish and Game expressed concern of potential water quality effects we were unable to provide an expert witness to present evidence on the subject.
26. Fish and Game is not satisfied water quality concerns have been sufficiently addressed through the FEMP. One issue is the use of the water quality framework developed by Mackenzie Water Research Limited (MWRL). As far as I am aware, the applicants have adopted nutrient discharge allowances (NDAs) that were developed as part of the water quality study carried out by GHD<sup>2</sup>. These nutrient limits have been incorporated into the FEMP using the OVERSEER model. While water quality is not my area of expertise, I have reviewed expert evidence on the matter and it seems evident that the MWRL

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<sup>2</sup> Dr J C Bright Evidence of the (10 December 2009) on resource consent applications by Southdown Holdings Limited, Five Rivers Limited and Killermont Station Limited. Paragraph 3.2

water quality standards are not appropriate for development in the Upper Waitaki Catchment.

27. As the panel will be aware the MWRL thresholds allow a 25% increase in periphyton growth<sup>3</sup>. Through my interpretation of expert evidence, this appears to be inappropriate as it allows a water body of any state to degrade by a further 25%. Fish and Game find it unacceptable that the applicants are proposing not to maintain the existing environment but to allow it to degrade by 25%. As stated in Dr Freeman's Addendum Report (paragraph 13), this approach is contrary to the conceptual approach of the Canterbury Regional Policy Statement (RPS) and the WCWARP/PNRRP objectives.
28. The evidence of Antonius Snelder presented on behalf of Meridian, in my opinion, stated a number of key issues relating to the MWRL proposed nutrient thresholds. The water quality assessments carried out by ECan staff also outlined serious concerns. Due to the obvious sensitivity of the Ahuriri Catchment and many flaws associated with the proposed threshold, it appears that the applicants need to incorporate different water quality thresholds into their FEMP's.
29. Fish and Game agree with paragraph 12 of Dr Freeman's Addendum Report that states "a more appropriate approach would be that identified in the current planning framework including recommended refinements to that framework contained in officer reports on Chapter 4 PNRRP."

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<sup>3</sup> Joint Evidence of DR J C Bright and M Robson (2 September 2009) resource consent applications by various parties to take and use water river streams canals and lakes.

## **Planning matters- In relation to water quality standards**

30. It is unclear which water quality guidelines should be used. The WCWARP is the only operative plan with water quality objectives locked in place therefore it should be given significant weight. However, various experts involved with these consents have collectively agreed that an appropriate objective is to maintain Lake Benmore in an oligotrophic state. The water quality numerical outcomes in table WQL5 of the PNNRP may not be consistent with that objective. Therefore, in this instance, reference to other guidelines is necessary.
31. As mentioned in para 26, Fish and Game does not support of a 25% increase in periphyton growth as a water quality threshold. Other guidelines are discussed in Dr Freeman's addendum such as the ANZACC and MfE guidelines. These guidelines should be considered and Fish and Game are of the view that the recent water quality guidelines recommendations made in the PNNRP officer reports are the most appropriate in this instance. The recommendations involve the most recent and comprehensive understandings of Canterbury's water quality, put into a planning context.
32. It is important that decisions made are correct in terms of sustainable management. Any conditions imposed need to lead to good outcomes including appropriate protection of aquatic values through maintenance of water quality and quantity.

## **Adaptive Management**

33. At the North Bank Tunnel hearings, Camilla Owen gave Fish and Game's perspective on adaptive management. When discussing Meridian's proposal Ms Owen stated that "the adaptive management is not true adaptive management in that there can be no iterative process, resulting if necessary in a "clawback" of the consent in whole or in part." While this is a different situation, in my opinion the same principle still applies. Once the consent is granted there is limited reversibility of adverse effects that occur.

34. Adaptive management can work, provided there are sufficient tools in place to choose from when mitigation is needed. The "suite of tools" should be extensive, providing the panel with confidence that at least one of the options will be a guaranteed success. The tools and the method of implementing the activity should also, as stated above, ensure reversibility. I note that the monitoring and auditing approaches have been amended in the FEMPs and the panel needs to be satisfied that a sufficient suite of tools and reversible outcome is offered.

35. In a recent case on adaptive management: *Crest Energy Kaipara Ltd v Northland Regional Council A 132/2009*, the Court adopted the features of adaptive management listed below, which include the requirement that there is a real ability to remove all or some of the development if monitoring warrants it:

*[101] We have more empathy with the following extract taken from the agreement at the planning witness caucus meeting:*

*"Andrew Riddell, Alan Richards, Mark Chrisp and Garry Venus, all agreed that the project is a candidate for application of the adaptive management regime, however there needs to be applied a set of robust consent conditions reflecting the matters set out in paragraphs 5.1 of Andrew Riddell's evidence [on behalf of the Director General] viz:*

*'Features of adaptive management are (i) that stages of development are set out; (ii) the existing environment is established by robust baseline monitoring; (iii) there are **clear and strong monitoring, reporting and checking mechanisms** so that steps can be taken before significant adverse effects eventuate; (iv) these mechanisms must be supported by **enforceable resource consent conditions which require certain criteria to be met** before the next stage can proceed; and (v) there is **real ability to remove all or some of the development** that has occurred at that time if the monitoring results warrant it. "'*

36. If dealing with a proposal that does not realistically have the ability to reverse effects, by either using various tools, or ultimately removing all or some of the development, then the proposal is not adaptive management.

37. In regard to the applicant's FEMPS, if WQ parameters are breached in the FEMP, N application is to decrease and stock is to be withheld. If these responses do not correct the breach, a 'root cause' analysis is carried out and then appropriate mitigation is suggested. Following on from my discussion earlier, I am uncertain if the two management options of N reduction and stock exclusion offer a sufficient "suite of tools". I also find it discomforting that the applicants will wait until the levels are breached to then source alternative "tools" through the root cause analysis. Addressing an environmental effect in retrospect is inconsistent with the principles of the RMA to "avoid, remedy or mitigate". In many circumstances, once the adverse effect has occurred, it is difficult to correct the damage.
38. Fish and Game is not satisfied that the conditions proposed, in combination with the supporting evidence, establish that the effects are reversible. Leaving additional fact finding to further down the track does not appear to satisfy the grounds of adaptive management, if there is no confidence a corresponding practicable method exists to remedy adverse effects after that fact finding.
39. Fish and Game are of the view that the consent should not be granted, or at the very least, given effect, until the Applicant can prove it has assessed the likely adverse effects scenarios, the root cause of any adverse effects arising from those scenarios, and the methods by which such adverse effects under the scenarios, **can** be remedied. This information ideally should be provided up front in evidence. Alternatively, such a report could be required, prior to the consent holder being entitled to give effect to the consent. For this requirement to be effective a condition would need to specify:

That the report needs to address all potential scenarios causing adverse effects; and

The likely root cause for such scenarios and effects; and

The suite of tools that will remedy the adverse effects;

That the report should be provided to ECan, for review by an appropriately qualified expert;

Only on confirmation that the report addresses the matters above, should consent be able to be given effect.

40. Such an approach is similar to that imposed by the Court in *Director General of Conservation v Marlborough DC* Decision No. C (113/2004) 17 August 2004

41. A final point in respect of adaptive management relates to warning thresholds. Fish and Game support Dr Freeman's evidence that discusses inclusion of an early warning threshold. A two-tier approach enables the applicant to take action and record effects before the primary threshold is breached. However, this approach will still only be effective provided the correct tools are in place.

### **Consent Conditions vs Management Plans**

42. While supportive of properties having a management plan, Fish and Game are concerned about the level of certainty these FEMP provide. Changes can be made to FEMPs and therefore anything in the plan does not tie the applicant in to serious commitment. The more taken out of management plans and placed into consent conditions, the more certainty and enforceability can occur.

43. Unfortunately, by changing aspects of the FEMPs to consent conditions, does remove flexibility which is desirable as it allows the best approaches to managing effects to be employed rather than being strictly bound by conditions. Therefore, it is about achieving the right balance. If there is little in the way of conditions and the applicant has the ability to alter the FEMPs at will, there is too much uncertainty.

44. In conclusion, there should be a condition that sets out the objectives and outcomes that the management plan is going to achieve. Those objectives and outcomes are aspects that the consent authority can then monitor and enforce. The applicant has endeavoured to do this, however the uncertainty lies with whether the stated outcomes are suitable or achievable through the FEMP.
45. The process in which the FEMP are amended needs to be thoroughly considered. Future amendments provide uncertainty for affected parties. To provide more certainty to affected parties, the amendment process must be spelt out in a condition. In this situation there should be a requirement for the consent holder to seek agreement of affected parties. This should be incorporated into the FEMP. This would ensure changes are genuine and provide the opportunity for reasonable changes to be made. Such a requirement could prevent detrimental decisions being made further down the track.
46. In addition to the above, a consent condition should require that the plan or any amendment to it be certified by a suitably qualified person on behalf of the consent authority so that in theory stakeholders can be satisfied that the management plan is dealing responsibly with the issues it needs to.

## **General Concerns**

Wording used:

47. The FEMP have a new section on construction phase risks. The wording used in this section is weak and does not show a commitment to addressing construction phase risks. For example, under "proposed management options" the FEMP states " Constructed crossing should be used to cross streams and not fords". The wording used, effectively removes any requirement to follow the management options stated in the FEMP. The use of the word "should" should be replaced with "shall". Without this wording strengthened the "management options" will serve little purpose.

## **Conclusion**

48. Applicants that did not initially apply for dairying should not be propose the option now without renotification of consent.
49. Appropriate water quality thresholds should be established now based on the best advice available. Fish and Game are concerned that appropriate water quality guidelines are not proposed.
50. Adaptive management should only be applied if there is certainty that the effects are in fact reversible.
51. There should be awareness that it is necessary to achieve the right balance in the conditions and FEMPs to enable enforcement and flexibility.