

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF 35 applications (21 applicants) to take and
use groundwater from the Waitaki River Catchment

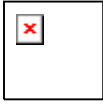
**STATEMENT OF EVIDENCE OF CATHY FAY BEGLEY,
ON BEHALF OF HAKATARAMEA WATER QUALITY GROUP**

INTRODUCTION

1. My full name is **CATHY FAY BEGLEY** and I am a Senior Environmental Planner for the firm GHD Ltd with whom I recently commenced employment. Prior to joining GHD I was employed by Davie, Lovell-Smith Ltd as a Senior Resource Planner for four years. Prior to this I was employed by Environment Canterbury (the Canterbury Regional Council) as a Consents Investigating Officer and then as a Senior Investigating Officer for 5 ½ years. I hold a Bachelor of Resource Studies and a Masters in Applied Science (Environmental Management) from Lincoln University. I am an Associate Member of the New Zealand Planning Institute and a full member of New Zealand Water and Waste Association.

SCOPE OF EVIDENCE

2. I have been requested by Counsel for the Mid River New Applicant Group (MRNAG) to provide planning evidence in relation to a series of applications for resource consent applying to the Hakataramea River and its catchment. Specifically, this evidence is focused on the requirements of the Waitaki Catchment Water Allocation Regional Plan (WAP). This evidence does not address each individual application in detail, as this is being set out in the evidence of others. Furthermore this evidence only addresses the resource consent applications within the Hakataramea River catchment. A list of the applications to which this evidence relates is set out in **Appendix One**.
3. To prepare this evidence I have relied upon the expert evidence provided by the following persons:
 - Ms Keri Johnston;
 - Ms Melissa Anthony;
 - Mr Ian McIndoe; and
 - Ms Lynn Torgerson.



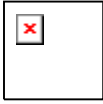
4. I have read many of the submissions received in response to the public notification of these applications relating to water quality. I have also read the technical reports and evidence prepared for this hearing on behalf of MRNAG (as listed above).
5. I am familiar with the WAP, the Proposed Natural Resource Regional Plan (NRRP) and other relevant statutory planning documents. I have been advised by Counsel that the Commissioners directed at the pre-hearing meeting that MRNAG should not repeat evidence already given at earlier hearings, but rather call in aid of that evidence. I have read the Code of Conduct for Expert Witnesses (Rule 330A, High Court Rules and Environment Court Practice Note) and agree to comply with it. I confirm that I have complied with it in the preparation of this statement of evidence.
6. My evidence will cover the following matters:
 - ▶ Background to the applications;
 - ▶ Activity status of the applications;
 - ▶ Evaluation of the proposed abstractions and use of water in terms of relevant planning documents, including the TRP, WAP, NRRP as incorporated by reference into the WAP, Canterbury Regional Policy Statement and Iwi Policy documents and Plans;
 - ▶ A discussion of the proposed abstractions and use of water in terms of Part II of the Resource Management Act 1991 (the Act).

THE PROPOSALS

7. The description and nature of the applications lodged by the individual applicants are set out in the joint evidence of Ms Keri Johnston (Irricon Resource Solutions) and Ms Melissa Anthony (GHD Ltd). I do not propose to repeat that information.
8. However, to enable the applications to be assessed against the rules contained in the WAP it has been necessary to group the applications. This has been undertaken by the Canterbury Regional Council (Ecan) and is set out in Appendix 3 to the Introductory Section 42A Officer's Report (prepared by Ms Claire Penman of MWH NZ Ltd). The appropriate witnesses on behalf of the various applicants have reviewed this grouping and I understand that they agree with it insofar as they relate to the applications forming part of MRNAG.

SITE AND LOCALITY

9. As set out above, the various application details and description of the environment has been set out in the evidence of others. In general terms, these applications relate to the taking and use of water for irrigation purposes from either the Hakatamea River or one of a number of tributary streams. It should be noted that this evidence also covers the use of water associated with the Haka Valley Irrigation Ltd application. While this application seeks the ability to take water from



main stem of the Waitaki River the water taken will be used for irrigation purposes on a number of properties within the Hakataramea Valley.

BACKGROUND

10. The evidence of Ms Johnston and Ms Anthony sets out the dates that the various applications were lodged and subsequently notified.
11. Many of these applications have been lodged with Ecan for sometime, I note that in the case of Hakataramea Station (1990) Ltd that these applications were lodged with Ecan in 1998, some 10 years ago. While this is the most extreme example, the length of time these applications have been in process has resulted in a number of changes being made. This is important when applying the “ready for notification” test which is used to determine priority between various applications. I understand that the issues around priority have largely been resolved as a result of the Commissioners most recent decision dated 8 April 2008 (the priority decision).

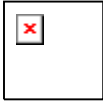
THE PLANNING FRAMEWORK

12. The planning framework applying to the taking and use of water within the Waitaki Catchment is unique. The process leading to the formation of the Waitaki Catchment Water Allocation Board and the promulgation of the WAP has been well documented in both legal and planning evidence of others presented at previous hearings. While I do not propose to repeat this evidence, I understand that there are differing interpretations and opinions as to the extent to which the provisions contained with the WAP can be given effect. Given this, my evidence firstly sets out the activity status of the various activities before discussing the general approach to non-complying activities set out within the WAP. My evidence then goes on to assess the proposed applications having regard to matters set out in Section 104D of the Act.

Status of Applications

Land Use Consents

13. The Transitional Regional Plan (TRP) contains a number a number of bylaws controlling works within the bed of waterways, where they are located within either the North Canterbury or South Canterbury Catchment Board Area. The streams subject to these applications are located within the Hakataramea Catchment which is outside the area identified as being within either the North Canterbury or South Canterbury Catchment Boards. Given this it is assumed that there is no operative Regional Plan for such activities within the Hakataramea Catchment and as such the activities should be treated as discretionary activities, pursuant to Section 77C of the Act and evaluated in accordance with Section 104B of the Act.
14. In July 2004 Chapter 6 of the NRRP was notified. This chapter sets out a number of rules relating to works within the bed of the rivers and streams within the Canterbury Region. Or particular relevance to the applications is Rule BLR 2. This rule permits the erection or placement of



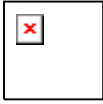
structures within the bed of the river or stream provided a number of conditions are met. The Council Officer states that none of the proposed activities can comply with Rule BLR 2 and as such are discretionary activity. However, I disagree with this assessment and believe that it is possible, depending upon how these works are physically undertaken, that they could comply with the conditions set out in Rule BLR 2. If this occurs then these activities could be permitted activities under the NRRP. However, given the lack of an operative Regional Plan, the works within the beds of the streams are considered to be **Discretionary Activities**.

Damming Permits

15. The TRP contains a General Authorisations (GA) that permits, subject to conditions, the damming of ephemeral streams. All of the proposed storage ponds are located outside natural watercourses and as such are outside what is permitted by the GA. However, the TRP fails to set out the status of such applications therefore it is considered that there is no operative Regional Plan in relation to these. Given Section 77C of the Act, the proposed damming of water should be treated as a discretionary activity and evaluated in accordance with Section 104B of the Act.
16. In July 2004 Chapter 5 of NRRP was notified. This chapter sets out a number of rules relating to water quantity within the Canterbury Region. Of particular is Rule WQL 37 that allows the damming of water subject to a number of conditions. None of the proposed dams comply with condition 3 of this rule. Therefore the damming of water is considered to be a discretionary activity considered under Rule WQN 41. Rule WQN 41 only has one condition which all of the applications are able to comply with.
17. Overall the damming of water is considered to be a **Discretionary Activity**.

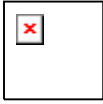
Water Diversion, Take and Use Permits

18. In July 2006 the Waitaki Catchment Water Allocation Plan (WAP) became operative. The WAP sets out a number of rules controlling the taking and use of water from both surface and groundwater located within the area defined as the Waitaki Catchment. Rule 9 of the WAP states that where an activity does not contravene Rule 1 and the point of take is not located within an area defined as a High Natural-Character Water Bodies the taking of water is a permitted activity. While the Hakataramea River is not defined as a High Natural-Character Water Body, all of the proposed applications exceed the rate and volume of water provided for by Rule 1. Therefore the applications are not permitted.
19. Rule 15 states that where an activity is consistent with Rules 2, 6 and 7 it is considered to be a discretionary activity. Rule 2 states “...no person shall take, use, dam or divert surface water or groundwater...” unless the taking of water is consistent with minimum flow regime and allocation limits as set out within Table 3 of Rule 2. The evidence of Ms Johnston and Ms Anthony outlines that for the applications located on the main stem of the Hakataramea River they are all within the



allocation limit of 0.5 m³/s set for the Hakataramea River (Table 3 (xix)). For the applications located on the tributary streams Table 3 (xxii) does not set an allocation limit for these streams. Therefore, these applications comply with the allocation limit set under Table 3 of Rule 2.

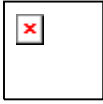
20. Ms Johnston and Ms Anthony state that the minimum flows being proposed by the applicants are more conservative than the WAP minimum flow of 0.5m³/s from September to March (for the takes from the Hakataramea River) or the 5 year 7 day low flow (for the takes from the tributary streams). As the applicants, with exception of the three applications who propose to harvesting water, are proposing a minimum flow regime that would see them reducing their abstraction by half whenever the flow in the Hakataramea River falls below 1,500L/s (1.5m³/s) and then cease whenever the flow in the Hakataramea River falls below 500L/s (0.5m³/s). Therefore, these applications meet both the allocation limit and minimum flow requirements as set out in Table 3 of Rule 2.
21. Table 5, Rule 6 sets a number of allocation limits for specific reaches within the Waitaki Catchment. While all of these applications are located within the Hakataramea River Catchment, this catchment is located within the area defined as being “Downstream of Waitaki Dam but upstream of Black Point”. Further all of the applications are considered to be within the “Agricultural and Horticultural activities” classification. Table 5 (v) sets an annual allocation (cumulatively) for these activities of 150 million cubic meters.
22. Ms Johnston’s and Ms Anthony’s evidence states that Ecan are of the opinion that of the 35 applications subject to this hearing, only four of these are within then 150 million cubic meter allocation. I note that in Ms Penman’s Section 42A report she states that Star Holdings (CRC021221.2) are able to comply with the above annual allocation and as such are considered to be discretionary activities. However, for the remaining applicants, Ms Penman is of the opinion that they are unable to comply with the annual allocation limit and as such are non-complying activities.
23. As detailed within Ms Johnston’ evidence there is a difference of opinion as to how the cumulative annual allocation is calculated. Council Officers have included all takes and diverts when arriving at the figure of just over 185Mm³. The table provided as part of Ms Johnston’s evidence excludes “non-consumptive takes” (i.e. diversions that are returned to the river). This table shows that this exclusion has the effect of reducing the annual allocation figure to just over 154Mm³.
24. When determining the annual allocation table (i.e. Table 5) Policies 10 –14 of the WAP provide guidance as to what should be taken into account. In this particular situation, the cumulative annual allocation of has been set at 150Mm³/year. However, these policies do not provide any guidance as to what should be included under this annual allocation table.
25. Policy 15 requires “...the rate of abstraction and the annual volume of resource consents for taking, using, damming or diverting...” of water to be “...reasonable for the intended end use...”. This policy is given effect to through the implementation of Policy 16 which requires “... resource



consent applications for irrigation to meet a reasonable use test in relation to the instantaneous rate of abstraction and the annual volume of the proposal to take, use, dam or divert water...

Policy 16 (a) – (c) then sets out what is to be taken into account when determining whether the “... take, use, dam or divert...” of water meets the reasonable use test. Policy 16 (a) requires the consideration of land use and physical factors such as soils type, climate and the irrigation system and management. Policy 16 (b) requires the consideration of irrigation application efficiency and Policy 16 (c) sets out how annual volumes are to be determined.

26. Given the matters set out in Policy 16 (a) – (c) it would seem inappropriate to apply such matters to a diversion of water where it is returned to the river or whether there is an associated take or use of that water for irrigation. This is due to the fact that these matters would be applied when considering whether the take and use aspect met the reasonable use test.
27. Rule 6 (1) does not provide for a “... take, use, dam or divert water” when “...the sum of the annual volumes ... exceeds the annual allocation...”. Rule 6 (2) provides a number of exceptions as to when a take use or diversions should not be included within the annual allocation. There is no specific exception under Rule 6 for non-consumptive takes and as such there is some inconsistency between how annual allocations are calculated under Policy 16 and the wording of Rule 6.
28. I note that in Mr Potts’ evidence (Hunter Downs Irrigation Scheme) he outlines the background of the evidence he presented to the Allocation Board. I understand that Mr Potts was the only person who gave evidence to the Board on allocation regimes, further that the majority of the allocation numbers adopted by the Board were taken from his evidence. On this basis Mr Potts suggests that the intention behind the rules of the WAP is a reflection of the way he presented his evidence to the Board. In that he did not include any non-consumptive uses of water within any of his allocation regimes or figures. This evidence suggests that non-consumptive uses of water should not be included within the cumulative allocation regime.
29. This inconsistency and uncertainty around how the 150Mm³ figure was arrived at (as detailed in Ms Johnston’s evidence and in the evidence of Mr Potts and in the evidence of Mr Potts) does reduce the weight placed on this figure. It is therefore, appropriate to exclude non-consumptive diversions from the annual allocations calculations. Implementing this approach would result in the applications within Hakataramea River catchment being within the overall annual allocation. Therefore, Rule 15 of the WAP would apply. This rule states that where an application is able to comply with Rule 2, 6 and 7 it is a **Discretionary Activity**.
30. However, if the Council Officers approach were adopted, then Rule 16 of the WAP would apply. This rule states that where an activity does not comply with Rule 2, Rule 6 or Rule 7 it is a non-complying activity. Based upon the discussion above the proposed applications within the Hakataramea Catchment comply with Rule 2, however, there is some uncertainty as to whether

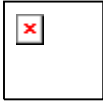


they comply with Rule 6, due to the uncertainty around how the cumulative annual allocations are calculated. Therefore it is also possible that these applications are **Non-Complying Activities**.

31. In order for the Consent Authority to grant a consent for a non-complying activity, it must be satisfied that one of the tests set out within Section 104D of the Act can be met. The first test of Section 104D requires the effects of the activity, on the environment, to be no more than minor. The second test requires the activity not to be contrary to the objectives and policies contained within an Operative and/or Proposed Regional Plan. I understand that in *Monowai Properties Ltd v Rodney District Council A215/03* the Court held that for a proposal to be “contrary” to the objectives and policies the proposal had to be “repugnant to” or “opposed to” rather than the proposal simply not being consistent with or not find support from the objectives and policies.
32. Normally non-complying activity status means that the Plan does not anticipate such activities. As such, the Plan would not include any assessment matters as it may have done for controlled, restricted discretionary or discretionary activities.
33. I note that in Ms Dawson’s evidence (Hunter Downs Irrigation Scheme), she outlines that the WAP takes a different approach from other planning documents by making statements as to what should be considered in respect of non-complying activities. For example Rule 16 states that “*In considering an application to which this rule applies the consent authority will have regard, amongst other matters, to all policies of this Plan.*” Further Policy 4 contains a number of matters that are to be addressed when considering an application for non-complying activities.
34. The Council Officers have made a number of comments about potential precedent effects, plan integrity and public confidence in the plan as a result of the granting of the non-complying activities. While these effects can be taken into account when determining an application (under Section 104 (1)(c) of the Act), in my view, the granting of these applications will not necessarily result in potential effects on Plan integrity. This is because the WAP appears to anticipate applications will be made for non-comply and as such sets out a planning framework to assess such applications.

ASSESSMENT OF EFFECTS

35. As outlined above these applications seek the ability to undertake a number of activities associated with the taking and use of water from either the main stem of the Hakataramea River or a number of tributary streams. These applications have attracted a number of submissions in support and in opposition which are both specific to the individual applications and also of a general nature in relation to all applications.
36. Ms Johnston and Ms Anthony’s evidence provides a good overall summary of the submissions received on the applications. While I do not propose to provide yet another summary of these submissions I do note that all the submissions have two key themes which are:



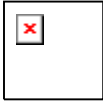
- ▶ There is a concern that the River catchment is over subscribed;
- ▶ The use of water for irrigation may have a negative impact upon the water quality contained within the river system.

My evidence will now focus on these two themes.

37. As outlined above, these applications are non-complying and for them to be granted they need to satisfy one of the two limbs of Section 104D of the Act. This means that the applicants need to establish that either the effects of their proposal on the environment will be minor or that the proposal is not contrary to the objectives and policies of the WAP and where appropriate the NRRP.

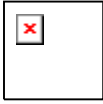
The Hakatamea River over subscribed

38. Fish and Game New Zealand and to a lesser extent the Department of Conservation have stated in their submissions that they are concerned that the tributaries of the Hakatamea River have been excluded from the 500L/s allocation limit (as per Table 3 (xix)). In their opinion the Hakatamea River (as a whole) already has more water abstracted from it than it can sustain
39. The WAP sets allocation regimes and associated minimum flow and flow sharing regimes to ensure that when water is taken from a waterway, that not only in the stream values are protected, but also the social, cultural and amenity values of the waterway. Objective 1 sets the over-arching objective of the Plan. Objective 1 a through to g provide guidance for this assessment and the setting of “environmental bottom lines”.
40. Objective 2, enables water to be used for, amongst other things, agricultural and horticultural activities to “... *enable people and communities to provide for the social, economic and cultural well being and their health and safety...*”:
41. The WAP seeks to address such aspects of over subscription by including an overarching allocation regime as set out in Rule 6, Table 5 (v). When determining an allocation regime Policies 4 and 5 set out what should be considered when determining “environmental flows” for surface water bodies and groundwater bodies respectively. I note that in the explanation of Policies 3 - 5 that the term “environmental flows” includes minimum flows, allocation limits, flushing flows and flow sharing.
42. In terms of the proposed applications Policy 4 is of particular relevance and sets out an extensive list of matters that are to be considered when determining an environmental flow. This list includes amongst other things; cultural aspects, natural character and landscape, aquatic ecology, water quality, riparian vegetation, recreational opportunities and access to waterways. I note that in the explanation of these policies the matters set out in Policy 4 are matters that should be addressed when considering an application for “... *a non-complying activity in respect to the environmental flow and level regimes established in this plan...*”. Therefore, when an application is consistent



with this policy it will not affect the values outlined in Policy 4. [Policy 4 is implemented through rule 3 table 3](#)

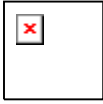
43. Ms Johnston and Ms Anthony have outlined that all the applications are consistent with the stem allocation regime for the Hakataramea River as set out in Table 3 (xix) of Rule 2. Further [for the reasons discussed above](#) it is possible that these applications are also consistent with the catchment wide allocation limit as set out within Table 5 (v) Rule 6. Therefore, these applications can be considered to be consistent with Policy 4.
44. However, the Council Officer, Ms Johnston and Ms Anthony have highlighted that there is a potential conflict between existing consent holders and those who are seeking consents. In simple terms, the WAP proposes a different minimum flow regime than that which is currently included as a condition on existing resource consents. To address this potential conflict Ms Johnston and Ms Anthony have proposed an alternative (to that contained within the WAP) minimum flow regime. This requires the applicants to reduce their rate of abstraction by half whenever the flow in the Hakataramea River as measured at State Highway 82 falls below 1,500L/s (1.5 m³/s) and then to cease abstraction whenever the flow is below 500L/s (0.5m³/s). The alternative minimum flow regime is consistent with that of existing resource consents and is conservative when compared to the minimum flow regime contained with Table 3 (xix) of the WAP. Therefore, the granting of the proposed takes will not affect the reliability of supply of the existing users, nor be contrary to the objectives and policies of the WAP.
45. Further, for the applications to take water from the tributary streams, Ms Johnston and Ms Anthony have, where possible, undertaken a flow correlation between the flow in the stream and the Hakataramea River flow. The reason being that the Hakataramea River is the only river which has a reliable gauging site which can be used to determine when the proposed takes should cease. For all the tributary streams, the applicants are proposing to reduce the amount of water they take by half whenever the flow in the river is below 1,500L/s and then cease whenever the flow falls below 500L/s. This ensures that the takes from the tributary streams will not affect the existing consent holder's reliability of supply. Further, for some of the tributary streams, such as Station Stream, McKays Stream and Grampians Stream, the applicants have proposed a specific minimum flow for these streams which is at least the 5 year 7 day low flow or higher. This will ensure that these takes will not impact upon either the aquatic ecology of the stream or any downstream existing permit holders. This also ensures that the takes are consistent with the objectives and policies of the Plan.
46. However, the Council Officer makes an interesting comment in relation to the three applications that seek to harvest water. The Officer seems to imply that there could be some priority issues between these users. I am a little confused by this statement, as none of the harvesting applications seek the ability to take water, from the same stream. If this were the situation, I concur



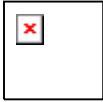
that there could be a priority issue between users. As this is not the case, and the fact that the harvesting will start only once the flow in the Hakataramea River exceeds 4.5m³/s it would appear to me that the limiting factor for harvesting is the flows contained within the stream at the time, rather than whether any others are harvesting water. As such I am unsure of what the priority issue is that the Officer is referring to.

Water Quality

47. Objective 4 of the WAP requires the *promotion of a "...high level of technical efficiency in the use of allocated water"*. The Plan requires the resource to be used *"... in a way that any given output is produced at least cost, including avoiding waste"*.
48. Objective 4 is elaborated further through Policies 15 – 20 of the WAP. These policies are of particular relevance as the inefficient use of water for irrigation can have significant adverse effects on the environment. Such effects include, but are not limited to, the leaching of nutrients through the soil profile and into the groundwater system. Where the groundwater system is highly connected to the nearby surface waterways, any increasing in nutrient loading within the groundwater system can manifest itself in an increase in the nutrient loading of the surface waterways. However, Ms Torgerson in her evidence states that the majority of the nitrogen measured in the Hakataramea River is Organic Nitrogen that is derived from animal and human effluent rather than Dissolved Inorganic Nitrogen, which is derived from surplus water draining through the soil profile.
49. Policy 15 requires that the rate of abstraction and the annual volume associated with any water take and use is reasonable and avoids significant wastage. Policy 16 sets out how to determine whether the use is "reasonable". The reasonable use test requires one to consider:
 - ▶ The land use of the site and the physical characteristics of the site such as soil type, water holding capacity, climatic factors, evapotranspiration and irrigation systems and management;
 - ▶ Irrigation efficiency; and
 - ▶ Annual volumes based upon one of two methods.
50. Ms Johnston and Ms Anthony state that each of the applicants has proposed an irrigation schedule that will result in less than half the known water holding capacity of the soil being applied during each irrigation cycle. The applicants propose to implement a farm management program that will include measures to ensure that irrigation only occurs whenever it is necessary. Furthermore, all of the applicants are proposing to use spray irrigation methods which are at least 80% efficient, and the systems will be audited under the Code of Practise for Irrigation Evaluation (2005). All of these measures will ensure that in terms of Policy 16 a-b the use of water meets the "reasonable use" test and as such is consistent with this policy.



51. Policy 16 c provides some very clear guidance as to how to determine annual volumes. As set out in Ms Johnston and Ms Anthony's evidence, the annual volumes proposed have been calculated in accordance with this policy.
52. As outlined in Ms Johnston and Ms Anthony's evidence the use of water for irrigation, both individually and cumulatively, can result in significant adverse effects on water quality. Of particular concern is the leaching of nitrogen (N) and phosphorus (P) from the soil into groundwater and "ending up" in the nearby surface water bodies. However, in Ms Torgerson's evidence in chief, the effect of elevated nutrients within the Hakataramea River is the promotion of periphyton growth. Ms Torgerson highlights that excessive periphyton growth can reduce the aesthetic and recreational values associated with the river, block water intakes and impact upon the ecosystem values associated with the river.
53. The water quality of the Hakataramea River is of a particular concern to Fish and Game New Zealand as the Hakataramea River is a valued trout and salmon spawning river. They are opposed to the granting of any further consent for irrigation from this river due to the potential impacts the use of water (cumulatively) could have upon the water quality of the river.
54. The Council Officer has commented that the possible degradation in water quality as a result of water use is a potential issue. While they have used the report prepared by Environment Canterbury (commonly known as the GNS report) as a basis of their assessment, they have also commented on the lack of information on this aspect provided by the applicants. Given the lack of information contradicting the GNS report the Council Officers are concerned that the granting of the applications may result in further degradation to the water quality of the Hakataramea River.
55. The WAP provides some very specific and useful policy guidance to be used when determining whether an application should be granted. Policy 13 requires the consent authority to "*...have regard to the extent to which the exercise of the consent could result in the water quality objectives of the Natural Resource Regional Plan not being achieved*". The explanation of this policy, states that it aims to recognise that the "*...Waitaki catchment has some sensitive and pristine water bodies that have not, to date, had intensive land uses in their catchments*" and as such aims to provide a level of protection. This policy also links with the NRRP to ensure that when determining an application, the matters contained within the NRRP are considered. This has been achieved by incorporating by way of reference both Objective WQL 1 and Objective WQL2 of the NRRP.
56. Objective WQL1.1 aims to ensure that the water quality within surface waterways is maintained or improved so that the rivers are suitable for contact recreation in the reaches where this is valued, that the water is suitable for stock water purposes, that amenity values and cultural values are provided for. In addition the objective sets a number of numerical water quality outcomes that are to be achieved. These outcomes are set out in Table WQL 5. I understand at this point in time

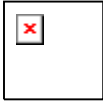


there is some uncertainty as to whether the water quality of the Hakataramea River currently meets the water quality outcomes set out in Table WQL 5 of the NRRP.

57. However, the overall objective of Objective WQL1.1 is to improve the water quality within surface waterways, so that the objectives set out in Objective WQL1.1 (1) (b) and (2) (b) are met. Based upon Ms Torgerson's evidence if stock are removed from waterways and windblown soils losses are reduced it is likely that there will be an overall decrease in the nutrients entering the river, thus there will be an overall improvement in the water quality of the Hakataramea River.
58. Objective WQL2 (b) (ii) states that where groundwater quality has been affected by human activity, the maximum allowable N increase should be not more than 2mg/L. Two theoretical studies have been undertaken. One by Environment Canterbury (commonly known as the GNS Report) and the other by AgResearch (undertaken on behalf of the applicants). Both of these studies focus on the groundwater drainage and overland flow pathways as being the main nutrient migration pathways. Both these studies indicate that there could be an increase in the concentrations of N and P within the Hakataramea River as a result of the use of water for irrigation. However, Ms Torgerson's evidence highlights that in both of these reports the concentration of N and P modelled to represent what is currently occurring (i.e. the existing water quality base line) and does not actually represent what is actually occurring. This was of concern and Pattle Delamore Partners undertook an analysis of the existing surface water quality data within the Hakataramea River catchment.
59. Ms Torgerson states that the existing water quality data suggests that the main nutrient migration pathways is as a result of stock having unrestricted access to waterways along with windblown soil. Ms Torgerson states that if stock are removed from the waterways and there is a reduction in windblown soil losses, then there could be an overall decrease in the nutrient loads entering the river. Thereby ensuring that the water quality within the Hakataramea River is improved.
60. To achieve this overall decrease the following mitigation measures have been proposed:
 - ▶ Fencing

Within the irrigated area:

 - (a) *Permanent fencing shall be erected at a minimum setback distance of 12 metres from the edge of any natural, permanently flowing, surface water features.*
 - (b) *Where practicable, riparian planting shall be carried out within fenced areas.*
 - (c) *Temporary fencing will be erected when stock are grazing areas of the property where there is access to other waterways, excluded from (a) above.*
 - (d) *All fencing will be maintained in a good state of repair.*
 - ▶ Shelter Belts
 - (a) *Within 12 months of the commencement of this consent, shelterbelts will be planted on the northern side of irrigated land within the consent holder's property, except where this will result in shading of a road causing treacherous conditions.*

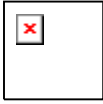


(b) *Shelterbelts* will be maintained in a good state of repair.

61. Further, Ms Johnston and Ms Anthony's evidence sets a comprehensive mitigation measures package which is to be implemented. This package includes:
- ▶ The requirement to undertake modelling of the nitrate nitrogen needed using either Overseer model, SPASMO model or another approved model.
 - ▶ The requirement to undertake nitrate nitrogen budgeting,
 - ▶ The requirement to ensuring that their irrigation infrastructure is designed by an appropriately qualified person (for new irrigation infrastructure) or and evaluated by an appropriately qualified person (for existing irrigation infrastructure), with any recommendations being implemented within 12 months of the evaluation being undertaken.
 - ▶ The requirement to prepare and then implement a farm management plan. The farm management plan will outline how effects are to be managed. These management plans need to address the following:
 - How use of water will be technically efficient and minimise runoff and drainage;
 - How contamination of groundwater and surface water is to be minimised especially by faecal contamination, nitrogen and phosphorus;
 - How nutrient losses will be minimised while maintaining the soil fertility to optimise pasture and crop productivity;
 - How going to ensure that soil is maintained in good physical condition;
 - How going to minimise adverse effects on water bodies and riparian areas;
 - How going to protect significant indigenous biodiversity and ecosystem values within the area;
 - To keep records on land use, area irrigation, stock number and fertiliser use;
 - The measures that will ensure that the management plan is regularly reviewed and updated.
62. Given the comprehensive mitigation package discussed above, along with not only the applicants but the communities willingness to improve farm management practices within the Hakataramea Valley, this will ensure that the water quality of the Hakataramea River is improved so that water quality standards identified within Objectives WQL 1.1 and WQL2 can be achieved, thereby meeting Policy 13 of the WAP.

CANTERBURY REGIONAL POLICY STATEMENT

63. Section 104 (1)(b)(iii) of the Act requires the Consent Authority to "have regard to" any relevant Regional Policy Statement (RPS). The RPS for the Canterbury Region has been operative since June 1998. Of relevance to these applications is Chapter 9 which relates to the management of the regions water resource. I consider that both the WAP and NRRP give effect to the objectives and policies set out in the RPS. On this basis I have not considered the RPS any further.



IWI POLICY DOCUMENTS/STATEMENTS AND PLANS

64. I note that the Waitaki River is a Statutory Acknowledgement Area under the Ngai Tahu Claims Settlement Act 1998 (Schedule 78). While this does not specifically include the Hakataramea River, I believe that the following documents are of relevance to the assessment of the proposals in terms of Section 104(1)(b) of the Act. The most relevant Iwi Policy documents are:
- ▶ Kai Tahu Ki Otago Natural Resource Management Plan;
 - ▶ Te Whakatau Kaupapa: The Ngai Tahu Resource Management Strategy for Canterbury;
 - ▶ Te Runanga O Ngai Tahu Freshwater Policy.
65. I also note that the objectives and policies contained within the WAP also contain frequent references to the potential effects on cultural values.
66. While MRNAG has not called specific evidence to address these matters, I note that evidence has been presented by others both at earlier hearings and for this hearing, which address the overall environmental quality of the Waitaki River. Based upon this evidence the overall environmental quality of the river system will not be adversely affected. However, whether this evidence is sufficient to meet the specific spiritual and cultural needs of Ngai Tahu is unclear.

PART II OF THE ACT

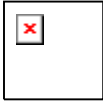
67. When considering an application for resource consent, Part II of the Act is of particular importance as this sets out the purpose and principles of the Act.

Section 5 - Purpose

68. The purpose of the Act is to promote the sustainable management of the natural and physical resources. This section also enables people and communities to provide for the social, economic and cultural wellbeing while avoiding, remedying and/or mitigating any adverse effects of an activity on the environment.

Section 6 – Matters of National Importance

69. Section 6 outlines the matters of national importance that must be recognised and provided for by all persons exercising functions and powers under it. Of relevance to these applications are:
- “(a) *The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.*
 - (d) *The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
 - (e) *The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
 - (g) *the protection of recognised customary activities.”*



70. In terms of the taking and use of water for irrigation impacting upon the natural character of the Hakataramea River and its tributaries. I note that the applicants are proposing an alternative flow regime which is conservative when compared to that set out within the WAP, thereby ensuring that the applications do not compromise the natural character of the Hakataramea Valley.
71. Public access is only likely to be affected through the placement of intake structures. From the evidence of Ms Johnston and Ms Anthony these structures are relatively small and would not compromise access to waterways where access is available.
72. The matters set of national importance set out in Section 6 (e) and (g) have already been discussed above.

Section 7 – Other Matters

73. Section 7 sets out various matters to which particular regard is to be had. The following are of relevance to these applications:

“(a) Kaitiakitanga:

[(aa) The ethic of stewardship:]

(b) The efficient use and development of natural and physical resources:

(c) The maintenance and enhancement of amenity values:

(d) Intrinsic values of ecosystems:

(f) Maintenance and enhancement of the quality of the environment:

(g) Any finite characteristics of natural and physical resources:

(h) The protection of the habitat of trout and salmon.”

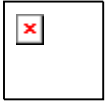
74. These matters have already been considered under the assessment of the objectives and policies set out in the WAP. On this basis I have not considered these aspects any further.

Section 8 – Treaty of Waitangi

75. Section 8 requires all persons, when exercising functions and powers under the Act to take into account the principles of the Treaty of Waitangi. The WAP has been promulgated having regard to these principles and specifically includes policies and objectives which recognise the importance of maintaining the integrity of the Hakataramea River and meeting the specific spiritual and cultural need of Ngai Tahu. These matters have been discussed above.

CONCLUSIONS

76. The proposed applications seek the ability to take and use water for irrigation from the Hakataramea Rive and its tributaries. They all fall within the cumulative abstraction volume of $0.5\text{m}^3/\text{s}$, and arguably also within the 150 million³cubic meter per year allocation for agricultural

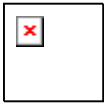


and horticultural activities above Black Point. However as the applicants propose an alternative minimum flow regime they are considered to be non-complying activities.

77. The effects of the alternative minimum flow regime have not been extensively discussed, due to the applicants proposing a conservative flow regime when compared to that which is contained within the WAP. The alternative minimum flow regime is to ensure that the applicants do not impact upon existing users reliability of supply.
78. Ms Torgerson has assessed the effects of the use of water and the potential increase in N and P levels in ground and surface waters. Ms Torgerson has recommended a number mitigation measures which have incorporated into best practice farming practices to avoid, remedy and mitigate any potential adverse effects.
79. In terms of threshold test set out within Section 104D of the Act, I consider that these applications are not contrary to the objective and policies of the WAP, nor are the effects on the environment more than minor. Further, the proposed irrigation will significantly contribute to the long term needs of the individual applicants through the economic and social benefits awarded to them and the local communities supported by farming in this area.
80. Based upon the above assessment I consider that the granting of these consents is appropriate, having had regard to the objectives and policies of the WAP and the purpose and principles of the Act.

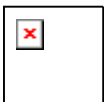
Cathy Begley

15 August 2008

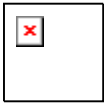


Appendix 1

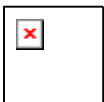
| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|-----------------|--|--|-------|---|---------------|--|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC050940 | RG & ZL Pringle | Application to take and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC050957 | RG & ZL Pringle | Application to divert and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC050960 | RG & ZL Pringle | To undertake works within the bed of a surface waterway | N/A | N/A | Discretionary | Discretionary | Grant | |



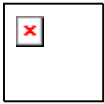
| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|------------------------------------|---|--|-------|---|---------------|--|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC051767 | RPNZ Properties Ltd | Application to take and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC051768 | RPNZ Properties Ltd | Application to take and use ground water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC051769 | RPNZ Properties Ltd | Application to take and use ground water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC950464.2 | Hakataramea Station (1990) Limited | Application to change the conditions of an existing consent | No | Yes | Discretionary | Discretionary | Grant | |



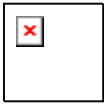
| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|------------------------------------|--|--|-------|---|---------------|--|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC981376 | Hakataramea Station (1990) Limited | Application to divert surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC040999 | Hakataramea Station (1990) Limited | Application to dam and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC981377 | Hakataramea Station (1990) Limited | Application to undertake works within the bed of a surface waterway | N/A | N/A | Discretionary | Discretionary | Decline – lack of assessment of effects in relation to the dimensions of the proposed structures and physical works required | Dimensions of structure provided. |
| CRC042653 | Hakataramea Station (1990) Limited | Application to undertake works within the bed of a surface waterway | N/A | N/A | Discretionary | Discretionary | Grant | |



| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|-----------------------|--|--|-------|---|---------------|--|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC951776.5 | Star Holdings Limited | Application to take, surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Grant | |
| CRC021585 | Star Holdings Limited | Application to divert surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Grant | |
| CRC021221.1 | Star Holdings Limited | Application to change the conditions of an existing consent | Yes | Yes | Discretionary | Discretionary | Grant | |
| CRC072756 | Star Holdings Limited | Application to take and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water. | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC021258 | Star Holdings Limited | Application to undertake works within the bed of a surface waterway | N/A | N/A | Discretionary | Discretionary | Grant | |



| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|-----------------------|---|--|-------|---|---------------|---|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC084260 | Star Holdings Limited | Application to change the conditions of an existing consent | No | Yes | Discretionary | Discretionary | Grant | |
| CRC071114 | RW and ME Sutton | Application to divert surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC040989 | NJ Small | Application to divert surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |



| Consent application number | Applicant Name | Type of Application | Within the Table 5 (v) allocation Yes/No | | Activity Status | | ECan section 42A Recommendation | Comment: |
|----------------------------|----------------|--|--|-------|---|---------------|---|---|
| | | | Ecan | MRNAG | Ecan | MRNAG | | |
| CRC040988 | NJ Small | Application to dam surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | Discretionary | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC051766 | NJ Small | Application to take and use surface water | No | Yes | Non-complying (due to Table 5 (v) allocation) | | Decline – lack of assessment of effects in terms of effects on lack of assessment of effects in terms of effects on water quality within the Hakataramea River and other water users through reduced reliability of supply and sharing of water | Alternative minimum flow regime proposed. Mitigation proposed to address water quality effects. |
| CRC071825 | NJ Small | Application to undertake works within the bed of a surface waterway | N/A | N/A | Discretionary | | Decline – due to effect on flood carrying capacity, water quality and bank stability. | Mitigation proposed to address the effects. |

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