Before the Commissioners appointed by Canterbury Regional Council

IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF Application CRC012047 by Otamatapaio Station (1993) Ltd for a Water Permit to divert, take & use surface water.

Section 42A Officer's Report of Claire Penman

Date of Hearing: 21 September 2009

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

INTRODUCTION

2. Otamatapaio Station (1993) Ltd (the applicant) has applied for a resource consent to:

   Divert, take and use up to 200 litres per second, but usually at a rate of 140 litres per second, from the Otamatapaio River with an annual volume of 2,442,840 cubic metres, for domestic supply, stock water and irrigation of 200 hectares of pasture and winter crop for stock at Otamatapaio Station, State Highway 83;

   See Attachment One for a map of the location of take and irrigation areas.

3. The applicant engaged Ms Haidee McCabe of Irrigation Resource Solutions Ltd (formerly of Attewell Irrigation Consultants Ltd) to prepare the application and assessment of environmental effects and to respond to further information requests on their behalf.

4. A 35 year duration is sought.

5. This is an application for a replacement consent, but with an increased irrigation area.

6. A site visit was undertaken during the audit of this application on 10 December 2008.

Background

7. Application CRC012047 was lodged on 30 March 2001 and formally receipted on 8 May 2001 and considered to be notifiable on 4 March 2003. Requests for further information have been sent covering effects including, but not limited to, water quality, landscape, irrigation volumes, minimum flows, intake design and derogation approvals.

8. Since the application was lodged, there have been a number of amendments. The total annual volume now being sought has been reduced from 3,139,500 cubic metres(as notified) to the currently proposed 2,442,840 cubic metres. The total rate of diversion has also been reduced from 370 litres per second (as lodged) to 250 litres per second (as notified) to the currently proposed maximum of 200 litres per second but usually at 140 litres per second, and micro hydro-electricity power generation is no longer proposed. The irrigation area was initially 345 hectares (as notified) but is now a total of 200 hectares. These final amendments were made in December 2008 with further clarification in June and August 2009.

9. Application CRC012049 is the associated discharge permit for this diversion application and is assessed in Report 29B. Application CRC012727 is the associated land use permit for this proposal and is also assessed in Report 29B. Both reports should be read together to get a full understanding of the proposal.

Previous consents

10. The consents that this application is replacing – WTK690251A.1, WTK690251B.1 and WTK690251C.1 – expired on 1 October 2001 (A copy can be found in Attachment Two). As this application was lodged between 3 and 6 months prior to the expiry of the above consents, the applicant is currently operating under s124 continuation.

11. These original consents provide for the diversion, take and use of water from the Otamatapaio River at "*a rate not exceeding 370 litres per second, but usually at a rate of 140 litres per second, for stock, domestic, irrigation and power generation purposes*".

12. The total irrigation area is identified in the consent as being 59 hectares, however, upon requesting renewal of this water right in 1984, the applicant identified that the irrigation area had increased to 73 hectares. This does not appear to have been recorded on the consent document. In addition to that 73 hectares, the remaining 127 hectares of the 200 hectares is also currently spray irrigated (near Clarks Creek), but does not appear to be provided for under this original consent, or any other existing consent.

13. The documents associated with the original WTK consents have been provided in a submission from the adjoining station owners in August 2007 (submission id#17391).

14. Those documents clearly outline that the maximum rate of 370 litres per second was for power generation purposes in the winter months, while the "usual" rate of diversion of 140 litres per second (up to 170 litres per second) would be in the summer months for irrigation and stockwater.

15. Therefore this proposal is seeking an increase in irrigation area but will maintain generally the same rate of abstraction that was provided for under the original WTK consents.

Additional consents

16. In addition, the applicant has in process application CRC021330 which is seeking to take water from Lake Benmore for irrigation of much of the same area of land. The plan attached in Appendix One identifies the respective irrigation areas for all applications.

17. CRC021330 is seeking a rate of take of 120 litres per second. CRC012047 was notified for 250 litres per second, a reduction from the previously consented and

applied for 370 litres per second. The applicant considered this total take, between the two consents, to be no more than what was originally consented, but to be taken partly from Lake Benmore instead of all from the Otamatapaio River.

18. However, CRC021330 was not part of the ministerial "call-in" as it had already been heard, but was adjourned at the time of the call-in, awaiting consultation between the applicant and Meridian Energy Limited (MEL). As a result of that consultation, consent CRC021330 has been considered as being a "top-up" for this application (CRC012047) in order to improve the reliability of supply for the irrigation system. MEL has provided derogation approval for only 252,000 cubic metres of water per year for CRC021330 on top of the 1,496,760 cubic metres that approval has been provided for under this application. At the time that this report was completed, a decision has not yet been made on application CRC021330. It is not part of this hearing.

19. Further discussion of the mitigation measures proposed in terms of efficient use between these two applications is contained later in this report.

Notification

20. Details of the public notification and wording are contained in Appendix 4 of the introductory s42A report (Report 1). This consent was notified in July 2003, the December 2003 "ministerial call-in" and August 2007 with 200 other applications for similar activities in the Waitaki catchment.

Submissions

21. In the 2007 public notification, 21 submissions in total were made on the water permit application CRC012047. Of these:

    (a) 2 were in support;

    (b) 17 in opposition; and

    (c) 2 neither supported nor opposed this application.

22. For the discharge and land use applications CRC012049 and CRC012727, a total of 17 submissions were received. Of these, 2 were in support, 13 in opposition, and 2 neither supported nor opposed the applications.

23. In the December 2003 "ministerial call-in", a total of 314 submissions were received on these applications.

24. In the July 2003 notification, a total of 12 submissions were made on CRC012047. Of these:

    (a) 4 were in support; and

    (b) 8 in opposition.

25. On the discharge application, a total of 10 submissions were received with 3 in support and 7 in opposition, and on the land use application a total of 11 submissions were received with 3 in support and 8 in opposition.

26. Details of submissions made in response to all applications which were publicly notified at the same time in 2007 and 2003 are contained in Report 1, Appendix 5.

Additionally, Table 1 below summarises submissions made individually on these applications, or submissions which raise particular concerns in relation to this proposal. Please note that all submissions hold equal importance, even if not specifically listed below.

27. Overall, the key effects of concern to submitters include effects on: ecosystems, water quality, allocations, minimum flows, natural character and landscape, efficiency and cultural values.

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Fish & Game NZ[1, 2, 3]	Important fish spawning tributary and abstraction may be affecting continuous flows to Lake Benmore	Oppose	Yes
Meridian Energy Ltd[1, 2, 3]	Concerned about water quality, metering and reasonable use	Oppose	Yes
Department of Conservation[1, 2, 3]	Potential effects on instream ecosystems given high cumulative rate of take from catchment; efficiency of use; duration	Oppose	Yes
CJ Munro[3]	Water needed for stockwater and winter feed crops	Support	No
KJ, DK & SR Anderson[1,3]	Existing user and applicant from Otamatapaio River. Concerned that replacement rate should only be 140l/s not 200l/s. Want flow sharing, suitable min flow site and conditions for secure stock supply provided.	Oppose	Yes
Grays Hills Station[3]	Irrigation is sustainable use of water	Support	Yes
A Campbell[3]	Reduction in flow of small streams, duration – suggest 5 years, would support water harvesting	Oppose	No
Waimate Rod & Gun Club[3]	River used to support trout fishery before irrigation abstractions, fish screens, oppose border-dyke irrigation	Oppose	Yes
NZ Salmon Angers Association[3]	Use for irrigation has caused river to go dry and affect angling opportunities and spawning	Oppose	No
Te Runanga o Waihao and Ngai Tahu[1, 2, 3]	Cultural significance of area to Ngai Tahu Whanui	Oppose	Yes

Table 1: Summary of submissions on application CRC012047

[1] August 2007
[2] Call-in 2003
[3] July 2003

DESCRIPTION OF THE PROPOSED ACTIVITY

28. The applicant proposes to divert, take and use water up to a rate of 200 litres per second, but usually at a rate of 140 litres per second, from the Otamatapaio River to irrigate an area of 200 hectares within a command area of approximately 425 hectares within Otamatapaio Station, and to provide stockwater and domestic supply (see photos of take point in Attachment Three). The split of the maximum rate of 200 litres per second is approximately 170 litres per second for irrigation, with 30 litres per second for stockwater and domestic supply for 3 dwellings. However, at the usual rate of abstraction of 140 litres per second, up to 30 litres per second may be used for

stock water, or the entire 140 litres per second for irrigation depending on requirements and any future conveyance upgrades.

29. Water will be conveyed from the diversion point through a race system that serves the current border-dyke system and a gravity-fed centre pivot at the lower end of the irrigation area. The whole property will be converted to spray systems to improve efficiency within 5 years of grant of this consent. An upgrade of the race system to pipes will be considered when the spray system is established and will depend on flow losses.

30. The discharge of unused irrigation and stockwater diverted through the race system discharges into Clarks Creek (see location in Attachment One) at a rate of up to 200 litres per second (refer to Report 29B for the s42A report on the discharge activity).

31. A land use consent has been applied for general maintenance works of the existing diversion structure and any upgrade of the fish screen that may be required (refer to Report 29B for the s42A report on the land use activity).

32. The proposed annual volume (and derogation approval) includes provision of 946,080 cubic metres for stock and domestic water for the property at a continuous rate of 30 litres per second. However, the applicant considers that the provision of stock and domestic water is covered by section 14(3)(b) of the RMA.

33. However, the applicant has not withdrawn this activity from the application. As such, I have included an assessment of the proposed stock and domestic water volume that is provided for in the derogation approval should the Commissioners decide that it needs to be covered by this consent.

34. The applicant proposes the following activities:

CRC012047

(a) To divert, take and use water from Otamatapaio River at or about map reference NZMS 260 H40:774-195.

(b) Water may be diverted as follows:

(a) at a rate not exceeding 30 litres per second at any flow in the Otamatapaio River;

(b) at rate not exceeding 140 litres per second when river flows in the Otamatapaio River are less than 600 litres per second but greater than 200 litres per second; and

(c) at a rate not exceeding 200 litres per second when river flows in the Otamatapaio River are greater than 600 litres per second.

(c) The volume of water diverted shall not exceed 2,442,080 cubic metres per year.

(d) Water shall be used for spray irrigation of up to 200 hectares of crops and pasture excluding dairy cows, within a command area of 425 hectares, stockwater and domestic supply to 3 dwellings.

(e) A total of 716,800 cubic metres of water per year will be used on the area identified in the attached plan as “Crossover irrigation area” in conjunction with consent CRC012330 should it be granted.

(f) A minimum flow equivalent to the 5-year 7-day low flow is proposed in the Otamatapaio River at the footbridge for the irrigation take, in accordance with Table 3, row (xxii) of the WCWARP.

(g) A fish screen will be installed on the intake, however, details of this have not been provided.

(h) The take of water will be metered.

LEGAL AND PLANNING MATTERS

Consent Requirements

35. An overview of 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 is provided in the introductory s42A report (Report 1). A summary of the requirements for this application is provided below:

TRP

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

WCWARP

(a) Rule 2, clause (1) – The applicant proposes the minimum flow of the 5-year 7-day low flow of 200 litres per second in the Otamatapaio River at the Footbridge (Table 3, row (xxii)) – refer to Report 2B for discussion on establishing the 5-year 7-day low flow. This minimum flow location is above all abstractions in the catchment. The 5-year 7-day low flow at the downstream end of the Otamatapaio River 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)).

(b) Rule 6 – The activity is within the allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam (see Report 3 for annual allocation and priority tables).

(c) Rule 15 - Classifying rule – discretionary activity

36. Overall, the proposed water permit is a **discretionary** activity under Rule 15 of the WCWARP (and TRP) and resource consent is required in accordance with section 14 of the RMA.

37. A consent under section 13 of the RMA to undertake works in the bed and banks of Otamatapaio River to maintain the intake is being sought (see Report 29B which deals with application CRC012727).

38. A discharge is associated with the proposal. Consent under section 15 of the RMA is being sought (see Report 29B which deals with application CRC012049).

Priority

39. There is no instantaneous allocation limit for takes from Otamatapaio River under Rule 2.

40. For Rule 6, annual allocation, refer to Report 3 for a full list of all existing consent holders and all applicants in priority order.

41. For this application the allocation limits are not exceeded and there are no priority issues

Derogation Approval

42. Meridian Energy Limited (MEL) has provided approval for Otamatapaio Station (1993) Ltd to derogate from its consents (see Attachment Four).

CONSULTATION

43. The applicant undertook consultation with Bog Roy Station (KJ, DK & SR Anderson), Meridian Energy Ltd (MEL) Fish & Game and Department of Conservation prior to the first notification of this application in July 2003.

44. I am unsure if any consultation has occurred since notification with any party.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

45. A description of the values of the Waitaki Basin and Lake Benmore in general is provided in the introductory s42A report (Report 1).

46. In addition to the above overall summary, the applicant notes the following:

    (a) Otamatapaio River arises from the Hawkdun and St Cuthbert Range, with Corbies Creek being the being the main tributary contributing to overall flows.

    (b) Upper catchment consists of mainly snow and short tussock vegetation on hill and steepland terrain, while the lower catchment consists of mainly low producing pastures on terraces, floodplains and rolling land and fans.

    (c) Otamatapaio River generally flows in one channel but at times braids into a number of channels in the lower reaches.

    (d) Below the Anderson's intake the river goes dry with significant flow losses over a 2km distance between the proposed intake and the Anderson's intake.

    (e) The river is important for spawning and irrigation will generally not coincide with these periods (April-May) so flows will be retained.

47. Fish and Game and other submitters[1], in their July 2003 submissions, provide further description of the Otamatapaio catchment:

[1] Submissions from Fish & Game, Waimate Rod & Gun Club, NZ Salmon Anglers, Canterbury Aoraki Conservation Board

(a) Otamatapaio River is an important spawning and juvenile rearing tributary of Lake Benmore for both brown and rainbow trout. It also provides some angling opportunity before flows are reduced.

(b) Total catchment area of the river is 184km^2. The hydrology of the catchment is reasonably well understood with flow recording beginning in 1988.

(c) It is recognised that flow losses to streambed gravels between the Bog Roy Station intake (Otamatapaio River take - CRC012019) and Lake Benmore occur when flows are less than 300 litres per second. However, in a natural state with no abstraction, the occurrence of flows less than 300 litres per second and subsequently a dry river bed would occur only 3% of the year.

(d) The Otamatapaio River, previously known as Maka tipua is of great significance to Maori, being pre-Mamoe. Before Lake Benmore, a Pa was sited at the river mouth, and rock drawings from this period were lost due to the creation of the lake.

48. The Otamatapaio Station Conservation Resources Report (2002), produced by the Department of Conservation for Tenure Review, provides additional information regarding the landscape and ecological values of the area.

(a) Otamatapaio Station covers an area of approximately 7917 hectares and lies between the Lake Benmore and the Ewe and Hawkdun Ranges, northwest of Otematata. It comprises nearly all the country from valley floor to ridge summit on the true left of the Otamatapaio River.

(b) The vegetation of the proposed irrigation area has been intensively developed and elsewhere has extensive *Hieracium*, briar and matagouri.

(c) There are no Recommended Areas for Protection (RAP) within proximity of the irrigation areas, however, adjacent to the irrigation areas are two SSWI and an area of national significance.

(d) Fish species identified in the Otamatapaio River, and other small tributaries were predominantly brown trout, upland bully and common bully with some recordings of long-jawed galaxias. Suitable habitat for several invertebrate species is provided in these waterways.

49. I also note that the proposed irrigation area is predominantly gently sloping and flat land at the base of the valley hills. Lower areas of the irrigation area will be visible to general traffic along State Highway 83.

50. Clarks Creek runs along the north-western boundary of the proposed irrigation area.

51. Lake Benmore, which the Otamatapaio River flows into, has a statutory acknowledgement in the Ngai Tahu Claims Settlement Act 1998.

52. In addition to this application, there is one other user of water within the Otamatapaio River catchment seeking replacement consents with lower priority (KJ, DR & SR Anderson – CRC012017 & CRC012019) and one other applicant for a new consent with lower priority (Otematata Station Ltd – CRC041033). The diagrammatic sketch in Attachment Five shows where all the applicants' activities are located relative to each other.

ASSESSMENT OF PROPOSED ACTIVITY

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

54. 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))

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

Adverse Effects	Applicant's assessment	My assessment	My Conclusion
Ecosystems	Consider with fish screen & min flow that effects minor.	Minimum flow as set out in Table 3 but minimum flow site at Footbridge not at bottom end of catchment as no surface flow. Further discussion on this below. Fish screen proposed.	Effects minor provided fish screen is suitable.
Other water users	Other users are downstream so may be effects on availability of water but min flow site upstream of all abstractions. Applicant and Andersons have flow sharing agreement above min flow, however, they request that the detail of this flow sharing regime is not included as a condition of consent to allow for an agreed approach to be flexible between the consent holders. Water meter proposed.	Water meter proposed. Flow sharing agreement between applicant and other abstractors has been established. This regime proposes to establish their own flow sharing regime through the mechanism of a water users group between flows of 450l/s and 200l/s. This is consistent with the approach outlined in Policy 25. However, it does not appear to include the abstractions from Corbies Creek and Glen Bouie Creek (within the Otamatapaio River catchment) as part of the flow sharing arrangement. As the proposed minimum flow site is upstream of the abstraction point, and an agreement has been reached between the users, there are unlikely to be any adverse effects on any existing water users.	Effects acceptable provided flow sharing agreement is suitable and conditions agreed to..
People, communities & recreational values	Part of substantially modified environment. While can be seen from SH83 is consistent with pattern of development in this area. Already developed pivot irrigator near SH83 so this consent will not result in any change in effects.	The lower irrigation area is visible from the State Highway. However, while it is irrigated, it does not appear to be covered by any consent. Cumulative landscape effects have not been dealt with by the applicant, but I note they are not within the "Outstanding Natural Landscape" areas. Conclusions of	Effects acceptable provided appropriate mitigation adopted in terms of landscape.

	Recreational & amenity effects have not been assessed.	Chris Glasson on landscape effects (Report 5) agree that effect on landscape from this proposal are acceptable provided suitable set-back distances are adhered to with respect to irrigation alongside SH83, otherwise there may be moderate adverse landscape effects. Appropriate min flow proposed to protect recreational use and aesthetic amenity of waterway. I also note that use of water for irrigation may result in improved productivity of the land & positive economic benefits for the wider community.	
Inefficient take and use	Applicant proposes 1,496,760m^3/yr for irrigation and has calculated Irricalc volume of 1,617,400 m^3/yr.	Using the methodology outlined in Report U05/15, a volume of 1,228,000m^3/yr would be more appropriate The applicant proposes to upgrade the part of the property in border-dyke to spray over time should this consent be granted but has not proposed a reduced annual volume to reflect this.	Effects may be more than minor
Water quality	MWRL report for cumulative effects.	Not satisfied given conclusions in s42A reports on cumulative effects (Report 4A-F). There are a number of submitters to be heard on this matter.	Effects may be more than minor.
Tangata Whenua values	No assessment provided.	Submissions concerned about effects on Tangata Whenua values & have not been addressed by applicant.	Effects uncertain.

Adverse effect on ecosystems

56. There are a number of submissions concerned with minimum flows and protecting fisheries values in all rivers and tributaries in the Upper Waitaki catchment (see Appendix 5 of Report 1). Several submissions specific to these applications were received when CRC012017 was first notified in July 2003 before the call-in and before the WCWARP was prepared.

57. Fish and Game NZ lodged several submissions on this application and describe in detail the Otamatapaio catchment, its importance for fisheries values and the pressure that existing and proposed water abstraction is placing on instream values (see paragraphs 3 of Fish and Game's July 2003 submission (submission id #784) and paragraphs 45 to 49 of Fish & Games August 2007 submission (submission id #16907)).

58. There was no minimum flow on the original consent. CRC have assessed the minimum flow on the Otamatapaio River (not Corbies Creek) as being 200 litres per second at the Footbridge which is equivalent to the 5year 7day low flow, in line with Table 3, row xii of the WCWARP. The applicant proposes this minimum flow. However, the location of the minimum flow site is not at the "*downstream end of the*

catchment". Instead the proposed minimum flow site is a well established recorder site located approximately 5 kilometres upstream of the Otamatapaio River and Corbies Creek confluence, and 3 kilometres upstream of the nearest downstream abstraction.

59. 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 approximately 200 metres downstream of the Corbies Creek confluence (below all abstractions).

60. However, Fish & Game in their submissions commented that flows would not go subsurface for more than 3% of the time, if there were no abstractions occurring within the catchment. No record of flows has been provided in the submissions to support this statement. Since the submissions were received, I understand that discussions have been had with representatives of Fish & Game (Frank Scarf), and that as a result of these discussions, Fish & Game are satisfied with the proposed minimum flow and monitoring location. I note, however, that I have received nothing in writing to this effect.

61. Mr Dave Stewart (hydrologist engaged by ECan), considers that given the catchment suffers from significant losses downstream of the Corbies Creek confluence, the best site for measuring and recording a minimum flow is at the Footbridge upstream of all abstractions. He considers the minimum flow assessed at this point best represents the 5-year 7-day low flow for the Otamatapaio River and would naturally be "zero" if it were to be measured at SH83.

62. Mr Adrian Meredith (surface water scientist, ECan) has also provided comment on the location of the proposed minimum flow site and proposed minimum flow. He considers that for the periods of the summer when peak abstraction would be occurring and when flows would be lowest, the proposed minimum flow (200 litres per second) and monitoring site is suitable for protecting those matters outlined in Policy 4. Mr Meredith considers that in the shoulder irrigation season, when trout and salmon spawning is likely to occur, it would be beneficial to have higher flows in the order of 400 litres per second to ensure surface flow is retained at SH83.

63. While it may be desirable to have a minimum flow that is higher in the shoulder seasons, the natural flows in the river at this time are likely to be above the minimum for most of the time. I also note that as the assessed 5-year 7-day low flow in terms of compliance with Table 3 has been set at 200 litres per second, the application would be consistent with the intention of the WCWARP in setting minimum flows. In addition, the Otamatapaio River is not considered to be a "small stream" (one that has a mean annual low flow of less than 100 litres per second), and cannot therefore be restricted via Policy 7.

64. I note that year-round flow is retained in the Otamatapaio River upstream of the Footbridge and that will continue to provide instream habitat for native fauna.

65. While sustaining a higher minimum flow in the shoulder irrigation period may afford a higher degree of protection to fish habitat, particularly for spawning (Policy 4(e)), this must be balanced against, along with other matters, consideration of naturally occurring dry river or stream beds (Policy 4(j)). While the proposed minimum flow of 200 litres per second, measured at the Footbridge, may not ensure a surface flow is retained at the downstream end, as the river naturally goes dry, I do not consider that this would result in unacceptable effects on instream habitat.

66. There is no allocation limit set for this water body in Table 3, row xxii. The mean flow, at which point flow sharing must occur, is assessed by CRC as 1,120 litres per second. As this consent, and others with lower priority in the Otamatapaio catchment total only 420 litres per second, there is no requirement for flow sharing to occur. However, I consider that a reduction regime for all abstraction between flows of 450 litres per second and 200 litres per second is appropriate to ensure that the flows are not reduced below the minimum downstream of the monitoring site. But this does not take into consideration the abstractions from the Corbies Creek catchment. The applicant may wish to address this at the hearing. The reduction in flows will be undertaken via a water users group as proposed by the applicant. However, details of this have not been put forward by the applicant as part of their application.

67. The applicant proposes to screen fish on the intake via a submerged gallery. The applicant has not yet specified the details of the minimum requirements for fish exclusion. In order to mitigate effects on ecosystems I would recommend a minimum depth of 2 metres below the stream bed.

68. While there are still submissions which are concerned with ecological values and minimum flows, this has been adequately addressed above. I consider that in setting minimum flows for the WCWARP, protection of instream ecological values has been taken into account. If the applicant proposes to install a suitable fish exclusion gallery as discussed above, and given they propose to cease abstraction in accordance with the environmental flow and allocation limits established for the Otamatapaio catchment as set out in the WCWARP, I consider the effects of the proposed diversion and take on ecosystems will be minor.

Adverse effects of inefficient take and use on other users

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

Irrigation volumes

70. The applicant proposes to take water at a rate not exceeding 200 litres per second, and use up to 1,496,070 cubic metres of water per year for irrigation of 200 hectares. As this is a replacement consent, the irrigation volume has been determined in conjunction with Rob Potts for MEL as 15,000 cubic metres per year for 73 hectares for border-dyke irrigation (based on the previously consented irrigation area).

71. In reference to the above calculation of irrigation volumes based on 15,000 cubic metres per year for border-dyke, I note that the applicant is proposing to convert to spray irrigation to replace the historic border-dyke system over the first couple of years of consent and use it over an increased area of 200 hectares.

72. I note that at 80% efficiency, with the rate of water applied for, the maximum application depth would be 6.9 millimetres per day. The applicant therefore considers that given border systems are typically less than 50% efficient and the expected evapotranspiration rates are likely to be over 6 millimetres per day in the peak summer months, that the proposed volume and rate is efficient.

73. I consider that once converted to spray, the proposed rate of take (200l/s) would be more than that required for an efficient irrigation system over the proposed 200 hectares particularly as from my understanding of irrigation infrastructure, it is very costly for spray systems to apply water at the proposed rate of 6.9 millimetres per day or higher.

74. The applicant however notes that the "usual" rate for irrigation will be 140 litres per second which equates to a daily application rate of 4.8 millimetres per day at 80% efficiency which is, in my opinion, suitable for spray irrigation in this area. They have identified that off-line storage may be utilised for times when 200 litres per second is being diverted. I consider that this rate should be specified for the use (not the divert) across the 200 hectares as a condition of consent in order to satisfy me that the irrigation will be efficient.

75. In terms of assessing the proposed annual volume against Policy 16, the applicant undertook an analysis using the Irricalc methodology, which they consider incorporates the requirements in the WCWARP. The Irricalc outputs determined that a recommended annual volume for the proposed irrigation area would be 1,617,400 cubic metres per year. As the applicant is proposing a volume less than this, they consider that it would be efficient and has taken into consideration the policies of the WCWARP.

76. As a comparison, I have used CRC's GIS system and the method outlined in Report U05/15 to determine an appropriate annual volume for spray irrigation of the proposed area in accordance with Policy 16(c). I based this calculation on intensive land use with 60% light soil (PAW <75mm) and 40% medium soil (PAW 75-110mm), and Effective Summer Rainfall of 175mm.

77. Using the above figures, an annual volume of 1,228,000 cubic metres would be considered an efficient volume of water for spray irrigation of this area.

78. I note that this methodology (Report U05/15) assumes an irrigation efficiency of 80% which is largely achievable for modern spray systems (consistent with Policy 16(b)) and takes into consideration on-site physical and climatic factors (Policy 16(a)).

79. Given the above discussion, I am not satisfied that the annual volume being sought by the applicant of 1,496,070 cubic metres per year would be reasonable and appropriate for the area and method of irrigation proposed

80. At the time of writing this report no supporting information for the Irricalc methodology had been provided to CRC in support of the applications proceeding to this hearing. There are uncertainties surrounding its suitability for use in the Waitaki catchment, so I cannot comment any further on whether the proposed annual volume is appropriate when taking into consideration the policies in the WCWARP.

81. I also consider that the standard efficiency condition (WP05) is appropriate to ensure that water is not applied to the soils above their average water holding capacity, nor onto unproductive areas of land.

Stockwater volumes

82. Approximately 30 litres per second (of the maximum 200 litres per second being sought) is attributed to stockwater requirements. The applicant has outlined that they do not require consent for stock water as they are relying on their rights prescribed in the RMA under s14(3)(b) which allows for the taking of water for "*the reasonable needs of an individual's animals for drinking water"* as a permitted activity (s92 response dated 5 December 2008).

83. However, the applicant has detailed their stockwater requirements as follows:

    (a) 200 dairy cattle @ 70 litres per day = 5,110 cubic metres per year

(b) 150 cattle @ 45 litres per day = 2,465

(c) 7000 sheep @ 3 litres per day = 7,665 cubic metres per year

(d) Multiplied by 1.2 in accordance with Schedule WQN11 = 18,300 cubic metres per year

84. The applicant notes that this volume (18,300 cubic metres) is less than the proposed annual stockwater volume of 946,080 cubic metres. This is because the proposed volume is based on a continuous 30 litres per second to provide the required head for conveyance along the race network and race losses of approximately 10 litres per second over its 3.5 kilometre length.

85. While the applicant does not consider that a consent is required for the stockwater component, I consider that the proposed rate and volume for stockwater of 946,080 cubic metres per year would be appropriate given the current type of open race distribution system that it flows through. However, I recommend a condition of consent requiring all reasonable attempts to be made to improve efficiency of the current conveyance system and upgrades to pipe where practicable.

Conveyance / distribution efficiency

86. The applicant has allowed for race losses of approximately 10 litres per second for the conveyance system. The applicant has commented on this in relation to Policy 19 of the WCWARP. They note that this system has been established for a long time and as water is required for a border-dyke system it must flow through races rather than a piped network. The applicant proposes that in time they will progress to pipe the system where there are significant losses identified as the system is converted to spray irrigation in order to gain enough pressure for a gravity feed system. They also consider that the reduction in rate from 50 litres per second to 30 litres per second is already a significant improvement and the imposition of an annual volume will mean the applicant will operate the scheme as efficiently as possible given the importance of every cubic metre of water.

87. I consider that the applicant's analysis of the conveyance efficiency is appropriate and that the race network appeared to be reasonable well maintained during my site visit. However, I consider that the volume of water conveyed through the race system in order to provide stock and domestic water may be excessive and that all efforts should be made to improve the system efficiency to allow a reduction in the flow rate required for stock and domestic supply.

Efficiency conclusions

88. I recommend an annual volume for irrigation and stock water of 1,068,800 cubic metres. In terms of stock water, I recommend a condition of consent requiring all reasonable attempts to be made to improve efficiency of the current conveyance system and upgrades to pipe where practicable.

89. Given the above discussion, I cannot be satisfied that that the proposed seasonal allocation is reasonable for the proposed irrigation area.

Adverse effect of use on water quality

Local effects

90. In terms of effects at the local scale, as this is partly a replacement application, the applicant has considered that effects on water quality will continue to be minor. I do

not agree that this is an appropriate starting point for the assessment of the water quality effects associated with these applications. In my view there can be no presumption that the effects of the use of water authorised under the previous consents will continue to be authorised under any new consent.

91. They noted in their s92 response dated 15th December 2006, that water quality tests would be carried out on the discharge into Clarks Creek to determine if there were any effects from the current system on water quality. To date, any results obtained have not been provided to CRC. The applicant also refers to a report by Dr P Espie regarding irrigation in the Mackenzie Basin (2004) which discusses the ability of modern centre pivot systems to minimise nutrient depletion and water contamination.

92. I note that the current system is border-dyke, with a likely conversion to spray systems, including but not exclusively centre pivots, planned for the coming years. In order for this assessment and reference to be valid to this application, I would recommend a condition on consent requiring a conversion to spray systems within 5 years of grant of consent.

93. I also note that only 73 hectares of irrigation is currently consented, thus the additional 127 hectares would be considered "new" irrigation with respect to any water quality assessment.

94. No nitrates assessment for the property has been provided and depth to groundwater is unknown. I note that Clarks Creek runs along the north-west boundary of the proposed irrigation area and that some form of buffer strip along its length may be appropriate to protect the surface water quality from runoff and leaching of nutrients as a result of irrigation. Conditions to this effect have not yet been provided by the applicant.

95. No submissions were received on the local effects on water quality of this proposal.

96. Given the above, I cannot be satisfied that the adverse effects on water quality from the proposed activity will be minor.

Cumulative effects

97. An assessment of cumulative effects on water quality was requested to address the above concerns and in reference to Policy 13 of the WCWARP. The applicant has been involved with the study by Mackenzie Water Research Ltd (MWRL) on cumulative effects within the catchment.

98. There are a number of submissions which identify water quality as a result of land use intensification as a concern, including a submission from Meridian Energy Ltd.Those submitters and their concerns are outlined in more detail in Appendix 5 of Report 1.

99. 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.

100. 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

101. The applicant has not provided an assessment of the effects of the proposed activity on cultural values. The sites of the proposed activities are within the rohe of Te Runaka O Waihao, Te Runaka O Arowhenua and Te Runaka O Moeraki. All three runanga and Te Runanga O Ngai Tahu were served notice of the applications in August 2007.

102. Submissions were received in opposition to this application from Te Runanga o Ngai Tahu and Ngai-Tahu Mamoe Fisher People. The concerns of the Ngai-Tahu Mamoe Fisher People seem to relate specifically to the resource consent process, rather than this specific application.

103. Te Runanga o Ngai Tahu have raised concerns relating to mixing of waters between catchments, deterioration of water quality, dewatering and residual flows, changes to sediment flow and deposition and impacts on sites of cultural significance.

104. Lake Benmore, which the Otamatapaio River flows into, has a statutory acknowledgement in the Ngai Tahu Claims Settlement Act 1998.

105. Given that there are a number of submissions which identify cultural values, I cannot determine the scale of the actual and potential effects on the cultural values of the area.

Conclusion

106. With regard to s104(1)(a), the actual and potential effects of the activity 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) The localised and cumulative impacts on water quality;

    (b) Whether the annual volume requested represents an efficient use of water;

    (c) Whether the applicant's flow sharing regime is suitable;

    (d) The effects on cultural values in the area.

107. The impacts on landscape values and ecosystems can be mitigated, if the recommended conditions requiring appropriate separation distances and installation of a suitable fish screen are included, should the Commissioners decide to grant consent for this activity.

Statutory Assessment (s104(1)(b))

Regional Policy Statement (RPS)

108. 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.

109. Of significance to this application is 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)

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

Objectives

111. Objectives 1 is a key objectives in relation to the proposed taking of water. I have considered whether Objective 1 can be met in terms of sustaining the quality of the river and surrounding environment. While the proposal may not entirely be consistent with Objective 1 and the associated policies (particularly policy 13 relating to water quality and policies 15 & 16 relating to efficient use), it is difficult to determine if the inconsistencies are significant enough to make the proposal contrary to Objective 1.

112. The proposed activity will impact on the matters outlined in Objective 1. In particular, (a) relating to spiritual and cultural values, given that effects on Tangata Whenua have been raised as a concern by submitters and have not yet been addressed by the applicant, and (b) life-supporting capacity of river and ecosystems, given that the potential adverse effects on water quality remain an outstanding concern. The cumulative impacts of the proposal on natural character and landscape values of the catchment (c) may be addressed by requiring appropriate buffer distances between the irrigation area and sensitive areas, such as State Highway 83. There have been a wide range of people who have submitted against the proposed activity due to concerns about impacts on these values. Given this, that no adequate mitigation has been proposed by the applicant, I cannot determine whether the proposed activity is contrary to these values at the time of preparing this report.

113. Objective 4 aims to achieve a high level of technical efficiency in the use of water. Sufficient information is not yet available to confirm that the annual volume of water requested is reasonable to meet the demands of the soils within the irrigation area, therefore, the proposal may not be consistent with Objective 4.

114. The proposed activity is within the allocation limits set by the WCWARP and will not affect the reliability of supply to other users taking water from Otamatapaio River given the applicant's proposed conditions, therefore, it may be considered to be consistent with Objectives 2 and 5 of the WCWARP.

Environmental flow and level regimes

115. Policies 2 – 8 deal with minimum lake flows for the Otamatapaio River.

116. Policies 3 and 4 outline the values that must be maintained in the water bodies, and a number of matters that must be considered when setting an environmental flow and level regime, and are particularly relevant to this application. Policy 4 has been discussed in more detail in the assessment of effects section. As the applicant is proposing to adopt the minimum flow required by the WCWARP, I am satisfied that the proposal is consistent with these policies.

Policies on water quality

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

Policies on efficient and effective use

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

119. Policy 15 ensures that the rate of abstraction and the annual volume is reasonable for the intended use. As discussed in the assessment of effects section of this report, I am not satisfied that the annual volume is reasonable for the intended use.

120. Policy 16 provides guidance for determining reasonable and efficient use for agriculture activities. As discussed in the assessment of effects, I am not satisfied that the requested volume of water is required under these consent applications.

Replacement consents

121. Policy 28 provides guidance as to matters which must be considered when deciding whether to grant or refuse an application for replacement of existing consents.

122. These include consideration of attempts to meet the efficiency expectations of the plan, recognition of the value of the investment by the consent holder and maintenance of the consent in any allocation limits and priority bands if granted.

123. I consider that the applicant has made attempts to show that they are meeting the efficiency expectations of the plan, however, as conclusions cannot yet be made on the annual volume, I cannot conclude the proposal is consistent with this policy.

Policies for the tributaries of Lake Benmore

124. Policy 41 deal with the environmental flow regime in the tributaries of Lake Benmore. Policy 41(ii) enables access to water for the activities identified in Objective 2, to the extent consistent with Objective 1.

125. The applicant is proposing to adopt the minimum flow equivalent to the 5-year 7-daylow flow as required by the plan, and is within the allocation for agricultural and horticultural activities identified in Rule 6, Table 5, therefore, the proposal is considered to be consistent with this policy.

Conclusion

126. 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 the applicant has not proposed any mitigation, and policies 15 and 16 due to effects of inefficient use. 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))

127. 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*[2] is relevant to this application (see discussion in Report 1).

PART II PURPOSE AND PRINCIPALS

Purpose of the RMA (s5)

128. 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."

129. Section 5(2) defines the meaning of "sustainable management", which is to manage resources in a manner that provides for the social, economic and cultural wellbeing of communities while protecting the life-supporting capacity of the environment for the needs of future generations. This section also states that this should be achieved while "safeguarding the life-supporting capacity of water" and "avoiding, remedying or mitigating" the adverse effects of activities.

130. The proposal will allow the development of land to occur, which may provide for the economic and social well-being of the community. The applicant however has not proposed measures to "safeguard the life-supporting capacity of water" and "avoid, remedy or mitigate" the potential impacts on surface water quality and landscape values as required in Section 5(2)(c), or provided information to confirm that the proposed annual volumes requested are reasonable and consistent with the objectives of Section 5(2)(a), which aims to provide for the needs of future generations.

Matters of National Importance (s6)

131. Sub-sections (a), (b) and (e) of Section 6 of the RMA are particularly relevant to this application. The proposal will include a change in visual aesthetics in an area of high amenity and may result in effects on water quality and ecosystems that have not been adequately mitigated. The applicant has not yet proposed measures to address these effects. The applicant has not assessed the impacts on cultural values, and runanga have submitted in opposition on this application.

Other Matters (Section 7)

132. 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.

133. Sub-sections (b), (c) and (f) are specifically relevant to this application and should be considered when deciding the acceptability of effects resulting from the proposed take and use of water from the Otamatapaio River. Section (b) relates to the efficient use of water and as discussed above there is currently insufficient conclusive evidence to confirm that the applicant's requested annual volume is reasonable.

[2] [2004] NZMRA 251

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

135. 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)

136. 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 Moeraki Runanga. Runanga were informed separately when ECan received the application and later when the application was notified. Submissions have been received from Ngai Tahu and runanga on this application.

RECOMMENDATION

Grant or Refuse

137. Section 104B applies to any application which is a discretionary or non-complying activity and states that the consent authority may grant or refuse the application and may impose conditions under s108.

138. The proposal may result in economic and social benefits to the wider community through improved pasture production, and the applicant has recognised the natural values of the river by proposing to adopt the minimum flow in Table 3.

139. There are however, a number of outstanding issues associated with this proposal as listed below:

(a) *Water quality* - No impact assessment or measures to address the water quality impacts that could arise from irrigation at this site. Given the conclusion regarding the potential cumulative adverse effects on water quality, it is premature to make any recommendation to grant or refuse this application as it relates to cumulative water quality;

(b) *Efficient and reasonable use* – There is a lack of conclusive information to support the Irricalc methodology used and subsequently the annual volume requested in accordance with the direction provided by Policies 15-20 of the WCWARP;

(c) *Ecosystems* – The applicant has proposed a fish screen but has not included any details of what this will entail, a reduction in flows above the minimum will be required to sustain the minimum flow;

(d) *Landscape and amenity* – The irrigation area is close to sensitive amenity areas and will be visible to the public using the State Highway;

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

(f) *Other users* – An appropriate flow sharing regime needs to be established and agreed on.

140. I have recommended conditions to address (c) above, however having considered all relevant matters outlined in section 104(1), I am not satisfied that the actual and potential effects of the proposed activity are acceptable due to concerns regarding the effects on water quality, the efficient use of water, flow sharing, landscape and cultural values (listed as (a) (b) (d) (e) and (f) above). On this basis, I cannot recommend that this application (CRC012047) be granted.

RECOMMENDED CONDITIONS

141. Comments on the mitigation proposed by the applicant are provided earlier in this report.

142. If the Commissioners decide to grant this application, a list of conditions that are usually included in a water permit are provided in Appendix 6 of the introductory s42A report. A list of draft recommended conditions specific to this application is provided below.

143. It should be noted that the investigating officer is not satisfied that these conditions would adequately mitigate that adverse effects that are of key concern, as discussed in paragraph 139 above.

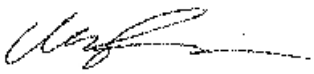
Table 3: Recommended draft conditions for water permit CRC012047

No.	Condition Code[3]	Details
Divert & Take		
1	WP01 (modified)	*Name of waterbody*: Otamatapaio River *Map reference:* NZMS 260 H40:774-195
Rate & Volume		
2		Water may be diverted as follows: (a) at a rate not exceeding 30 litres per second at any flow in the Otamatapaio River; (b) at rate not exceeding 140 litres per second when river flows in the Otamatapaio River are less than 600 litres per second but greater than 200 litres per second; and (c) at a rate not exceeding 200 litres per second when river flows in the Otamatapaio River are greater than 600 litres per second; and (d) with a volume not exceeding 2,442,080 cubic metres between 1 July and the following 30 June.
Use		

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

3	WP04	*Type of irrigation:* Border-dyke and spray irrigation *Number of hectares:* 200 hectares *Use:* crops and pasture for grazing stock excluding milking dairy cows *Plan No: "*CRC012047" (Attachment 1)
4		An annual volume not exceeding 716,800 cubic metres per year shall be used on the 112ha area identified as "Crossover irrigation area" on attached plan "CRC012047" Attachment 1 in conjunction with CRC021330, if granted.
5	WP05	Efficiency of use
6	WP06	Backflow preventer
Mitigation		
7	WP07	*Name of waterbody:* Otamatapaio River *Map reference:* NZMS 260 H40:759-168 *Minimum flow:* 200 litres per second *Flow graph:* See Report 2A
8	WP09	Fish screen – or gallery with minimum depth below river of 2 metres
9		The consent holder shall ensure water races used to convey water diverted in terms of this permit are well maintained to minimise losses.
10		The consent holder shall cease irrigation using border-dyke systems and convert the property to spray irrigation within 5 years from the date of commencement of this consent.
Measuring & Metering		
11	ME03	Open channel
12	ME04	
13	ME05	
14	ME06	
15	ME07	*Waterway*: Otamatapaio River
16	WP08	*Waterway:* Otamatapaio River *Map reference:* NZMS 260 H40:759-168 **To be used with ME03-05**
Administrative Conditions		
17	AD01	
18	AD02	*Number of working days:* 5

		Month 1: March *Month 2:* July *Waterbody:* Otamatapaio River *Cross reference to Condition:* 7
19	AD04	Lapse date

Signed:  Date: 31st August 2009

Claire Penman
Consents Investigating Officer

REFERENCES

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

Canterbury Regional Council 2004. Proposed Natural Resources Regional Plan – Chapter 5: Water Quantity.

Canterbury Regional Council 2004. Proposed Natural Resources Regional Plan – Chapter 6: Beds and margins of Lakes and Rivers

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.

Department of Conservation 2003. Bog Roy Station Tenure Review - Conservation Resources Report.

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

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

Ministry for the Environment, 2006. Waitaki Catchment Water Allocation Regional Plan.

Te Maire Tau, Anake Goodall et al., 1990. Te Whakatau Kaupapa: Ngai Tahu Resource Management Strategy for the Canterbury Region. ISBN: 0-908925-06-9.

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

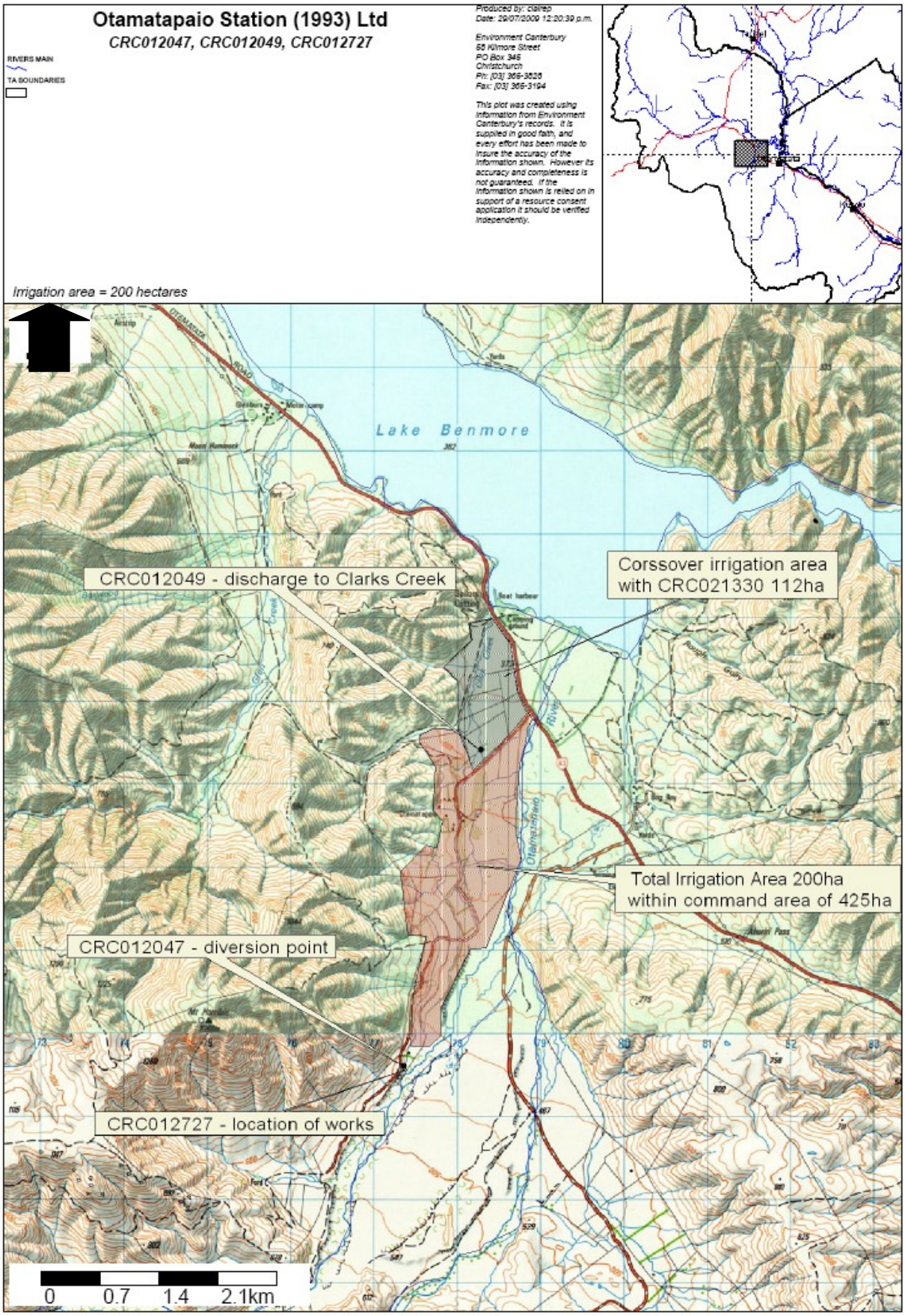
Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation Regional Plan. ISBN: 0-9582620-7-1.

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

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

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

ATTACHMENT ONE – LOCATION MAP



ATTACHMENT TWO – PREVIOUS CONSENTS

RecordNo WTK690251A.1

Consent Summary

Type Consent
Souce Full Transfer
PermitType Water Permit
FileNo CO6T/01165

ClientID 7064 **ClientName** Otamatapio (1993) Limited

To to divert water from Otamatapaio River at map reference S117:758-264 (H40:774-195) at a maximum rate of 370 litres per second, but usually at a rate of 140 litres per second, for stock, domestic, irrigation and power generation purposes.

Location State Highway 83, OTEMATATA

Status Continuation until new application determined

Events

16/Feb/1971	Given Effect To
17/Feb/1971	Lapse Date if not Given Effect To
17/Dec/1993	< Consent Transferred
23/Mar/2001	1st Expiry Reminder
01/Oct/2001	Consent Expires
01/Oct/2001	Sec 124 continuation starts

Subject to the following conditions:

1)

RecordNo WTK690251B.1

Consent Summary

Type Consent
Souce Full Transfer
PermitType Water Permit
FileNo CO6T/01165

ClientID 7064 **ClientName** Otamatapio (1993) Limited

To to take water from water races between map references S117:758-264 (H40:774-195) and S117:769-305 (H39:783-233) for stock, domestic and irrigation water supply to 59 hectares at a maximum rate of 370 litres per second, but usually at the rate of 140 litres per second.

Location State Highway 83, OTEMATATA

Status Continuation until new application determined

Events

16/Feb/1971	Given Effect To
17/Feb/1971	Lapse Date if not Given Effect To
17/Dec/1993	< Consent Transferred
23/Mar/2001	1st Expiry Reminder
01/Oct/2001	Consent Expires
01/Oct/2001	Sec 124 continuation starts

Subject to the following conditions:

1)

Consent Summary

RecordNo **WTK690251C.1**

Type Consent
Souce Full Transfer
PermitType Water Permit
FileNo CO6T/01165

ClientID 7064 *ClientName* Otamatapio (1993) Limited

To to use water for power generation at map reference S117:768-298 (H39:782-226) at a maximum rate of 370 litres per second.

Location State Highway 83, OTEMATATA

Status Continuation until new application determined

Events

16/Feb/1971	Given Effect To
17/Feb/1971	Lapse Date if not Given Effect To
17/Dec/1993	< Consent Transferred
23/Mar/2001	1st Expiry Reminder
01/Oct/2001	Consent Expires
01/Oct/2001	Sec 124 continuation starts

Subject to the following conditions:

1)

ATTACHMENT THREE – PHOTOS OF RIVER & INTAKE SITE TAKEN ON 10 DECEMBER 2008 BY CLAIRE PENMAN

Diversion race downstream of intake

Otamatapaio River at Footbridge (minimum flow site)

Intake pipes in Otamatapaio River

Otamatapaio River looking upstream from diversion point

Intake point

Looking across Otamatapaio River flats downstream of intake

Irrigation race not currently in use

Discharge into Clarks Creek

ATTACHMENT FOUR – DEROGATION APPROVAL

meridian

22 July 2009

Gillian Ensor
Environment Canterbury
PO Box 345
Christchurch

Dear Gillian

Application by Otamatapaio Station (1993) Limited

1 We write to you to outline the basis of Meridian Energy Limited (*Meridian*) providing its derogation approval of the application numbered CRC012047 by Otamatapaio Station (1993) Limited (*Otamatapaio*). We refer to the letter to ECan from Chapman Tripp dated the 26th of June 2008 setting out Meridian's position on derogation approvals generally.

2 Meridian has read and considered the application CRC012047 by Otamatapaio and provides derogation approval on the following basis:

2.1 Otamatapaio shall only be entitled to take and use water from the Otamatapaio River (at location H40: 774-195) at a maximum rate of 200 litres per second for the irrigation of 200 hectares and provision of stockwater identified in the application;

2.2 the annual volume shall not exceed 2,442,840 cubic metres per annum (of which 946,000 cubic metres per annum is stockwater) and this shall be allocated as an agricultural and horticultural activity upstream of Waitaki Dam but not upstream of the outlets of the glacial lakes under Rule 6, Table 5 of the Waitaki Catchment Water Allocation Regional Plan;

3 Any amendment or modification to the above will require further written derogation approval from Meridian. On the same basis any subsequent variation, transfer or replacement application that is relevant to the volume or location of the take may also require further approval.

4 This letter is not an affected party approval to the consent application under section 94 of the Resource Management Act. Meridian may choose to submit in support or oppose the application on grounds which do not relate to the derogation of its rights, or not to submit at all.

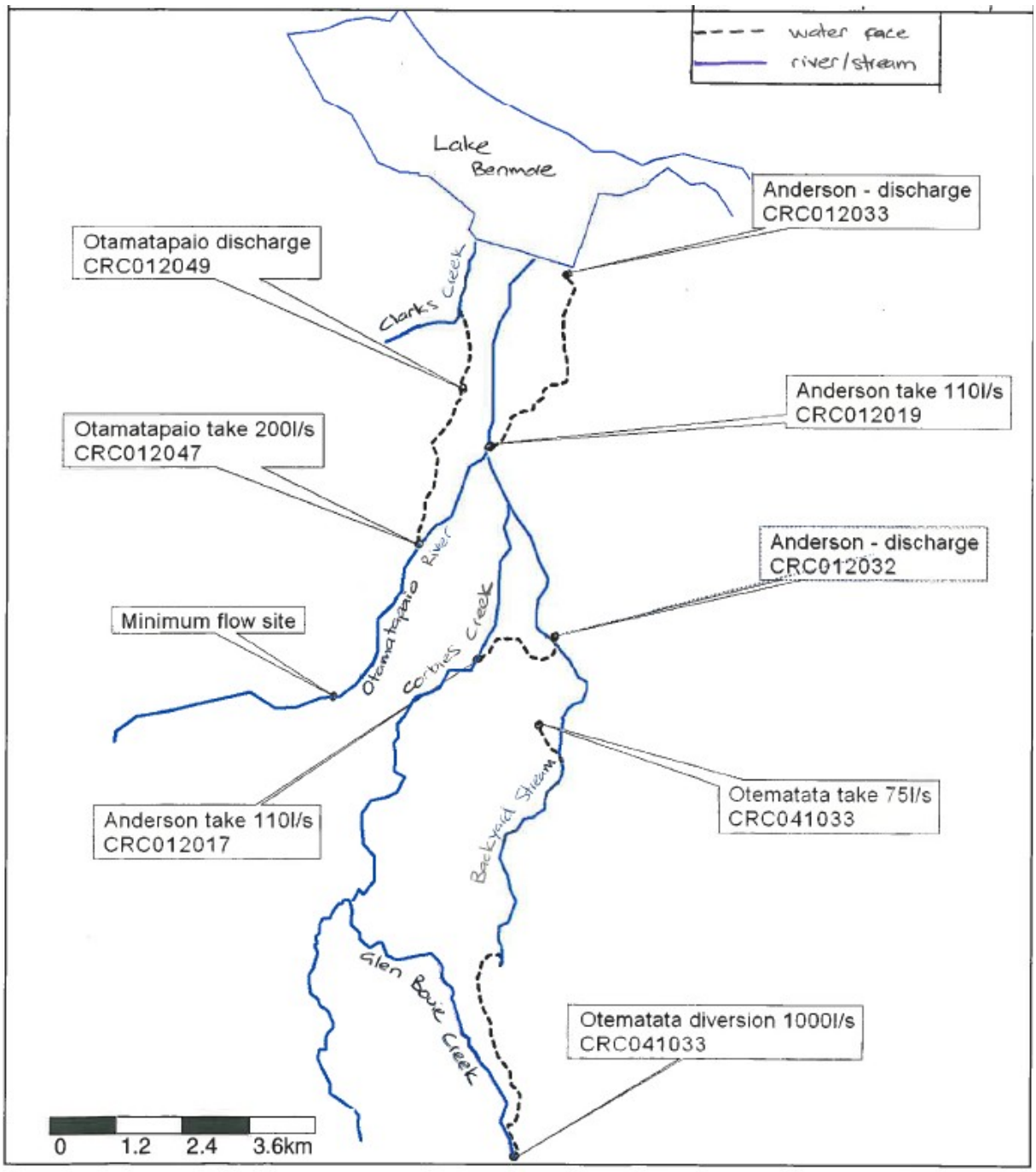
5 This letter does however record (subject to the above) that Meridian will not oppose the granting of the Otamatapaio application on the ground that it will reduce the quantity of water available under Meridian's existing consents.

6 Please advise if any basis for Meridian's approval outlined in paragraph 2 will not be met by the resource consent.

Yours sincerely

Richard Turner
Planning Manager – Natural Resources

ATTACHMENT FIVE – DIAGRAMMATIC SKETCH OF APPLICATIONS IN OTAMATAPAIO CATCHMENT



ATTACHMENT SIX – OBJECTIVES & POLICIES

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

Policy 18	Requiring the volume of water on existing consents to reflect actual use.	Through the replacement of the existing consent an annual volume will be specified in the conditions
Policy 19	Encouraging piping or sealing of water distribution systems to minimise water loses and maintain water quality.	The proposed conveyance via open water race will mean here is some water loss via evaporation, but the applicant considers it will be upgraded within the first 5 years as the borders are replaced with a spray system.
Policy 20	Promoting the integration of multiple uses of water.	Multiple uses of water are not proposed
Policy 21	Requiring the installation and use of water-measuring and recording devices.	A suitable water metering device is proposed to be installed
Policy 23	Restricting taking or diverting of water (surface and shallow and connected groundwater) upstream of Lake Benmore during times of low flow except for essential uses	A suitable minimum flow is proposed for restricting the abstraction of water in times of low flow.
Policy 25	Allowing for sharing of available water within a water-users group	A flow sharing agreement has been reached between the water users in the Otamatapaio catchment.
Policy 26	Setting priority bands for upper or mid-catchment tributaries and the Ahuriri catchment.	Priority bands have not been established for this catchment
Policy 27	Giving priority during low flows or levels to integrated schemes where water used for more than one purpose.	There are no integrated schemes with this sub-catchment
Policy 28	Considerations for granting or refusing replacement consents	While there has been considerable investment by the consent holder, I do not consider that they have adequately addressed the efficiency expectations of the plan
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