

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

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Application CRC030944 by
Waitangi Station Limited for a
Water Permit to divert, take &
use surface water from Sutton
Stream, Gibson Stream and
Lake Aviemore.

Section 42A Officer's Report of Susannah Vesey

Date of Hearing: September 21st 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 overview and technical reports on hydrology and minimum flows (Report 2A and 2B), the report outlining annual allocations (Report 3) and the reports on cumulative landscape and water quality effects in the catchment (Reports 4(A-F) and 5).

INTRODUCTION

2. Waitangi Station Ltd (the applicant) has applied for a resource consent to:
 - (a) divert, take and use up to 34,560 cubic metres of water per eight consecutive day period at a maximum rate of 55 litres per second, from Sutton Stream, of which 40 litres per second will be used to irrigate up to 55 hectares of pasture and 15 litres per second will be used for stockwater; and
 - (b) divert, take and use up to 48,816 cubic metres of water per 19 consecutive day period at a maximum rate of 55 litres per second, from Gibson Stream, of which 40 litres per second will be used to irrigate up to 23 hectares of pasture and 15 litres per second will be used for stockwater; and
 - (c) take and use up to 21,168 cubic metres of water per seven consecutive day period at a maximum rate of 35 litres per second, from Lake Aviemore, of which 30 litres per second will be used to irrigate up to 50 hectares of pasture and five litres per second will be used for stockwater.
3. See Attachment One for a map of the location of take and irrigation areas.
4. Mr Adair Brimelow of Attewell Irrigation Consultants submitted the initial application and assessment of environmental effects (AEE) on behalf of the applicant. Ms Haidee McCabe subsequently provided comments and further information on behalf of the applicant both while employed by Attewell Irrigation Consultants more recently through her own company, IR Solutions.

5. Both Ms McCabe and myself will refer to each of the three aspects of this application as the following:
 - (a) Proposal A = Sutton Stream divert, take and use
 - (b) Proposal B = Gibson Stream divert, take and use
 - (c) Proposal C = Lake Aviemore take and use
6. The applicant seeks a duration of approximately 16 years until 30 April 2025 which is consistent with the expiry of their MacKenzie Irrigation Company shares.
7. This is an application for a new activity.

Background

8. Application CRC030944 was lodged on 23 December 2002 and considered to be notifiable on 23 April 2003. Requests for further information have been sent covering effects including, but not limited to, water quality, landscape, irrigation volumes, intake design and derogation approvals.
9. Since the application was initially lodged, the rates and volume of abstraction for some of the proposals were increased and abstraction point locations corrected prior to this application being notified. Annual volumes for the water taken for irrigation proposed prior to the 2007 notification. Minimum flows and lake levels have been proposed since this application was notified.
10. On 26 August 2009 the applicant proposed a set of MIC/MEL common consent conditions which they advised form part of their consent application. However given the time they were received by the Canterbury Regional Council (CRC), I have not had time to audit these conditions and as such are not discussed in my report.
11. Waitangi Station have also applied for the following consents:
 - (a) CRC031013 - To disturb the beds of Sutton Stream and Gibson Stream by excavating the bed of the streams to allow for the erection and reconstruction of an intake structure in the bed of the Sutton Stream and in the bed of Gibson Stream.
 - (b) CRC031014
 - (i) to discharge up to 34,560 cubic metres of excess irrigation and stockwater per eight consecutive day period at a maximum rate of 55 litres per second, into Lake Aviemore at map reference NZMS 260 I40:9687-1954;
 - (ii) to discharge up to 48,816 cubic metres of excess stock and irrigation per 19 consecutive day period at a maximum rate of 55 litres per second, into Lake Aviemore at map reference NZMS 260 I40:9551-1919.
12. These consents are addressed separately in Reports 39B and 39C.
13. Application CRC10143 – to construct, install and use an irrigation intake structure and pump shed on the bed and banks of Lake Aviemore between map references NZMS 260 I40:0037-1369 and NZMS 260 I40:0031-1375; was lodged with Environment

Canterbury on 24 July 2009 and is currently being audited by myself. This application is not subject of this hearing.

14. I met with Mr Dave Sutton at Waitangi Station on 28 January 2009 where I was shown the intake locations, areas to be irrigated and discharge points. Observations from my visit are included throughout this report.
15. As will be explained in more detail later in my report, the applicant currently diverts water from Sutton and Gibson Streams through existing stockwater races for stock drinking water purposes only. The applicant intends on replacing the existing intake infrastructure and will upgrade the existing races to convey water sought under this proposal.

Amendment

16. Ms McCabe has been consulting with Meridian Energy Limited (MEL) in regards to the design and location of the proposed intake structure for the Lake Aviemore aspect of this proposal. An outcome of this is that the intake needs to be located further away from the Aviemore Dam. As such, on 30 July 2009, Ms McCabe sought an amendment to this application to take water from Lake Aviemore from any location between map references NZMS 260 I40:0037-1369 and NZMS 260 I40:0031-1375.
17. Ms McCabe does not consider the amended location will have any greater impact on the environment or aquatic ecosystem. The lake environment between the two locations does not vary and therefore the effects should not be any different. She advises she considers the only party to be potentially affected is MEL as they lodged a submission in opposition on the original application. Their submission had been made to ensure they have clear details of the intake location and concept.
18. Given this amendment was made as a result of consultation with MEL, Ms McCabe considers no other parties are considered to be affected by the change in location and therefore would not be affected by this change without re-notification.
19. I have visited the site and note there does not appear to be any difference in the surroundings of the proposed location compared with the notified location. I agree that there is no information available which would indicate a change in effects on the environment. Given this, and the fact no other submissions were lodged in relation to the Lake Aviemore intake location, I agree with Ms McCabe and recommend this application may be amended and considered without re-notification.

Stockwater

20. The 2007 notification wording for this application stated:

*"To divert, take and use up to 34,560 cubic metres of water per eight consecutive day period at a maximum rate of 55 litres per second, and a maximum volume of 330,000 cubic metres per year, from **Sutton Stream**, at or about map reference NZMS 260 K39:9674-2157, approximately 1,100 metres north east of the Waitangi Station Homestead, Lake Aviemore, of which 40 litres per second will be used to irrigate up to 55 hectares of pasture and 15 litres per second will be used for stockwater; and*

*To divert, take and use up to 48,816 cubic metres of water per 19 consecutive day period at a maximum rate of 55 litres per second and a maximum volume of 300,000 cubic metres per year, from **Gibson Stream**, at or about map reference NZMS 260 I39:9608-2103, approximately 800 metres north east of the Waitangi Station Homestead, Lake Aviemore, of which 40 litres per second will be used to irrigate up to 23 hectares of pasture and 15 litres per second will be used for stockwater; and*

*To take and use up to 21,168 cubic metres of water per seven consecutive day period at a maximum rate of 35 litres per second and at a volume not exceeding 300,000 cubic metres per year, from **Lake Aviemore**, at or about map reference NZMS 260 140:0037-1369, approximately 60 metres upstream of the Aviemore Dam, adjacent to Te Akatarawa Road, Lake Aviemore, of which 30 litres per second will be used to irrigate up to 50 hectares of pasture and five litres per second will be used for stockwater.”*

21. The 2003 notification wording was almost identical to that above, apart from no annual volumes were included.
22. In a response to further information requested under section 92 RMA (s92) dated 10 October 2006, Mr Sutton provided annual volumes for each of the three proposed abstractions. In this letter he makes it very clear that the annual volumes are for irrigation only and the stock water volumes are not included.
23. In another response to further information requested under s92 dated 4 February 2009, Ms McCabe confirmed that the annual volumes refer only to the irrigation requirements – stockwater is in addition to the irrigation volume.
24. I believe that in his s92 response, Mr Sutton clearly identifies the proposed annual volumes take into consideration irrigation demand only. Additionally, I note that the notification wording clearly identifies separate rates of water to be diverted for irrigation and stockwater.
25. Given the above, I consider it is reasonable to include the divert rates and volumes for irrigation and stockwater for each of the three proposals within the allocation for ‘agricultural and horticultural activities’ section of Table 6 of the WCWARP. I believe that any submitter looking through the file would be aware stockwater was in addition to the proposed annual volumes for each of the proposals.

Notification

26. Details of the notification and wording are contained in Appendix 4 of the introductory s42a report (Report 1). This consent, and associated applications CRC031013 and CRC031014 were notified in May 2003 as part of the Minister’s call-in and in August 2007 with 200 other applications for similar activities in the Waitaki Catchment.

Submissions

27. In the 2007 public notification, 16 submissions in total were made on this proposal (CRC030944, CRC031314 and CRC031015). Of these:
 - 1 was in support;
 - 13 in opposition; and
 - 2 neither supported nor opposed this application.
28. Details of submissions made in response to all applications which were publicly notified at the same time in 2007 are contained in Report 1, Appendix 5. Additionally, Table 1 below summarises submissions made individually on the Waitangi Station proposal, or submissions which raise particular concerns in relation to this proposal. Please note that all submissions hold equal importance, even if not specifically listed below.

29. Table 1 also includes details of submissions made individually on the Waitangi Station proposal during the 2003 notification process.
30. 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.

Table 1: Summary of submissions on Waitangi Station's proposal (applications CRC030944, CRC031013 and CRC031014). ¹ Call-in 2003 ² August 2007			
Submitter	Issues	Support/ Oppose	To be heard
Canterbury Aoraki Conservation Board ¹	Concerned with the duration sought, recommends 11-13 years. Applicant should show commitment to new application methods during the consent period for be considered when comes up for renewal.	Support	Yes
Fish and Game ¹	Consent for stockwater should be separate to that for irrigation. Little reason for minimum flow. Metering and fish screen recommended	-	Yes
Otematata Station and Aviemore Ltd ¹	Enhance sustainability of the farming operation, positive flow on effects for community, no single user should dominate use.	Support	No
Mr M Urquhart ¹	Water resource should have multiple users, small take will have long lasting benefit to community, enhancing viability and soils of property.	Support	Yes
Ms F Home ¹	All water should be taken from Lake Aviemore.	Oppose	Yes
Mr S Carswell ²	Degradation of water quality	Oppose	Yes
Fish and Game ²	Streams don't have great fishery value, resident trout likely where flows allow. Concerns could be addressed through consent conditions	Oppose	Yes
Meridian Energy Limited ²	MIC shares, flow regimes, metering, water quality	Oppose	Yes

DESCRIPTION OF THE PROPOSED ACTIVITY

31. The applicant proposes to irrigate a total of 128 hectares of their Station using water taken from three different sources. As mentioned in the introduction of my report, Ms McCabe and I will refer to each of the three sub-proposals separately.
32. I have included a number of photos taken during my site visit as Attachment Two These should assist in understanding the proposal.

Proposal A

33. 55 litres per second of water is to be diverted from Sutton Stream at map reference NZMS 260 I39:9674-2157 (average rate of 50 litres per second over 8 days). 15 litres per second will be used for stockwater and conveyance through the race system and

the remaining 40 litres per second will be used for the irrigation of 55 hectares (as illustrated on Attachment 1).

34. Of the 55 hectares to be irrigated under this proposal, approximately 40 hectares are located on the flat land in front of Waitangi Homestead, adjacent to Te Akatarawa Road (either side of Waitangi Station Road) and 15 hectares are located on a raised 'terrace' approximately 20 metres above the road.
35. The applicant intends on installing a submerged intake structure, adjacent to the stream bed. This is discussed further in Report 39B associated with application CRC031013 for works in the bed and banks of Sutton and Gibson Streams.
36. Water will be conveyed to irrigation areas via an existing water race (which the applicant has advised will be upgraded to reduce losses and improve carrying capacity). Water will be piped from the race to the irrigators under this proposal.
37. Ms McCabe has advised the stockwater will be piped to troughs within the proposed irrigation areas. Stock will have access to the water race outside of these areas.
38. Any excess irrigation or stockwater will be piped down a hillside, under Te Akatarawa Road and discharged into Lake Aviemore. This is discussed further in the Report 39C associated with application CRC031014 for the discharge of water into Lake Aviemore.
39. In summary the applicant proposes the following activities under CRC030944 for proposal A:
 - (a) The intake pipe will be 5 millimetre mesh, overlain with gravels to prevent entrapment of fish. The submerged intake structure will be buried approximately two metres below ground level.
 - (b) A minimum flow of 80 litres per second on Sutton Stream at map reference NZMS 260 139:967-215 (above Sutton Stream intake)
 - (c) Water races will be upgraded to improve efficiency by minimising losses
 - (d) Water will be piped from headrace to irrigation areas
 - (e) Spray irrigation will be used
 - (f) Divert and take will be metered

Proposal B

40. 55 litres per second of water is to be diverted from Gibson Stream at map reference NZMS 260 139:9608-2103 (average rate of 29.7 litres per second over 19 days) before the confluence with Sutton Stream. 15 litres per second will be used for stockwater and conveyance through the race system and the remaining will be used for the irrigation of 23 hectares.
41. These 23 hectares are separate to those irrigated under Proposals A and C. The area is identified on Attachment 1.
42. The applicant intends on installing a submerged intake structure identical to that sought for Proposal A, adjacent to the stream bed. This is also subject of application CRC031013.

43. Water will be conveyed to irrigation areas via an existing water race (which the applicant has advised will be upgraded to reduce losses and improve carrying capacity). Ms McCabe has advised that unlike proposal A, it is likely the irrigators will take water directly from the water race.
44. Ms McCabe has advised the stockwater will be piped to troughs within the proposed irrigation areas. Stock will have access to the water race outside of these areas.
45. The existing water race joins Sutton Stream at the boundary of Waitangi Station, adjacent to Te Akatarawa Road which then discharges into Lake Aviemore. Any excess irrigation or stockwater will be discharged into the Lake at this point. This is discussed further in Report 39C associated with application CRC031014 for the discharge of water into Lake Aviemore.
46. In summary the applicant proposes the following activities under CRC030944 for proposal B:
 - (a) The intake pipe will be 5 millimetre mesh, overlain with gravels to prevent the entrapment of fish. The submerged intake will be buried two metres below ground level.
 - (b) A minimum flow of 80 litres per second will be maintained on Sutton Stream at map reference NZMS 260 139:967-215 (above Sutton Stream intake)
 - (c) Water races will be upgraded to improve efficiency of conveyance by minimising losses.
 - (d) Water will be piped from headrace to irrigation areas
 - (e) Spray irrigation will be used
 - (f) Divert and take will be metered

Proposal C

47. 35 litres per second of water is to be taken from Lake Aviemore, approximately 60 metres upstream of the Aviemore Dam between map reference NZMS 260 NZMS 260 140:0037-1369 and NZMS 260 140:0031-1375. Five litres per second will be used for stockwater and the remaining will be used for the irrigation of 50 hectares.
48. The area to be irrigated under proposal C is quite different from that irrigated under proposals A and B – it is located approximately 10 kilometres around the Lake. The area is adjacent to the top arm of Lake Waitaki. The area is identified on Attachment 1.
49. Ms McCabe has been in discussions with Meridian Energy's Engineers about the intake design for this proposal as the intake will be owned on land owned by MEL and the close proximity to MEL's dam infrastructure. As discussed in the "Background" section of this report, a resource consent application under section 13 RMA was lodged with Environment Canterbury on 24 July 2009.
50. Water will be piped from the intake to the irrigation area (for approximately 1.5 kilometres) following the contours of the land. Due to the piped nature of this proposal, there will be no discharge of excess water.

51. During my site visit Mr Sutton showed me the area to be irrigated under this proposal. I note the area is very close to the edge of Lake Waitaki. Mr Sutton advised me there will be a buffer zone between the irrigation and the edge of the Lake, however no further details about this have been provided by the applicant at the time this report was prepared.
52. In summary the applicant proposes the following activities under CRC030944 for proposal C:
- (a) Fish screens will be used at intake site – CRC100143 states five millimetre mesh will be placed over the intake pipe. No further details of fish screen have been provided.
 - (b) The proposed abstraction from Lake Aviemore
 - (c) Water will be piped from intake to irrigation areas
 - (d) Pipe will be buried underground where possible.
 - (e) Spray irrigation will be used
 - (f) The abstraction will be metered.

LEGAL AND PLANNING MATTERS

Consent Requirements

53. 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. A summary of the requirements for this application is provided below:

TRP

54. The TRP permits the diversion of surface water associated with minor realignments of, and minor improvements to, water courses within its region. However the diversion sought under this application does not relate to such works and as such I consider the TRP is “silent” on this matter.
55. The TRP permits the abstraction of surface water from any surface waterway provided the volume abstracted is less than 10 cubic metres per day, and the rate of take is limited to five litres per second. Given that the proposed take exceeds these limits, consent is required as a discretionary activity.

WCWARP

56. Proposals A and B: Rule 2 clause (1)–The applicant has proposed a minimum flow of the 5-year, 7-day low flow assessed by the Canterbury Regional Council (CRC) (Table 3, row xxii) to be maintained above the proposed intake on Sutton Stream. The 5-year 7-day low flow at the downstream end of Sutton Stream would technically be zero litres per second as the stream naturally goes to ground (see Report 2A for further discussion on classifying activities that fall within Table 3, row (xxii)).
57. Proposal C: Rule 2, clause (1) – The applicant proposed to adopt the minimum lake level for Lake Aviemore of 265.5 metres above sea level (Table 3, row (xv)).

58. Rule 6 – The activity is within the allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam. This rule states:

...“no person shall take, use, dam or divert water when in combination with any other take, use, dam or diversions, the sum of the annual volumes authorised by resource consent, exceeds the annual allocation to that activity in Table 5”...

as such the volume of water I consider should be included in the allocation for each proposal is listed below:

- (i) Proposal A = 803,040 cubic metres (irrigation volume + stock water).
 - (ii) Proposal B = 611,040 cubic metres (irrigation volume + stock water).
 - (iii) Proposal C = 310,000 cubic metres (irrigation volume + stock water).
59. In summary, the proposed water permit is a **discretionary** activity under Rule 15 of the WCWARP and resource consent is required in accordance with section 14 of the RMA.

Additional Consents

60. The applicant has advised the proposed pipeline from Lake Aviemore to the irrigation area (Proposal C) will not cross any streams and as such no permits are required for works in the bed and banks of rivers.

Priority

61. There is no instantaneous allocation limit for takes from “all other rivers and streams” (row (xxii)) under Rule 2.
62. For Rule 6, annual allocation, refer to Report 3 for a full list of all existing consent holders and all applicants. As described above, the application is within allocation limits set in Rule 6. As such priority is not a concern.

Derogation approvals

63. At the time this report was prepared, Meridian Energy Limited (MEL) has not provided approval for Waitangi Station Limited to derogate from its consents.

CONSULTATION

64. The applicant provided a copy of their application and AEE to the following parties in December 2002:
- (a) Graham Hughes – Fish and Game Council
 - (b) Rob Young – Department of Conservation
 - (c) Waihao Runanga and Kai Tahu Otago Ltd
 - (d) Graeme Marshall – Meridian Energy
65. Letters were received by Environment Canterbury in April 2003 from Fish and Game and the Department of Conservation stating they did not consider themselves to be

potentially adversely affected and no longer wished to be heard. I note however both these parties submitted in opposition through the 2007 notification process.

66. The applicant has also consulted with Mr Fred Graham who holds resource consent CRC001883 to take water from further up the catchment. Mr Graham also has application CRC072363 to be heard at this hearing to take water from Black Jack Stream.
67. The applicant did not undertake any further consultation prior to notification, as they considered that the application was to be publicly notified as part of the Waitaki Catchment call-in process.
68. I am unaware of any additional consultation which has occurred since this application was notified in 2007.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

69. A description of the values of the Mackenzie Basin and Lake Aviemore in general are provided in the introductory s42A report (Report 1).
70. Attachment three illustrates the affected environment as described below.

Water bodies

71. In addition to the overall summary described above, the original AEE provides the following comments in relation to the proposed activities which I agree with.
 - (a) Sutton Stream drains the South Western slopes of Mount Sutton before Douglas Stream joins it. The stream flows through a narrow and steep gorge before being joined by Gibson Stream also.
 - (b) Sutton Stream is ephemeral in nature and only during periods of high and intense rainfall does it flow into Lake Aviemore. The stream dries up at varying distances along the bed where it flows out of the gully onto the river bed.
 - (c) Gibson Stream begins below the Sutton Stream catchment of Mount Sutton and then combines with Miller and Black Jack Streams. Gibson Stream then confluences with Sutton Stream approximately 1.5 kilometres before Lake Aviemore.
 - (d) Lake Aviemore is part of a highly modified Waitaki catchment Hydro Electrical Power Scheme constructed in the late 1960's. The lake is approximately 11 kilometres long and 3.5 kilometres at its widest point.
72. From my site visit I note the following:
 - (a) Lake Aviemore is a popular recreation lake.
73. In their submission dated 27 September 2007, Fish and Game advise Sutton and Gibson Streams do not hold great fishery values however a resident population of trout is likely to exist where flows allow.
74. From Environment Canterbury's GIS database I note the proposed activities are located within an area of regional significance. Lake Aviemore is a Statutory Acknowledgement area.

Irrigation area

75. There is very little up-to-date information available on soils in the vicinity. Given this, Ms McCabe contracted Mr Trevor Webb of Landcare Research to provide information on the soils within the areas to be irrigated under each of the proposals. This is summarised below in Table 2, where PAW = profile available water:

Proposal	Soil series	PAW range (mm)	PAW (mm)
A	Tasman	25-60	40
	Eweburn	30-75	45
	Becks	75-120	100
B	Eweburn	30-75	45
C	Grampians	70-100	90
	Dalgety	45-90	60
	Eweburn	25-60	45

76. Keller and Pfluger (2005) provides the following information about the Mid-Catchment tributaries of the Waitaki Catchment:
- (a) 44% of land cover is predominately tall tussock grasslands, with only 16% of cover being low producing grasslands.
 - (b) Threatened bird species recorded include; Black Stilt, New Zealand Falcon, Crested Grebe and Kea.
77. From Environment Canterbury's GIS database I note the proposed activities are located within an area of regional significance. The land used as a camping ground between the Waitangi Station boundary and Lake Aviemore is listed as being owned by MEL.
78. The proposed activities are located within the jurisdiction of the Waimate District Council. Given this I have considered the Waimate District Plan, in particular Planning Map number 6. This map shows proposals A, B and C to be located within Lakeside Protection Area 2.
79. From my site visit I note the following:
- (a) There are camping-grounds along the banks of Lake Aviemore. One of these is opposite the entry to Waitangi Station; the proposed discharge is in this area.
 - (b) Some of the area to be irrigated under proposal A is already used to grow winter feed. However Waitangi Station does not have any existing irrigation.
 - (c) There is existing irrigation under Mr Graham's consent mentioned above which "greens" the hillside behind Waitangi Station.
 - (d) The areas to be irrigated are visible from SH8 on the opposite side of the Lake.
 - (e) The area to be irrigated under proposal C would be obviously visible from the top arm of Lake Waitaki.

Other users

80. There is one existing water abstraction within the catchment. This is Mr Fred Graham's resource consent CRC001883 which takes 17 litres from Miller Stream for the irrigation of 45 hectares. This abstraction is upstream of the proposed activities.
81. Mr Graham also has application CRC072363 at this hearing seeking to take 12 litres per second from Black Jack Stream which is located higher up the Sutton Stream catchment than Waitangi Station's abstractions.
82. In relation to Lake Aviemore:
- (a) Consent CRC010927 is held by RM, CJ, IA and AH Munro. This authorises the take and use of 20 litres per second from Lake Aviemore. The consent was issued in 2000 and expires in 2035.
 - (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 litres per second and a total annual volume of 26,289 cubic metres of water from Lake Aviemore. The take is subject to the minimum lake level of 265.5 metres above mean sea level for Lake Aviemore.
 - (c) MEL holds a suite of consents authorising the operation of the Lake Aviemore Dam and the use of water for power generation.
 - (d) Aviemore Limited has applied for CRC083692 to take and use water at a rate not exceeding 19 litres per second and a total annual volume not exceeding 210,000 cubic metres per year from Lake Aviemore
83. Other than MEL's consents, all of these other users are located a large distance away from the proposed abstraction from Lake Aviemore.

ASSESSMENT OF PROPOSED ACTIVITY

84. The proposed water permit is a discretionary activity and must be considered in the context of s104 of the RMA.
85. 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))

86. The effects that have been considered for this type of activity (surface water abstraction) are presented in the introductory s42A report. That report includes the presentation of the relevant planning provisions which direct us to consider these effects. A summary of potential effects from each of the proposals are provided in Tables 3 and 4 below. Given the similar nature of Proposals A and B, these have been summarised together.
87. Where that I am satisfied that subject to mitigation, effects will be minor and there are no outstanding matters of contention I have not discussed the particular effect further.
88. Where mitigation is referred to in these tables, I am referring to the recommended conditions listed at the end of this report. The recommended conditions take into

consideration those proposed by the applicant, however may have been re-worded or replaced by conditions commonly used by Environment Canterbury.

Table 3: Summary of potential adverse effects from Proposals A and B			
Adverse Effects	Applicant's assessment	IO audit	Conclusion
Ecosystems	<p><u>Minimum flow:</u> A minimum flow of the five-year, seven-day low flow of 80 litres per second will be maintained on Sutton Stream at map reference NZMS 260 139:967-215 is proposed in accordance with Rule 2, Table 3, row xxii of WCWARP.</p> <p><u>Fish screens:</u> Given the buried nature of the intake structure for these proposals and the five millimetre mesh intake screen, Ms McCabe does not consider there will be adverse effects on fish life and the 'standard' fish screen condition is not required for these proposals.</p>	<p><u>Minimum flow:</u> Note submissions indicate subject streams do not hold great fishery values. I agree with the applicant that the proposed environmental flow regime is consistent with the WCWARP. Further discussion of the minimum flow and monitoring site is contained in Report 2B. In summary, the main reason for CRC not assessing the minimum flow at the downstream end of the catchment is because the summer flows typically disappear below ground downstream of the Homestead Bridge (below all abstractions). The proposed minimum flow will ensure that will still be 'underground flow' as naturally occurs downstream of the proposed abstraction points. I recommend a condition be required on the consents in the Sutton Stream catchment to ensure that no more water than is available above the minimum flow is abstracted as explained in Report 2A (Mr Graham and Waitangi Station).</p> <p><u>Fish screens:</u> Note application CRC031013 advises intake structure will be buried 2-3 metres below ground. I recommend a condition be included on consent restricting the intake structure to being buried at least two metres from the stream bed (horizontal or vertical distance) and ensuring a five millimetre mesh intake screen be used. I consider such a condition will adequately mitigate effects on fishery values of the streams.</p>	Effects minor
Other users	Ms McCabe notes there is only one existing abstraction from within this catchment. As discussed earlier this is Mr Graham's consent to take water from Miller Stream. Given Mr Graham's consent is located upstream of this proposal and is not managed on a minimum flow, Ms McCabe does not consider him to	I agree that Mr Graham's existing resource consent CRC001883 will not be affected by this proposal. There is no allocation limit set for this water body in table 3, row xxii. Row xxii(b) specifies flow sharing shall occur at the mean flow as assessed by the CRC. Report 2B advises the mean flow for Sutton	Effects minor

	<p>be adversely affected.</p> <p>The applicant and Mr Graham (CRC030944 and CRC072363) are proposing to manage both water permits being sought at this hearing on the same minimum flow.</p>	<p>Stream is 280 litres per second. As this consent and others with higher priority in the Sutton Stream catchment total 139.5 litres per second, there is no requirement for flow sharing to occur.</p>	
Efficiency of take for irrigation	<p>Refer to Attachment Four for details as to why the proposed irrigation annual volume of 330,000 (Proposal A) and 138,000 (Proposal B) cubic metres is considered to be efficient by the applicant. These volumes are based on information listed earlier in report provided by Mr Webb (Table 2).</p> <p>Mitigation proposed to ensure that the application rate will not exceed 50% of the PAW of the applicable soil type.</p>	<p>Agree proposed annual volumes within irrigation demand for areas to be irrigated calculated using methods described in Policy 16(c). I note the soils to be irrigated are considered to be light and as such I agree proposed mitigation reasonable and as such I recommend a condition be included which should ensure water is not left to go to waste and is applied in an efficient manner.</p>	Effects minor
Efficiency of distribution system and stockwater	<p>A rate of 15 litres per second is sought for each of Proposals A and B for stockwater and conveyance. Ms McCabe notes the applicant intends on utilising the existing race system to convey water for these proposals, however some upgrading will be required to improve efficiency and to accommodate the additional irrigation flow rate. Ms McCabe suggests that during this upgrade the applicant can seal any leaking areas of the race. In regards to proposal A, the headrace is approximately two and a half kilometres long. It is likely that water will be piped under pressure from the headrace to the irrigation areas. In regards to proposal B, the headrace is approximately two kilometres long and it is likely the irrigator will abstract directly from the race. Ms McCabe states it is not economically feasible for the applicant to pipe all of each of these proposals.</p>	<p>I recommend a condition on this consent should the Commissioners be of a mind to granting it, which will require the applicant to ensure the piping and distribution system is maintained in good working order. See discussion below in relation to stockwater and conveyance rates and volumes sought.</p>	Effects uncertain.
People, communities, amenity and landscape	Discussed below	Not satisfied effects adequately mitigated given conclusions of Mr Chris Glasson (Report 5). See below for more details.	Effects may be more than minor
Water quality	Discussed below	Not satisfied given conclusions in Report 4F on cumulative effects.	Effects may be more than minor.
Tangata Whenua values	Not assessed	Submissions concerned & have not been addressed by applicant.	Effects uncertain.

Table 4: Summary of potential adverse effects from Proposal C			
Adverse Effects	Applicant's assessment	IO audit	Conclusion
Other users	Given the proposed minimum lake level of 265.5 above mean sea level, Ms McCabe considers potential adverse effects on other users of Lake Aviemore to be minor.	In relation to the existing users of Lake Aviemore I note the WCWARP does not set an allocation limit or any form of flow sharing regime. Given this, and the sheer volume of water in the Lake, I do not consider the abstraction sought under CRC030944 will have adverse effects on other users.	Effects minor
Efficiency of take for irrigation	Refer to Attachment Four for details as to why the proposed irrigation annual volume of 300,000 cubic metres is considered to be efficient by the applicant. This is based on information listed earlier in report provided by Mr Webb (Table 2). Mitigation proposed to ensure that the application rate will not exceed 50% of the PAW of the applicable soil type.	Agree proposed annual volumes within irrigation demand for areas to be irrigated calculated using methods described in Policy 16(c)(ii). I note the soils to be irrigated are considered to be light and as such I agree proposed mitigation reasonable and as such I recommend a condition be included which should ensure water is not left to go to waste and is applied in an efficient manner.	Effects minor
Efficiency of distribution system and stockwater	The water will be piped from the intake to the irrigation area. 5 litres per second taken for stockwater (10,000 cubic metres per year)	I note no water to allow for losses has been applied for in relation to proposal C which suggests no loss of water. Condition recommended above includes ensuring pipes and distribution system well maintained to ensure water not left to go to waste. However volume sought for stockwater appears to be very high given piped nature of intake and stocking ratios.	Effects uncertain
Ecosystems	Ms McCabe states the applicant will adhere to the minimum lake level as identified in Table 3, row xv of the WCWARP at 265.5 metres above mean sea level. Given this level was developed and accepted through the WCWARP, Ms McCabe considers this level would provide suitable lake ecosystem protection.	I agree the proposed minimum lake level by which the proposed abstraction from Lake Aviemore will be managed complies with that specified in Rule 2, table 3, row xv. No in-depth details of fish screen provided to date. I not a number of submissions raise concerns in relation to fish screening. As such I cannot determine scale of effects until I have heard the applicant and submitters evidence.	Effects uncertain
People, communities, amenity and landscape	Discussed below	Not satisfied effects adequately mitigated given conclusions of Mr Chris Glasson. See below for more details.	Effects may be more than minor
Water quality	Discussed below	Not satisfied given conclusions in s42a report on cumulative effects.	Effects may be more than minor.
Tangata Whenua values	Not assessed	Submissions concerned & have not been addressed by applicant.	Effects uncertain.

Adverse effect of an inefficient take

89. Ms McCabe has advised she considers the applicant is entitled to take and use water for their animal's drinking water under section 14(3)(b) or the RMA. However this section does not include the diverting of stockwater or discharge of excess stockwater and as such the divert and discharge rates for the stockwater have been applied for as part of resource consent applications CRC030944 and CRC031014.
90. I note however the applicant has also applied for 5 litres per second to be taken from Lake Aviemore for stockwater as part of this consent application. Given no consent has been applied to divert water from Lake Aviemore; I am unsure how Ms McCabe's advice above applies to Proposal C.
91. Ms McCabe has provided estimated annual volumes for stockwater. These are based on the water required to enable conveyance through the race system and includes race or system losses:
- (a) A = 473,040 cubic metres per year (15 litres per second continuously)
 - (b) B = 473,040 cubic metres per year (15 litres per second continuously)
 - (c) C = 10,000 cubic metres per year (up to 5 litres per second continuously)
92. Ms McCabe has advised a stocking ratio of 15 stock units per hectare (SU/ha) is proposed for the irrigated areas should these applications be granted.
93. I note that over the potential 128 hectares to be irrigated, a stocking ratio of 15 SU/ha equates to approximately 320 cattle being grazed. Using Table WQN26 for guidance, this would equate to a peak demand for stockwater of approximately 6,300 cubic metres per year.
94. Given the above, I do not consider the rates and volumes of water sought for stockwater are reasonable. However the I do note that the volumes above reflect the need to convey water along the races rather than that which would reasonably be taken for stockwater.
95. The raises the question of the efficiency of the distribution systems. In regards to Proposals A and B, open races are being used to convey water. Further discussion of proposed works to improve efficiency of these races is provided in Table 3.
96. I note the water taken under Proposal C is to be piped from Lake Aviemore and as such losses from conveyance are unlikely. Given this I consider the volume of water sought should be reduces to reflect the stockwater requirements for this area (rather than 10,000 cubic metres for stockwater). This may be something the applicant wishes to address at the hearing.
97. Given the inefficiencies of conveying water through open race systems, and the water rate requirements as operational overhead that the conveyance system requires, I am concerned that the current water race system cannot fully comply with what would be considered a technically and allocatively use of water.
98. While the rates and volumes may seem unreasonable when the end use is considered, when the existing infrastructure is considered, the rates and volumes sought do not seem unreasonable or incomparable with similar stockwater operations.

Adverse effect on ecosystems

99. In regards to the proposed minimum flow, as discussed in Table 4, I am satisfied this will mitigate effects on ecosystems.
100. However at the time I prepared this report I was unable to determine the scale of effects from Proposal C as little details in relation to fish exclusion method (fish screen) have been provided.
101. Particularly I note Fish and Game have raised concerns in relation to fish screening. I discussed Fish and Game's concerns with Ms McCabe. She advised me that due to the uncertainty of the design of the proposed intake structure, she cannot provide details of fish screen designs. She did agree that a fish screen would be required, however that she would discuss designs with Fish and Game once she had more details about the intake structure. She was also concerned that the screen may not be able to 'comply' with the standard Environment Canterbury fish screen conditions due to the velocity requirements not being easily met in a Lake environment.
102. I note that application CRC100143 for works to install an intake structure for Proposal C has been lodged with the CRC (not to be heard at this hearing). This application advises a five millimetre mesh will be placed over the intake pipe. To date I have not received any further information from the applicant.
103. I note that while I currently cannot consider potential effects on ecosystems to be minor given the lack of mitigation; this is an effect that may be easily mitigated with suitable fish exclusion methods.

Adverse effect on people, communities, amenity and landscape values

Communities and amenity

104. The original AEE states Sutton and Gibson Streams do not provide any recreational activities to the local community given they are small and ephemeral in nature.
105. Ms McCabe notes there are camping grounds alongside Lake Aviemore, adjacent to Waitangi Station. However she notes no submissions had been made in relation to this application from people who use these camping grounds.
106. I note Lake Aviemore is actively used by recreationalists. In particular during my site visit I saw many people camping along the lake edge adjacent to Waitangi Station
107. Given minimum flows and a minimum lake level has been proposed for this application, I am unaware of any potential adverse effects that may result from the proposal and as such I agree with Ms McCabe and consider potential adverse effects on community and amenity values to be minor.

Positive effects

108. I note that the use of water for irrigation may result in improved productivity of the land and positive economic benefits for the wider community.

Landscape

109. A number of submitters have raised concerns with potential changes in landscape resulting from increased irrigation in the MacKenzie Basin.

110. Ms McCabe has assessed the impact of all three irrigation sources being utilised. She notes that much of the area is already being progressively developed by:
- (a) Cultivation and regressing;
 - (b) Topdressing and generally increasing soil fertility levels;
 - (c) Some new fencing;
 - (d) Progressive development of the farm in general;
 - (e) Irrigation already on the neighbours property nearby;
 - (f) Highly modified area with the nearby Lake Aviemore dam an associated infrastructure.
111. Ms McCabe recognises the areas to be irrigated can be viewed from the State Highway across the Lake, however considers it is consistent with the pattern of development of the flatter irrigable lands in the locality. She notes the backdrop of the ridgeline is unaffected by any irrigation development.
112. Ms McCabe notes the extent that the use of water will result in periodic greening of irrigated areas and will be limited to the areas outlined in the application. Additionally she notes irrigation of these areas may result in certain on-farm areas not being grazed as extensively as at present (she considers this means there may be an environmental offset associated with this proposal).
113. I agree with Ms McCabe that the proposed irrigation areas are all visible from across Lake Aviemore when driving along the State Highway.
114. I note that Te Akatarawa Station has an existing water permit which irrigates an area of land on the hills 'behind' Waitangi Station. Additionally some of the proposed areas to be irrigated by CRC030944 are currently cropped to grow winter feed. As such there is existing greening from irrigation in the vicinity of this proposal.
115. Ms McCabe does not consider cumulative landscape effects are necessary to determine each individual application. She states it is evidence of effects that are too remote or uncertain to be necessary for the subject application, as they are effects that depend on the extent to which other applications for water uses may or may not be granted and the extent of other activities such as land uses beyond the scope of the Regional Council's statutory functions.
116. I note the area to be irrigated by Proposal C is not currently cropped and is very visible both to people using the lake as there are very few trees along the lake edge, and additionally is visible from the State Highway. Additionally the irrigated area is located very close to the lake edge.
117. In Report 5, Mr Chris Glasson concludes that the proposed irrigation areas for proposals A and B have low visibility and sensitivity due to modification in the area and the location at the junction of a landform and lake edge. He notes however that the absence of a buffer between the proposed irrigation area and lakeshore road will create moderate adverse landscape effects that requires mitigation.
118. In regards to Proposal C, Mr Glasson also comments geometrically shaped areas will create moderate adverse landscape effects. I note that the irrigation area for Proposal

C has been amended from a rectangle to following the alluvial fan lake edge, hence reducing these geometric shapes.

119. He also recommends there should be a buffer between the irrigation area and the lake edge which may include willows, tussock grassland and shrubland.
120. Given Mr Glasson's comments and in the absence of further mitigation, I cannot be certain that potential effects on landscape both cumulatively and individually will be minor.

Adverse effect of use on water quality

121. The applicant has not provided any individual assessment of potential adverse effects on water quality which may arise from the proposed activity. They have contributed towards the MWRL water quality study and are prepared to adopt mitigation measures which may be suggested through this study. At the time this report was prepared no mitigation to address water quality concerns had been proposed by the applicant.
122. From Environment Canterbury's GIS database I note the applicants existing water races flow through the areas to be irrigated under Proposals A and B. I am not aware of any other surface water flows through the irrigated area.
123. Additionally I note Mr Sutton advised me there would be a buffer zone adjacent to the lake edge from the irrigated area under Proposal C. I have not been provided any details about this to date.
124. There are a number of submissions which identify water quality as a result of land use intensification as a concern.
125. 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 level of 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.
126. Given the above, and absence of proposed on-farm mitigation in relation to water quality, I do not consider localised and cumulative potential adverse effects on water quality to be minor.

Adverse effect on Tangata Whenua Values

127. Ms McCabe has not provided an assessment of potential adverse effects on Tangata Whenua Values.
128. I note Te Runanga o Ngai Tahu in particular have submitted in opposition on all applications which were notified in 2007. They have concerns about the impacts of the applications on the cultural beliefs, values and practises of Ngai Tahu. Additionally they do not consider the applications to be consistent with the objectives and policies of the WCWARP.
129. Additionally, Lake Aviemore is a Statutory Acknowledgement area.

130. Given no assessment has been provided and submissions have been made regarding cultural values, I cannot determine the scale of effects of the proposed activity on cultural values until I have heard from submitters.

Conclusion

131. 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) Effects on people, communities, amenity and landscape values
- (b) The localised and cumulative impacts on surface water quality;
- (c) The effects on cultural values in the area.

Statutory Assessment (s104(1)(b))

Regional Policy Statement (RPS)

132. 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.
133. Of significance to these applications are Chapter 5 and 6 (Recognising and providing for Tangata Whenua), Chapter 8 (Landscape) and Chapter 9, which relates to the management of the Region's water resources. 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)

134. 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 Five. A discussion of the objectives and policies that I consider are particularly relevant when deciding this application is provided in the following paragraphs.

Objectives

135. 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.
136. The proposed minimum flows should ensure that the life supporting capacity of the environment (b) is not compromised, however I do not consider suitable fish screening is proposed in relation to Proposal C. I cannot confirm that the proposal will not compromise cultural values (a). The individual and cumulative impacts of the proposal on the natural character and landscape values of the catchment (c) may be addressed by requiring appropriate buffer distances between the irrigation area and the lakeside road.

137. 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 from Sutton Stream and its tributaries or Lake Aviemore and the applicant has demonstrated the volume of water sought is reasonable to meet the demands of soils within the irrigation area. Therefore it may be considered to be consistent with Objectives 2, 3, and 5 of the WCWARP.

Policies

138. Policy 7 – the applicant seeks to divert and take water from Gibson and Sutton Streams. These streams each have a mean annual low flow less than 100 litres per second. The original AEE gives consideration to an alternative source of water– Lake Aviemore. The AEE explains however that the costs associated with pumping and piping water from the Lake would be so great that this would be outside the economic scope of the project.
139. Policies 2 – 8, and 41 deal with environmental flow and level regimes for the tributaries of Lake Aviemore and link directly to Rule 2 and the environmental flow and level regimes outlined in Table 3. Policy 3 is incorporated in policy 41(ii) and is therefore discussed under that policy. Policy 41 is a key policy in relation to the proposed application, as it outlines the values of the tributaries of Lake Aviemore that the plan seeks to maintain when setting an environmental flow regime. I note the proposed minimum flow is consistent with that specified in row (xxii), Table 3 of the WCWARP. Given this I consider the minimum flow will protect and give effect to the values discussed in the above policies.
140. Policy 17 requires resource consent applications for stock drinking water to meet a reasonable use test in relation to the rate and volume of abstraction. As discussed in the effects section of this report, I do not consider the rates and volumes sought for stockwater to meet this reasonable use test. However these rates and volumes are based on those needed to convey the stockwater to the bottom of the races.
141. Policy 19 encourages the piping or sealing of water distribution systems to minimise water loses and maintain water quality. As mentioned in the assessment of affects above, Proposals A and B will utilise the applicant’s existing stockwater races. It has been proposed that these will be upgraded and sealed in areas. From this, I consider the applicant has proposed to minimise water loss from their race system. I do note however Ms McCabe has advised the diverted rate of 15 litres per second is to ensure stock water is conveyed to the bottom of the water races. Proposal C is proposed to be entirely piped.
142. Policy 21 requires the installation and used of water-measuring and recording devices. Ms McCabe has advised the applicant will meter and monitor all diversions and abstractions. I recommend the most recent metering and monitoring conditions be included on this consent should the Commissioners be of a mind to granting this application.
143. Policy 24 allows consent holders to take water for stock drinking-water uses (among others) when rivers or lakes are at or below minimum flows or levels provided the amount taken does not exceed actual stock drinking water requirements (among others). I recommend a condition be included on this consent should the Commissioners decide on granting it requiring the applicant to shut down the intake to only diverting water for stock drinking needs when minimum flow restrictions are on.

Conclusion

144. With regard to s104(1)(b), the relevant provisions of the RPS and WCWARP have been considered above. I do not consider the water permit application is consistent with policy 13 due to there being likely effects on water quality and there is a lack of mitigation proposed by the applicant. I am not yet certain that the rates and volumes sought. In addition, I cannot make a conclusion about whether the application is consistent with Objective 1 given the number of submissions to be heard.

Other Matters (s104(1)(c))

145. 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).
146. In regards to the uncertainty of rates and volumes sought for stockwater and conveyance, the Commissioners may wish to consider the existing infrastructure in terms of stockwater races which the applicant intends to utilise as part of their proposal.

PART II PURPOSE AND PRINCIPALS

Purpose of the RMA (s5)

147. 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.”

148. 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.
149. 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 as required in Section 5(2)(c).

Matters of National Importance (s6)

150. Sub-sections (a), (b) and (e) of Section 6 of the RMA are particularly relevant to this application. The proposal may result in effects on water quality and ecosystems that have not been adequately mitigated. The applicant has not yet proposed measures to address this effect. The applicant has not assessed the impacts on landscape and cultural values, and runanga have submitted in opposition on this application.

Other Matters (Section 7)

151. 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.

¹ [2004] NZMRA 251

152. Sub-section (f) is specifically relevant to this application. 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)

153. 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 Waihao Runanga. Runanga were informed separately when Environment Canterbury received the application and later when the application was notified. Submissions have been received from Ngai Tahu on this application.

RECOMMENDATION

Grant or Refuse

154. Section 104B applies to any application which is a discretionary activity and states that the consent authority may grant or refuse the application and may impose conditions under s108.
155. Having considered all relevant matters outlined in section 104(1), I am unable to make a recommendation under s104B as I am not able to determine the actual and potential effects from the proposed activity on the following matters are acceptable:
- (a) Ecosystems given the lack of information in regards to proposed fish screen for Proposal C's intake structure.
 - (b) landscape values within the Waitaki basin;
 - (c) the localised and cumulative impacts on surface water quality;
 - (d) the effects on cultural values in the area.
156. The applicant has requested a duration until 31 April 2025 which is consistent with their MIC share agreement. Given there are outstanding potential adverse effects, I am unable to provide comment in relation to duration as cannot determine the potential degree of effects.
157. While all three proposals were receipted under CRC030944, I recommend each proposal is split into individual resource consents should the Commissioners decide to grant this application. Each of the three water takes are from separate water sources, although I recognise Proposals A and B are to be managed on the same minimum flow site.
158. Additionally, with regard to s104(1)(c), should the Commissioners be of the mind to grant this consent, I refer you back to my "background" section where it issue of stockwater is discussed. It is my recommendation that the allocation of 1,724,080 is included against this application as is currently the case, rather than only the 768,000 cubic metres sought for irrigation.

RECOMMENDED CONDITIONS

159. If the Commissioners decide to grant this application, I have included sets of draft conditions specifically for this application below in Tables 5-7. These have been

proposed by the applicant or recommended by myself and are explained in relevant sections of this report.

160. I emphasize that these conditions should provide sufficient mitigation for those potential adverse effects which I consider will be minor. These conditions do not however adequately mitigate adverse effects on:

- (a) Landscape values within the Waitaki basin;
- (b) The localised and cumulative impacts on surface water quality;
- (c) The effects on cultural values in the area.

161. A number of the conditions below have 'codes' located next to them. Please refer to Appendix 6 of the introductory report (Report 1) to view the conditions in full. Any proposal specific details or conditions are included below.

Table 5: Recommended draft conditions for water permit CRC030944 Proposal A		
No.	Condition Code	Details
Divert		
1	WP01	<i>During irrigation season</i> <i>Name of waterbody:</i> Sutton Stream <i>Map reference:</i> NZMS 260 I39:9674-2157 <i>Instantaneous rate:</i> 55 litres per second
2	WP01	<i>Irrigation off-season</i> <i>Name of waterbody:</i> Sutton Stream <i>Map reference:</i> NZMS 260 I39:9674-2157 <i>Instantaneous rate:</i> 15 litres per second
Take		
3	WP01	<i>Name of waterbody:</i> Sutton Stream <i>Surface water abstraction point (SWAP):</i> I39/0025 <i>Map reference:</i> NZMS 260 I39:9674-2157 <i>Instantaneous rate:</i> 40 litres per second <i>Volume:</i> 34,560 cubic metres per eight consecutive days and 330,000 cubic metres between 1 st July and the following 30 th June
Use		
4	WP04	<i>Water taken under condition 3 shall only be used for...</i> <i>Type of irrigation:</i> Spray irrigation <i>Number of hectares:</i> 55 hectares <i>Use:</i> crops and pasture for grazing stock excluding milking dairy cows <i>Plan No:</i> "Waitangi Station Proposals A ad B" (Attachment 1)

4	WP05	
5	WP06	
Mitigation		
6	WP07	<i>Name of waterbody:</i> Sutton Stream <i>Map reference:</i> NZMS 260 I39:961-210 <i>Minimum flow:</i> 80 litres per second <i>Flow graph:</i> See Report 2A
7	Non-standard	Whenever the flow in Sutton Stream at map reference NZMS 260 I39:961-210, falls below 80 litres per second, the consent holder shall reduce the rate of diversion to that specified in condition (2) of this permit.
8	Non-standard	SWAP I39/0025 shall be buried at least two metres below ground level.
9		The consent holder shall ensure water races used to convey water diverted in terms of this permit are well maintained to minimise losses.
Measuring & Metering		
10	ME02	
11	ME03	
12	ME04	
13	ME05	
14	ME06	<i>Waterway:</i> Sutton Stream and its tributaries
15	WP08	<i>Waterway:</i> Sutton Stream <i>Map reference:</i> NZMS 260 I39:961-210 To be used with ME03-05
Administrative Conditions		
16	AD01	
17	AD02	<i>Number of working days:</i> 5 <i>Month 1:</i> March <i>Month 2:</i> July <i>Waterbody:</i> Sutton Stream <i>Cross reference to Condition:</i> 6
18	AD04	Lapse date

Table 6: Recommended draft conditions for water permit CRC030944 Proposal B

No.	Condition Code	Details
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Divert		
1	WP01	<p>During irrigation season</p> <p><i>Name of waterbody:</i> Gibson Stream</p> <p><i>Map reference:</i> NZMS 260 I39:9608-2103</p> <p><i>Instantaneous rate:</i> 55 litres per second</p>
2	WP01	<p>Irrigation off-season</p> <p><i>Name of waterbody:</i> Gibson Stream</p> <p><i>Map reference:</i> NZMS 260 I39:9608-2103</p> <p><i>Instantaneous rate:</i> 15 litres per second</p>
Take		
3	WP01	<p><i>Name of waterbody:</i> Gibson Stream</p> <p><i>Surface water abstraction point (SWAP):</i> I39/0026</p> <p><i>Map reference:</i> NZMS 260 I39:9608-2103</p> <p><i>Instantaneous rate:</i> 40 litres per second</p> <p><i>Volume:</i> 48,816 cubic metres per 19 consecutive days and 138,000 cubic metres between 1st July and the following 30th June</p>
Use		
4	WP04	<p>Water taken under condition 3 shall only be used for...</p> <p><i>Type of irrigation:</i> Spray irrigation</p> <p><i>Number of hectares:</i> 23 hectares</p> <p><i>Use:</i> crops and pasture for grazing stock excluding milking dairy cows</p> <p><i>Plan No:</i> "Waitangi Station Proposals A ad B" (Attachment 1)</p>
4	WP05	
5	WP06	
Mitigation		
6	WP07	<p><i>Name of waterbody:</i> Sutton Stream</p> <p><i>Map reference:</i> NZMS 260 I39:961-210</p> <p><i>Minimum flow:</i> 80 litres per second</p> <p><i>Flow graph:</i> See Report 2A</p>
7	Non-standard	Whenever the flow in Sutton Stream at map reference NZMS 260 I39:961-210, falls below 80 litres per second, the consent holder shall reduce the rate of diversion to that specified in condition (2) of this permit.
8	Non-standard	SWAP I39/0026 shall be buried at least two metres below ground level.
9		The consent holder shall ensure water races used to convey water diverted in terms of this permit are well maintained to minimise losses.
Measuring & Metering		

10	ME02	
11	ME03	
12	ME04	
13	ME05	
14	ME06	<i>Waterway:</i> Sutton Stream and its tributaries
15	WP08	<i>Waterway:</i> Sutton Stream <i>Map reference:</i> NZMS 260 I39:961-210
Administrative Conditions		
16	AD01	
17	AD02	<i>Number of working days:</i> 5 <i>Month 1:</i> March <i>Month 2:</i> July <i>Waterbody:</i> Sutton Stream <i>Cross reference to Condition:</i> 6
18	AD04	Lapse date

Table 7: Recommended draft conditions for water permit CRC030944 Proposal C		
No.	Condition Code	Details
Take		
1	WP01	<i>During irrigation season</i> <i>Name of waterbody:</i> Lake Aviemore <i>Surface water abstraction point (SWAP):</i> I40/0686 <i>Map reference:</i> NZMS 260 I40:0037-1369 <i>Instantaneous rate:</i> 35 litres per second <i>Volume:</i> 21,168 cubic metres per seven consecutive days and 330,000 cubic metres between 1 st July and the following 30 th June
2	WP01	<i>Irrigation off-season</i> <i>Name of waterbody:</i> Lake Aviemore <i>Surface water abstraction point (SWAP):</i> I40/0686 <i>Map reference:</i> NZMS 260 I40:0037-1369 <i>Instantaneous rate:</i> 5 litres per second
Use		

3	WP04	<p>Water taken under condition 3 shall only be used for...</p> <p><i>Type of irrigation:</i> Spray irrigation</p> <p><i>Number of hectares:</i> 50 hectares</p> <p><i>Use:</i> crops and pasture for grazing stock excluding milking dairy cows</p> <p><i>Plan No:</i> "CRC030944 C" (Attachment 2)</p>
4	WP05	
5	WP06	
Mitigation		
6	Non-standard	The taking of water in terms of this permit shall cease when the level in Lake Aviemore reaches 265.5 metres above mean sea level as assessed by Meridian Energy Limited and published on www.meridianenergy.co.nz/AboutUs/LakeLevels
7	Non-standard	Whenever the level in Lake Aviemore falls below 265.5 metres above mean sea level, the consent holder shall reduce the rate of take to that specified in condition (2) of this permit.
Measuring & Metering		
8	ME01	
9	ME03	
10	ME04	
11	ME05	
Administrative Conditions		
12	AD01	
13	AD03	<p><i>Number of working days:</i> 5</p> <p><i>Month 1:</i> March</p> <p><i>Month 2:</i> July</p>
14	AD04	Lapse date

Signed: _____



Date: 26 August 2009

Susannah Vesey
Consents Investigating Officer

REFERENCES

Canterbury Regional council 2004. Proposed Natural Resources Regional Plan– Chapter 4: Water Quality.

Canterbury Regional Council 1998. Regional Policy Statement. Report No R98/4. ISBN 1-86937-337-5.

Canterbury Regional Council 1991. Transitional Regional Plan. October 1991.

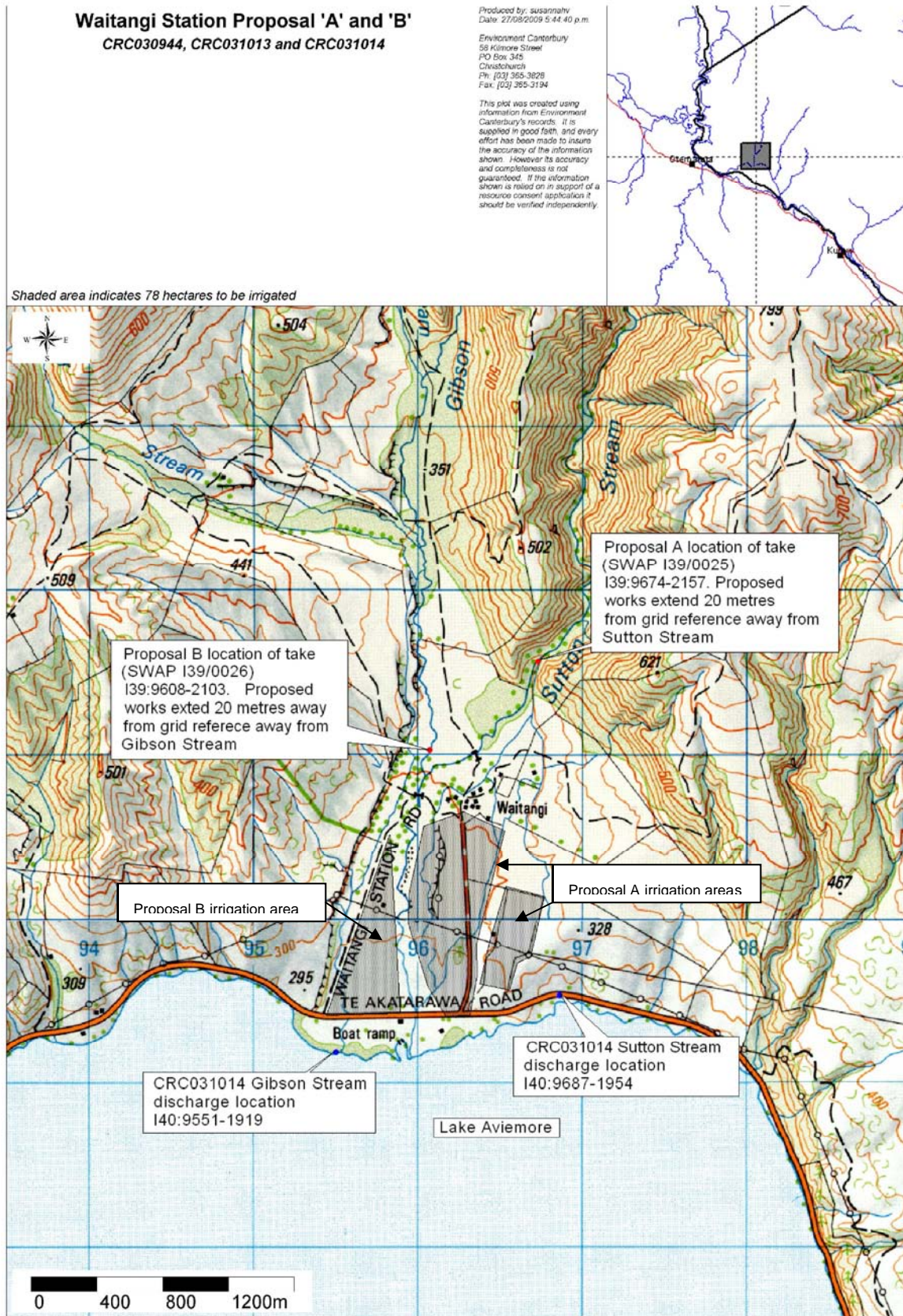
Keller, J & Pfluger, Y. 2005. Working papers about the Natural and Physical Resources of the Waitaki catchment by locality. Report provided to the Waitaki Catchment Water Allocation Board.

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

Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation Regional Plan. ISBN: 0-9582620-7-1.

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

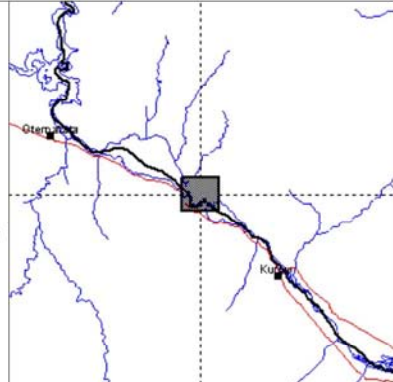
ATTACHMENT ONE – LOCATION MAPS



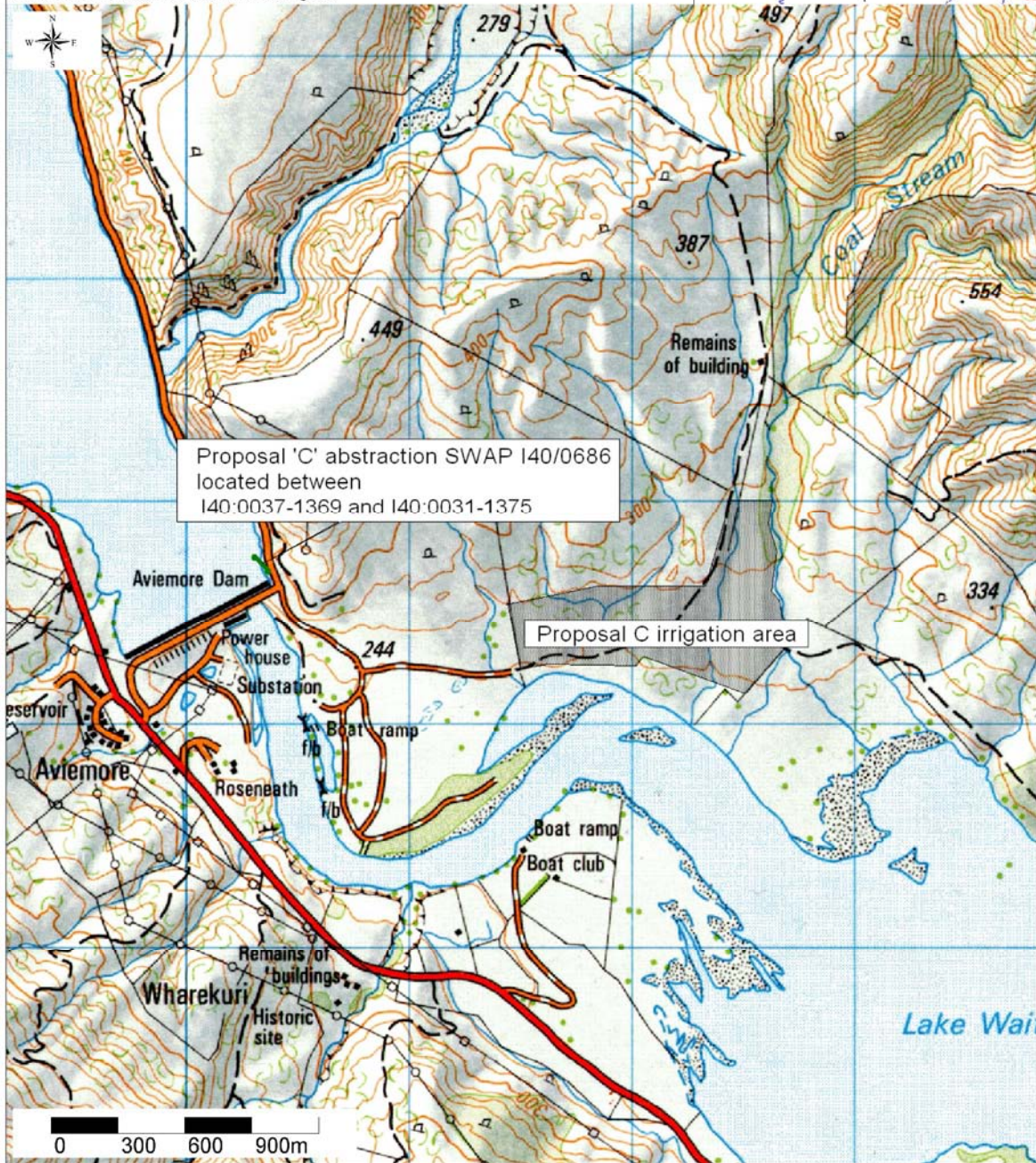
Plan CRC030944 C
Waitangi Station, Proposal C

Produced by: susannah
 Date: 27/08/2009 5:44:40 p.m.
 Environment Canterbury
 58 Kilmore Street
 PO Box 345
 Christchurch
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This plot was created using information from Environment Canterbury's records. It is supplied in good faith, and every effort has been made to insure the accuracy of the information shown. However its accuracy and completeness is not guaranteed. If the information shown is relied on in support of a resource consent application it should be verified independently.



Shaded area indicates 50 hectares to be irrigated



ATTACHMENT TWO – PHOTOS OF PROPOSAL

(all photos taken by Susannah Vesey on 28/01/09)

PROPOSAL A



Photos 1 and 2: Existing intake site on Sutton Stream



Photo 3: Water race leading from Sutton Stream intake.



Photos 4 and 5: Upper and lower ‘terraces’ to be irrigated using Sutton Stream water.

PROPOSAL B



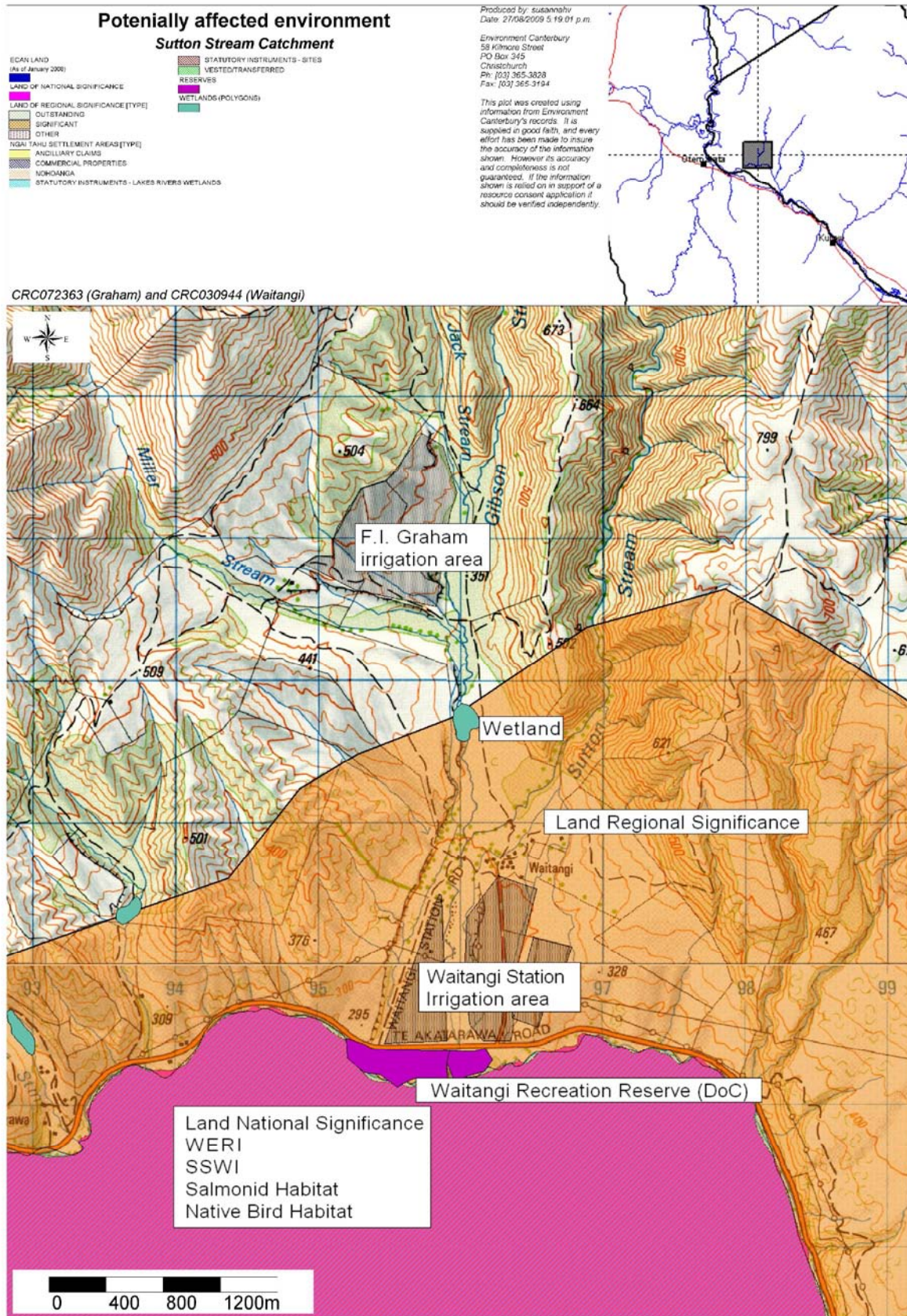
Photos 6 and 7: Proposed intake site on Gibson Stream and area to be irrigated using Gibson water.

PROPOSAL C



Photos 8 and 9: Proposed intake site on banks on Lake Aviemore and area to be irrigated using Aviemore water. Area runs along base of hills on left and across to fence line on right. Willows and tussocks along lake create a 'buffer zone'. Photo taken from main highway

ATTACHMENT THREE – AFFECTED ENVIRONMENT



ATTACHMENT FOUR – ANNUAL VOLUME CALCULATIONS

The table below summarises the allocative efficiency of each of these proposals. This specifically relates to the proposed irrigation annual volumes for each of the proposals. Where:

- (a) Area = number of hectares to be irrigated under the proposal
- (b) Proposed AV = annual volume proposed by applicant
- (c) Soil type = light/med/heavy soil classification as per the methodology described in Report U05/15
- (d) EIR = effective irrigation season rainfall for the subject area

Technical efficiency of the proposal						
Proposal	Proposed AV (m ³ /yr)	Area (ha)	Report U05/15 methodology			Efficient
			Soil type	EIR (mm)	Volume(m ³ /yr)	
A	330,000	40	Light	195	331,250 (248,000 + 83,250)	Yes
		15	Med	195		
B	138,000	23	Light	195	142,000	Yes
C	300,000	35.7	Light	200	298,205 (219,555 + 78,650)	Yes
		14.3	medium	200		

ATTACHMENT FIVE – 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.	Number of submissions concerned about values in Objective so cannot determine if consistent with these values.
Objective 2	Provide water for different activities.	Activity within allocation limit for Agricultural and Horticultural activities upstream of Waitaki Dam but not upstream of the outlets of the glacial lakes.
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 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.	Proposal A and B: Appropriate minimum flow proposed. Flow sharing not required, however recommend condition to ensure only water available above minimum flow taken. Proposal C: Appropriate minimum lake level proposed and no flow sharing regime required.
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 environmental flow and level regimes in water bodies of the Waitaki Catchment	A minimum flow has been proposed in accordance with Rule 2 of WCWARP.
Policy 4	Matters to be considered when setting environmental flow and level regimes.	A minimum flow has been proposed in accordance with Rule 2 of WCWARP.
Policy 7	Consideration of alternative locations for activities when mean annual low flow is less than 100 litres per second	Proposals A and B are from such streams. Proposal C from Lake Aviemore. See “Statutory assessment” section of report for more discussion.
Policy 9	Discouraging further mixing of water between catchments	Gibson Stream naturally flows into Sutton Stream which in turn naturally flows into Lake Aviemore. No discharge of water into another catchment in relation to Proposal C.
Policy 13	Addresses water quality objectives in the NRRP	Addressed in Report 4a
Policy 15	Ensuring take and use of water is reasonable for its intended use	See comments in relation to Policies 16 and 17.
Policy 16	Requiring irrigation applications to meet the specified reasonable use test	Applicant has demonstrated reasonable use test.
Policy 17	Requiring applications for town and community water supplies of stock drinking-water supplies to meet the specified reasonable use test	Applicant has not demonstrated reasonable use
Policy 19	Encouraging piping or sealing of water distribution systems to minimise water losses and maintain water quality.	Applicant has advised existing races will be upgraded in relation to Proposals A and B. Proposal C is piped.
Policy 21	Requiring the installation and use of water-measuring and recording devices.	Ms McCabe has advised the diversions and takes will be metered.
Policy 24	Allowing domestic supply and actual stockwater to be taken when rivers or lakes are at or below minimum flows or levels	Only actual stock water needs will be diverted during times of low levels.
Policy 25	Allowing for sharing of available water within a water-users group	Ms McCabe has advised that if necessary the applicant will reach an agreement with

		the other user in the Sutton Stream catchment.
Policy 26	Setting priority bands for upper or mid-catchment tributaries and the Ahuriri catchment.	Not yet been assessed
Policy 27	Giving priority during low flows or levels to integrated schemes where water used for more than one purpose.	No schemes in catchment
Policy 41	Setting an environmental flow and level regime for these tributaries	An appropriate minimum flow has been proposed to ensure consistency with this policy
Policy 42	Setting minimum lake levels for Lakes Ruataniwha, Benmore, Aviemore and Waitaki	An appropriate minimum lake level has been proposed to ensure consistency with this policy