

APPLICANT: WAITANGI STATION LTD

REPORT OF HAIDEE MCCABE

Consent ID	Description	Table 3 Location	Table 5 Location
CRC030944	<p>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 at a maximum volume of 330,000 cubic metres per year for irrigation, from Sutton Stream, at or about map reference NZMS 260 139:9674-2157, 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</p> <p>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 at a maximum volume of 138,000 cubic metres per year for irrigation, from Gibson Stream, at or about map reference NZMS 260 139:9608-2103. 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</p> <p>To divert, take and use up to 21,168 cubic</p>	<p>“All other rivers and streams” and Lake Aviemore</p>	<p>Upstream of Waitaki Dam but not upstream of the outlets of the glacial lakes.</p>

	<p>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 for irrigation, from Lake Aviemore, between approximate map reference NZMS 260 I40:0037-1369 and I40:0031-1375 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 5 litres per second will be used for stockwater. A 35 year duration is sought.</p>		
Activity Status			
<p><u>Rule 2, Table 3 WCWARP:</u></p> <p>Sutton and Gibson Stream: No allocation limit is specified for “all other stream”, and the minimum flow has been determined as the 1 in 5 year, 7 day low flow required in the WCWARP which is proposed to be complied with.</p> <p>Lake Aviemore: the WCWARP determines a minimum lake level for Lake Aviemore of 265.5 mtrs amsl which is proposed to be complied with.</p> <p><u>Rule 6, Table 5 WCWARP:</u> The proposed annual volume is within the allocation limit for “Upstream of Waitangi Dam, but not upstream of the outlets of the glacial lakes”</p> <p>Overall status: Any activity that complies with Rules 2 and 6 is a discretionary activity as per Rule 15</p>			
Consent ID	Description		
CRC031013	<p>To disturb the bed of Sutton Stream to allow for the reconstruction of an intake structure, at or about map reference NZMS 260 I39:9674-2157, approximately 1,100 metres north-east of the Waitangi Station homestead, Lake Aviemore; to disturb the bed of Gibson Stream to allow for the reconstruction of an intake structure, at or about map reference NZMS 260 I39:9608-2103, approximately 800 metres north east of Waitangi Station homestead, Lake Aviemore. A 35 year duration is sought.</p>		
Activity Status			

<p><u>TRP:</u> There is no operative regional plan so S77C of the RMA applies, and the activity is discretionary. (Lodge prior to NRRP)</p> <p><u>Overall status:</u> Discretionary</p>	
Consent ID	Description
CRC031014	To discharge up to 34,560 cubic metres of water per eight consecutive day period at a maximum rate of 55 litres per second, into Lake Aviemore, adjacent to Te Akatarawa Road, at or about map reference NZMS 260 I40:9687-1954. The water to be discharge is excess irrigation water and stockwater taken from Sutton Stream; and to discharge up to 48,816 cubic metres of water per 19 consecutive day period at a maximum rate of 55 litres per second, into Lake Aviemore, adjacent to Te Akatarawa Road, at or about map reference NZMS 260 I40:9551-1919. The water to be discharged is excess irrigation and stock water from Gibson Stream. A 35 year duration is sought.
<p>Activity Status</p>	
<p><u>TRP:</u> There is no operative regional plan so S77C of the RMA applies, and the activity is discretionary. (Lodged prior to NRRP)</p> <p><u>Overall status:</u> Discretionary</p>	

1 PROPOSAL

1. Waitangi Station Ltd (herein referred to as 'the applicant') farms Waitangi Station, which is located on the northern shows of Lake Aviemore, between Otamatata and Kurow.
2. The applicant applied for CRC030944, CRC031013 and CRC031014 on the 13 December 2002 which is to take water from three locations, associated earthwork consents and discharge.
3. The area proposed to be irrigated is shown on a plan contained in Appendix A
4. Water is proposed to be abstracted from three locations under consent CRC030944 as follows:
 - a) Location a) Sutton Stream. Water is proposed to be abstracted at a maximum rate of 55 l/s from Sutton Stream of which 40l/s is required for irrigation and 15l/s for stock water. The water will be diverted from Sutton Stream into an existing water race down to the irrigated area, whereby it will then be piped. The water is proposed to be applied to the land via spray irrigation, over an area of 55 hectares.
 - b) Location b) Gibson Stream. Water is proposed to be abstracted at a maximum rate of 55 l/s from Gibson Stream; 40l/s for irrigation and 15l/s for stock water. The water will be diverted from Gibson Stream into an existing water race down to the irrigated area, whereby it will then be piped. The water is proposed to be applied to the land via spray irrigation over an area of 23 ha.
 - c) Location c) Lake Aviemore. Water is proposed to be abstracted at a maximum rate of 35l/s from Lake Aviemore; 30l/s for irrigation and 5l/s for stock water. The water will be pumped from Lake Aviemore and then piped to the irrigated area. The water is proposed to be applied to the land via spray irrigation over an area of 50 ha.
5. CRC031013 is to disturb the bed of Sutton and Gibson Stream to allow for the construction of an upgraded intake structure, which will be a buried infiltration type gallery.
6. CRC031014 is to discharge excess irrigation and stock water into Lake Aviemore at two locations.

7. A new land use consent application was lodged with ECan on the 24th July 2009 for the Lake Aviemore intake. It is anticipated that this consent can be pursued outside this hearing on a non-notified basis should these applications be granted.

1.1 Timeline and Summary of Significant Amendments made to the Applications

Timeline	CRC030944	CRC031013	CRC031014
Date of Lodging	13 December 2002	13 December 2002	13 December 2002
Notifiable Date	23 April 2003	23 April 2003	23 April 2003
First Notified	28 May 2003	28 May 2003	28 May 2003
Public Notification	04 August 2007	04 August 2007	04 August 2007

8. Further information was provided to ECan as requested in April 2003, relating to rate of water take, works to be undertaken, discharge location, efficiency of take and written approval from stakeholders.
9. Further information was provided by the applicant in October 2006 regarding consent CRC030944, specifically annual volume of each take, efficiency of water use, water quality, flood carrying capacity and flooding patterns, bank erosion, stability and proximity of man made structures.
10. On the 4th February 2009, alterations and clarifications were provided to ECan as follows:
- a) CRC030944 – duration sought amended to 2025
 - b) CRC030944 – Reduction of the irrigation seasonal volume for the Gibson Stream to 138,000m³
 - c) CRC031014 – Discharge location amended to Lake Aviemore as that was already occurring with the stock water race from Gibson Stream, new map reference I40:9551-1919 (approx 400mtrs west of original location).
 - d) It was clarified that the annual volume of water notified only related to irrigation requirements as provided by the applicant in October 2006. Stockwater is in addition to the irrigation volume proposed, as provided for by Section 14 3) of the RMA.
 - e) The stock water volume required (including race losses) in addition to the notified irrigation volume, is estimated to total 952,080m³ annually as detailed below:
 - f) Sutton Stream: 473,040m³/year (15 l/s continuously)
 - g) Gibson Stream: 473,040m³/year (15 l/s continuously)
 - h) Lake Aviemore: 10,000m³/year (up to 5 l/s)
 - i) It was detailed that further hydrology investigation were being carried out in relation to the Sutton Stream and a suitable minimum flow was being determined for the Sutton and Gibson Stream abstractions. It was anticipated to be consistent with the 5Y7DLF as per the WCWARP.
 - j) Furthermore in relation to the Lake Aviemore abstraction, the minimum lake level was proposed to be complied with as per the WCWARP of 265.5mtrs.
11. On the 11th March 2009, further details and assessments of effects were provided to ECan on the Sutton and Gibson Stream intake structures.
12. On 25 June ECan requested further information on the discharge applications. A response to this request was provided on the 31 July 2009, plus further details on the 31st July 2009.
13. In July 2009 a letter was sent to the commissioners requesting a minor amendment to the map reference for the take from Lake Aviemore given the consultation occurring with Meridian Energy Ltd with regard to the intake structure. An additional map reference was required (between

approximate map reference **I40:0037-1369** and **I40:0031-1375**) to allow the intake to potentially be located approximately another 70mtrs upstream of the Aviemore Dam than the current location.

14. On the 11th June 2006, the Lake Aviemore irrigation command area was extended as it had become apparent that the 50ha irrigation area identified on the map to date, had not actually shown the full 50ha required.
15. No other changes have been made to the application.

2 BACKGROUND INFORMATION

2.1 Farm Details

16. Waitangi Station Ltd (herein referred to as 'the applicant') operates a 21,487ha high country station with a mixture of freehold and leasehold land located on the northern shore of Lake Aviemore.
17. Approximately 1,600 Ha of freehold flat land was required under the Public Works Act for the construction of the Aviemore Dam and Lake Aviemore which submerged this land.
18. All of the proposed irrigation is to be developed on freehold land.
19. Waitangi Station is a high country station which is predominantly hill country with a small amount of flat land, approximately 200 ha. The station currently runs 14,000 merino sheep and 300 cattle. All stock are summered and wintered on the hill country. The hoggets are given supplement feed in the winter.
20. The proposed irrigation development will be beneficial to the applicant for a number of reasons, some are outlined below:
 - a) It will enable the applicant to make enough winter feed (eg hay or balage) to ensure that none has to be purchased.
 - b) Currently the applicant retains approximately 50% of their merino lambs through a winter, fattens them and sells them in the spring with the remaining 50% being sold as store (sold at a lower weight for a lesser price). It is anticipated that there will be a greater percentage of lambs fattened with the proposed irrigation development.
 - c) It will enable the applicant to priority feed twin bearing ewes prior to lambing ensuring that those ewes are in the best condition possible when lambing.

2.2 Water Source

21. Location a) Sutton Stream is a tributary of Lake Aviemore and drains from the slopes of Mt Sutton. Trout are known to inhabit this stream
22. Location b) Gibson Stream is a tributary of Sutton Stream, with Black Jack and Miller stream merging to join with the Sutton near the Waitangi homestead. Trout are known to inhabit the stream.
23. Location c) Lake Aviemore – Lake Aviemore is situated below Lake Benmore and upstream of Lake Waitaki. The lake has a normal operating range between 267.7mtrs and 268.3mtrs asl. The lake is used for power generation and recreational purposes, such as swimming, boating and fishing.

2.3 Mackenzie Irrigation Company Shares held

Name: Waitangi Station Ltd	Number
Property Shares	1
Irrigation Shares	133

24. Irrigation shares are required for the full irrigation area as this is a new consent

2.4 Derogation Approval

25. Derogation approval was obtained from Meridian Energy Limited on the 11th September 2009 – Appendix D

3 SUBMISSIONS

26. These applications were again notified in December 2003, as part of the “ministerial call-in”. A total of 314 submissions were received.
27. A summary of the 2007 submissions is as follows

Resource Consent	Submissions in support	Submission in opposition	Neutral
CRC030944	1	12	2
CRC031013	1	12	2
CRC031014	1	13	2

28. Details of the submissions made in response to all applicants that were publically notified at the same time in 2007 are contained in CRC Report 1, Appendix 5. I have reviewed this report and adopt it as a true and accurate summary of the submissions received.
29. Details of the submissions received that are not common to all applications are as follows:

Submitter	Issues	Support/ neutral/oppose
Fish and Game NZ, Central South Island Region	Streams do not have great fishery value, resident trout likely where flows allow. Concerns could be addressed through consent conditions	Oppose
Meridian Energy Ltd	MIC flows, flow regimes, metering, water quality, effect of intake structure on Meridian infrastructure.	Oppose

30. Fish and Game support the proposed minimum flow of 80L/s determined for the Sutton Stream as the 5Y7DLF which is required by the WCWARP. This is also relates to the Gibson Stream abstraction, given it is a tributary of the Sutton Stream.
31. Furthermore the applicant clarified recently in an email to F&G and DOC dated 26th August 2009, various details on the application. Feedback was sought but had not been received at the time of writing this evidence.
32. The submission made by MEL was subsequently withdrawn in relation to the potential adverse effects of MEL infrastructure on the 21st September 2009 due to the consultation carried out.

4 CRC030944 - TAKE AND USE CONSENT - ASSESSMENT OF ENVIRONMENTAL EFFECTS

4.1 Effects on other water users

Effects on other water users	
Comments	<p>This is a new consent application however the stockwater race system has been operating for many years</p> <p>The CRC reporting officer for these applications agrees that effects on other water users are minor.</p>

Location a) Sutton Stream and b) Gibson Stream

33. Upstream of the Gibson Stream abstraction, neighbours Te Akatarawa Station (F Graham) have consent to take water from a tributary, Miller Stream for 17.5 l/s for irrigation. This consent has no minimum flow restriction.
34. Given the applicant is proposing to take water downstream and there is no minimum flow restriction F Graham is not considered to be effected.
35. Furthermore F Graham has applied to take a further 12 l/s for irrigation from Black Jack Stream (CRC072363) as part of this hearing process which is also upstream of the applicants proposed abstractions.
36. Table 3 of the WCWARP provides a minimum flow for all "other rivers and streams" of the 5-year 7-day low flow which has been determined as 80l/s. An upstream site on Sutton Stream above the applicants intake has been determined given the stream is often dry in the lower catchment below the Homestead Bridge
37. Given the applicant and F Graham are both proposing to comply with the minimum flow, flow-sharing and F Graham is upstream, the other user is not considered affected.
38. This minimum flow aims to ensure that where there are competing users for the resource, the effects on these users is "acceptable" which was established by the WCWARP
39. There is a public camping ground run by the Waimate District Council on the shores of Lake Aviemore within close proximity to Sutton Stream and the proposed irrigation development. However the stream is already often dry in the lower reach and the minimum flow aims to provide a level of protection for other users.
40. Mitigation is proposed restricting the rate of take, volume per week and minimum flows. Given this, effects on other users are considered to be minor

Location c) Lake Aviemore

41. Currently there are no other surface water abstractors within close proximity to the proposed abstraction from Lake Aviemore
42. Table 3 of the WCWARP provides a minimum lake level of 265.5 metres a.m.s.l.
43. The seasonal allocation aims to, amongst other things to ensure that where there are competing users for the resource, the effects on these users is "acceptable".
44. Meridian Energy is the main water user of Lake Aviemore for electricity generation. Meridian Energy controls the inflow and outflows of Lake Aviemore and has influence over the lake levels. Derogation approval has been provided.
45. Mitigation is proposed restricting the rate of take, volume per week and minimum lake levels. Given this, effects on other users are considered to be minor

All three locations:

46. The take sits within the area defined as “Upstream of Waitaki Dam, but not upstream of the outlets of the glacial lakes” in Table 5 of the WCWARP. Table 5 sets a cumulative allocation of 275 million cubic metres per year for this area.
47. Report 3 – Annual Allocations to Activities (Rule 6 Table 5) acknowledges that the granting of the applications subject to this hearing will not result in the cumulative allocation limit being exceeded.

4.2 Effects on Ecosystem values

Effects on Ecosystem Values	
Comments	<p>Sutton Stream and Gibson Stream classified as “all other streams and rivers” specified in Table 3 of the WCWARP, which has been determined as 80l/s.</p> <p>The CRC reporting officer for these applications agrees that effects on ecosystems are minor for A and B but uncertain for C. Concerns raised in the S42a report on C have been addressed below.</p>

Location a) Sutton Stream and b) Gibson Stream

48. The minimum flow proposed by the WCWARP for ‘all other streams and rivers’ was developed to ensure that the aquatic values of streams are protected.
49. Table 3 of the WCWARP sets a minimum flow regime for Sutton Stream of the 5-year 7-day low flow as assessed by CRC at the downstream end of the catchment. But as already noted this stream is ephemeral and zero flow is usually experienced at the end of the catchment. Consequently this flow has been correlated upstream to above the Sutton Stream abstraction, for the entire Sutton Stream catchment (includes Gibson Stream) and agreed by Ecan and F&G.
50. A water level recorder will be installed on the Sutton Stream to ensure compliance with the minimum flow. The take itself will also be appropriately metered
51. The intake is proposed to be fish screened in accordance with “Fish Screening: good practice guidelines for Canterbury, NIWA Client Report: CHC2007.092, October 2007”.
52. Given this, effects on ecosystem values are minor.

Location c) Lake Aviemore

53. The minimum lake levels proposed by the WCWARP in Table 3 were developed to ensure that the aquatic values of the lake systems are protected. The applicant proposes to accept the minimum lake levels as defined in Table 3 of WCWARP.
54. Meridian Energy Ltd already operates water level recorders on the lakes and this information can be used to ensure compliance with minimum lake levels. The take itself will also be appropriately metered
55. The intakes have been designed by Riley Consulting Ltd in order to address MEL concerns with intakes near Meridian structures. The final design will address fish screen requirements in accordance with recommended guidelines, however, the applicant would like to note that didymo has been detected in the Upper Waitaki system and the presence of this organism may challenge the performance of any intake and fish screen if it establishes itself.
56. Given this, effects on lake values will be no more than minor.

4.3 Effects of inefficient water use

Location a) Sutton Stream

Reasonable and Efficient Use Seasonal Volumes and Land Use	
Land Use	Intensive Pasture (Sheep/Beef)
Area to be irrigated (hectares)	55 ha
Method of application	Spray
Efficiency of application	80%
Daily application depth	5 mm
Return period	7 out of 8 days
Return period application depth	20-35mm
Soil profile available water	40-100mm (T Webb): Majority 45mm
Effective Irrigation Season Rainfall	195mm/ha/yr
Seasonal volume required by WQN9v2(m³/year)	341,000 m ³ /year
Seasonal volume required (m³/year)	330,000 m ³ /year
Volume to be included in Table 5 (WCWARP) allocation	330,000 m ³ /year
Comments	<p>The proposed annual volume has been determined using 600mm (as per MIC shareholding) for 55 ha, which is less than that provided by WQN9v2.</p> <p>The proposed stock water annual take and use, has been determined using Schedule WQN11 of the NRRP. The proposed stock water volume is 473,040 cubic metres based on a continuous divert of 15l/s to enable the water to get to the end of the race system including race loses. Excess water is discharged back into Lake Aviemore.</p> <p>The CRC reporting officer for these applications considered the irrigation take is an efficient use of water and the effects are minor but the stockwater take effects are considered uncertain. Concerns raised in the S42a report have been addressed below.</p>

Location b) Gibson Stream

Reasonable and Efficient Use Seasonal Volumes and Land Use	
Land Use	Intensive Pasture (Sheep/Beef)
Area to be irrigated (hectares)	23 ha
Method of application	Spray
Efficiency of application	80%
Daily application depth	5 mm
Return period	19 days
Return period application depth	20-35mm
Soil profile available water	45mm (T Webb)
Effective Irrigation Season Rainfall	195mm/ha/yr
Seasonal volume required by WQN9v2(m ³ /year)	142,600m ³ /year
Seasonal volume required (m ³ /year)	138,000 m ³ /year
Volume to be included in Table 5 (WCWARP) allocation	138,000m ³ /year
Comments	<p>The proposed annual volume has been determined using 600mm (as per MIC shareholding) for 23 ha, which is less than that provided by WQN9v2.</p> <p>The proposed stock water annual take and use, has been determined using Schedule WQN11 of the NRRP. The proposed stock water volume is 473,040 cubic metres based on divert of 15 l/s continuously to enable the water to get to the end of the race system including race losses. Excess water is discharged back into Lake Aviemore.</p> <p>The CRC reporting officer for these applications considered the irrigation take is an efficient use of water and the effects are minor but the stockwater take effects are considered uncertain. Concerns raised in the S42a report have been addressed below.</p>

Location a) Sutton Stream and b) Gibson Stream

57. The proposed application depth of 20-35mm per return period is less than 50% of the water holding capacities expected. This is considered to be an efficient use of water and the irrigation systems will be determined and managed to ensure compliance.
58. The proposed annual volume is based on Schedule WQN9v2 on specific soil types determined by Mr Webb (combination of light and medium) and intensive pasture.
59. Policy 15 and 19 of the WCWARP encourages the piping or otherwise sealing of water distribution systems to minimise water losses and meet efficiency and effective use requirements. This system is proposed to be piped from the main head race to a spray irrigation system and a reticulated trough system.

60. Policy 21 of the WCWARP requires all water takes to be metered. To ensure that this application is consistent with this policy, the applicant proposes to meter their take.
61. Given this, effects of inefficient water use are minor

Location c) Lake Aviemore

Reasonable and Efficient Use Seasonal Volumes and Land Use	
Land Use	Intensive Pasture (Sheep/Beef)
Area to be irrigated (hectares)	50 ha
Method of application	Spray
Efficiency of application	80%
Daily application depth	5 mm
Return period	7 out of 8 days
Return period application depth	20-35mm
Soil profile available water	45-90 mm (T Webb)
Effective Irrigation Season Rainfall	200mm/ha/yr
Seasonal volume required by WQN9v2(m³/year)	298,211 m ³ /year (596mm/season)
Seasonal volume required (m³/year)	300,000 m ³ /year (600mm/season)
Volume to be included in Table 5 (WCWARP) allocation	300,000 m ³ /year (600mm/season)
Comments	<p>The proposed annual volume has been determined using 600mm (as per MIC shareholding) for 50 ha, which is extremely close to that provided by WQN9v2 (shortfall of 1,789m³ per season).</p> <p>The proposed stock water annual volume take and use, has been determined using Schedule WQN11 of the NRRP.</p> <p>The CRC reporting officer for these applications considered the irrigation take is an efficient use of water and the effects are minor but the stockwater take is considered inefficient use of water. Concerns raised in the S42a report have been addressed below.</p>

62. The proposed application depth of 20-35mm per return period is less than 50% of the water holding capacities expected. This is considered to be an efficient use of water and the irrigation systems will be determined and managed to ensure compliance.
63. The proposed annual volume is based on Schedule WQN9v2 for light-medium soils and intensive pasture.
64. Policy 15 and 19 of the WCWARP encourages the piping or otherwise sealing of water distribution systems to minimise water losses and meet efficiency and effective use requirements. This system is piped to a spray irrigation system and reticulated trough system.

65. Policy 21 of the WCWARP requires all water takes to be metered. To ensure that this application is consistent with this policy, the applicant proposes to meter their take.
66. When determining the annual volume allocation using WQN9v2 based on Mr Webbs soil PAW and the hectares of each type, we determined the annual volume allocation of 298,211m³. (applied for 300,000m³) Given that this WQN9v2 figure is extremely close to that applied for, we consider the 300,000m³ proposed is an efficient and reasonable use of water as agreed during consultation with the Reporting Officer
67. Given this, effects of inefficient water use are minor

Stockwater:

68. Schedule WQN11 of the NRRP was used to determine daily requirements for take and use for the irrigation area. Based on the applicants stock water requirements proposed at the time this equated to approximately a total of 9,840m³/year (including 1.2 tolerance factor). The take and use for Location a) and b) are to remain the same.
69. The proposed stock water volume based on the divert for Location a) and b) is 473,040 cubic metres each for 15 l/s continuously to enable the water to get to the end of the race system including race loses. Excess water is discharged back into Lake Aviemore.
70. It must be understood that the race system also supplies stockwater to un-irrigated land which at times can have a high demand in a short period
71. The proposed stock water volume for Location c) had been estimated as 10,000 cubic metres based on 5 l/s continuously to provide stock water for the irrigation area and another 250ha of un-irrigated land. Given the Reporting Officers concerns the applicant has since reviewed this volume and future requirements. In actual fact a further 400ha of un-irrigated land requires stockwater supply from this pipeline system. Consequently using Schedule WQN11 to re-consider requirements, it has been determined that approximately 8,000 cubic metres per year is required and considered reasonable.

Area to be supplied	Stock numbers (worst case)	Stockwater Requirements	Total Cubic Metres/Season
50ha irrigated	125 lactating beef cattle	70L/head/day	3,194
400ha non-irrigated	3000 ewes	3L/head/day	3,285
TOTAL			7,775 (inc 1.2 tolerance)

72. In conclusion for all stockwater abstractions, the take and use is proposed to be consistent Schedule WQN11 of the NRRP, however for the race systems a higher volume is required to be diverted which is non-consumptive.
73. Given the existing race system and identification of supplying non-irrigation land, effects of inefficient water use are considered minor.

4.4 Effects of the use of water on water quality

Effects on Water Quality	
Comments	<p>The CRC reporting officer for these applications is not currently satisfied that effects of water quality are minor.</p> <p>Cumulative effects on water quality have been addressed by Mackenzie Water Resources Limited (MWRL) and are summarized below.</p> <p>Local effects have also been addressed below</p>

74. The property, according to the MWRL Water Quality Study, is located within the Lake Aviemore surface water catchments for Location a) Suttons Stream and Location b) Gibson Stream. For Location c) it is located in the Lake Waitaki catchment.
75. The calculated nutrient mitigation requirement of the receiving environments determined in the MWRL Study has identified the N and P thresholds for the property. These are shown in the table below.
76. "OVERSEER® has been RUN by a QUALIFIED person to model the N and P outputs from the proposed farming system. The results of the model have been incorporated in to the table below. This table shows that the applicant can meet the property thresholds which are the most restrictive.

	Nitrogen Threshold	Phosphorous Threshold
MWRL Water Quality Study Property Thresholds	56,286	2,390
OVERSEER® Outputs	46,599	675

77. The applicant is committed to implementing the "Mandatory Good Agricultural Practices" set out within the Farm Environmental Management Plan (FEMP) (see Appendix E). Implementing these practices ensure that the OVERSEER® results are validated. This along with ensuring that the property thresholds of the WQS (set out in the table above) are not exceeded will ensure that the cumulative effects of the use of water for irrigation on water quality are no more than minor.
78. Whilst the applicant is within their property thresholds, the MWRL Study identified that the applicant still has to consider specific on farm effects and the impacts these activities could have on the local receiving environment. This requires a specifically developed FEMP to identify and implement appropriate mitigation measures set out in the draft attached (see Appendix E).
79. At a workshop held in Twizel in August 2009, the applicants met with Ms Melissa Robson of GHD Limited. A "desk top" on farm risk assessment was undertaken. This is considered to be the "starting point" of the FEMP.
80. The workshop identified potential on farm risks specific to each farm along with possible mitigation measures. The on farm risks identified during the desktop risk assessment need to be verified by an appropriately qualified person who has carried out a site visit. It is anticipated that this will occur should the application be granted.
- For Waitangi Station, the desktop risk assessment identified the following potential risks:
 - Buffers required from any permanent streams or rivers/lake – for fertiliser application and irrigation development
 - Bridges/culverts across streams
 - Track runoff – check
 - Location of water troughs
 - Timing of fertiliser applications
81. The applicant has committed to implementing the FEMP including an on farm risk assessment, appropriate mitigation, monitoring and auditing before the first exercise of this consent. The FEMP has been proposed as condition of consent and the draft FEMP is attached to this evidence as Appendix E.
82. The applicant has already identified draft mitigation and as summarized below:
- a) Fencing stock out of permanently flowing waterways within the irrigation areas
 - b) Buffer zone created between the irrigation area and Lake Waitaki
83. The Reporting Officer identifies mitigation from the original AEE. The mitigation will be finalised as part of the FERA to complete the FEMP. Given developments since the original AEE it is considered N and P thresholds are more appropriate to limit discharges rather than specifying farming activities.
84. Given that the N and P thresholds from the MWRL Study can be met, and the applicants commitment to addressing on farm risks with the implementation of the FEMP, the effects of the

use of water on water quality for both the local receiving environment and cumulative effects are considered to be minor.

4.5 Individual Landscape Effects

Effects on Landscape	
Comments	<p>Landscape effects have been addressed by UWAG’s Landscape Architect, Mr Andrew Craig, who considers that this proposal will have a minor effect on landscape values.</p> <p>The CRC reporting officer for these applications considers the effects on landscape are uncertain and may therefore be more than minor</p>

85. Mr Andrew Craig is a landscape architect who is providing general and specific recommendations on behalf of UWAG clients to this hearing. His conclusions reflect that the general effects on the MacKenzie landscape of these further applications within the basin will be significantly less than minor. I adopt his recommendations to the committee. In terms of the specific placement of the irrigation structures associated with this application, I confirm the following:
86. The irrigation areas proposed is already part of a substantially modified environment, whereby land has been progressively cultivated and re-grassed, top dressed, new fences, and within a highly modified environment with the nearby Aviemore Dam and associated infrastructure.

4.6 Effects on People, Communities and Amenity Values

Effects on People, Communities and Amenity Values	
Comments	<p>The CRC reporting officer for these applications considers that effects on amenity are minor</p>

87. The applicant has proposed the minimum flow and lake levels as specified in the WCWARP for the water body from which they have applied to take and use water. A minimum flow and lake level is designed to adequately protect people, community and amenity values.
88. The activities all occur in a rural setting, where the dominant land use is pastoral farming. Given that the proposed activities all occur on private farmland; as such the use of water is unlikely to adversely affect amenity values.
89. There is a public camping ground run by the Waimate District Council on the shores of Lake Aviemore, within close proximity of the proposed irrigation development from Sutton and Gibson Stream. However this is already a highly modified rural farming environment and Sutton Stream is already often dry in the lower reaches by the camping area.
90. The WCWARP sets an annual allocation “cap” for agricultural and horticultural activities within defined areas (Table 5) which in Section 5.1 is considered to be met. The applicant has proposed an annual allocation limit for their own resource consents for the use of water.
91. Water quality is addressed in Section 5.4 in terms of cumulative and individually with the FEMP and landscape has been considered with Section 5.5
92. Therefore, given the applicant’s commitment to ensuring efficient use of water on their property, the minimum flow and flow-sharing regime protect in-stream values and other users, it is considered that effects on people, communities and amenity will be minor.

4.7 Effects on Tangata Whenua Values

Effects on Tangata Whenua	
Comments	The CRC reporting officer for these applications considers the effects on Tangata Whenua are uncertain and may therefore be more than minor

93. Te Runanga O Ngai Tahu submitted on all applications in the catchment, seeking that all applications be declined.
94. The primary reasons for this were that the applications were considered to be inconsistent with the policies and objectives of the WCWARP, and also at odds with the cultural objectives of the RMA.
95. This application is considered to be within the allocation limits and in accordance with the minimum flows of the WCWARP. Te Runanga O Ngai Tahu had considerable input into the creation of the WCWARP.
96. An email was sent to Paul Horgan on the 26th August 2009, outlining the proposal and any changes made since notification. Feedback was sought but not received at the time of writing this evidence.
97. However, it is acknowledged that Te Runanga O Ngai Tahu have a significant relationship with the Waitaki Catchment, and as such, appropriate minimum flow conditions, and management of water quality effects, is proposed by the applicant to ensure that the potential effects on the environment, including tangata whenua values are minor.

5 CRC031013 LAND USE CONSENT - ASSESSMENT OF THE ENVIRONMENTAL EFFECTS

98. Two intake sites are considered, Location a) Sutton Stream and Location b) Gibson Stream. Both intakes are proposed to be constructed in the same manor at the existing race intake structure. The land use consent for Location c) Lake Aviemore has been lodged but is not part of this consenting process.
99. The potential effects considered to be relevant to this activity are as follows:

5.1 Effects of the works on flood-carrying capacity and erosion

100. The intake is proposed to consist of an infiltration gallery buried up to approximately one metre below stream bed level which is considered appropriate for the intake size and stream velocities; any excavated materials will be replaced to bring the area back to bed level. The intake should be installed within approximately half a day.
101. The intake is proposed to be located in the stream bed but should have no effect on the flowing water as it is proposed to be buried.
102. The main flowing water may be disturbed on installation of the intake when the stream may need to be temporarily diverted around the area where the intake pipe is being installed. On completion of construction, the stream will be reinstated over the infiltration gallery.
103. The proposed intake structure should not create any erosion or increase bank instability to other banks in the vicinity given the buried and unobtrusive nature proposed.
104. It is noted that both streams are stable at the proposed abstraction site and not subject to adverse bank erosion
105. The Homestead Bridge is located approximately 1km downstream and the Te Akawatara Rd Bridge approximately 1.5km downstream. Given the nature of the proposed intake, any effects are unlikely.
106. Given this, the effects on flood-carrying capacity and erosion of Sutton and Gibson Stream are considered to be minor as agreed by the Reporting Officer.

5.2 Effects of the works on water quality and ecosystems

107. Works around the intake area will be undertaken during the initial construction and on an as needed basis for such activities as maintenance at the beginning of the irrigation season.
108. It is acknowledged that the in-stream works can cause a temporary discolouration of the water and particularly from the perspective of the aquatic ecosystems that may be present in the stream; such sedimentation can have an impact at sensitive times such as spawning, which can therefore be avoided.
109. Sedimentation can also affect downstream users taking water for domestic or stock water purposes.
110. The most common approach is to avoid undertaking works within flowing water, thereby avoiding the possibility of increasing levels of suspended sediment contained within the waterway. In this instance it is simply not practicable for the works associated with the intake to occur in an area where water is not flowing.
111. However it is proposed that the stream be temporarily diverted (less than 50mtrs) around where the intake is to be located so that works does not occur in continuously flowing water.
112. The applicant provided clarification to DOC and F&G on the 26th August and feedback was sought. Therefore no specific times to avoid intake construction have been identified in relation to the streams.
113. The intake is proposed to be fish screened in accordance with "Fish Screening: good practice guidelines for Canterbury, NIWA Client Report: CHC2007.092, October 2007".

114. The area of works will be re-instated on completion of works to minimise the adverse effects on riparian ecosystems
115. Given the short term nature of the work, and the proposed mitigation measures as per the consent conditions, effects on ecosystem values and water quality are able to be effectively mitigated as concluded by the Reporting Officer.

5.3 Effects on amenity, people, communities and Tangata Whenua values

116. The proposed intake abstractions are located behind the Waitangi Station homestead and are not easily accessible or visible by the public.
117. The intake will be located at the existing race system intake therefore there will be minimal disturbance of the stream bed.
118. The intake will be inconspicuous as it is located under the river bed and covered by rock material. After the initial construction, the disturbed area should re-vegetate and in time blend back into the surroundings.
119. In relation to Tangata Whenua values, accidental recovery protocol has already been proposed by the applicant.
120. The effects on amenity, people, communities and Tangata Whenua values are considered minor as also concluded by the Reporting Officer.

6 CRC031014 – DISCHARGE CONSENT – ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 Effects on flood carrying capacity and bank erosion

121. When water is discharged into a waterway, the flow, and potentially the velocity, of the receiving water body is increased, thereby increasing the volume of water in the water body and potentially scouring the banks where the discharge occurs.
122. The discharge from Gibson Stream is well established (no structure) for the existing discharge of excess stock water, without adverse effects on erosion.
123. This discharge is proposed to continue fairly much in the same manner with the likelihood of an increased water flow at times, due to the inclusion of discharge of excess irrigation water.
124. Given that the existing discharge from Gibson Stream is well established with no adverse effects on erosion, it is assumed that the new discharge from Sutton Stream will also have no adverse effects on erosion long term with the possibility of some initial erosion when the activity first commences until the disturbance settles.
125. Furthermore the Sutton Stream water discharged into Lake Aviemore will be onto a small rock discharge pad, required on the lakes edge to remove the velocity and potential erosion.
126. Given the volume of water contained within Lake Aviemore and the historical nature of the Gibson Stream discharge, the discharge of excess stock and irrigation water is unlikely to effect the erosion of the banks or bed of the Lake or effect flood capacity. These effects are therefore considered minor as agreed by the Reporting Officer.

6.2 Effects on instream values and water quality

127. The water that is discharged into Lake Aviemore from both discharge locations is unused (eg it has not been used for irrigation prior to the discharge occurring) irrigation and stock water.
128. On the irrigated land, water will be reticulated from the races; given this is an intensified land use area.
129. Where Sutton Stream water is discharged into Lake Aviemore which is a new activity, a small rock discharge pad is required on the lakes edge to remove the velocity and potential erosion which could increase sediment in this area. Water will be discharge above the maximum operating level with a drop of 1-2mtrs onto a small discharge pad prior to discharging into the lake; fish are therefore not anticipated to be able to enter.
130. The Gibson Stream discharge has been occurring with the stock water system and consequently a structure is not required. This discharge is unlikely to have continuous flow and will occur irregularly therefore fish are not expected to enter the race from Lake Aviemore (they have not historically)
131. The water should be the similar quality as that diverted and what has been carried our historically and fish passage is unlikely; therefore the effects on water quality of Lake Aviemore are considered minor as agreed by the Reporting Officer.

6.3 Effects on amenity, people, communities and Tangata Whenua values

132. When water is discharged there is the potential to cause adverse effects on other users of the water body due to the contamination of the water, or create an unsightly plume that may affect amenity.
133. In this case, the receiving water body is Lake Aviemore. The volume discharged is a very small volume of water in proportion to the extensive lake providing a significant dilution effect. The quality of water being discharged into Lake Aviemore should be unaltered from that being diverted
134. The race system from Sutton Stream is existing with the water discharged back into Sutton Stream. With this development it is proposed to discharge directly into Lake Aviemore at a new location. The change in location will mean that the discharge is further from the camping area.

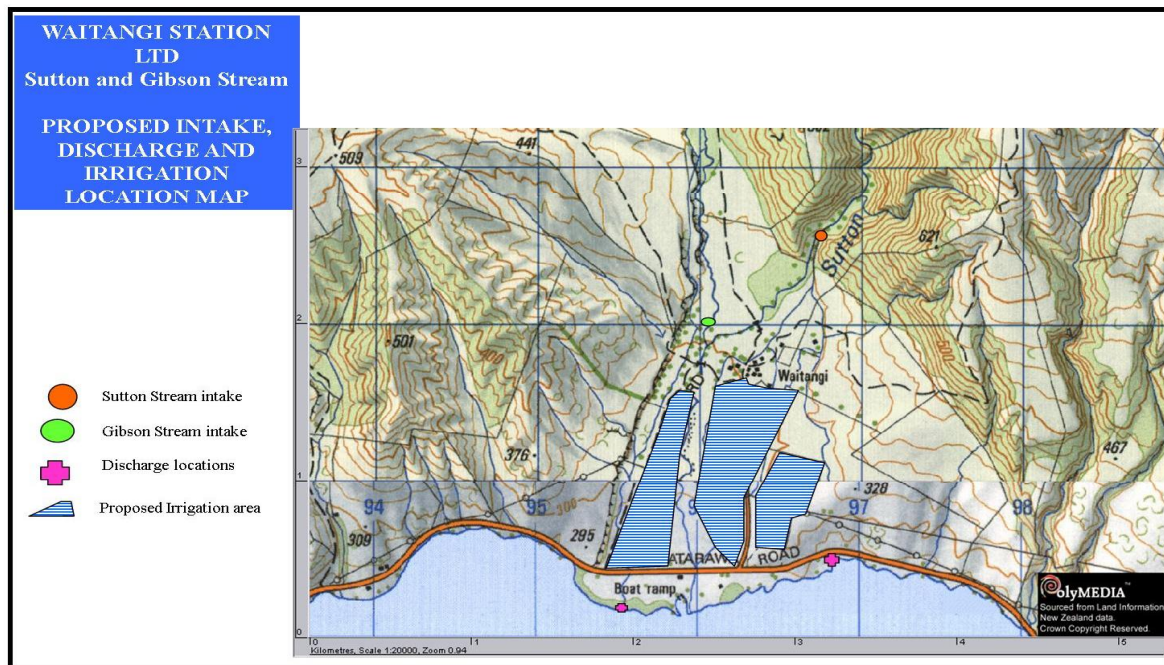
135. The race system from Gibson Stream is already operating and discharges directly into Lake Aviemore as it has historically for stockwater. The camp ground is located on either side of the Gibson Stream discharge, however it is understood that generally by the time the race reaches the camp ground, there is no flow.
136. Therefore, effects on amenity, people, communities and Tangata Whenua values are minor as agreed by the Reporting Officer.

7 CONCLUSIONS

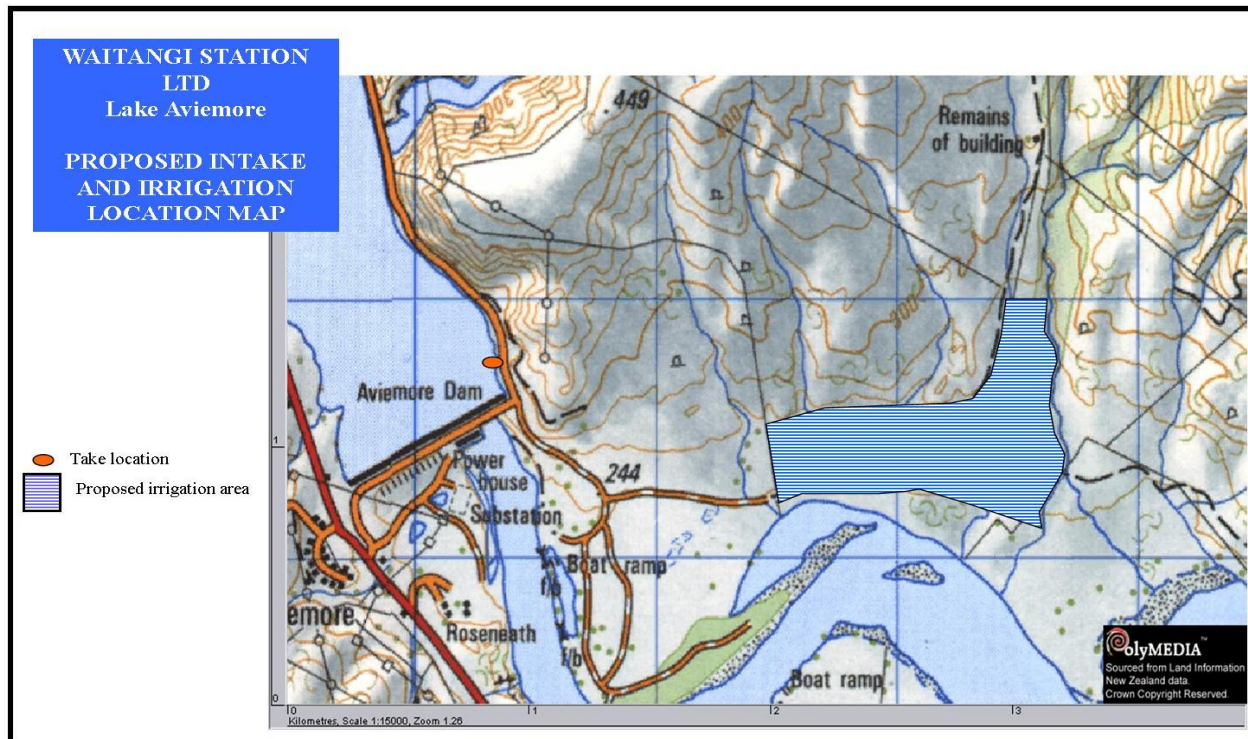
137. The potential effects associated with the take and use of water, and the related ancillary landuse and discharge activities have been assessed, taking the concerns of submitters into account, and are considered to be minor.

APPENDIX A: AREAS OF PROPOSED IRRIGATION DEVELOPMENT AT WAITANGI STATION

Proposed locations A and B: Sutton and Gibson Stream location



Proposed location C: Lake Aviemore



APPENDIX B:

Photo A; Existing intake on Sutton Stream (Location A)

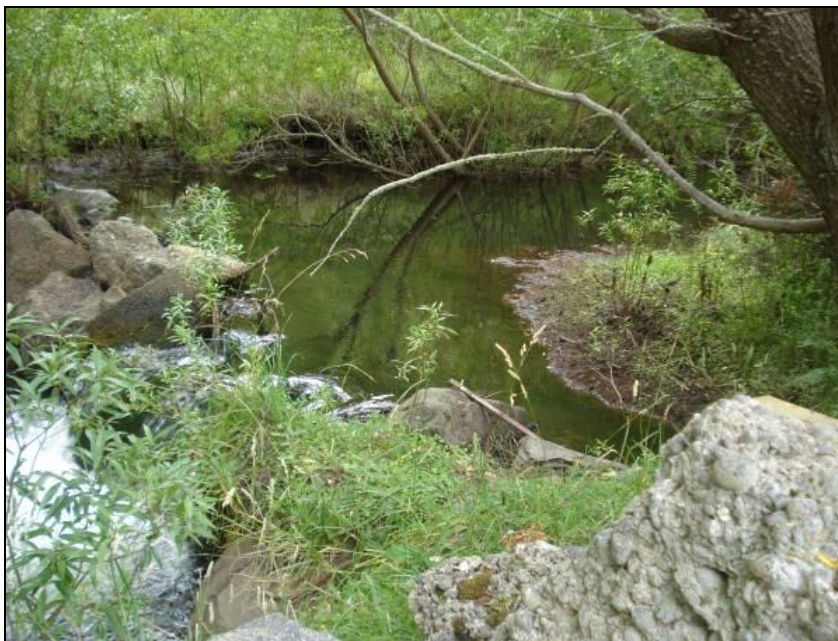


Photo B: Example of the proposed area to be irrigated using Sutton Stream water



Photo C: Proposed intake site on Gibson Stream (Location B)



Photo D: Example of the proposed area to be irrigated using Gibson Stream water



Photo E: Proposed intake site general location on the banks of Lake Aviemore (Location C)



Photo F: Proposed area to be irrigated using Aviemore water. Area runs along base of hills on left and across to fence line on right. Arrow indicates approximate location of the fence line.



APPENDIX C – PROPOSED CONDITIONS

CRC proposed conditions with tracked changes.

Please note that conditions relating to water quality thresholds and FEMP are to be added.

Table 5: Recommended draft conditions for water permit CRC030944 Proposal A		
No.	Condition Code	Details
Divert		
1	WP01	<p><i>During irrigation season</i></p> <p><i>Name of waterbody:</i> Sutton Stream</p> <p><i>Map reference:</i> NZMS 260 I39:9674-2157</p> <p><i>Instantaneous rate:</i> 55 litres per second</p>
2	WP01	<p><i>Irrigation off-season</i></p> <p><i>Name of waterbody:</i> Sutton Stream</p> <p><i>Map reference:</i> NZMS 260 I39:9674-2157</p> <p><i>Instantaneous rate:</i> 15 litres per second</p>
Take		
3	WP01	<p><i>Name of waterbody:</i> Sutton Stream</p> <p><i>Surface water abstraction point (SWAP):</i> I39/0025</p> <p><i>Map reference:</i> NZMS 260 I39:9674-2157</p> <p><i>Instantaneous rate:</i> 40 litres per second</p> <p><i>Volume:</i> 34,560 cubic metres per eight consecutive days and 330,000 cubic metres between 1st July and the following 30th June</p> <p><i>Insert tranching regime from Derogation Approval</i></p>
Use		
4	WP04	<p><i>Water taken under condition 3 shall only be used for...</i></p> <p><i>Type of irrigation:</i> Spray irrigation</p> <p><i>Number of hectares:</i> 55 hectares</p> <p><i>Use:</i> crops and pasture for grazing stock excluding milking dairy cows <i>Do not wish to limit stock type. FEMP will ensure N and P discharges are not exceeded.</i></p> <p><i>Plan No:</i> "Waitangi Station Proposals A ad B" (Attachment 1)</p>
4	WP05	
5	WP06	
Mitigation		
6	WP07	<i>Name of waterbody:</i> Sutton Stream

		<p><i>Map reference: NZMS 260 I39:961-210</i></p> <p><i>Minimum flow: 80 litres per second</i></p> <p><i>Flow graph: See Report 2A Refer to the evidence of Mr Boraman for correct consent condition</i></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 I39/0025 shall be buried at least two one 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	<p>Telemetry optional – (d ii) or (diii)</p> <p>May not be practical depending on network coverage, radio link and whether necessary.</p>
12	ME04	<i>Data logger required by MEL/MIC conditions</i>
13	ME05	
14	ME06	<i>Waterway: Sutton Stream and its tributaries</i>
15	WP08	<p><i>Waterway: Sutton Stream</i></p> <p><i>Map reference: NZMS 260 I39:961-210</i></p> <p>To be used with ME03-05</p>
Administrative Conditions		
16	AD01	
17	AD02	<p><i>Number of working days: 5</i></p> <p><i>Month 1: March</i></p> <p><i>Month 2: July</i></p> <p><i>Waterbody: Sutton Stream</i></p> <p><i>Cross reference to Condition: 6</i></p>
18	AD04	Lapse date

Table 6: Recommended draft conditions for water permit CRC030944 Proposal B		
No.	Condition Code	Details
Divert		
1	WP01	<p><i>During irrigation season</i></p> <p><i>Name of waterbody: Gibson Stream</i></p>

		<p>Map reference: NZMS 260 I39:9608-2103</p> <p>Instantaneous rate: 55 litres per second</p>
2	WP01	<p>Irrigation off-season</p> <p>Name of waterbody: Gibson Stream</p> <p>Map reference: NZMS 260 I39:9608-2103</p> <p>Instantaneous rate: 15 litres per second</p>
Take		
3	WP01	<p>Name of waterbody: Gibson Stream</p> <p>Surface water abstraction point (SWAP): I39/0026</p> <p>Map reference: NZMS 260 I39:9608-2103</p> <p>Instantaneous rate: 40 litres per second</p> <p>Volume: 48,816 cubic metres per 19 consecutive days and 138,000 cubic metres between 1st July and the following 30th June</p> <p><i>Insert tranching regime from Derogation Approval</i></p>
Use		
4	WP04	<p>Water taken under condition 3 shall only be used for...</p> <p>Type of irrigation: Spray irrigation</p> <p>Number of hectares: 23 hectares</p> <p>Use: crops and pasture for grazing stock excluding milking dairy cows. <i>Do not wish to limit stock type. FEMP will ensure N and P discharges are not exceeded.</i></p> <p>Plan No: "Waitangi Station Proposals A and B" (Attachment 1)</p>
4	WP05	
5	WP06	
Mitigation		
6	WP07	<p>Name of waterbody: Sutton Stream</p> <p>Map reference: NZMS 260 I39:961-210</p> <p>Minimum flow: 80 litres per second</p> <p>Flow graph: See Report 2A</p> <p><i>Refer to the evidence of Mr Boraman for correct consent condition</i></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 -one 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	Telemetry optional – (d ii) or (diii) May not be practical depending on network coverage, radio link and whether necessary.
12	ME04	<i>Data logger required by MEL/MIC conditions</i>
13	ME05	
14	ME06	<i>Waterway: Sutton Stream and its tributaries</i>
15	WP08	<i>Waterway: Sutton Stream</i> <i>Map reference: NZMS 260 I39:961-210</i>
Administrative Conditions		
16	AD01	
17	AD02	<i>Number of working days: 5</i> <i>Month 1: March</i> <i>Month 2: July</i> <i>Waterbody: Sutton Stream</i> <i>Cross reference to Condition: 6</i>
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: Lake Aviemore</i> <i>Surface water abstraction point (SWAP): I40/0686</i> <i>Map reference: NZMS 260 I40:0037-1369</i> <i>Instantaneous rate: 35 litres per second</i> <i>Volume for irrigation: 21,168 cubic metres per seven consecutive days and 330,000 cubic metres between 1st July and the following 30th June</i>
2	WP01	<i>Irrigation off-season</i> <i>Name of waterbody: Lake Aviemore</i> <i>Surface water abstraction point (SWAP): I40/0686</i>

		<p>Map reference: NZMS 260 140:0037-1369</p> <p>Instantaneous rate: 5 litres per second</p>
Use		
3	WP04	<p>Water taken under condition 3 shall only be used for...</p> <p>Type of irrigation: Spray irrigation</p> <p>Number of hectares: 50 hectares</p> <p>Use: crops and pasture for grazing stock excluding milking dairy cows Do not wish to limit stock type. FEMP will ensure N and P discharges are not exceeded.</p> <p>Plan No: "CRC030944 C" (Attachment 2)</p>
4	WP05	
5	WP06	
Mitigation		
6	Non-standard	<p>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</p>
7	Non-standard	<p>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.</p>
Measuring & Metering		
8	ME01	
9	ME03	<p>ME02 as piped. Telemetry optional – (b ii) or (diii)</p> <p>May not be practical depending on network coverage, radio link and whether necessary.</p>
10	ME04	<i>Data logger required by MEL/MIC conditions</i>
11	ME05	
Administrative Conditions		
12	AD01	
13	AD03	<p>Number of working days: 5</p> <p>Month 1: March</p> <p>Month 2: July</p>
14	AD04	Lapse date

Table 2: Recommended draft conditions for CRC031013		
No.	Consent Code	Details
Scope		
1	LU01	<p>(a) The excavation of a 20 metre long and 3 metre deep trench for the purposes of installing a buried intake structure in Sutton Stream;</p> <p>(b) The excavation of a 20 metre long and 3 metre deep trench for the purposes of installing a buried intake structure in Gibson Stream;</p> <p>(c) The placement of an intake structure as described in Plan CRC031013A (Attachment 2) in each of Sutton and Gibson Streams;</p> <p>(d) The replacement of excavated materials (larger rocks first) over the intake structure to reinstate the bed to its existing level at each location;</p> <p>(e) Maintenance works (i) including replacing the intake structure.</p>
Location		
2	LU02	<p><i>Cross reference to Condition: 1</i></p> <p><i>Name of watercourse: Sutton Stream and Gibson Stream</i></p> <p><i>Map reference: NZMS 260 139:9674-2157 and NZMS 260 139:9608-2103</i></p> <p><i>Plan: "Waitangi Station Proposals A and B" (Attachment 1)</i></p>
Limits of Excavation		
3	Non-standard	Works described in conditions (1)(a) to (1)(c) and (1)(d)(i) shall take no longer than a week. Maintenance works in accordance with condition (1)(d) shall take no longer than two days
Erosion Protection		
4	LU10	
5	LU11	<i>Waterbody: Sutton Stream and Gibson Stream</i>
6	LU12	
7	LU13	<i>Waterbody: Sutton Stream and Gibson Stream</i>
Prior to Construction		
8	LU08	
9	Non standard	The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager shall be notified by the consent holder of the intention to carry out works and their intended type and scope at least 48 hours prior to the commencement of work.

10	LU31	
During Construction		
11	LU14	
12	Non-standard	All practicable measures shall be undertaken to prevent the discharge of sediment to the Sutton and Gibson Streams, arising from the works, including, but not limited to the placement of hay bales to collect sediment
13	LU18	
14	LU21	
15	LU23 modified	All practicable measures shall be undertaken to minimise vehicles and machinery entering Sutton and Gibson Streams, including, but not limited to: <ul style="list-style-type: none"> (a) The consent holder shall take all practicable steps to avoid cementitious material entering Sutton and Gibson Streams including waste wash water from tools and machinery. (b) Cement shall be stored securely or removed from site overnight.
16	LU22	
17	LU26	
18	LU24	
19	LU25	
Accidental Discovery Protocol		
20	LU09	
Upon Completion		
21	LU28	
22	Non standard	On completion of works, the area shall be restored to its original condition as far as practicable.
Administrative Conditions		
23	AD03	
24	AD04	
Table : Recommended draft conditions for discharge permit CRC041545 CRC031014		
No.	Consent Code	Details
Scope		
1a	DP01	<i>Irrigation season</i> <i>Waterbody from:</i> Sutton Stream <i>Waterbody to:</i> Lake Aviemore <i>Map reference:</i> NZMS 260 I40:9687-1954 <i>Discharge rate:</i> 55 litres per second

		<p><i>Plan:</i> "Waitangi Station Proposal A and B"</p> <p><i>Other:</i> The water shall be unused irrigation and stock water.</p>
1b	DP01	<p><i>Irrigation season</i></p> <p><i>Waterbody from:</i> Gibson Stream</p> <p><i>Waterbody to:</i> Lake Aviemore</p> <p><i>Map reference:</i> NZMS 260 I40:9551-1919</p> <p><i>Discharge rate:</i> 55 litres per second</p> <p><i>Plan:</i> "Waitangi Station Proposal A and B"</p> <p><i>Other:</i> The water shall be unused irrigation and stock water.</p>
2a	DP01	<p><i>Irrigation off-season</i></p> <p><i>Waterbody from:</i> Sutton Stream</p> <p><i>Waterbody to:</i> Lake Aviemore</p> <p><i>Map reference:</i> NZMS 260 I40:9687-1954</p> <p><i>Discharge rate:</i> 15 litres per second</p> <p><i>Plan:</i> "Waitangi Station Proposal A and B"</p> <p><i>Other:</i> The water shall be unused stock water.</p>
2b	DP01	<p><i>Irrigation off-season</i></p> <p><i>Waterbody from:</i> Sutton Gibson Stream</p> <p><i>Waterbody to:</i> Lake Aviemore</p> <p><i>Map reference:</i> NZMS 260 I40:9687-1954</p> <p><i>Discharge rate:</i> 15 litres per second</p> <p><i>Plan:</i> "Waitangi Station Proposal A and B"</p> <p><i>Other:</i> The water shall be unused stock water.</p>
Operation and Maintenance		
2	DP02	<i>Waterbody:</i> Lake Aviemore
3	LU13 modified	The discharge shall not occur in a manner likely to cause erosion of, or instability to, the banks or bed of Lake Aviemore; or reduce the flood-carrying capacity of the waterway.
4	DP03	
5	DP04	<i>Note applicable for both locations Not considered necessary</i>
Administrative Conditions		
6	AD03	Review
7	AD04	Lapse date

APPENDIX D: DEROGATION APPROVAL

APPENDIX E – DRAFT FARM ENVIRONMENTAL MANAGEMENT PLAN