

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

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Application CRC083692 by
Aviemoire Limited for a Water
Permit to take & use surface
water.

Section 42A Officer's Report of Yvette Rodrigo

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 4(A) – (4F) and 5).

INTRODUCTION

2. Aviemoire Limited (the applicant) has applied for resource consent to take and use water from Lake Aviemoire, at a rate not exceeding 19 litres per second (l/s), and a volume not exceeding 210,000 cubic metres (m³) per year.
3. Water will be used for spray irrigation of up to 35 hectares (ha) of winter feed crops and pasture at Aviemoire Station, State Highway 83, Lake Aviemoire.
4. See Attachment One for a map of the location of take and irrigation area.
5. Ms Cathy Begley (of 'GHD Limited') has been engaged by the applicant to prepare the application and assessment of environmental effects (AEE) associated with the take and use of water from Lake Aviemoire.
6. The applicant has requested a duration of 35 years.

Background

7. The applicant owns Aviemoire Station, which is located on the true right banks of both Lake Waitaki (adjacent to the Waitaki Dam) and Lake Aviemoire. The applicant also owns Little Awakino Station situated on the true bank of the lower Waitaki River. These stations are operated as high country stations, grazed by sheep and cattle.
8. Application CRC083692 was lodged on 28 March 2008 to replace an existing consent (WTK750901), which authorised the abstraction of up to 25 l/s and 600 m³ per week of water from Station Creek, and expired in June 2008. Water taken under the existing consent was used to irrigate 2 ha of land within Aviemoire Station for growing winter feed crops, using wild flood irrigation methods.

9. As the application was lodged prior to the expiry of the existing consent in June 2008, the applicant was granted authorization by ECan to continue operating under the previous consent until a decision on the current application was made¹.
10. When the replacement application was submitted to ECan, the applicant proposed to take 19 l/s from Station Creek or Lake Aviemore to irrigate up to 35 ha of land within the property. Subsequently an annual volume of 210,000 m³ was requested based on a seasonal application depth of 600 millimetres, or 6,000 m³ per hectare per year, which is consistent with the McKenzie Irrigation Company (MIC) share allowance. The application was notified with this annual volume.
11. Ms Begley also advised ECan on 15 June 2009 that the applicant wished to amend their application and was now only seeking to pursue the abstraction from Lake Aviemore.
12. In my view, given the change of location of the take (from Station Creek to Lake Aviemore) and the increase in the area to be irrigated, this application is not a direct replacement and therefore should be considered as a new activity.

Notification

13. Details of the notification and wording are contained in Appendix 4 of the introductory s42A report (Report 1). The application was considered to be notifiable on 22 October 2008, when ECan was advised that the applicant wished to increase the annual volume applied for to 210,000m³. The application was subsequently notified in November 2008.

Submissions

14. Four submissions were received by ECan within the submission period, when the application was notified in 2008. These submissions are summarised in Table 1 below.

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Ruataniwha Farm Limited	Farm viability.	Support	No
A J Gloag	Farm viability. Sustaining ground cover and eliminating dust.	Support	No
Fish and Game New Zealand	Lack of detail regarding fish screens and cumulative impacts. Intensified landuse and gamebird impacts. Not opposed to the take from Lake Aviemore provided the proposal is consistent with WCWARP. Duration of 35 years not supported.	Oppose	Yes
Meridian Energy Limited	Derogation. Water quality. Stockwater. Effects on MEL infrastructure. Duration. Water metering. Sustainable management.	Oppose	Yes

Table 1: Summary of specific submissions on application CRC083962

¹ Pursuant to section 124 of the RMA.

DESCRIPTION OF THE PROPOSED ACTIVITY

15. This description of the proposed activity relates specifically to the take and use of water. The applicant proposes to take water from Lake Aviemore under the following conditions:
- (i) Water will be taken at a rate not exceeding 19 l/s, with an annual volume of 210,000 cubic metres per year (m³/yr), from Lake Aviemore, as shown in Attachment One.
 - (ii) Water will be abstracted from Lake Aviemore between map references NZMS 260 H40:8931-1861 and H40:8990-1801. The exact location of the take is currently unknown as the applicant has not decided on how water will be abstracted from the lake.
 - (iii) Water will be used for spray irrigation of up to 35 hectares of pasture at Aviemore Station, Lake Aviemore, as shown in Attachment One.
 - (iv) The take of water from Lake Aviemore will cease whenever the level in Lake Aviemore is lower than 265.5 metres above mean sea level (the minimum lake level specified in the WCWARP).
 - (v) A fish screen will be installed on the intake structure to prevent the entry of fish.
 - (vi) The take of water will be metered.
16. The applicant states that stockwater will be obtained under the rights prescribed in the RMA in section 14(3), as acknowledged on page 14 of the Waitaki Allocation Board (WAB) decision. The proposed annual volume therefore does not include any provision for stock water for the property and the annual volume requested is solely for “irrigation purposes” and is additional to the volumes permitted by section 14(3) of the RMA.

LEGAL AND PLANNING MATTERS

Consent Requirements

17. The consent requirements under the Resource Management Act (RMA), Transitional Regional Plan (TRP) and Waitaki Catchment Water Allocation Regional Plan (WCWARP) for water permit applications are outlined in the introductory s42A report.
18. A summary of the requirements for this application are provided below:
19. TRP
- (a) The TRP permits the abstraction of surface water from Lake Aviemore provided the volume abstracted is less than 100 cubic metres per day (m³/day), and the rate of take is limited to 10 l/s. Given that the proposed take exceeds these limits, consent is required as a discretionary activity.
20. WCWARP
- (a) Rule 2, clause (1) – The applicant has proposed to adopt a minimum lake level for Lake Aviemore of 265.5 metres above sea level (Table 3, row (xvi)).

- (b) Rule 6 – The activity is within the allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam.
 - (c) Rule 15 – Classifying rule, discretionary activity.
21. In summary, the proposed water permit is a discretionary activity under Rule 15 of the WCWARP and requires consent pursuant to section 14 of the RMA.
 22. The applicant was asked to confirm if other consents would be required for the activity to occur. In particular, a land-use consent may also be required depending on the method of abstraction.
 23. The applicant has not applied for a land-use permit for the installation or maintenance of the intake structure. They state that there are a number of options that may be used for abstraction, including options that would not require any works within the bed of the lake and therefore, would not require a land-use consent under section 13 of the RMA.
 24. The applicant has not applied for a discharge permit. The proposed activity does not include “discharges” to land or water, therefore resource consent under section 15 of the RMA, is not required.

Priority

25. In terms of instantaneous allocation under Rule 2 for Lake Aviemore, a detailed list of all applicants who fall within Table 3 can be found in Report 2A.
26. For Rule 6, annual allocation, refer to Report 3 for a full list of all existing consent holders and all applicants in priority order. All applications upstream of the Waitaki Dam and downstream of the glacial lake outlets are currently within annual allocation limits set in the WCWARP, therefore priority in relation to the plan, is not an issue for this application.

Derogation Approvals

27. MEL has not provided derogation approval to Aviemore Limited for this application. Ms Begley advised ECan in a letter dated 15 June 2009, that the applicant was seeking to purchase MIC shares to support their proposal.

CONSULTATION

28. It is stated in the AEE, that a copy of the application was sent to Meridian Energy Limited (MEL), the Department of Conservation (DoC), Fish and Game New Zealand (F&G), Te Runanga O Ngai Tahu, Arowhenua Runanga and Te Runanga O Waihao Incorporated.
29. A number of parties, including the ones listed above were notified of the application by ECan when it was lodged and subsequently when the application was notified in 2008.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

30. A description of the values of the Mackenzie Basin in general is provided in the introductory s42A report (Report 1).

Proposed Irrigation Area

31. The proposed irrigation area is located on the true right bank of Lake Aviemore, located approximately 1.5 kilometres (km) east of the Otematata township. Irrigation will occur for a distance of approximately 1.5 km along, and on either side of the State Highway, should this consent be granted.
32. There is an artificial wetland area approximately 1.2 kilometres northwest of the proposed irrigation area. The wetland is identified on ECan's GIS system as 'Otematata Ponds'.
33. The applicant also advises that the Parsons Rock camping ground is located on the shores of Lake Aviemore adjacent to the south-eastern portion of the proposed irrigation area.
34. There are no silent files within the proposed irrigation area or in the vicinity of the proposed intake location.

Lake Aviemore

35. The applicant described Lake Aviemore in the AEE as having high aesthetic and recreational values. It is used extensively for recreational opportunities such as fishing, boating, camping and provides habitat for upland bullies, common bullies, long finned eel, brown trout, rainbow trout, sockeye salmon and Chinook salmon.
36. ECan's GIS system identifies Lake Aviemore as:
 - A salmonid, freshwater fish and native bird habitat;
 - A Wetland of Representative Importance (WERI)²;
 - A Site of Special Wildlife Importance (SSWI)³; and
 - An area of National Significance; and
 - A Ngai Tahu Statutory Acknowledgement Area.

Other Users

- (a) Consent CRC010927 is held by RM, CJ, IA and AH Munro. This authorises the take and use of 20 l/s of water from Lake Aviemore. The consent was issued in 2000 and expires in 2035. The consented location for the water take is a section of lakefront which extends from a point immediately adjacent to the proposed irrigation area to a point approximately 1 kilometre northwest of the proposed irrigation area.
- (b) CRC084090 is held by SJB Munro and was granted in May 2008 for a period of 35 years. The consent authorises the abstraction of 3 l/s and a total annual volume of 26,289 m³ of water from Lake Waitaki. The take is subject to the minimum lake level for Lake Aviemore in the WCWARP.

² Keller and Pfluger, 2005. A register of ecologically important wetlands.

³ Keller and Pfluger, 2005. A list of areas identified by the former New Zealand Wildlife Service that provide important habitat for wildlife.

- (c) MEL hold a suite of consents authorising the operation of the Lake Aviemore Dam and the use of water for power generation.
- (d) Waitangi Station Limited have applied for consent CRC030944 to take and use water from Lake Aviemore, at a rate not exceeding 35 l/s and a total annual volume not exceeding 300,000 m³. This application is a part of the current hearing. In terms of the annual allocation limits to Agricultural and Horticultural activities, Waitangi Station have priority over the applicant's proposal. The proposed location of the take is approximately 10 km from the intake for Aviemore Station.

ASSESSMENT OF THE PROPOSED ACTIVITY

37. The proposed water permit is a discretionary activity and must be considered in context of section 104 of the RMA.
38. Section 104(1) outlines matters that the consent authority must have regard to when considering an application for 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 (Section 104(1))

39. The effects that have been considered for this type of activity (surface water abstraction) are presented in the introductory s42A report (Report 1). That report includes the presentation of the relevant planning provisions which direct us to consider these effects. A summary table regarding the assessment of individual effects for this application is provided below and a detailed discussion of these effects is provided in the following sections.

Adverse Effects	Applicant's assessment	IO assessment	Conclusion
People, communities & amenity values	A limited assessment has been provided based on the existing irrigation activity.	The proposed increase to the irrigation area will result in a visible change to the landscape.	Cumulative effects may be more than minor.
Inefficient use	Annual volume of 210,000 cubic metres per year.	This volume is greater than estimated using WQN9v2. Lack of conclusive soil water demand data.	Not consistent with Policy 16(c).
Other water users	Limited to impacts on MEL. Predicted minor impacts.	Impacts on existing consent holders and application with higher priority likely to be minor due to proposal to adopt minimum lake level. Derogation approval not yet provided.	Effects on other users minor, however derogation approval from MEL not provided.
Ecosystems	Fish screen and minimum flow proposed.	Agree with applicant's assessment & mitigation.	Effects acceptable.
Water quality	MWRL study for cumulative effects. Local effects not assessed.	Not satisfied given conclusions in s42a report on cumulative effects.	Effects may be more than minor.
Tangata Whenua values	No assessment provided.	No submissions received on this application but no assessment by applicant to confirm that impacts are acceptable.	Effects may not be acceptable.

Table 2: Summary of Assessment of Effects for CRC083692

Adverse effect on people, communities and amenity values

40. The applicant has not provided an assessment of the effects on landscape, amenity values and other downstream users at a local scale or in relation to the cumulative impacts associated with the activity.
41. A number of submitters have raised concerns with regard to this effect on natural character and amenity values. This matter is discussed in a separate report by Dr Mike Freeman, which addresses the cumulative landscape effects (Report 4a) of irrigation within the catchment.

Landscape Values

42. The proposed activity will result in the irrigation of land adjacent to the State Highway, along the shore of Lake Aviemore. This will result in a visible change in land-use that will extend for a distance of approximately 1.5 km along the road. In addition, the irrigation area is likely to be visible from people using the lake for recreation or camping in the area.
43. The applicant states the effects of the proposal will not have a significant impact on the natural character or landscape values because a portion of this land is already irrigated and therefore visually different from the existing landscape. It is also stated that due to the previous method of irrigation (wild flooding) and the difficulty in controlling the flow of water across the irrigation area, it is likely that the area actually irrigated exceeded the area specified in the application (2 ha).
44. Nevertheless the applicant is now proposing to irrigate a larger area than previously authorised (an additional 33 ha). The proposal also includes irrigation of land on either side of the state highway and land adjacent to the lake and a camping ground. This increase in area combined with the proximity to the road and recreational areas may result in a greater impact due to the increased visibility of irrigation on the property.
45. Mr Chris Glasson (Landscape Architect, engaged by ECan) was asked to comment on the effects on landscape values relating to this application. He stated that without an appropriate buffer distance separating the irrigation area from the road, the proposal could result in moderate landscape effects.

Recreation & Amenity Values

46. While the specific details of the intake structure are unknown at this time, Ms Begley states that the abstraction of water from Lake Aviemore can be undertaken to ensure that the adverse effects on amenity are minimised. The applicant has proposed to take water from Lake Aviemore at the top of the irrigation area, to ensure that there is a separation distance between the intake and the Parson Rock camping ground.
47. As stated previously, the applicant has not applied for a land-use consent for the installation and maintenance of the intake structure and it is stated in the application that one of the options being considered is to install an infiltration gallery within the applicants property to take water. I would agree with the applicant that this method of abstraction would be unlikely to result in an adverse effect on the recreation or amenity values of the area.
48. Any option that would require the disturbance of the bed or banks of the lake, however would need to be authorised by a consent and therefore the effects on amenity and recreational values could be addressed as part of the consents process when the application is submitted to ECan.

Transpower Infrastructure

49. The map attached to this report in Attachment One indicates the presence of Transpower structures and electrical conductor lines that dissect the irrigation area between Lake Aviemore and State Highway 83 in a south easterly direction. The applicant has not assessed the impacts of irrigation on these structures.
50. It should be noted that Transpower did not submit on the application when it was notified. They did however, advise ECan on a number of other similar applications in the Waitaki Catchment, that the proposed activities including the irrigation of water onto land could result in adverse effects on their assets. They have also provided guidelines (NZECP34:2001) on appropriate mitigation measures that should be implemented to ensure the protection of these assets and the National Grid.
51. These mitigation measures include:
 - (a) Avoiding the placement of structures, buildings, planting of trees or encroaching vegetation within 12 horizontal metres either side of any structure;
 - (b) Maintaining a distance of at least 4 metres from any irrigation equipment to the conductors (power lines), towers and poles; and
 - (c) Preventing the spray of water onto conductors by adjusting nozzles, turning jets off when the boom passes by the towers and keeping the boom well away from conductors.
52. The applicant may wish to provide an assessment of the impacts of their proposed activity (irrigation) on these structures at the hearing. Alternatively a condition has been recommended for this application, should the Commissioners decide to grant consent for this activity, that require the above measures, including separation distances to be maintained.
53. It should also be noted that the impacts on these structures should be considered when an intake structure is installed, whether or not land-use consent under section 13 of the RMA is required for the activity. In assessing these applications, ECan currently considers the impacts of works within 50 metres of Transpower structures and power lines.

Positive Effects

54. It is noted that the use of water for irrigation could improve the productivity of the land, resulting in economic benefits to the wider community.

Summary

55. The proposal will result in a visible change to the natural character of the area, given the proximity of the irrigation area to the State Highway, Lake Aviemore and the camping ground. In addition, the irrigation of land between SH83 and Lake Aviemore could result on impacts on Transpower assets that are located in this area. Both these impacts however can be mitigated by ensuring appropriate separation distances are maintained. On this basis, the adverse effects of the proposal could be mitigated provided, conditions requiring appropriate separation distances from these features and the irrigation area are included, should the Commissioners decide to grant consent for this activity.

Adverse effects on other users

56. The impacts associated with the abstraction from Lake Aviemore on other users were assessed by Ms Begley in Section 5.2 of the AEE. The assessment was limited to the impacts on MEL's reliability of supply, which was to be addressed by the applicant's purchase of MIC shares to offset these potential effects.
57. A search of ECan's GIS database has identified that at present there are two existing consents (CRC010927 and CRC084090) for abstractions of water from Lake Aviemore and an application to take up to 300,000 m³ of water from the lake (CRC030944), which has priority over this application by Aviemore Station Ltd. While CRC010927 is not subject to a minimum lake level, CRC084090 includes a condition requiring the abstraction of water from the lake to cease when the minimum lake level of 265.6 m, as set by the WCWARP is reached.
58. The applicant has not assessed the impacts of their proposed activity on the rights of these other consent holders or the applicant with priority to abstract water from Lake Aviemore. The applicant's take is located approximately 600 metres from the take authorised by the existing consent CRC010927. It is noted that the consented take is not subject to any minimum lake levels therefore the proposed activity should not affect the ability of the existing consent holder to take water from the lake.
59. The application by Waitangi Station to take water from the lake will be subject to a minimum lake level and has a higher priority than this application. The proposed abstraction however is unlikely to result on adverse effects on this abstraction for the following reasons:
- The abstraction is unlikely to have more than a negligible impact on lake levels (i.e. Abstracting the total annual volume from the lake at any one time would only result in an 8 mm drop in lake levels);
 - The Waitangi Station abstraction is located approximately 10 km from the applicant's proposed take and there are a number of streams and surface water courses contributing flow to Lake Aviemore between the two takes.
 - Lake levels are largely controlled by MEL.
60. It should also be noted that neither the existing consent holder nor Waitangi Station have submitted on or raised concerns about this application.
61. The applicant has confirmed that the volume requested is based on the volumes allowed under the MIC share agreement, however has not yet provided confirmation that these shares have been purchased or derogation approval from MEL has been obtained. While I am satisfied that the proposed activity is unlikely to adversely affect either the existing abstraction or proposed take from Lake Aviemore, I cannot confirm that the impacts on MEL will be acceptable and note that MEL have lodged a submission in opposition to this application and wish to be heard.

Adverse effects of inefficient use

62. 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.

Annual Volumes

63. The irrigation volume applied for has been based on the volume adopted by the Mackenzie Irrigation Company (MIC), of 6000 m³ per hectare per year. Ms Begley has also determined the annual volume using WQN9v2, based on an average PAW of 72.5 millimetres (for shallow and stony sandy and silt loams with a WHC of between 55 – 90 mm), an effective rainfall of 210 millimetres per hectare per year and intensive pasture land use.
64. These parameters would provide an annual volume of 222,250 m³ or an application depth of 635 mm/season. On this basis, Ms Begley states that the proposed annual volume of 210,000 m³ is conservative to meet the seasonal demand of the soils within the irrigation area.
65. ECan's soil information database indicates however that the proposed area of irrigation (35 hectares) consists of predominantly (95%) Waenga sandy loam shallow soils with a PAW (mid range) of 90 millimetres. If this value was used in the assessment, then the annual volume required as estimated using WQN9v2 would equate to 189,000 m³.
66. The reason for this lower volume is largely due to the difference in PAW values used in the assessment. The PAW values recorded in ECan's soils database for this soil type are representative of medium soils (PAW mid of 90) compared to the PAW of 72.5 used by Ms Begley, which would represent light soils.
67. Mr Jeromy Cuff (Land Resources Scientist, ECan) was asked to provide advice on appropriate PAW values for the types of soils found within the irrigation area. He stated that:
- (a) The estimated PAW attributes for Waenga soils suggest a range between 30 – 149mm however these estimates are based on relationships with other soils and have an "unknown level of accuracy".
 - (b) Rough calculations based on the description of this soil type in Soil Bureau Bulletin 27 estimate the PAW to be 90mm however this may be an upper limit for this soil.
 - (c) Essentially, either value (i.e. 72.5 mm, used by the applicant or 90 mm, recorded in ECan's GIS database) may be correct. The most reliable method of determining the appropriate PAW value would be to carry out a soil survey.
68. Given the uncertainties regarding the PAW values for the soils within the irrigation area, I cannot therefore confirm that the proposed annual volume represents an efficient and reasonable volume to meet the seasonal demand of the soils on site.

Technical Efficiency

69. The applicant states that the maximum gross depth of water applied will be 4.6 millimetres per day, which equates to a total application depth of 33 mm over a 7 day period. This rate of application is less than half the AWHC of the soil type in the area, therefore there should be no losses to groundwater and the proposal should be able to achieve the 80% technical efficiency recommended by the WCWARP.
70. It should also be noted that the applicant used to irrigate land within this area using a wild flooding method of irrigation and is now proposing to use spray irrigation, which is considered to be a more efficient method.

Summary of effects from inefficient use

71. While I am satisfied that the method of irrigation (spray irrigation), application rates and return periods proposed combined with the water holding capacity of the soils within the irrigation area should ensure that irrigation can achieve an 80% technical efficiency consistent with Policy 16(b) of the WCWARP, I am not satisfied that there is sufficient information to confirm that the proposed seasonal allocation of 210,000m³ is reasonable for the proposed irrigation area, required by Policy 16(c). The applicant may wish to address this issue at the hearing.
72. In addition, the applicant has not confirmed whether water metering of the take is proposed. I recommend that if the Commissioners decide to grant this consent, a condition requiring water metering is included. This will provide accurate information on the amount of water used in order to efficiently manage the use of this water.

Adverse effect of use on water quality

73. The proposed activity can have an impact on water quality in the immediate vicinity of the site or in combination with other activities in the catchment result in cumulative adverse effects.

Localised Impacts on Water Quality

74. The applicant has not assessed the impacts of the proposed use of water for irrigation on groundwater and surface water quality. Ms Begley advises, however, that the applicant is proposing to develop a farm management plan, which will include measures to mitigate potential impacts on water quality. At the time of writing this report, the applicant has not provided any details of the mitigation measures or an assessment of residual impacts on water quality once these measures are implemented to determine if the impacts on water quality can be adequately mitigated.

Cumulative Impacts on Water Quality

75. The applicant has contributed to the study by Mackenzie Water Research Ltd (MWRL) on cumulative effects within the catchment.
76. The report by MWRL has been audited and a separate s42a report prepared (see Report 4a). The conclusion of Dr Mike Freeman and other experts (as outlined in Reports 4(a) – (f)) is that given the significant level of uncertainties involved in, and technical concerns with, critical aspects of the MWRL/GHD assessment relating to the extent of adverse effects, together with the lack of mitigation measures proposed by resource consent applicants means that it would be premature to make robust conclusions about the potential adverse cumulative effects.
77. At the time of writing this report, the applicant has not provided a farm management plan or details of mitigation measures that will be implemented to ensure that the impacts on water quality will be adequately mitigated

Adverse effects on ecosystems

78. The applicant predicts that the adverse effects on ecosystems resulting from the abstraction of water from Lake Aviemore will be acceptable for the following reasons:
- (a) The applicant is proposing to cease taking water when lake levels fall below the minimum lake level set in the Plan; and

- (b) The intake structure used to take water from the lake will have a fish screen installed to prevent the entry of fish into the system.
79. The minimum lake level for Lake Aviemore has been set in recognition of the natural values of the lake, which should include the ecosystem and communities that inhabit the lake. The applicant's proposal to cease taking water from the lake when this level is reached should therefore ensure that the ecological values of the lake are protected.
80. Specific details of the intake structure and therefore the type of fish screen that will be used are not currently available. I have recommended a condition that can be included in the consent should it be granted, to ensure that an appropriate screen is installed, when the intake structure is determined by the applicant.
81. On this basis, the effects on the ecological values of Lake Aviemore are considered to be no more than minor, provided the measures proposed by the applicant are included as conditions of consent.

Adverse effects on Tangata Whenua values

82. The applicant did not include an assessment of the proposed activity on cultural values. The sites of the proposed activities are within the rohe of Te Runanga O Moeraki and Te Runanga O Waihao.
83. According to the Ngai Tahu Claims Settlement Act 1998, Lake Aviemore is a Statutory Acknowledgment Area. The Ngai Tahu Claims Settlement Act 1998 states that while Lake Aviemore is a recent 'creation', it overlays the path of the Waitaki River, and also covers areas which have been important in Ngai Tahu history.
84. Given that the applicant has not assessed the impacts of their proposal on cultural values, I cannot confirm that the actual and potential effects on cultural values of the area will be acceptable.
85. It should be noted however that there are no sites of archaeological significance in the area specified by the application and the area is not within a Silent File Area.
86. Ngai Tahu or representatives from the individual runanga did not specifically submit on this application however a representative from these parties will be heard at the Upper Waitaki hearing, with regard to the submissions in opposition to other Upper Waitaki applications.

Conclusion

87. With regard to s104(1)(a), the actual and potential effects of the activities have been discussed above. For this consent, I cannot confirm that under s104(1)(a), the actual and potential effects of the proposed activity are acceptable when taking account the proposed mitigation. In particular, there is uncertainty regarding the following aspects of the application:
- (a) Whether the annual volume requested represents an efficient use of water;
- (b) The localised and cumulative impacts on surface water quality;
88. The impacts on landscape values and Transpower assets can be mitigated, if the recommended conditions requiring appropriate separation distances are included, should the Commissioners decide to grant consent for this activity.

Statutory Assessment (Section 104(1)(b))

Regional Policy Statement (RPS)

89. 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.
90. Of significance to these applications are Chapter 9, which relates to the management of the Region's water resources, and Chapter 10, which relates to works in the bed. 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)

91. 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 Two. A discussion of the key objectives and policies that I consider particularly relevant when deciding this application is provided in the following paragraphs

Objectives

92. Objective 1 of the WCWARP provides direction on the key issues that need to be addressed to sustain the quality of the Waitaki River and surrounding environment in relation to the taking and using of water. The proposed activity could potentially impact on the matters set out in (a), (b) and (c) of this objective.
93. While the proposed minimum lake level should ensure that the life supporting capacity of the environment (Objective 1(b)) is not compromised, I cannot confirm that the proposal will not compromise cultural values (Objective 1(a)). The cumulative impacts of the proposal on the natural character and landscape values of the catchment (Objective 1(c)) may be addressed by requiring appropriate buffer distances between the irrigation area and sensitive areas, such as the lakefront, camping ground and State Highway 83.
94. The applicant has not provided sufficient information to confirm that the annual volume of water requested is reasonable to meet the demands of soils within the irrigation area, therefore the proposal may not be consistent with Objective 4.
95. The proposed activity is within the allocation limits set by the WCWARP and will not result in affecting the reliability of supply to other users taking water from Lake Aviemore, therefore it may be considered to be consistent with Objectives 2, 3 and 5 of the WCWARP.

Environmental Flow and Level regimes

96. The applicant is proposing to adopt the minimum lake level required by the WCWARP for Lake Aviemore, therefore it is considered that the application is consistent with Policies 3 and 4.

Surface Water Quality

97. 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 4A, by Dr Mike Freeman, addresses this policy in more detail, particularly on the cumulative scale. Given his conclusions, I consider that this application may be contrary to this policy

Efficient and effective use

98. Policies 15 – 20 deal with efficient and effective use and all are applicable to this application.
99. 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.
100. 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.

Replacement consents

101. Policy 28 provides guidance as to matters which must be considered when deciding whether to grant or refuse an application for replacement of existing consents.
102. These include consideration of attempts to meet the efficiency expectations of the plan, recognition of the value of the investment by the consent holder and maintenance of the consent in any allocation limits and priority bands if granted.
103. I consider that while the applicant has applied for this consent to replace an existing activity, the nature of the application is significantly different, particularly in the scale of the operation. While the applicant is proposing to convert to spray irrigation of land within the property, there is currently insufficient information to show that they can meet the efficiency expectations of the plan.

Policy for Lake Aviemore

104. Policy 42 specifically relates to setting minimum lake levels that recognise the natural and recreational values of the lake. The applicant is proposing to adopt the minimum lake levels in the plan, therefore the proposal is considered to be consistent with this policy.

Conclusion

105. With regard to s104(1)(b), the relevant provisions of the RPS and WCWARP have been considered above. In my view, the applicant's proposal may not be consistent with Policy 13 due to there being likely effects on water quality and policies 15-20 due to effects of inefficient use.

Other Matters (Section 104(1)(c))

106. With regard to s104(1)(c), the consent authority can consider any other matter relevant and reasonably necessary to determine the applications. I consider that the high court decision *Aoraki Water Trust and Others v Meridian Energy Limited* is relevant to this application (see discussion in Report 1).

Part II Purpose and Principles

Purpose of the RMA (s5)

107. 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.”

108. 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 by “avoiding, remedying or mitigating” the adverse effects of activities.

109. 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 “avoid, remedy or mitigate” the potential impacts on surface water quality and landscape values 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)

110. Sub-sections (b) and (e) of Section 6 of the RMA are particularly relevant to this application. The proposal will include a change in the visual aesthetics in an area of high amenity. The applicant has not proposed measures to address these effects. The applicant has not assessed the impacts on cultural values, however, it should be noted that runanga have not submitted on this application.

Other Matters (Section 7)

111. 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.

112. Sub-sections (b), (c) 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 Lake Aviemore. 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.

113. Section (c) refers to the maintenance and enhancement of amenity values. The applicant has not proposed mitigation measures to ensure that this objective is achieved. However, maintaining buffer distances between the irrigation areas and areas used by the public, such as roads, the camping ground next to the property and Lake Aviemore, may ensure that the amenity values of this area are not compromised.

114. Section (f) requires the maintenance and enhancement of the quality of the environment. The proposal may result in adverse effects on water quality and could therefore compromise this requirement.

Principles of the Treaty of Waitangi (s8)

100. 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 Arowhenua

Runanga. Runanga were informed separately when ECan received the application and later when the application was notified. They did not submit on this application.

RECOMMENDATION

Grant or Refuse

115. 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.
116. Due to the changes in location of the take of water and increases to the scale of the operation with respect to the amount of water requested and the area of irrigation, the impacts associated with the proposal are likely to be greater than the impacts associated with the existing activity at this site.
117. The applicant is proposing however to convert to spray irrigation and has proposed to adopt the minimum lake level for Lake Aviemore, which will improve technical efficiency of the operation and recognises the natural values of the lake.
118. There are however, a number of outstanding issues associated with this proposal as listed below:
- (a) *Surface water quality* - No impact assessment or measures to address the water quality impacts that could arise from irrigation at this site. The impacts on water quality may therefore not be acceptable;
 - (b) *Efficient and reasonable use* - There is a lack of soil water demand information to support the annual volume requested in accordance with the direction provided by Policies 15 – 20 of the WCWARP;
 - (c) *Landscape and amenity* - The irrigation area is close to sensitive amenity areas and will be visible to the public using the lake, a camping ground and the State Highway.
 - (d) *Transpower infrastructure* – The applicant has not assessed the impacts of irrigation on Transpower's assets that are located within the proposed irrigation area.
 - (e) *Water metering* – The applicant is not proposing to install a water meter.
119. I have recommended conditions to address (c), (d) and (e) above, however having considered all relevant matters outlined in section 104(1), I am not satisfied that the actual and potential effects of the proposed activity are acceptable due to concerns regarding the effects on water quality and the efficient use of water (listed as (a) and (b) above). On this basis, I cannot recommend that this application be granted.

RECOMMENDED CONDITIONS

120. Comments on the mitigation proposed by the applicant for each application are provided earlier in this report.
121. If the Commissioners decide to grant this application, a list of conditions that are usually included in a water permit are provided in Appendix 6 of the introductory s42A

report (Report 1). A list of draft recommended conditions for this application are provided below.

122. It should be noted that I am not satisfied that these conditions would adequately mitigate that adverse effects that are of key concern, for example, adverse effects on water quality as a result of land use intensification.

No.	Condition Code ⁴	Details
Take		
1	WP01	<p><i>Name of waterbody:</i> Lake Aviemore</p> <p><i>Map reference:</i> between NZMS 260 H40:8931-1861 and H40:8990-1801.</p> <p><i>Instantaneous rate:</i> 19 litres per second</p> <p><i>Volume:</i> xxx cubic metres [Disagreement between IO and applicant regarding reasonable annual volume]</p>
2	WP03	<p><i>Instantaneous rate:</i> 19 litres per second</p> <p><i>Volume:</i> 11,481 cubic metres</p> <p><i>Design return period:</i> 7 days</p> <p><i>Seasonal volume:</i> xxx cubic metres</p>
Use		
3	WP04	<p><i>Type of irrigation:</i> Spray irrigation</p> <p><i>Number of hectares:</i> 35 hectares</p> <p><i>Use:</i> Pasture for grazing sheep and beef cattle.</p> <p><i>Plan No:</i> CRC083692</p>
4	WP05	
5	WP06	
Mitigation		
6	Non standard	When the level in Lake Aviemore, as measured at [x] is at or below 265.5 metres above mean sea level, the abstraction of water from Lake Aviemore shall cease.
7	WP10 or WP14	Fish screen condition, depending on type of intake structure applicant is proposing.
8	WP13	Transpower condition.
Measuring & Metering		

⁴ See Report 1, Appendix 6 for the condition code explanation.

9	ME01	
10	ME03	
11	ME04	
12	ME05	
Administrative Conditions		
13	AD01	
14	AD03	
15	AD04	



Signed:

Date: 31st August 2009

Yvette Rodrigo
Consents Investigating Officer

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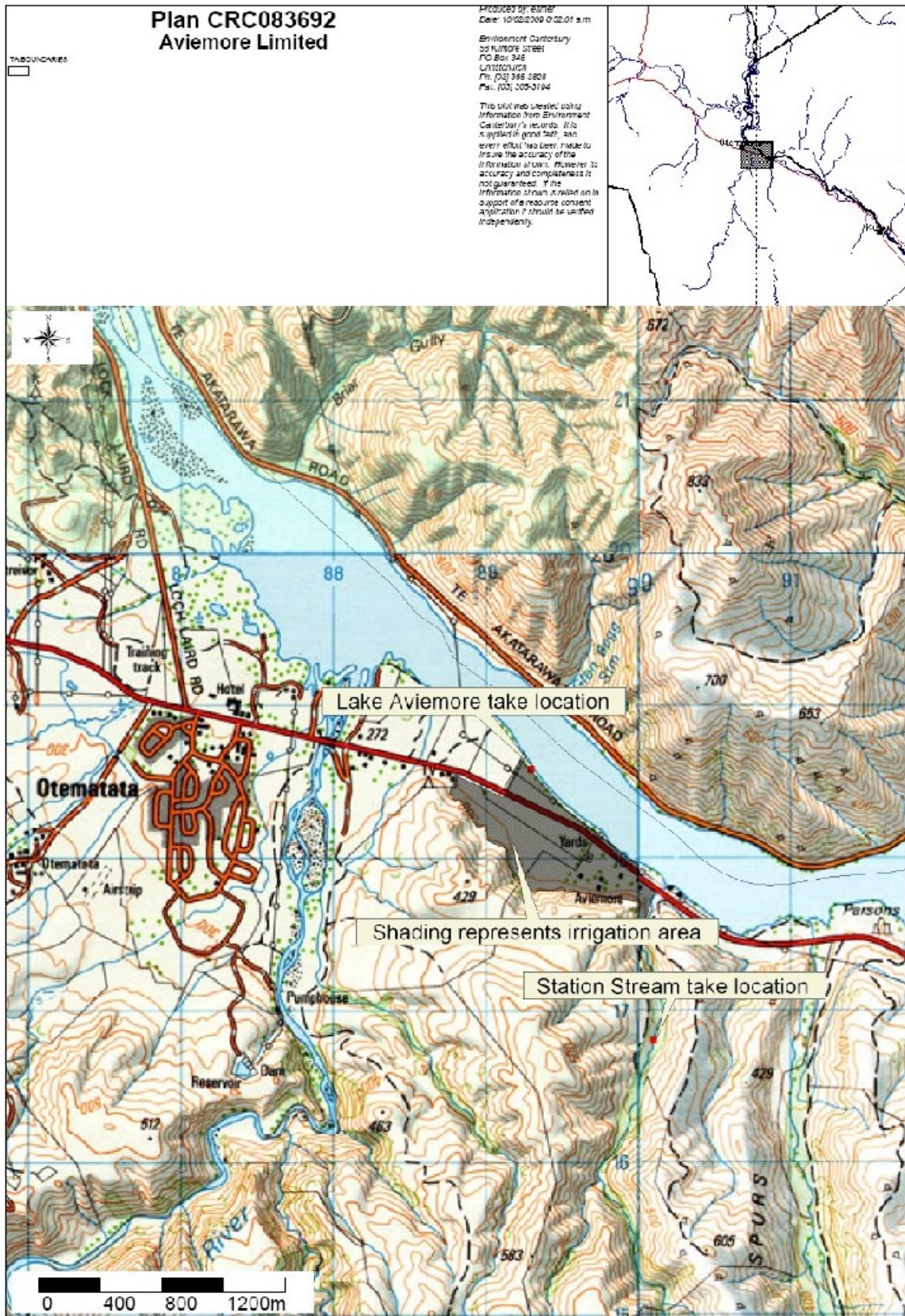
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ATTACHMENT ONE – LOCATION MAP



ATTACHMENT TWO – 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 proposal does not compromise sections b. – g. of this objective, however, no assessment of the proposed activity has been submitted by the applicant to determine if the effects on cultural values (i.e. section a.) will be more than minor.
Objective 2	Provide water for different activities.	The proposed activity is within the WCWARP allocation for agricultural and horticultural activities.
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 proposed abstraction and use will be undertaken to achieve a high level of efficiency.
Objective 5	Provide for practical and fair sharing of allocated water during times of low water availability.	An appropriate minimum lake level, consistent with the requirements of the WCWARP has been proposed by the applicant.
Policy 1	Recognising connectedness between all parts of the catchment	The cumulative effects of the proposal in relation to water quality, landscape and amenity values of the catchment have not been assessed.
Policy 3	Setting of environment flow and level regimes for all activities in Objective 2 and consistent with Objective 1.	Minimum lake levels for Lake Aviemore have been proposed to protect the natural values of the waterbody and the rights of existing users within the catchment.
Policy 4	Outlines a number of matters that must be considered when setting an environmental flow and level regime	The minimum lake levels proposed will protect the values set out for Lake Aviemore.
Policy 11	Consider effects on Tangata Whenua values, local and national effects when allocating water to activities	The proposal may have an effect on these values.
Policy 12	Outlines matters that must be considered when establishing allocation limits.	The proposal may not be consistent with f. and g. of this policy.
Policy 13	Addresses water quality objectives in the NRRP	Effects uncertain.
Policy 15	Ensuring take and use of water is reasonable for its intended use	The proposed take and use is not considered to be reasonable for the purposes of irrigation.
Policy 16	Requiring irrigation applications to meet the specified reasonable use test	The proposed annual volume is not consistent with the volumes determined using WQN9v2.
Policy 19	Requiring piping or sealing of water distribution systems to minimise water loss.	Water will be piped to the irrigation area.
Policy 20	Promotes the integration of multiple uses of water	A stock water system is already operational.
Policy 21	Requires the installation of a water meter	One is proposed.
Policy 23 Policy 24	Policies 23 – 27 refer to restrictions during times of	An appropriate minimum lake level has been proposed that will take into account the requirements

Policy 25	low water availability.	of these policies.
Policy 26		
Policy 27		
Policy 28	Considerations when deciding applications for replacement consents.	The applicant is not a direct replacement due to the different intake location and significant increase in the irrigation area however the applicant is proposing more efficient methods of irrigation than were used under the existing consent.
<i>Lakes Ruataniwha, Benmore, Aviemore and Waitaki</i>		
Policy 42	Setting minimum lake levels for these lakes	Appropriate minimum lake level has been proposed.