

**Before the Commissioners appointed by Canterbury
Regional Council**

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Applications CRC071649 &
CRC071650 by Bellfield Land
Company Limited for a Water
Permit to take & use surface
water and a Land Use Permit to
disturb the bed.

Section 42A Officer's Report of Claire Penman

Date of Hearing: 21 September 2009

1. This report should be read together with the introductory s42A report which gives an overview of all applications presented at this hearing (Report 1), the planning and technical reports on hydrology and minimum flows (Report 2A and 2B), the planning report outlining annual allocations (Report 3) and the reports on cumulative landscape and water quality effects in the catchment (Reports 4A – F and 5).

INTRODUCTION

2. Bellfield Land Company Ltd (the applicant) has applied for resource consent to:
 - (a) CRC071649: Take and use 30 litres per second with a volume not exceeding 312,000 cubic metres per year from Hen Burn Stream from one of two locations, for spray irrigation of 52 hectares within a command area of 130 hectares for grazing sheep and beef (*CRC071649*); and
 - (b) CRC071650: Disturb the bed of Hen Burn Stream at one of two locations to construct a minor structure to facilitate the abstraction of water and associated maintenance (*CRC071650*).

At Hen Burn Road, Omarama (see Attachment One for maps of the location of take, land use and irrigation areas).

3. Jason Cowan of Pasley, Dean & Kirk was originally engaged to prepare the application and assessment of environmental effects on their behalf. Subsequently, Mr Bob Hall of GHD Ltd (formerly R J Hall) provided responses to some further information requests. The applicant has now engaged Haidee McCabe of IR Solutions, to respond to further information requests.
4. A 16 year duration to 2025 is sought. These are applications for new activities.

Background

5. The applicant currently holds an existing consent to take water from the Hen Burn at a rate of 30 litres per second for irrigation of 7 hectares (see copy of CRC001096.1 in

Attachment Two). The applicant proposes that this application will be surrendered if CRC071649 is granted.

6. Applications CRC071649 and CRC071650 were lodged on 1 December 2006 and considered to be notifiable on that date. Requests for further information have been sent covering effects including, but not limited to, water quality, landscape, irrigation volumes, minimum flows, and derogation approvals.
7. There have been no changes to the water permit application since it was lodged and notified. However, the land use consent has been amended to provide for works associated with the installation of a submerged infiltration gallery for the abstraction of water, rather than a pipe intake and supporting concrete wing-wall structure on 22 June 2009. I consider required works will be within the scope of those required for the intake structure as originally proposed.
8. Consents CRC011987 and CRC012733 are currently being sought by the applicant for another proposal from the Quail Burn (see Report 8A) to irrigate 190 hectares.

Notification

9. Details of the notification and wording are contained in Appendix 4 of the introductory s42A report (Report 1). Both consents were notified in August 2007 with 200 other applications for similar activities in the Waitaki catchment.

Submissions

10. In the 2007 public notification, 22 submissions in total were made on the water permit application CRC071649. Of these:
 - (a) 2 were in support;
 - (b) 18 in opposition; and
 - (c) 2 neither supported nor opposed this application.
11. For the land use application CRC071650, a total of 21 submissions were received. Of these, 2 were in support, 17 in opposition, and 2 neither supported nor opposed the applications.
12. Details of submissions made in response to all applications which were publicly notified at the same time in 2007 and 2003 are contained in Report 1, Appendix 5. Additionally, Table 1 below summarises only those submissions made individually on these applications, or submissions which raise particular concerns in relation to this proposal. Please note that all submissions hold equal importance, even if not specifically listed in the table below.
13. Overall, the key effects of concern to submitters include effects on: ecosystems, water quality, allocations, minimum flows, natural character and landscape, efficiency and cultural values.

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Fish & Game	Good tributary for trout, eels and indigenous fish, and gamebirds. Take exceeds allocation limit.	Oppose	Yes
Department of Conservation	Water quantity, water quality, fish passage, natural character	Oppose	Yes
Meridian Energy Ltd	Effects on water quality, efficient use and need to meter take	Oppose	Yes
Ohau Co Trust	Amount of water being sought exceeds that available and a fair flow sharing regime should be established	Oppose	Yes
AJ & WH Sutherland	Concerned about location of abstraction point	Oppose	Yes

Table 1: Summary of specific submissions on applications CRC071649 & CRC071650

DESCRIPTION OF THE PROPOSED ACTIVITY

14. The applicant proposes to take water at a rate of 30 litres per second from one of two locations on the Hen Burn via a submerged infiltration gallery buried up to 1 metre deep (see photos of Hen Burn in Attachment Three). The two locations are currently proposed in order to manage the irrigation system based on availability of flow at the intake point which has not yet been determined. However, only one intake site will be used. Irrigation will be via a centre pivot for a total of 52 hectares.

15. The applicant states that water will be conveyed from the intake to the proposed centre pivots, via a pipe network.

16. The applicant does not propose to supply any stock water to the property from this system as it already provided by another water source.

17. The applicant proposes the following activities:

CRC071649

(a) To take and use water from the Hen Burn at a maximum rate not exceeding 30 litres per second, and a volume not exceeding 18,144 cubic metres per week, between map references NZMS 260 H39:615-337 and H39:615-339 **or** H39:619-339 and H39:621-338.

(b) Water shall be used for spray irrigation of up to 52 hectares for grazing sheep and beef with a volume not exceeding 312,000 cubic metres per year.

(c) A minimum flow of 0.02m³/s is proposed in the Hen Burn at Hen Burn Road, in accordance with Table 3, row (xii) of the WCWARP.

(d) The intake will be via a submerged gallery to prevent fish entering the intake.

(e) The take of water will be metered.

CRC071650

(a) To disturb the riverbed and install a gallery in the Hen Burn to facilitate the abstraction and associated maintenance work to sustain the abstraction for consent CRC071649 between map references NZMS 260 H39:615-337 and H39:615-339 **or** H39:619-339 and H39:621-338.

- (b) The gallery will be approximately 5 to 10 metres long, constructed of 300 millimetre diameter PE pipe with slots not exceeding 5 millimetres, oriented at a 45 degree angle upstream.
- (c) The installation of the gallery is expected to take half a day to complete and maintenance will be periodic and of short duration.
- (d) Depth of excavation will be up to 2.5 metres below bed level, with the gallery installed at a depth of at least 1 metre below bed level.
- (e) Within the bed, the stream may need to be diverted around the works site so as to minimise the work required in flowing water.
- (f) Proposed mitigation measures are discussed in the assessment section of this report.

LEGAL AND PLANNING MATTERS

18. The consent requirements under the Resource Management Act (RMA), Transitional Regional Plan (TRP), Proposed Natural Resources Regional Plan (PNRRP) and Waitaki Catchment Water Allocation Regional Plan (WCWARP) for water permit and land use applications are outlined in the introductory s42A report. A summary of the requirements for these applications are provided below:

TRP

Water permit - The TRP permits the abstraction of surface water from any surface waterway provided the annual volume abstracted is less than 10 cubic metres per day, and the rate of take is limited to 5 litres per second. Given that the proposed take exceeds these limits, consent is required as a discretionary activity.

Land use permit - The TRP is silent on matters relating to works in the bed and banks of rivers and lakes in the Waitaki catchment. These activities are required resource consent as a discretionary activity under section 77C(1)(b) of the RMA.

WCWARP

- (a) Rule 2 clause (1)(a) - The applicant proposes to adopt the minimum flow for the Hen Burn of 0.02 cubic metres per second at Hen Burn Road (Table 3, row (xii)).
- (b) Rule 2 clause (1)(b) – The application exceeds the allocation limit for the Hen Burn of 0.08 cubic metres per second (Table 3, row (xii)). However, this application will fall within that allocation limit once the consent which it replaces is surrendered. As the applicant proposes this as a condition of consent, I consider that it falls within the allocation limits for the purposes of assessing the status of the activity.
- (c) Rule 6 – The activity is within the annual allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam (see details of annual allocation in Report 3).
- (d) Rule 15 – Classifying rule – discretionary activity

PNRRP

- (a) Rule BLR2 - It is not clear from the application which of the conditions, are not complied with, as there is not enough detail in the proposal.
 - (b) Rule BLR8 – The works would be considered discretionary under this rule should they not comply with the conditions of Rule BLR1.
19. The proposed water permit is a **discretionary** activity under Rule 15 of the WCWARP (and TRP) and resource consent is required in accordance with section 14 of the RMA.
20. The proposed land use permit is a **discretionary** activity under Rule BLR8 and resource consent is required in accordance with section 13 of the RMA.
21. No discharges are associated with the proposal and therefore no consent under section 15 of the RMA is required.

Priority

22. In terms of instantaneous allocation under Rule 2 of the WCWARP, a detailed list of all applicants who fall within Rule 2, Table 3 can be found in Report 2A.
23. For Rule 6 of the WCWARP (annual allocations), refer to Report 3 for a full list of all existing consents and applications in priority order.
24. For application CRC071649, the allocation limits are not exceeded and there are no priority issues.

Derogation Approval

25. At the time of preparing this report, Meridian Energy Limited (MEL) had not provided approval for Bellfield Land Company Limited to derogate from its consents.

CONSULTATION

26. The applicant contacted the following parties prior to lodgement: Fish & Game, Department of Conservation, Te Runanga o Waihao and the upstream abstractor WH & AJ Sutherland.
27. I am unsure if any consultation has occurred since notification in August 2007.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

28. A description of the values of the Mackenzie Basin in general is provided in the introductory s42A report (Report 1).
29. In addition to the above overall summary, the applicant notes the following:
- (a) Hen Burn is typically within a confined channel about 2-4 metres wide with the stream about 1 metre wide.
 - (b) Catchment size is approximately 80 square kilometres.
 - (c) Flows in the Hen Burn are typically lower at location (2) than location (1) – between 30 and 50 percent (see Attachment One for locations of take).

- (d) Hen Burn swamp, located between 400 and 900 metres upstream from location point (2), is a slow moving stream with a significant habitat of Carex species. Marsh crake are present and black stilt breed there.
- (e) Hen Burn has populations of brown trout and Canterbury galaxias.
30. I also note that while the topographical map (Attachment One) indicates that the command area covers a small wetland, from my site visit I can confirm that it is no longer a wetland and is not improved pasture. There are however wetland areas outside the proposed irrigation area.
31. In addition, the command area is not visible from the State Highway or users of Hen Burn Road to visit the Clay Cliffs would not travel as far along as the proposed command area.
32. There is one other existing consented user of water upstream of the proposed abstraction points. WH & AJ Sutherland (CRC020508) has a consent to take 50 litres per second from Horse Gully, a tributary of the Hen Burn.

ASSESSMENT OF PROPOSED ACTIVITY

33. The proposed water permit and landuse permit are discretionary activities and must be considered in the context of section 104 of the RMA.
34. Section 104(1) outlines matters that the consent authority must have regard to when considering an application for a resource consent, including any actual and potential effects on the environment, any relevant statutory provisions, and any other matter the consent authority considers relevant.

Assessment of actual and potential effects (s104(1)(a))

35. The effects that have been considered for these types of activities (surface water abstraction and disturbance of the bed of a river) are presented in the introductory s42A report (Report 1). That report includes the identification of the relevant plan provisions which direct us to consider these effects. A summary table regarding the assessment of individual effects for these applications is provided below and a detailed discussion for the water permit of those outstanding matters or areas of concern is provided in the following sections.

Water permit

Adverse Effects	Applicant's assessment	IO assessment	Conclusion
Ecosystems	Consider with fish screen via submerged gallery & min flow that effects minor.	Minimum flow as set out in Table 3 which takes into consideration protection of ecosystems. Submerged gallery proposed as fish screen but needs to be in accordance with recommended conditions.	Effects minor.
Other water users	Existing consent holder has submitted against this application, but applicant notes in AEE that they were initially supportive of proposal. Water meter proposed.	Water meter proposed. As the existing consent holder is upstream of the proposed intake, and has a minimum flow requirement downstream of their own point of take, this proposal will not result in any reduction of flow reliability or	Effects minor.

		trigger the minimum flow any sooner. Both applicants within allocation limit.	
People, communities & recreational values	Part of substantially modified rural environment. Irrigation area set back 500 m from Hen Burn Rd and not visible from State Highway or to tourists visiting Clay Cliffs. Greening effects of irrigation part of agricultural landscape. Cumulative effects too remote, unnecessary to determine application & beyond scope of Regional Council. Consider as appropriate min flow that sufficient flow retained for recreational and amenity purposes. Positive economic benefits of irrigation as well.	The irrigation area is not visible from the State Highway. Conclusions of Chris Glasson on landscape effects (Report 5) agree that effect on landscape from this proposal are acceptable provided there is no irrigation on any hill slopes and the irrigation area is compatible with the landform patterns Appropriate min flow proposed to protect recreational use and aesthetic amenity of waterway. I also note that use of water for irrigation may result in improved productivity of the land & positive economic benefits for the wider community	Effects acceptable with appropriate irrigation area design.
Inefficient take and use	Applicant proposes 312,000m ³ /yr for irrigation, and considers an efficient Irricalc volume would be 378,430m ³ /yr	Disagree that this is an efficient volume. Consider 271,050m ³ /yr more appropriate using the methodology outlined in Report U05/15.	Effects may be more than minor.
Water quality	MWRL report for cumulative effects.	Not satisfied given conclusions in s42A reports on cumulative effects (Report 4A-F). There are a number of submitters to be heard on this matter.	Effects may be more than minor.
Tangata Whenua values	No assessment provided.	Submissions concerned & have not been addressed by applicant.	Effects uncertain.

Adverse effects of inefficient use on other users

36. The taking of water in excess of that required for the intended use may contribute to water levels being unnecessarily reduced and less water available for other users. A number of submitters have identified this issue.

Irrigation volumes

37. The applicant proposes to take water at a rate not exceeding 30 litres per second and use up to 312,000 cubic metres per year for irrigation of 52 hectares (as notified). An efficient irrigation volume has been calculated using Irricalc of 378,430 cubic metres per year. Therefore, the applicant considers that as their proposed notified volume is less than the Irricalc requirement, that the volume is efficient.
38. The proposed rate of 30 litres per second, equates to a gross daily application depth of 5mm/day. At 80% efficiency this works out to be approximately 4 mm/day which is achievable for the type of irrigation system proposed and appropriate for the expected rates of evapotranspiration.

39. As a comparison to the applicant's annual volume calculation, I have used CRC's GIS system and the method outlined in Report U05/15 to determine an appropriate annual volume for irrigation of the proposed area, in accordance with Policy 16(c). I based this calculation on intensive land use with 32.5ha heavy soil (PAW >110mm), 6.5ha medium soil (PAW 75-110mm) and 13ha light soils (PAW <75mm) and Effective Summer Rainfall of 195mm.
40. Using the above figures, a recommended annual volume 271,050 cubic metres would be a more appropriate and efficient volume of water for spray irrigation of this area using one of the methods outlined in Policy 16(c).
41. I note that this methodology (Report U05/15) assumes an irrigation efficiency of 80% which is largely achievable for modern spray systems (consistent with Policy 16(b)) and takes into consideration on-site physical and climatic factors (Policy 16(a)).
42. Given the above discussion, I cannot make a conclusion on the Irricalc method to be satisfied that the annual volume being sought by the applicant of 312,000 cubic metres per year would be reasonable and appropriate for the area and method of irrigation proposed.
43. I also consider that the standard efficiency condition (WP05) is appropriate to ensure that water is not applied to the soils above their average water holding capacity, nor onto unproductive areas of land.

Conveyance / distribution efficiency

44. The applicant proposes to pipe the water from the gallery to the irrigation area. They consider that the system therefore meets the requirements of Policy 19.
45. I agree that a piped system would meet the efficiency requirements of Policy 19.

Efficiency conclusions

46. Given the above discussion, I am not satisfied that that the proposed seasonal allocation is reasonable for the proposed irrigation area.

Adverse effect of use on water quality

Local effects

47. In terms of effects at the local scale, the applicant has considered that effects on water quality will continue to be minor. They note that the proposed spray irrigation is an efficient method which minimises any leaching to groundwater or surface water run-off and good farm management practices will be employed to further mitigate any potential water quality effects. The applicant notes that there are no flowing waterways in the irrigation area and they propose to fence around the irrigation area to keep the more intensively stocked area clear from waterways. The applicants also note that desktop studies for similarly stocked properties in the Mackenzie Basin have estimated increased nitrate-nitrogen concentrations in the range of 0.004 to 0.008g/m³ to the lake system. They consider the effect would be similar from this property.
48. It is not clear from the application what size property the desktop nitrates assessment that was undertaken for and therefore how it compares with this proposal.

49. The applicant also refers, in the application, to a report by Dr P Espie regarding irrigation in the Mackenzie Basin (2004) which discusses the ability of modern centre pivot systems to minimise nutrient depletion and water contamination.
50. I note that no numerical nitrates assessment for the property has been provided and depth to groundwater is unknown but assumed to be limited in volume. I also note that conditions to mitigate effects on groundwater, such as a farm management plan, have not yet been provided by the applicant.
51. No submissions were received on the local effects on water quality of this proposal.
52. Given the above, I cannot be satisfied that the adverse effects on water quality from the proposed activity will be minor.

Cumulative effects

53. An assessment of cumulative effects on water quality was requested to address the above concerns and in reference to Policy 13 of the WCWARP. The applicant has been involved with the study by Mackenzie Water Research Ltd (MWRL) on cumulative effects within the catchment.
54. There are a number of submissions which identify water quality as a result of land use intensification as a concern, including a submission from Meridian Energy Ltd who effectively hold consent to use all the water in the Upper Waitaki catchment. Those submitters and their concerns are outlined in more detail in Appendix 5 of Report 1.
55. The report by MWRL has been audited and a separate s42a overview report prepared by Dr Mike Freeman as well as numerous technical s42A reports (see Reports 4A-F).
56. The conclusion of Dr Mike Freeman and other experts (as outlined in Reports 4A-F) is that given the significant level of uncertainties involved in, and technical concerns with, critical aspects of the MWRL/GHD assessment of the adverse effects, together with the lack of mitigation measures yet proposed by resource consent applicants means that it is premature to make adequate conclusions about the potential adverse cumulative effects.

Adverse effect on Tangata Whenua values

57. The applicant has not provided an assessment of the effects of the proposed activity on cultural values. The sites of the proposed activities are within the rohe of Te Runaka O Waihao, Te Runaka O Arowhenua and Te Runaka O Moeraki. All three runanga and Te Runanga O Ngai Tahu were served notice of the applications in August 2007..
58. Submissions were received in opposition to this application from Te Runanga o Ngai Tahu and Ngai-Tahu Mamoe Fisher People. The concerns of the Ngai-Tahu Mamoe Fisher People seem to relate specifically to the resource consent process, rather than this specific application.
59. Te Runanga o Ngai Tahu have raised concerns relating to mixing of waters between catchments, deterioration of water quality, dewatering and residual flows, changes to sediment flow and deposition and impacts on sites of cultural significance.
60. Given that there are a submitters who wish to be heard, I cannot determine the scale of the actual and potential effects on the cultural values of the area.

Land use permit

Adverse Effects	Applicant's assessment	IO assessment	IO Conclusion
Flood-carrying capacity & erosion	The submerged gallery will not result in any barrier to flood flows and a condition is proposed to ensure no erosion results from the intake.	I agree with the applicant that the nature of the gallery being below the river bed will not adversely affect flood-carrying capacity or result in erosion of the bed or banks. The minor maintenance works that may be required will be of short duration and also not affect the capacity of the stream.	Effects minor.
Man-made structures	No assessment provided.	Using CRC's GIS system I have identified the nearest man-made structure downstream being the bridge across Hen Burn Rd. As the gallery will not alter the flow in the stream, I do not consider that it will adversely affect any man-made structures.	Effects minor.
Water quality and ecosystems	The works will be undertaken over a period of half a day. The stream will be deflected around the works site during the installation to minimise the works required in flowing water and subsequently minimise any discharge of sediment to water. Conditions to this effect are proposed. Any maintenance works will likely be undertaken when a fresh or flood has occurred and the stream will already have higher sediment loads and therefore the effects of works are minor in terms of the context of the water quality at the time.	I agree with the applicant that whilst the works will be carried out in flowing water, given the short duration, timing of works, and with appropriate conditions, adverse effects of the works on water quality would be minor.	Effects minor.
Riparian plants and animals	A condition is proposed to ensure that adverse effects on vegetation and wildlife are minimised.	During my site visit I observed the potential intake locations and noted the presence of predominantly exotic grasses and broom. Provided the applicant re-instates the site on completion of the works, I consider that the adverse effects on riparian plants and animals would be minor.	Effects minor.
Tangata Whenua values	No assessment provided.	As all other effects are considered minor, I am satisfied that effects on Tangata Whenua values minor.	Effects minor.

Overall Conclusion

61. With regard to s104(1)(a), the actual and potential effects of the activities have been discussed above.
62. In particular, for the water permit application, there is uncertainty regarding the following effects:

- (a) The localised and cumulative impacts on water quality;
 - (b) Whether the annual volume requested represents an efficient use of water;
 - (c) The effects on cultural values in the area.
63. For the land use permit application, I am satisfied that all actual and potential effects will be minor.

Statutory Assessment (s104(1)(b))

Regional Policy Statement (RPS)

64. Under Section 104(1)(b)(iii) of the RMA, the consent authority shall have regard to any relevant regional policy statement. The Canterbury Regional Policy Statement has been operative since 26 June 1998.
65. Of significance to these applications are Chapter 8, which relates to landscape and natural character, Chapter 9, which relates to the management of the Region's water resources, and Chapter 10, which relates to beds of lakes and rivers. The WCWARP and PNRRP take into account policies in the RPS and address the issues outlined in more detail. Any assessment of effects has been made using these documents and therefore I have had regard to the RPS throughout this assessment.

Waitaki Catchment Water Allocation Regional Plan (WCWARP)

66. The objectives and policies of the WCWARP that are relevant to each potential adverse effect have been identified in the introductory s42A report. A table of all those objectives and policies considered to be relevant to this application is appended in Attachment Four. A discussion of the objectives and policies which are particularly relevant to these applications is provided in the following paragraphs. Where I am satisfied there is no conflict with the objectives and policies, I have not discussed them.

Objectives

67. Objective 1 is a key objective in relation to the proposed taking of water. I have considered whether Objective 1 can be met in terms of sustaining the quality of the river and surrounding environment. While the proposal may not entirely be consistent with Objective 1 and the associated policies (particularly policy 13 relating to water quality and policies 15 & 16 relating to efficient use), it is difficult to determine if the inconsistencies are significant enough to make the proposal contrary to Objective 1.
68. The proposed activity will impact on the matters outlined in Objective 1. In particular, (a) relating to spiritual and cultural values, given that effects on Tangata Whenua have been raised as a concern by submitters and have not yet been addressed by the applicant, and (b) life-supporting capacity of river and ecosystems, given that the potential adverse effects on water quality remain an outstanding concern. There have been a wide range of people who have submitted against the proposed activity due to concerns about impacts on these values. Given this, and that no mitigation has been proposed by the applicant, I cannot determine whether the proposed activity is contrary to these values at the time of preparing this report.
69. The proposed activity is within the allocation limits set by the WCWARP, therefore, it may be considered to be consistent with Objective 2.

70. Objective 4 aims to achieve a high level of technical efficiency in the use of water. The applicant has not provided sufficient information to confirm that the annual volume of water requested is reasonable to meet the demands of the soils within the irrigation area, therefore, the proposal may not be consistent with Objective 4.
71. I am satisfied that the proposal will not affect the reliability of supply to other users downstream on the Hen Burn. And can conclude that it is consistent with Objective 5 of the WCWARP.

Environmental flow and level regimes

72. Policies 2 – 8 deal with minimum flows for the Hen Burn.
73. Policies 3 and 4 outline the values that must be maintained in the water bodies, and a number of matters that must be considered when setting an environmental flow and level regime, and are particularly relevant to this application. As the applicant is proposing to adopt the minimum flow required by the WCWARP and falls within the instantaneous allocation limits, I am satisfied that the proposal is consistent with these policies.

Policies on water quality

74. Policy 13 deals with water quality issues resulting from land use intensification and enables the consent authority to have regard to the water quality objectives in the PNRRP. The WCWARP incorporates by reference Objectives WQL1, 2 and 3 of the PNRRP which contain particular outcomes to be achieved in the regions waterbodies. Report 4F, by Dr Mike Freeman, addresses this policy in more detail, particularly on the cumulative scale. Given his conclusions, I cannot determine if this application is contrary to this policy.

Policies on efficient and effective use

75. Policies 15 – 20 deal with efficient and effective use and all are applicable to this application.
76. Policy 15 ensures that the rate of abstraction and the annual volume is reasonable for the intended use. As discussed in the assessment of effects section of this report, I am not satisfied that the annual volume is reasonable for the intended use.
77. Policy 16 provides guidance for determining reasonable and efficient use for agriculture activities. As discussed in the assessment of effects, I am not satisfied that the requested volume of water is required under these consent applications.

Policies for other rivers and streams in the upper catchment

78. Policy 40 deal with the environmental flow regime in the rivers and streams in the upper catchment (see Map 2 in the WCWARP). Policy 40 enables access to water for the activities identified in Objective 2, to the extent consistent with Objective 1.
79. As the environmental flow and level regime in the plan is proposed by the applicant, and as it is within the allocation for agricultural and horticultural activities identified in Rule 6, Table 5, the proposal would be considered to be consistent with this policy.

Proposed Natural Resources Regional Plan (PNRRP)

80. The objectives and policies of the PNRRP that are relevant to each potential adverse effect have been identified in the introductory s42A report. A discussion of the relevant objectives and policies is provided below.

Objective BLR1 – Activities within the beds and margins

This objective aims to ensure that works in the beds and banks of rivers and streams can be undertaken while minimising effects, including flood-carrying capacity, natural character, ecosystems, other structures, erosion, Ngai Tahu values. Given the small scale of the works and recommended mitigation, the proposed works will be consistent with the outcomes required by this objective.

Policy BLR1 – Effects of activities within the bed or margins

This policy aims to control activities within the bed and within 7.5 metres of the banks or any flood control structure to ensure that objective BLR1 is achieved. This may include restricting activities so that do not affect flood-carrying capacity, erosion or create plant infestations. With the proposed conditions, the works will be consistent with this policy.

Conclusion

81. With regard to s104(1)(b), for the water permit application the relevant provisions of the RPS and WCWARP have been considered above. I do not consider that this application is consistent with Objective 1, and Policies 13, 15, 16 of the WCWARP.
82. For the land use permit application, I am satisfied that the application is consistent with the relevant plan provisions of the RPS and PNRRP. There are no policies or objectives in the TRP.

Part II Purpose and Principals

83. Part 2 of the RMA contains sections 5 to 8 which define the purpose and principals of the RMA.

Purpose of the RMA (s5)

84. Under Section 104, the consent authority must consider applications “subject to part II” of the RMA. The purpose of the RMA (Section 5(1)) is to:

“promote the sustainable management of natural and physical resources.”

85. Section 5(2) defines the meaning of “sustainable management”, which is to manage resources in a manner that provides for the social, economic and cultural wellbeing of communities while protecting the life-supporting capacity of the environment for the needs of future generations. This section also states that this should be achieved while “safeguarding the life-supporting capacity of water” and “avoiding, remedying or mitigating” the adverse effects of activities.
86. The proposal will allow the development of land to occur, which may provide for the economic and social well-being of the community. The applicant however has not proposed measures to “safeguard the life-supporting capacity of water” and “avoid, remedy or mitigate” the potential impacts on water quality as required in Section 5(2)(c), or provided information to confirm that the proposed annual volumes requested are reasonable and consistent with the objectives of Section 5(2)(a), which aims to provide for the needs of future generations.

Matters of National Importance (s6)

87. Sub-sections (a), (b) and (e) of Section 6 of the RMA are particularly relevant to this application. The proposal will may impact on the visual aesthetics in an area of high amenity that need to be mitigated and may result in effects on water quality and

ecosystems that have not yet been adequately mitigated. The applicant has not yet proposed measures to address these effects. The applicant has not assessed the impacts on cultural values, and runanga have submitted in opposition on this application.

Other Matters (s7)

88. In achieving the purpose of the RMA, the consent authority is directed to have particular regard to a number of matters as set out in (a) – (j) of Section 7.
89. Sub-sections (b) and (f) are specifically relevant to this application and should be considered when deciding the acceptability of effects resulting from the proposed take and use of water from the Quail Burn. Section (b) relates to the efficient use of water and as discussed above there is currently insufficient conclusive evidence to confirm that the applicant's requested annual volume is reasonable.
90. Section (f) refers to the maintenance and enhancement of the quality of the environment. The applicant has not proposed mitigation measures to ensure that this objective is achieved, particularly with regards to water quality.

Principles of the Treaty of Waitangi (s8)

91. Section 8 of the RMA requires the consent authority to take into account the principles of the Treaty of Waitangi. The site lies within the rohe of Te Runaka O Waihao, Te Runaka O Arowhenua and Te Runaka O Moeraki. Runanga were informed separately when ECan received the application and later when the application was notified. Submissions have been received from Ngai Tahu and runanga on this application.

RECOMMENDATION

Grant or Refuse

92. Section 104B applies to any application which is a discretionary or non-complying activity and states that the consent authority may grant or refuse the application and may impose conditions under s108.
93. For the land use permit application (CRC071650), I am satisfied that the actual and potential effects of the proposed activity are acceptable. I recommend that consent application CRC071650 be granted, subject to the attached recommended conditions.
94. For the water permit application (CRC071649), I am not satisfied that the actual and potential effects of the proposed activity are acceptable. In particular, there are a number of outstanding matters as follows:
 - (a) *Water quality* - No impact assessment or measures to address the water quality impacts that could arise from irrigation at this site. Given the conclusion regarding the potential cumulative adverse effects on water quality, it is premature to make any recommendation to grant or refuse this application as it relates to cumulative water quality;
 - (b) *Efficient and reasonable use* – There is a lack of conclusive information to support the annual volume requested in accordance with the direction provided by Policies 15-20 of the WCWARP;

- (c) *Cultural values* – The applicant has not provided any assessment on cultural values and there are outstanding submissions from runanga in opposition to this proposal.

95. Having considered all relevant matters outlined in section 104D, I am not satisfied that the actual and potential effects of the proposed activity are minor due to concerns those matters outlined as (a) (b) and (c) above. I also cannot be satisfied that the proposal is consistent with objectives and policies of the relevant planning documents given that no assessment or mitigation has been provided for the above. I cannot recommend that application CRC071649 be granted.

RECOMMENDED CONDITIONS

96. Comments on the mitigation proposed by the applicant are provided earlier in this report.
97. If the Commissioners decide to grant these applications, a list of conditions that are usually included in a water permit are provided in Appendix 6 of the introductory s42A report. A list of draft recommended conditions specific to application CRC071649 is provided below.
98. It should be noted that the investigating officer is not satisfied that these conditions would adequately mitigate the adverse effects that are identified in paragraph 94 above.
99. Draft recommended conditions for the land use permit CRC071650 are included below.

Table 3: Recommended draft conditions for water permit CRC071649		
No.	Condition Code¹	Details
Divert & Take		
1	WP01	<p><i>Name of waterbody:</i> Hen Burn</p> <p><i>Map reference:</i> NZMS 260 H39:615-337 and H39:615-339 or H39:619-339 and H39:621-338</p> <p><i>Instantaneous rate:</i> 30 litres per second</p> <p><i>Volume:</i> 2,592 cubic metres per day and 271,050 cubic metres between 1st July and the following 30th June</p>
Use		
2	WP04	<p><i>Type of irrigation:</i> Spray irrigation</p> <p><i>Number of hectares:</i> 52 hectares</p> <p><i>Use:</i> crops and pasture for grazing stock excluding milking dairy cows</p> <p><i>Plan No:</i> "CRC071649" (Attachment 1)</p>
3	WP05	

¹ See Report 1, Appendix 6 for condition code and wording.

4	WP06	
Mitigation		
5	WP07	<p><i>Name of waterbody:</i> Hen Burn</p> <p><i>Map reference:</i> NZMS 260 H39:631-337</p> <p><i>Minimum flow:</i> 20 litres per second</p> <p><i>Flow graph:</i> See Report 2A</p>
6	Non-standard	<p>(a) No water shall be taken in terms of this permit as referred to in condition 1 until a report is provided to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager demonstrating the existing fish exclusion measures have been designed and installed in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007. (Copy available on www.ecan.govt.nz).</p> <p>(b) The fish exclusion measures shall be maintained in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007.</p>
Measuring & Metering		
7	ME02	Piped
8	ME04	
9	ME05	
10	ME06	
11	ME07	<i>Waterway:</i> Hen Burn
12	WP08	<p><i>Waterway:</i> Hen Burn</p> <p><i>Map reference:</i> NZMS 260 H39:631-337</p> <p>To be used with ME03-05</p>
Administrative Conditions		
13	AD01	
14	AD02	<p><i>Number of working days:</i> 5</p> <p><i>Month 1:</i> March</p> <p><i>Month 2:</i> July</p> <p><i>Waterbody:</i> Scrubby Creek</p> <p><i>Cross reference to Condition:</i> 6</p>
15	AD04	Lapse date

Table 4: Recommended draft conditions for CRC071650		
No.	Consent Code²	Details
Scope		
1	LU01	(a) Installation, maintenance or replacement of gallery intake structures within bed of Hen Burn, including excavation of gravel and sediments, (b) Maintenance only necessary to maintain adequate flow of water to irrigation intake.
Location		
2	LU02	<i>Cross reference to Condition: 1</i> <i>Name of watercourse: Hen Burn</i> <i>Map reference: NZMS 260 H39:615-337 and H39:615-339 or H39:619-339 and H39:621-338</i> <i>Plan: "CRC071650" (Attachment 1)</i>
Limits of Excavation		
3	Non-standard	The gallery shall be approximately 5 to 10 metres long, constructed of 300 millimetre diameter PE pipe with slots not exceeding 5 millimetres, oriented at a 45 degree angle upstream.
4	Non-standard	The installation of the gallery is shall take half a day to complete.
5	Non-standard	Depth of excavation will be up to 2.5 metres below bed level, with the gallery installed at a depth of at least 1 metre below bed level.
6	Non-standard	Within the bed, the stream may be diverted around the works site so as to minimise the work required in flowing water with a length of no more than 50 metres.
7	Non-standard	Any gravel, sand and other natural material excavated as part of the works authorised by this consent during the disturbance of the bed of Hen Burn, must be deposited on, or near to, the excavation site, and shall be reshaped and formed to a state consistent with the surrounding natural riverbed.
Erosion Protection		
8	LU10	
9	LU11	<i>Waterbody: Hen Burn</i>
10	LU12	

² See Report 1, Appendix 6 for condition code and wording.

1	LU13	<i>Waterbody: Hen Burn</i>
Prior to Construction		
12	LU08	
13	Non standard	The Canterbury Regional Council Compliance Monitoring Officer shall be notified of the intention to carry out works and their intended type and scope at least 48 hours prior to the commencement of work.
14	LU31	Bird survey
During Construction		
15	LU14	
16	LU18	
17	LU21	
18	LU23 modified	All practicable measures shall be undertaken to minimise vehicles and machinery entering Hen Burn.
19	LU22	
20	LU26	
21	LU24	
22	LU25	
Accidental Discovery Protocol		
23	LU09	
Upon Completion		
24	LU28	
25	Non standard	On completion of works, the area shall be restored to its original condition as far as practicable.
Administrative Conditions		
26	AD03	
27	AD04	

Signed:



Date: 31st August 2009

Claire Penman
Consents Investigating Officer

REFERENCES

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Gabites, S, & Horrell, G. 2005. Seven day mean annual low flow mapping of the tributaries of the Waitaki River. Canterbury Regional Council Report R05/16. ISBN: 1-86937-570-X.

Keller, J & Pfluger, Y. 2005. Workign papers about the Natural and Physical Resources of the Waitaki catchment by locality. Report provided to the Waitaki Catchment Water Allocation Board.

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The Resource Management Act 1991. Consolidated version including the Resource Management Amendment Act 1995. August 2005.

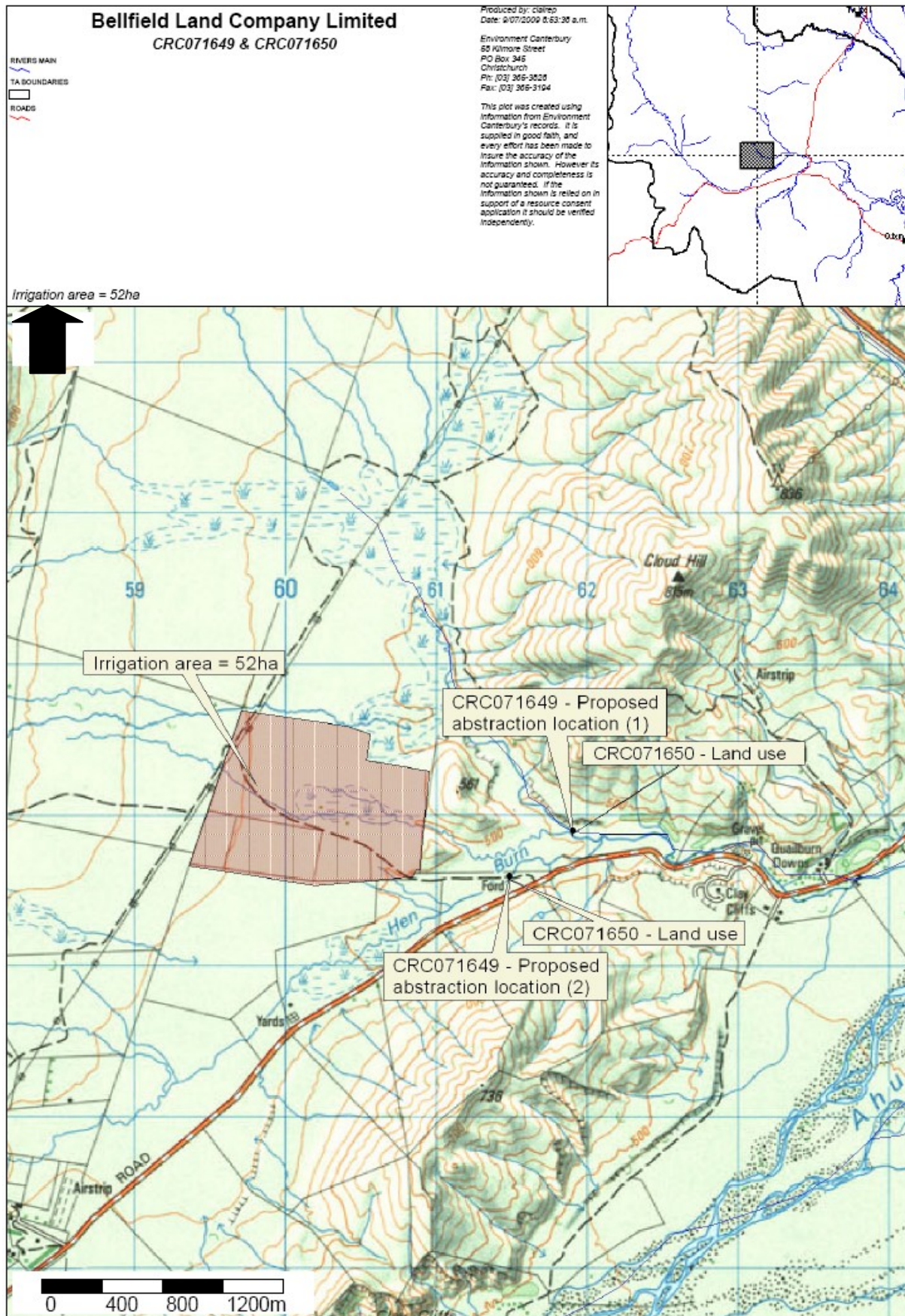
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Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation Regional Plan, Material Incorporated by Reference. ISBN: 0-9582620-6-3.

Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation Regional Plan, Annex 1 – Decision and principal reasons for adopting the Plan provisions. ISBN: 0-9582620-4-7.

Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation Regional Plan, Section 32 Report. ISBN: 0-9582620-5-5.

ATTACHMENT ONE – LOCATION MAP



ATTACHMENT TWO – EXISTING CONSENT

RecordNo CRC001096.1

Type Consent

Source Full Transfer

PermitType Water Permit

FileNo CO6C/17884

ClientID 66210

ClientName Bellfield Land Company Limited

Consent Summary



To to divert up to 60 litres per second and to take up to 30 litres per second of water from the Hen Burn, at or about map reference NZMS 260 H39:632-335 for spray irrigation of up to seven hectares.

Location Quailburn Downs, OMARAMA

Status Current

Events 31/Jul/2002 Given Effect To
30/Jan/2003 Lapse Date if not Given Effect To
09/Aug/2006 < Consent Transferred
24/Oct/2035 Consent Expires

Subject to the following conditions:

- 1) The rate at which water is taken from the Hen Burn, shall not exceed 30 litres per second, with a volume not exceeding 5,184 cubic metres in any period of 15 consecutive days.
- 2) The rate at which water is diverted shall not exceed 60 litres per second.
- 3) (a) For the period 1 May to 31 January of the next year the taking of water for irrigation purposes in terms of this consent shall cease whenever the flow in the Ahuriri River at the South Diadem recorder site (at or about map reference NZMS 260 S108:458-406), as estimated by the Canterbury Regional Council, is at or below 12 cubic metres per second.
(b) For the period 1 February to 30 April the taking of water for irrigation purposes in terms of this consent shall cease whenever the flow in the Ahuriri River at the South Diadem recorder site (at or about map reference NZMS 260 S108:458-406), as estimated by the Canterbury Regional Council is at or below 10 cubic metres per second.
- 4) A fish screen shall be operated and maintained on the intake to ensure that fish are prevented from passing into the intake.
- 5) The consent holder shall take all practicable steps to:
 - (a) ensure that the volume of water applied does not exceed that required for the soil to reach field capacity; and
 - (b) avoid leakage from pipes and structures forming part of the reticulation system associated with the abstraction; and
 - (c) avoid the application of abstracted water onto non-productive land such as impermeable surfaces and river or stream riparian strips.
- 6) The consent holder shall, within twelve months of the commencement of this consent, install, or provide for the installation of:
 - (a) an easily accessible straight pipe, of a length at least 15 times the diameter of the pipe, or
 - (b) a water flow measurement device which will measure the rate at which water is taken to within an accuracy of 10 percent as part of the pump outlet plumbing or within the mainline distribution system.
- 7) The taking of water in terms of this permit shall cease for a period of up to 48 hours on notice from the Canterbury Regional Council, to allow measurement of the flow in the Hen Burn.
- 8) When requested in writing by the Canterbury Regional Council, the rate at which water is taken shall be measured to within an accuracy of 10 percent, and the measurement and the hours during which water is taken shall be recorded. A copy of the records shall be provided to the Canterbury Regional Council in accordance with the request.

- 9) The Canterbury Regional Council may, on any of the last five working days of June each year, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.

- 10) Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 of the Act.

ATTACHMENT THREE – PHOTOS OF IRRIGATION AREA & INTAKE SITE TAKEN ON 11 DECEMBER 2008 BY CLAIRE PENMAN



Hen Burn near proposed location (1)



Looking across proposed irrigation area



Hen Burn near proposed location (2)



Hen Burn at bridge looking downstream (minimum flow site)



Hen Burn at bridge looking downstream (minimum flow site)

ATTACHMENT FOUR – OBJECTIVES & POLICIES

Objective / Policy	Description	Assessment
Objective 1	To sustain the qualities of the environment of the Waitaki River and associated beds, bars, margins, tributaries, islands, lakes, wetlands and aquifers.	The proposed activity will impact on the matters outlined in Objective 1, particularly (a), (b) and (c). There have been a wide range of people who have submitted against the proposed activity due to concerns about impacts on these values. I therefore cannot determine whether the proposed activity is contrary to these values at the time of preparing this report.
Objective 2	Provide water for different activities.	The proposed activity is within the annual allocation limit for agricultural and horticultural activities outlined in Rule 6. Therefore, this application would not affect availability of water to other users.
Objective 3	Recognise that there are beneficial and adverse effects on the environment at a national and local scale.	These factors have been considered in the assessment of effects.
Objective 4	Achieve a high level of technical efficiency in the use of water.	The applicant has not demonstrated that the use of water for irrigation is technically efficient.
Objective 5	Provide for practical and fair sharing of allocated water during times of low water availability.	Appropriate minimum flow proposed and the proposal would not affect the reliability of supply to other users.
Policy 1	Recognising connectedness between all parts of the catchment	By providing a suitable minimum flow, the connectedness with the catchment is recognised.
Policy 3	Setting of environment flow and level regimes for all activities in Objective 2 and consistent with Objective 1.	Applicant proposes minimum flow as established in Table 3 of the plan which will enable access for the activities in Objective 2.
Policy 4	Outlines a number of matters that must be considered when setting an environmental flow and level regime	Applicant proposes minimum flow as established in Table 3 of the plan which will ensure those matters have been considered
Policy 8	Promoting water harvesting when flows are low	Water harvesting is not proposed
Policy 9	Discouraging further mixing of water between catchments	Water will be taken and used within the same catchment and sub-catchment
Policy 10	Enabling small amounts of water to be taken or diverted where effects are minor.	The proposed volume exceeds what is considered to be a small amount
Policy 11	Consider effects on Tangata Whenua values, local and national effects when allocating water to activities	Submissions received on Tangata Whenua values, but application falls within allocation limits for agricultural and horticultural activities
Policy 12	Outlines matters that must be considered when establishing allocation limits.	Application falls within allocation limit for activities in Objective 2
Policy 13	Addresses water quality objectives in the NRRP	Addressed in more detail in Report 4A
Policy 15	Ensuring take and use of water is reasonable for its intended use	Applicant is seeking what I consider to be an unreasonable volume of water
Policy 16	Requiring irrigation applications to meet the specified reasonable use test	As above – applicant has not provided an adequate assessment
Policy 19	Encouraging piping or sealing of	The proposed conveyance via a pipe is

	water distribution systems to minimise water losses and maintain water quality.	consistent with this policy.
Policy 20	Promoting the integration of multiple uses of water.	Multiple uses of water are not proposed
Policy 21	Requiring the installation and use of water-measuring and recording devices.	A suitable water metering device is proposed to be installed
Policy 23	Restricting taking or diverting of water (surface and shallow and connected groundwater) upstream of Lake Benmore during times of low flow except for essential uses	A suitable minimum flow is proposed for restricting the abstraction of water in times of low flow.
Policy 25	Allowing for sharing of available water within a water-users group	A flow sharing regime is proposed in Report 2A.
Policy 26	Setting priority bands for upper or mid-catchment tributaries and the Ahuriri catchment.	Priority bands have not been established for this catchment
Policy 27	Giving priority during low flows or levels to integrated schemes where water used for more than one purpose.	There are no integrated schemes with this sub-catchment
Policy 40	Setting an environmental flow and level regime for these rivers and streams.	An appropriate minimum flow has been proposed to ensure consistency with this policy