UNDER The Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010 and the Resource Management Act 1991

AND

IN THE MATTER OF The hearing of submissions on the Proposed Canterbury Land and Water Regional Plan.

EVIDENCE OF ANDREW JAMES BARTON

Introduction

1. My name is Andrew James Barton. I hold the qualifications of BSc (Chemistry and Geography) from the University of Otago and a Post Graduate Diploma in Science (Environmental Science) from the University of Otago. Since January 2013, I have been employed by Barton Resource Management Limited, as a resource management consultant. Previously I have been employed Beca as an Associate - Planning, as the Environmental Manager at Synlait, and in a number of consent and compliance roles at the Canterbury Regional Council (ECan).

2. I have worked in a range of roles that have had a water management focus for 14 years. I have advised on resource management matters relating to the proposed Central Plains Water Irrigation scheme and the proposed Synlait Farms irrigation scheme from the Rakaia River. I have also prepared a number of resource consent applications and assessment of effects on the environment for a number of farming clients. I regularly undertake resource management due diligence and provide strategic advice on farm acquisitions and water resource management. I have also been the Canterbury Regional Councils reporting officer for a number consent applications, notably those made for Kakahu Irrigation, Levels Plains Irrigation, Selwyn District Councils Paparua stockwater and irrigation scheme, and water permit applications that were considered at the most recent Ashburton Lyndhurst and Rangitata Orton Groundwater Allocation Zone hearings.

3. A copy of my CV is attached to my evidence as Appendix 1.

4. I have read the Expert Code of Conduct contained in the Environment Court's Practice Note 2011 and I agree to comply with it. I have prepared this evidence in accordance with the Practice Note.

Scope of Evidence

5. For this Hearing I have been engaged by Synlait Farms Limited (SFL), who is a member of the Canterbury Primary Sector Policy Group. Evidence has also been presented on behalf of this group by Mr Peter Callander from Pattle Delamore Partners Limited and Mr Ian McIndoe of Aqualinc Research Limited. I agree with the evidence presented by both Mr Callander and Mr McIndoe and support their conclusions and recommendations. My evidence provides additional commentary to further support some of those conclusions and where applicable provides additional conclusions on matters not covered by Mr Callander or Mr McIndoe.

6. The evidence I will present deals with selected aspects of the allocation of surface water and groundwater that are set out in the Proposed Canterbury Land and Water Regional Plan (Proposed Plan).

7. My evidence will cover the following key matters where the Officers report has not made amendments that are considered to suitably address the submissions made by SFL. I also discuss amendments that have been proposed by the Officers s42A report that are considered to adequately address the SFL submissions.

    a. Objective 3.11 is to maximise the efficient use of water for social and economic benefits. My evidence discusses the proposed amendment in the s42A report to make this objective subject to meeting existing allocation limits set in Chapters 6-15 of the proposed plan.

    b. Objective 3.15 encourages the development of a regional network of water storage facilities. The wording implies that storage facilities must be constructed, which appears to ignore the use of groundwater as part of the network. My evidence focuses on the existing investment in groundwater and the importance of the storage available in groundwater to any regional network.

    c. Policy 4.4 requires the use of limits to manage water allocation. The dynamic state of the groundwater resource is not recognised by this policy. The adequacy of the groundwater allocation limit calculations does not reflect the strategic importance of groundwater to the region.

d. Policy 4.7 requires a regime and timeframe to be set to reverse over-allocation. This policy does not recognise the relatively simple method to determine the groundwater allocation figures that have been included with Schedules 6-15.

e. Policies 4.50, 4.60, 4.63 and 4.66 all relate to the imposition of annual volume limits on surface water takes. Any annual limit should not unnecessarily constrain the ability to take water to meet a soil moisture deficit or fill a storage reservoir, provided instream flow requirements are being met.

f. Policy 4.71 seeks to use transfers to reduce water use in over-allocated catchments, while Policy 4.73 specifies that transfers in an over-allocated catchment, other than to an irrigation scheme, will need to incorporate a partial surrender of the consented allocation. These policies encourage continued use of water at an existing site, rather than the transfer of water to a new site, even though that may not be the most efficient use of that water for the individual or the community.

g. Rule 5.104 makes applying for groundwater allocation in over-allocated zones a prohibited activity. A status of non-complying is considered to be more appropriate in order to recognise the relative coarseness of the current allocation limits and the recent decisions of ECan to grant consents in zones considered to be over-allocated.

h. Rule 5.107 requires a proportion of allocation to be surrendered if water is transferred to another site. A compulsion to surrender part of any transferred allocation is likely to halt the transfer of water and it is thus unlikely to retrieve any allocation and does not encourage efficiency of use.

i. Schedule 12 describes the method for considering well interference effects. This schedule is considered to be an adequate means for identifying the threshold at which a neighbouring well owner is potentially adversely affected. However, the schedule should not limit the ability for information to be presented to show that any effect on a neighbouring well owner is acceptable.

j. Schedule 13 describes the method for determining the volume of groundwater that has been allocated. The allocation method for groundwater has changed compared to the Canterbury Natural Resources Regional Plan (NRRP), while

the allocation limits remain almost identical, which unnecessarily results in most zones being considered to be over-allocated.

Importance of groundwater

9. Groundwater is a very important water resource that can be sustainably managed to provide irrigation water for a significant area of Canterbury, with associated community benefits. Groundwater, when pumped from a depth of less than approximately 100 metres, is a cost effective source of irrigation supply. Groundwater requires a lower capital cost per hectare than surface water supply, particularly the large proposed irrigation schemes that are currently mooted, because the groundwater is stored in water-bearing layers immediately beneath the property thus avoiding conveyance costs.

10. Groundwater has provided a reasonably priced and reliable source of irrigation water that has allowed irrigation development within a timeframe that up until the Proposed Plan was notified, was largely in the control of the party making an application to take water or to transfer an existing water permit. SFLs farms and the Synlait Milk plant would not exist if they had waited for water from the proposed Central Plains Water irrigation scheme. Groundwater has been the basis of significant investment by SFL and Synlait Milk Ltd.

11. 680,128 ha of land in Canterbury is authorised for irrigation, of which 55% is from groundwater[1]. 6,679 wells are authorised for taking groundwater in Canterbury, of which 89% are related to horticultural and agricultural use[2]. The cost of drilling a well ranges significantly with diameter and depth and the cost of pumps and other related infrastructure, which are influenced by the depth of water and required yield.

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[1] Aqualinc Research Limited. 2010. *Update of Water Allocation Data and Estimate of Actual Water Use of Consented Takes 2009-10*

[2] Environment Canterbury. 2012. *Canterbury Region Water Use Report for the 2011/12 year*

12. Typical costs may range from $20,000 for a shallow well with a surface mounted pump, to over $200,000 for a deep groundwater well. The large number of wells in Canterbury represents a significant investment in water supply infrastructure. These investments multiplied over the number of wells authorised for abstraction in Canterbury represent a significant investment in the groundwater resource.

13. The importance of groundwater is worthy of acknowledgement in the proposed plan. The proposed s42A amendment to Objective 3.12 (Now Objective 3.6) is supported in that regard.

14. The proposed plan has a considerable focus on large scale investment in infrastructure to store and convey surface water for irrigation, as promoted by proposed Objective 3.15. However, if the cost of large scale development is to be borne by the users, and the cost is too high, the development will not be supported. There is a balance to be struck between providing timely access to surface water, while recognising that in some cases irrigation from a groundwater source may be the preferred option due to timeliness and whole of life costs.

15. There may be the potential for further groundwater development in some areas. Investigations into the potential for further groundwater allocation within the sub-regional zones are required.

16. Objective 3.15 does not explicitly include reference to groundwater. The wording discusses storage facilities, implying constructed facilities rather than groundwater aquifers. The revised Objective 3.7 has not changed to include groundwater within the network.

17. Objective 3.15 focuses on infrastructure for water storage and distribution facilities. Groundwater is an important form of water storage and forms an integral part of the equation for providing irrigation water to Canterbury, as promoted by the Canterbury Water Management Strategy. The continued use of groundwater, and the scope for potential increases in allocations in certain zones, should be acknowledged in this Objective.

18. Objective 3.11 (now proposed Objective 3.4) includes making efficient use of water up to allocation limits, which SFL proposed as an amendment to Objective 3.15. Making use of groundwater, where readily available is considered to be an efficient

use of water. Therefore, the concerns raised by SFL with respect to Objective 3.15 are adequately addressed.

19. Policy 4.48 recognises the existing investment in hydropower and surface water irrigation schemes when they are re-consented because of the level of investment and improvements in water use efficiency and conveyance are anticipated. There is a significant investment in groundwater wells and associated pumps, electrical components and headworks. Equally, groundwater use is anticipated to become more efficient with time. For example, SFL's sole farm that exclusively uses rotary boom irrigation has added another irrigator, which has improved the ability to meet demand during dry periods and allows irrigation to be scheduled to a greater extent. Further, Groundwater is explicitly recognised within Schedule 16, the Regional Concept Plan, as a key source of water for some zones. The importance of investment in groundwater should be included in Policy 4.48.

20. Policy 4.76 limits the duration for consents that may impede the ability of a community to find an integrated approach to five years. Potentially this policy has significant economic repercussions for existing users with significant investment in existing infrastructure seeking replacement consents if the existing infrastructure is not consistent with the integrated approach. For example an existing groundwater user may be faced with a 5 year replacement consent if a surface water scheme is mooted as the integrated approach. While an integrated approach is preferable, it must also be economic. For example, coercing a coastal groundwater user to join a surface water irrigation scheme with the threat of 5 year consent durations when groundwater is a far more cost effective solution was not represent an efficient use of water.

21. Limiting duration of consents to 5 years and forced subscription to surface water alternatives may have unintended effects in terms of economic viability of some otherwise economic activities. The evidence of Mr Butcher addresses this matter.

Groundwater allocation

22. Objective 3.11 is to maximise the efficient use of water for social and economic benefits. The 42A report has recommended a change to Objective 3.11, and includes it as recommended Objective 3.4. The proposed revision includes a caveat that requires water to be allocated within limits set by the proposed plan.

23. The change to the objective is reasonable, provided that the limits that have been set are robust. The interim nature of the limits included with the proposed plan must be recognised, which has been discussed in the evidence of Messrs Callander and McIndoe.

24. Messrs Callander and McIndoe provide examples where resource consents have been granted to take water in excess of the NRRP allocation limit. The most recent decision for a notified groundwater permit application that exceeded the allocation limit was for the Rangitata Orton groundwater allocation zone. The application was granted, in accordance with the Officer's recommendation, because the additional recharge that will be provided by the Rangitata South irrigation scheme once it is commissioned will make sufficient headroom in the allocation.

25. Objective 3.4, as recommended by the s42A report, is supported provided the allocation limits are suitably robust. The evidence of Messrs McIndoe and Callander suggest that is not the case. The Objective can be retained provided the relevant Policies and Rules are changed to reflect the evidence of Messrs McIndoe and Callander.

26. Policy 4.4 is to manage water through setting limits. Synlait's submission states that groundwater can be allocated on a long term basis, which recognises the ability to allow for more water to be taken in some years and that not all water is taken in some years. The evidence of Mr McIndoe discussed this matter and identifies that additional groundwater can be taken if it is managed dynamically rather than statically. As with the s42A recommended Objective 3.4, Policy 4.4 is appropriate, depending on the integrity of the method used to derive allocation limits.

27. Policy 4.6 precludes the granting of resource consents where defined limits have been breached. The s42A report outlines a recommended change to Policy 4.6 to allow for replacement consent applications to be granted, which is supported. However, again the integrity of the allocation limit becomes critical to the significance of Policy 4.6.

28. Policy 4.7 requires the elimination of over-allocation, which again leads back to the importance of setting limits appropriately.

29. Rule 5.104 stipulates that any new application to take groundwater in a zone where the allocation limit has been exceeded is prohibited. The coarseness of the

allocation limits set in Sections 5-16 appears to unnecessarily limit the potential for consideration of further granting of resource consents to take groundwater. Examples provided by Mr McIndoe, as well as the Rangitata Orton zone example, demonstrate that a simple interim allocation limit may unnecessarily limit the economic and sustainable use of groundwater.

30. The objectives and policies could be changed to distinguish between the allocations that are currently specified in Sections 6-15 of the Proposed Plan, which Mr McIndoe has explained to be in effect interim limits that have not been fully developed, and the allocation limits that are set via the sub-zone planning process. Additionally, rule 5.104 should be changed so that taking water in excess of an interim limit is non-complying, whereas taking water in excess of an operative limit set through a sub-zone planning process is a prohibited activity.

31. Schedule 13 specifies the method for estimating the effective groundwater allocation. The evidence of Mr McIndoe addresses the concerns raised by SFL in their submission.

Annual volume limits on surface water

32. The requirement for annual volume limits to be placed on surface water consents is a theme that echoes through several policies.

33. Policy 4.50 requires surface water takes for storage to have an annual volume limit. If clauses b-d are satisfied, which require a maximum rate of take, consideration of a higher minimum flow and/or ceasing taking water to meet flow variability requirements, there may be no need to set an annual volume limit. Once the instream requirements of the river are catered for, there should be no limit on the annual volume able to be stored. Provided stored water is used efficiently, and the instream flow requirements are being met, there should be no annual limit to the volume of water able to be stored.

34. The s42A report refers to the requirement for limits under the National Policy Statement Freshwater Management (NPS FM), which is acknowledged. The s42A report also states that there is the ability to propose an annual volume that meets the needs of the storage facility and intended use. There is nothing in policy 4.50 that limits the annual volume to “reasonable use”, which is determined using the method in Schedule 10 and provides for 90% reliability of supply.

35. Policy 4.60 (b) requires annual limits, based upon the reasonable use test set out in Schedule 10. The s42A report states that Policy 4.60 does not limit the user to 90% reliability. However, Policy 4.60 requires any annual limit to be based upon reasonable use, which is defined by Schedule 10 as being an annual limit that provides for 90% reliability, amongst other matters. Hydropower has been provided for on an unlimited basis, which is not opposed because there is typically always a demand for energy. Similarly, if there is a demand for irrigation then water should be able to be taken if instream values are provided for. For example, if northwest conditions develop at the end of a dry season (demand greater than a 90% event), the annual volume may have already been exhausted. Feasibly there could be a flow of 1,000 cubic metres per second in the Rakaia River late in the season, coinciding with a soil moisture deficit and water would not be able to be taken.

36. Policy 4.63 requires annual volume limits to be imposed on consents that do not have annual volume limits. This Policy makes no reference to reasonable use, allowing for a greater annual volume limit to be set than would otherwise be determined using Schedule 10. Therefore, Policy 4.63 allows for a greater reliability of supply than 90%.

37. Policy 4.66 appears to catch all water permits for taking surface water by stating that the use of water shall be reasonable, which again draws one back to Schedule 10 and the need for a limit to provide a 90% reliability of supply.

38. It is accepted that the NPS FM requires minimum flows and limits. However, for a river, Schedule WQN13 stipulates that the allocation limit is based on the average rate allocated. An annual volume limit unduly locks up a flow of water that could have otherwise been taken, either for storage or for meeting demand in a year with a demand that exceeds the 90th percentile. If the water could be taken, there would be either more stored water available being for future use, or a reduced soil moisture deficit and increased production, making more efficient use of the resource.

39. I recommend that changes are made to Policies 4.50, 4.60, 4.63 and 4.66 so that there is consistent use of language to replace “reasonable use” with “efficient use”. Avoiding the term “reasonable use” eliminates the unnecessary Schedule 10 requirement for annual volumes based upon 90% reliability for surface water takes if instream values have been provided for by the minimum flow regime for the river. Efficient use of water on farm can be demonstrated through the Farm Environment Plan reporting procedures and good farm management practice. For example soil

moisture monitoring and flow meter records can be used to demonstrate that the use of water is efficient.

40. Under rule 5.96 the taking of surface water is a restricted discretionary activity. Matter 2 for the discretion is whether the amount of water taken is reasonable, and references Schedule 10. This matter for discretion should provide some ability for decision makers to consider a higher level of reliability than 90% if instream values are met. I recommend that additional wording is included at the end of Matter 2 to state "and/or whether water will be used efficiently".

Groundwater well interference

41. Policy 4.58 limits the drawdown in any neighbouring well to no more than 20% of that available for new takes. Policy WQN19 of the NRRP specifically excluded the need for any well interference assessment of a replacement groundwater take. Policy 4.58 only applies to 'new' takes, so it is assumed that replacement takes are exempt. This should be clearly stated. The amendment proposed in the s42A report is supported.

42. In practice, the 20% threshold is a trigger to further examine effects on neighbouring wells and is used as a threshold for determining whether a neighbours written approval is required, and whether an application needs to be notified or not. A 20% drawdown effect is not an adverse effect of its own accord.

43. For example, a domestic well could have 30 metres of water available in the well, which would mean that 24 metres is to be protected. For a domestic well only 5 metres of drawdown may need to be protected to ensure adequate water is available. The wording of this Policy does not allow for further information to be provided in order to allow a decision maker to consider whether a neighbouring well can still function for its intended purpose with a greater drawdown effect than the 20% limit. To preclude groundwater use when there is water available would be inconsistent with the s42A report recommended Objective 3.4. Policy 4.58 should include an allowance for a consent to be granted when interference effects on neighbouring well owners can be shown to be minor.

44. The wording of Schedule 12 has been changed in the s42A report to allow for specific details of each bore and pump to be considered. The proposed change is supported.

Transfers

45. Policy 4.71 seeks to manage transfers to reduce water use in a catchment that is over-allocated, and to achieve greater efficiency of use and more effective storage and distribution of water. Policy 4.73 states that transfers in over-allocated catchments must include a proposal to surrender a proportion of the allocation.

46. The requirement for a reduction in water use is likely to be an impediment to transfers. A trade is unlikely to occur if water needs to be surrendered because the current consent holder is forced to relinquish value. Requiring a reduction in water use if a permit is transferred may increase the likelihood that the permit will be used at its present location.

47. Those consent holders who are members of an irrigation scheme and hold groundwater consents are better off to fully implement their groundwater consents and sell any scheme shares that they hold, because trading of irrigation scheme shares is not limited. Over-allocation will not be addressed by limiting transfers. Mr Geoff Butcher presents evidence on this matter.

48. These two Policies encourage surface water users to merge their water permits into an irrigation scheme, which is supported. However, any transfer of surface water to another site is considered to have equal merit, particularly if is used in the upper plains area instead of deep groundwater. Any transfer of surface water should be exempt from the requirement to surrender water when a transfer is implemented.

49. Previously any groundwater consent holder that relies upon a deep well may have been able to sell their water permit to raise the capital to invest in a surface water irrigation scheme. The ability to raise capital in this manner is limited by these policies. Those deep groundwater users will be incentivised to continue taking deep groundwater if they cannot realise the full value of their groundwater consent, because the cost of writing off the groundwater consent and wells and joining the surface water scheme is too high.

50. Policy 4.73 does not specify the amount of water that needs to be surrendered. Therefore, one cubic metre of water could be surrendered allowing any application to be consistent with this policy. The Policy is supported in that regard because it allows discretion over the requirement for surrender, which could range from a nominal one cubic metre to a higher figure.

51. Rule 5.107, clause 5 specifies the requirements for transfers to surrender part of the allocation. Clause 5 will not assist in retrieving allocation, and may impede the ability of deep groundwater users to raise capital to switch to a surface water supply, in the manner supported by the CWMS.

52. Rule 5.107, clause 5 should be deleted. Retaining the existing wording of Policy 4.73 requires some water to be surrendered if it is warranted, which can be tailored depending on the circumstances.

Ancillary Farming Activities

53. The storing of dairy shed effluent will now require a resource consent under rule 5.35. Previously the use of land was permitted if at least three days storage was available. Increased storage capacity on dairy farms is supported. However, rather than forcing existing farmers to obtain a new land use resource consent within 6 months of the plan becoming operative, I believe that it would be more prudent to invest that money in increasing the capacity of the storage facility. Otherwise it is likely that any application to continue to use the existing storage facility will be a costly consenting process for hundreds of farmers and ECan. I recommend an additional permitted activity rule for existing storage facilities that were permitted by the NRRP, provided the storage capacity is increased in size with five years so that it is consistent with good industry practice.

Changed Objectives

54. Objective 3.1 fails to recognise the social and economic importance of water. The additional Objective 3.3 proposed in the Officers report is supported.

55. Objective 3.12 emphasised the importance of groundwater for maintain flows but failed to adequately recognise the importance of groundwater for abstraction. The revised Objective 3.6 proposed in the s42A report is supported.

Changed Policies

56. Policy 4.47 provides for replacement of consents in over-allocated groundwater allocation zones providing the rate and volume does not increase, which is reasonable. However, clause (b) includes an additional proviso that requires significant and enduring improvements in water use efficiency and reductions in any

adverse effects. The recommended insertion of clause (b)(ii) in the s42A report is supported.

57. Policy 4.67 specifies that the summer irrigation season is October to April. Synlait records soil moisture and has irrigated in late August and early May in order to meet soil moisture deficits. This Policy should not assume that any consent that does not have an irrigation season specified is limited to taking water from October to April. To do so would not be an efficient use of the resource. If a minimum flow is met and a soil moisture deficit exists, then irrigation should occur to make efficient use of the investment in irrigation infrastructure. The s42A report recommended change to include September is supported.

Andrew Barton

4 February 2013

Andrew Barton

Director, Barton Resource Management Ltd

BSc Chemistry and Geography, University of Otago, 1996

Postgraduate Diploma in Science, University of Otago, 1997

COP Contaminant Hydrogeology, University of Canterbury, 2003

COP Environmental Management Systems, Lincoln University, 2008

Andrew has 14 years of environmental; planning, assessment, and compliance experience. Andrew specialises in providing strategic resource management advice to clients, particularly relating to water resource management.

Citizenship	New Zealand	
Background	2009 - 2013:	Director, Barton Resource Management, Christchurch
	2009 - 2013:	Associate, Beca, Christchurch
	2005 – 2009:	Environmental Manager, Synlait, Dunsandel
	1999 – 2005:	Environment Canterbury, Consents and Compliance roles

Relevant experience

Beca Infrastructure Limited, Christchurch, 2009 – 2013

Andrew primarily provided strategic advice to farming clients who hold resource consents or are interested in making applications for resource consents. He is providing strategic advice to Environment Canterbury, Ngai Tahu Property, Synlait and Genesis Energy. Andrew has managed a number of consenting projects for dairy farming companies. Andrew has also managed preparation of consent applications for Territorial Local Authorities. Andrew has processed resource consents on behalf of Environment Canterbury, and has also prepared consent applications and regional plan submissions on behalf of farming and industry clients. Andrew also acted as the environmental lead for the Christchurch Southern Motorway design phase.

Strategic Water Resource Management Advice

Synlait Secondment

Andrew has provided advice to Synlait regarding optimal use of their existing resource consents for irrigation. He has identified potential partners for leasing water permits and has negotiated water permit lease agreements. He has also successfully prepared and overseen a number of applications to transfer water permits. Andrew was involved in mediation of an Environment Court appeals relating to groundwater consent hearing decisions. Andrew also presented submissions on the Proposed Natural Resources Regional Plan.

Genesis Energy Water Resource Management Advice

Andrew has managed a project that is provided advice to Genesis Energy regarding water allocation and use of water for irrigation in Canterbury, and provided background information as part of the process of acquiring the Tekapo generation assets from Meridian Energy.

Ngai Tahu Property Farm Developments

Andrew provided advice relating to consenting requirements for proposed dairy farm developments and preparing necessary resource consent applications, including dairy discharge permits and water permits for dairy shed supply.

Environment Canterbury Water Management Strategy Implementation

Andrew provided advice to ECan regarding rationalising the large number of water permits and moving towards aggregated consent entities that can internalise water transfers, effectively creating a water market.

Central Plains Water Fish Screening Mediation

Andrew provided advice regarding fish screen consent conditions relating to an appealed consent and successfully negotiated a mutually agreeable consent condition with Fish and Game and DoC.

Rakaia Selwyn Consent Reviews Representation and Advice

Andrew has co-ordinated solicitors and expert witnesses to present at the consent review hearing and worked with solicitors to prepare an appeal. He was worked with ECan to agree on suitable consent conditions through informal mediation.

Plan Submissions

Dairy NZ Draft ECan RPS Submission

Andrew managed a project for Dairy NZ that involved analysis of ECan's Draft Regional Policy Statement, and preparation of a submission on behalf of Dairy NZ.

Ionic Investments Regional Plan Submission

Strategic advice was provided regarding preparation of a late submission on the Proposed Regional Plan relating to a resource consent for irrigation that had minimum flows.

Industry and TLAs

Fulton Hogan Gravel Extraction Consents

Andrew managed a project that has prepared resource consent applications for a contentious large scale gravel extraction, which is currently being processed by Environment Canterbury. Andrew has prepared affidavit evidence for an Environment Court declaration on gravel priority.

Dalley Gravel Pit

Andrew managed consent applications to excavate and operate a gravel pit at Cust, which attracted significant scrutiny from ECan, but with a sound technical argument and strong and persistent influencing the applications were granted on a non-notified basis.

Timaru District Council Milliscreen Process Water Consent Application

An application was prepared, and subsequently granted for a resource consent to take and use groundwater for process use.

Waitaki District Council Otematata Wastewater Discharge Consent Application

Andrew prepared a consent application for a discharge permit, and managed the subsequent consultation and negotiations with Fish and Game, who withdrew their right to be heard following agreement on suitable mitigation. Andrew presented evidence at the hearing and co-ordinated expert evidence. The consent was subsequently granted.

Christchurch Readymix Concrete Consent Applications

An application was prepared to change the use of water from irrigation to industrial use in a red zone, which was granted on a non-notified basis.

Christchurch Southern Motorway Design Phase

Andrew was the environmental lead for the design team and worked with the lead designers and engineers to ensure that the motorway design met the conditions of the resource consents. He co-ordinated input from planners, landscape architects, ecologists, noise experts, ornithologists and hydrogeologists and managed preparation of change of condition applications.

Environment Canterbury Landuse Consent Processing

Andrew has processed consent applications for ECan for water permits and land use consents, including presenting reports at ECan hearings.

Synlait, Dunsandel, New Zealand, 2005 – 2009

Andrew was responsible for managing the environmental performance of the company and obtaining the necessary resource consents for development projects. Andrew conceived an innovative concept for accessing reliable water from the Rakaia River and applied for consents to take and use this Rakaia River water for irrigation. He successfully managed a team of experts and lawyers to obtain these resource consents. He also presented the planning evidence at the consent hearing.

Andrew also guided a number of vital consent applications through the consenting process, which allowed continuing development of Synlait's farming business. He has made and presented submissions on the Proposed Natural Resources Regional Plan. He worked with both consent holders and Environment Canterbury on consent reviews in the Rakaia Selwyn groundwater zone, and was appointed to the sub-committee representing the consent holder group to provide strategic resource management advice.

Andrew was involved with applications and subsequent consent hearings and appeals for the milk plant consent applications. He was actively involved in Environment Court and High Court hearings relating to a declaration on which water permit applications have priority to take from the Rakaia River, and prepared affidavits. Andrew also worked with lawyers to successfully mediate appeals on consent decisions.

Andrew retains a small shareholding in Synlait Limited.

Consents Investigations, August 2005 – November 2005

As Acting Team Leader, Andrew provided effective guidance and leadership to a team of Consents Investigating Officers. Andrew was responsible for making notification decisions on resource consent applications for water permits for irrigation and land use consents for activities such as riverbed works high country burns.

Compliance Monitoring, January 2003 – August 2005

Andrew led a team of compliance monitoring officers monitoring rural consents, which required a broad knowledge of irrigation and water resource management issues in Canterbury. Andrew led the team into the first trial of real time monitoring of irrigation takes within a catchment, and also managed the implementation of the low flow monitoring systems that being used now. The primary workload for the team was monitoring of irrigation water permits and animal effluent discharge permits, including annual reporting and taking enforcement action where necessary.

Andrew was responsible for input into tenure review processes for North Canterbury high country leases which had registered Land Improvement Agreements. Andrew also oversaw monitoring compliance for high country burns and other land use activities.

Andrew also took enquiries from media and was interviewed on local television. Andrew provided input to aspects of the PNRRP relating to irrigation and dairy effluent. He was also responsible for recruiting, interviewing, and training new staff and motivating staff to meet cost recovery targets, which his team exceeded.

Consents Investigations, June 2000 – January 2003

As an Investigating Officer Andrew processed resource consents applications from the Waitaki catchment north to Kaikoura. He dealt mainly with water permits, but worked across most major activities, such as riverbed works and high country burns. He became a senior member of the consents team and was a mentor for more junior staff. He provided input and feedback to ECan planners during the formulation of the PNRRP.

The major consent projects that he worked on were Opihi River Regional Plan consent replacements, Paparua Stockwater and Irrigation consents, Levels Plains Irrigation, and Kakahu Irrigation Limited. He was also part of the Meridian Project Aqua consent audit/processing team.

Compliance Monitoring, February 1999 – June 2000

Andrew monitored the conditions of water permits and discharge permits from the Waitaki catchment to the Rakaia catchment. He gained valuable experience in relating to farmers and a working knowledge of the Resource Management Act. He mainly monitored irrigation water permits, animal effluent discharge permits and riverbed works consents.

Professional Development

- Making Good Decisions – Certified RMA Decision Maker, February 2010