

IN THE MATTER Of the Resource Management Act 1991

AND

IN THE MATTER Of application CRC090713 by Island Glen Diaries Limited to take and use groundwater for the irrigation purposes from the Rangitata-Orton Groundwater Allocation Zone

DECISION OF HEARING COMMISSIONER EMMA CHRISTMAS

13 April 2012

The Application

1. Island Glen Dairies Limited has applied to take and use 1,180,000 cubic metres of groundwater per year, from existing wells on its property adjacent to Rangaita Island Road, in the Rangitata–Orton Groundwater Allocation Zone. The zone is currently fully allocated in terms of Schedule WQN4 of the Natural Resources Regional Plan. The application will replace existing consent CRC051162.2, increasing the annual allocation by 253,000 cubic metres of water per year. The rates of take from each well are also amended slightly.

Decision

2. Under delegated authority from the Canterbury Regional Council to hear and decide this application, it is my decision that application CRC090713 should be granted with an expiry date of 21 December 2039, subject to the conditions attached to this decision.

The hearing

3. The application was heard at Environment Canterbury's offices on Church Street, Timaru on 19 March 2012. A site visit was not undertaken.
4. The following people appeared at the hearing:

For the applicant:

Keri Johnston, Director, Irricon Resource Solutions

Adrian Munoz, Farm Manager, Island Glen Dairies Limited

Submitter:

Brian Tremewen, Rangitata Downs Limited

Reporting Officers:

Andrew Barton, Resource Management Planner, Beca

Nicola Wilson, Hydrogeologist, Environment Canterbury

5. The hearing was adjourned in order to receive additional information from the reporting officer, which was then provided to the applicant. A right of reply was received on 26 March and the hearing was closed on 27 March.

Background

6. Island Glen Dairies ('Island Glen') is a dairy farm currently milking 750 cows, located at Rangitata Island Road, between Dip Road and Badham Road. 200 hectares is irrigated under consents CRC051162.2 and CRC011767. CRC011767 authorises the taking and use of 16.6 l/s (average rate of take 14.2 l/s), from shallow bore K38/0133. CRC051162.2 authorises the taking of 60 l/s from each of bores K38/1809, 83 m deep, and K38/1810, 100 metres deep. Consent CRC051162.2 specifies an annual volume of 927,000 cubic metres.
7. The annual volume was imposed on CRC051162.2 at the time it was granted, without the agreement of the applicant. The volume was calculated as 60% of the average daily rate for 150 days, a formula that was briefly used by Environment Canterbury to determine annual volumes prior to the notification of the Natural Resources Regional Plan (NRRP). The volume is inadequate to meet seasonal irrigation needs, therefore the current application is for an additional allocation of water, so that the total volume is equivalent to that allowed under Schedule WQN9 of the NRRP.
8. The application was lodged in 2008 as a change of conditions to CRC051162.2, however it was considered by Environment Canterbury to be beyond the scope of the existing consent. It has therefore been treated as a new application for the full volume of water. If it is granted, consent CRC0501162.2 will be surrendered.
9. The application is within the Rangitata-Orton Groundwater Allocation Zone (the "allocation zone"), which is currently 103% allocated.
10. The application also seeks to correct the locations of the bores, which were not drilled in the precise locations identified in the original consent.
11. An expiry date of 21 December 2039 is sought to match the existing consent.
12. No changes are sought to consent CRC011767.

Notification

13. The application was notified on 6 December 2008, as follows:

Rangitata-Orton Groundwater Zone	
Applicant:	Island Glen Dairies
Address:	c/- Irricon Resource Solutions, Alford Park, RD 1, Ashburton

CRC090713 - to take and use groundwater from bore K38/1809 (83 metres deep and 300 millimetres diameter), located at or about map reference K38:86632-75781, and bore K38/1810 (100 metres deep and 300 millimetres diameter), located at or about map reference K38:86303-76524, at a maximum rate of 60 litres per second from each bore, with a combined volume not exceeding 1,180,000 cubic metres between 1 July and the following 30 June. Water will be used for the irrigation of 200 hectares of pasture for grazing stock, adjacent to the Rangitata Island Road between Dip Road and Badham Road, Rangitata.
A consent duration of 30 years is sought. This is an application for a new take.

Changes subsequent to notification

14. An aquifer test was carried out following notification and as a result the applicant amended the maximum rates of take from each well to reflect the sustainable yields obtainable from each well (70 l/s from K38/1809 and 30 l/s from K38/1810). The total rate of take is therefore 100 l/s rather than the 120 l/s that was notified. While the increase in rate from 60 to 70 l/s for bore K38/1809 represents a small increase in the scale of pumping from this well, and therefore the potential effects on neighbours, the well interference analysis shows there are no additional effects. It is unlikely that any additional parties would have made a submission on the application based on this small change. I therefore accept the amendment and have decided the application on this basis.

Submissions

15. Four submissions were received, all in opposition and seeking to be heard. One submission, from Tata Dairy Limited, was subsequently withdrawn, and will not be considered further.
16. The concerns raised by the remaining submitters focussed on the adverse effects on the submitters' wells, the cumulative effects of taking additional water from the allocation zone, and the adverse effects on surface flows, particularly McKinnons Creek.
17. Submitter Mr Brian Tremewen attended the hearing. Dialan Farms withdrew its right to be heard. Mr Simon Johnson (Rangitata Island Dairy Limited) did not appear but provided written evidence, focussing on the effects on McKinnons Creek.

Activity status

18. The application was lodged in 2008, prior to the NRRP becoming operative. The activity status is therefore determined under the Proposed NRRP. The taking of water is a non-complying activity under Rule WQN23 of the PNRRP and discretionary under the Transitional Regional Plan (TRP).
19. The volume of water sought to be taken is within the volume specified under Schedule WQN9, and was therefore considered by the applicant to be a permitted activity under the PNRRP at the time of lodging (and today under the operative NRRP). However, when it is considered together with consent CRC011767, which is thought to authorise irrigation of an overlapping area of land, then the total volume that may be taken would exceed that specified in Schedule WQN9. The application to use water is therefore a discretionary activity under Rule WQN26 of the PNRRP. The use of water is discretionary under the TRP.
20. Overall, the application is for a non-complying activity.

Priority

21. Since the application is for water within a fully allocated zone, the priority of the application is relevant. Mr Barton advised there was one other application to take water within the zone: CRC054473, Mr GM Stoddart. This application was lodged in 2005 and has not been progressed despite attempts by Environment Canterbury to encourage the applicant do so. The Court of Appeal has determined that where there is unreasonable delay in consent process, priority can be displaced¹. I agree with Mr Barton that this decision is relevant in this instance and that CRC054473 has been subject to unreasonable delay on the part of the applicant. Island Glen should therefore be given priority in terms of hearing and decision-making over CRC054473.

Description of the environment

22. This is adequately summarised in both the s42A report and the application. In brief, there are three distinct water bearing layers, a shallow one, hydraulically connected to surface water, a layer from 50 - 80 m, from which the water will be taken, and less extensive aquifers at depths in excess of 100 m, generally inland of SH1.

¹ Central Plains Water Trust v Synlait Ltd [2009], CA544/08, CA588/08.

23. There is a high use of groundwater in the zone, primarily for irrigation purposes. A large surface water irrigation scheme, the Rangitata South Irrigation Scheme (RSIS), is currently being developed. This will take water from the Rangitata River and store it in head ponds south of Arundel. Water will be distributed primarily using existing stockwater races, and will service the area between the Rangitata and Orari rivers.

Assessment under Section 104

24. The potential effects of taking water have been clearly detailed in both the s42A report and the application. The consent to be replaced, CRC051162.2, is part of the existing environment and therefore the only effects of relevance are those resulting from the increased annual volume, and the amendments to rates of take and the locations of the wells. These effects are limited to:

- Cumulative effects on groundwater availability
- Well interference effects
- Stream depletion effects
- Effects of an inefficient take
- Effects on water quality

Cumulative effects on groundwater availability

25. The NRRP seeks to prevent long term decline in groundwater levels, with Policy WQN8 aiming to:

"Control the total amount of groundwater allocated for abstraction so that there is not a significant continuing long term decline in mean annual ground levels and artesian pressures".

26. If groundwater is over allocated it can affect surface water bodies, the reliability of other groundwater users, and result in saltwater intrusion. One submitter questioned how the consent could be granted when the zone is currently over allocated.

27. The Rangitata-Orton Groundwater Allocation Zone has an allocation limit in Schedule WQN4 of the NRRP of 42.5 Mm³/year. ECan's website² lists the current effective allocation as 43.973 Mm³/yr. The zone is therefore fully allocated. Previous applications to take additional water in 2005 were declined. There are currently two applications in process - the subject of this hearing and the application by Mr Stoddart discussed earlier.
28. The allocation limit for the zone has been derived using a 'second order' allocation. That is, it is based on 50% of the land surface recharge (i.e. from rainfall and existing irrigation) to the zone. The Environment Canterbury website states that this approach is used when there is a moderate amount of information available. It is still, however, an interim approach. The website states³: *"Where there is a high level of hydrogeological knowledge, groundwater is allocated using specific sustainable-yield based calculations, and may involve groundwater modelling. When this approach is used, it is likely the current zones will be divided into sub-zones to take account of the more specific hydrogeological characteristics of these areas."* This more detailed calculation has not yet been undertaken for the zone.
29. The volume of 42.5 Mm³ is therefore unlikely to be final allocation limit, and if additional information is available on the amount of water that can be sustainably allocated, it is reasonable to consider that information.
30. The applicant has provided further detail, supported by analysis from Julian Weir of Aqualinc Research Limited, on the additional recharge to the zone that is likely to be derive from the implementation of the Rangitata South Irrigation Scheme (RSIS), which is presently under construction. The scheme is designed to supply 14,000 ha of land, more than half of which is within the Rangitata-Orton allocation zone.
31. Additional losses to groundwater as a result of the scheme's operation were considered to derive from:
- irrigation of additional land, assumed to be approximately 4,000 ha within the allocation zone
 - loss from scheme header ponds and on-farm storage ponds

² <http://ecan.govt.nz/services/online-services/monitoring/groundwater-allocation/Pages/groundwater-allocation-summary.aspx>

³ <http://ecan.govt.nz/services/online-services/monitoring/groundwater-allocation/Pages/definitions-information.aspx#first order>

- additional leakage through the existing stockwater race network which will be used to transfer the water
32. The calculations estimated additional land surface recharge of:
- 4.7 Mm³/yr from additional irrigated areas
 - 24.2 Mm³/yr leakage from the header and storage ponds, and
 - 0.2 Mm³ additional race leakage.
33. Using these figures, an allocation of 50%, in line with the current ECan approach, would provide an extra 14.5 Mm³/yr of water able to be allocated from the zone.
34. The above analysis was commented on by Ms Wilson. In her opinion, extra recharge from additional land irrigated could appropriately be included in the allocation limit, but contributions from ponds and races should not be relied upon as “there is guarantee as to the future efficiency of this infrastructure”.
35. Mr Barton had a similar view, considering that the amount of water predicted to be lost from the ponds and races was significant, and that this would present a significant driver for lining ponds and piping races. This is the situation that is currently occurring within the Valetta Irrigation Scheme.
36. I agree that the recharge from the additional irrigated land can and should be included in the allocation limit. This is consistent with the approach applied to other ‘second order’ allocation zones, where recharge from irrigation, be it of groundwater or surface water delivered via an irrigation scheme, is routinely included in the allocation limit. The difference here is that the recharge has not yet occurred.
37. I also agree that there is uncertainty with future losses from races and ponds. However, the amount of additional recharge resulting from the increased irrigation area alone means that potential recharge from races and ponds is not critical to the applicant’s case and does not need to be considered further.
38. Fifty percent of an additional 4.7 Mm³ (if that is a fair estimate) of recharge from the new irrigation area is 2.35 Mm³/yr. This would increase the size of the allocation block to 44.85 Mm³/yr, sufficient for all existing consents plus CRC090713.

39. The estimate of 4.7 Mm³/yr is dependant upon a correct estimate of the additional area of land to be irrigated, and correct assumptions of the soil water holding capacity of that land.
40. In relation to the water holding capacity, Ms Johnston provided information showing that the soil profile available water (PAW) within the scheme area varies between 30 and 175 mm. An average figure of 95 mm was used in the modelling. Mr Weir carried out a sensitivity analysis using soil PAWs of 30 mm and 175 mm. Assuming a soil PAW of 30 mm, the recharge was calculated as being 12.1 Mm³/yr. Assuming a soil PAW of 175 mm, the recharge reduces to 2.2 Mm³/yr. A soil map provided by Ms Johnston showed the majority of soils within the scheme area to have a PAW of 100 mm or less, consistent with the 95 mm used in the modelling. Significant areas have a PAW of 75 mm or less. In this respect, the recharge is likely to exceed that calculated, and the figure is therefore conservative.
41. In terms of the new area of land to be irrigated, there is less certainty. It is not currently clear (although the information must exist) which of the areas of land that will receive water from the scheme are currently un-irrigated, and which are already irrigated by groundwater and are seeking a 'top-up' or to replace an existing groundwater consent. To resolve this, Mr Barton proposed a condition requiring that the additional allocation could not be taken until it could be demonstrated that at least 4,000 ha of currently un-irrigated land was being irrigated using scheme water. He also commented that the 4,000 ha, which was the figure used in Aqualinc's model, may be able to be reduced if the modelling was refined. This has not, however, been undertaken.
42. Ms Johnston considered the condition was unnecessary, as it is anticipated that water will be available to the first shareholders later this year and the scheme will be fully constructed within two years. 14,000 shares (for 14,000 ha) have been sold to date, the large majority of which are in the allocation zone. (Again, however, it is not clear how many of these shares will be used on land that is currently un-irrigated). Ms Johnston did not consider that the abstraction of an additional 253,000 m³ of water over the next year or two, before full development of the scheme, would result in long term decline in groundwater levels or compromise environmental values. Furthermore, she considered existing leakage from stockwater races added recharge to the zone which was presently not accounted for in the allocation limit.

43. While Ms Wilson agreed that a decline in groundwater as a result of taking the additional water for two years before the scheme is operational was unlikely, she commented that allocation limits were there for a reason. Increasing the allocation limit based on a future increase in recharge posed risks.
44. I believe the condition proposed by Mr Barton is necessary in order to ensure that the additional irrigation only occurs once the additional recharge is certain. Although the risk of the scheme not developing to the extent that an additional 4,000 ha of land within the allocation zone is irrigated might be small, it is nevertheless a risk. Granting additional allocation prior to the recharge occurring within the zone may also set an undesirable precedent for future applications.
45. If the scheme is developed in a manner consistent with the information provided by Ms Johnston, the delay should be two years at most. This does not seem unduly harsh to ensure certainty of water. I have therefore attached a condition similar to that proposed by Mr Barton.

Adverse effects on surrounding groundwater users as a result of well interference

46. The Regional Policy Statement (RPS) and NRRP require that new grants of consent do not unreasonably interfere with existing authorisations. Specifically Chapter 9, Policy 6 of the RPS states:

"In considering a permit to take water, a consent authority should, as part of the requirements of s104 of the RM Act, consider the need to:... (c) provide for existing water permit holders to have priority for the term of their permit;"

47. Policy 5 of the RPS also gives priority to existing users, saying that the grant of a permit to take water *"should not preclude the reasonable exercise of an existing consent to takewater"*
48. Objective WQN7 of the NRRP seeks to ensure that groundwater abstractions from new bores, in conjunction with all other abstractions from existing bores, do not significantly affect the yield from neighbouring bores.
49. Policy WQN19 of the NRRP establishes a threshold of acceptable interference and requires that any new bore be located so that the abstractions from it do not cause any significant interference on abstractions from neighbouring bores.

Specifically, the policy states that the extent of direct cumulative interference effect on any neighbouring bore should not exceed 20% of the available drawdown in any bore with an existing authorisation that is within 2 kilometres, unless the effect is mitigated. A *de minimus* threshold of 0.1 metres is set for direct drawdown effects, below which effects are considered to be insignificant.

50. All three submitters were concerned about the potential effects on their wells.
51. The applicant conducted step drawdown tests on both wells, and a constant rate discharge test on K38/1809. Aquifer parameters were derived which were subsequently used for well interference analysis. Ms Wilson re-analysed the aquifer tests and identified alternative parameters, then used by Mr Barton in the audit. In both cases, no wells within the deeper aquifer were identified as being adversely affected. A number of wells in the shallow aquifer (less than 20 m deep) were determined by the model to be potentially affected, however the conclusion of both the ECan officers and Ms Johnston is that due to the conservative nature of the modelling and the lack of consideration for recharge into the shallow wells by water from the Rangitata River, these wells will not be affected by the take.
52. I concur with this assessment and consider the effects on neighbouring wells to be less than minor.

Adverse effects on surface water flows

53. Objective WQN3 of the NRRP is to enable access to the region's groundwater resource while ensuring, amongst other things, that abstraction from groundwater that is hydraulically connected to surface water does not result in adverse effects on flows and the values that the surface water supports.
54. The wells are located close to both the Rangitata River and McKinnons Creek. Two submitters were concerned with the effects on McKinnons Creek, and their own hydraulically connected shallow takes. Mr Johnson provided written evidence stating that over recent years, flows in McKinnon's Creek had reduced, which he considered was due to the granting of consents to take groundwater and install galleries upstream of his property. Flows continued to reduce once irrigators were on restriction. It was not clear from his evidence whether the takes referred to were for deep or shallow groundwater takes.

55. The applicant did not address stream depletion effects in the original application, but stated at the hearing that it was ECan's practice not to assess stream depletion for wells deeper than 50 m.
56. Ms Wilson's advice was that due to the depth of the wells (screened at 70+ metres) there is no potential for direct stream depletion. Mr Barton also commented that no other deep groundwater consents in the area, including those held by the submitters, are subject to minimum flow restrictions.
57. I agree that due to the depth of the wells, any effects on surface water, and therefore on the exercise of consents with minimum flow restrictions, will be no more than minor.

Adverse effects of the inefficient use of water

58. Policy 3 of Chapter 9 of the RPS seeks to "*promote efficiency in the use of water*" and, as the supporting text explains, efficiency involves both a technical evaluation and an evaluation of allocative efficiency.
59. The NRRP reflects the RPS's focus on efficient use of water. Objective WQN5 seeks to: "*Achieve a high level of efficiency in terms of resource availability and the use of water*". Policy WQN16 includes a number of provisions to ensure that the instantaneous rate of abstraction, the return period and annual volume of water authorised to be taken is no more than reasonable for the intended end use of the water and reflects the actual quantity needed to undertake the land use activity.
60. Groundwater in Canterbury is a finite and valuable resource, and in order to maximise the benefits of allocating that groundwater for irrigation use, applicants should be allocated sufficient water to achieve the benefits of irrigation, but not be permitted to take more than is reasonably needed. Over-allocation has adverse effects both on the availability of the resource to other parties, and on the environment, by depleting the resource.
61. An annual volume of 1,180,000 m³ of water is sought. This was the volume calculated under Schedule WQN (version 3) at the time the application was made. The current version of the plan (Schedule WQN9 version 4) would allow use of up to 1,352,359 m³ as a permitted activity. The volume sought can therefore be considered to be reasonable.

62. A question was raised as to how consents CRC090713 and CRC011767 (the take from the shallow well) will be operated together to avoid over-application of water. The two consents together would allow irrigation on average of 4.93 mm/day, which is an acceptable application depth. The combined weekly volume authorised under both CRC011767 and CRC090713 will be less than previously authorised under consent CRC051162.
63. As mentioned earlier the combined annual volume may exceed the Schedule WQN9 volume, but this would be by a small amount. In my opinion there is no need for additional conditions governing the concurrent use of the two consents.

Effects on water quality

64. The RPS recognises that protecting groundwater quality, particularly where it is a source of drinking water, is important. Objective 3 focuses on the importance of protecting water quality from contaminants and *"safeguarding the existing value of water bodies for efficiently providing sources of drinking water for people"*. Policy 11 is to *"Promote land use practices which maintain and where appropriate enhance water quality"*.
65. The NRRP also sets out certain aspirations for groundwater quality. Objective WQL2.1 of Chapter 4 says that *"if, during the life of this plan, the overall maximum nitrate-nitrogen concentration exceeds 5.6 milligrams per litre in any aquifer, any increase...shall not exceed a rate of 1.5 milligrams per litre every ten years"*. The base rate for this calculation is derived from concentrations measured or reasonably deduced in the three years prior to 1 November 2010. The objective also seeks to cap the overall nitrate-nitrogen concentration at 11.3 mg/L.
66. There is a relative paucity of direction in the NRRP on how this is to be achieved. While Policy WQL10 promotes the use of "best management practices" to manage the leaching of nutrients, including nitrogen, Rule WQL 20 only imposes restrictions on particular land uses, being cropping and grazing with 30 stock units or more per hectare. It requires those farms to calculate the average nitrate-nitrogen concentrations in soil drainage water from the land using OVERSEER, to implement "best management practices" when those calculations exceed 8 mg/L, and not to exceed a calculated discharge of 16 mg/L. If they can not comply with these requirements then their land use

activity becomes a restricted discretionary activity. Other farming activities can occur as of right.

67. Policy WQN 16 (Chapter 5 NRRP) requires that, when assessing applications to take water, regard is had to avoiding or limiting adverse effects on water quality. It cross-references back to specified policies in Chapter 4 of the NRRP, including Policy WQL10. However Rule WQN15 permits use of water from a private groundwater take as long as certain conditions relating to the efficient use of water are met. There are no conditions which directly relate to nutrient management practices.
68. The existing land use is irrigated dairy farming, and this will continue effectively unchanged, albeit with the ability to irrigate slightly greater quantities of water each year. The change in effects, if any, on water quality, is likely to be extremely minor.
69. Over recent years, particularly where applications have been heard in large 'group' hearings, conditions have been applied requiring some or all of: preparation of a farm environmental management plan, modelling of the nitrate concentration in soil drainage water, reviewing farm management practices where the concentration exceeds 8 mg/L, and in some cases, for example recent consents in Chertsey zone, ceasing taking water if the modelled discharge exceeds 16 mg/L. In the latter cases, high background nitrate concentrations were of concern. These conditions have reflected concerns about cumulative impacts on groundwater quality – an issue generally better dealt with when a large number of applications are heard together.
70. Mr Barton advised that due to the current planning framework (discussed above) consents lodged and decided since the NRRP becoming operative have generally not been subject to nutrient management conditions, except where there are particular concerns with regard to water quality.
71. No issues were identified by Mr Barton or Ms Johnston in regards to water quality in the allocation zone, with the exception of high concentrations of groundwater near associated with the Clandeboye dairy processing plant some years ago.
72. Ms Johnston advised that the applicant is currently obliged under their contract with Fonterra, to prepare an annual nutrient budget, including use of OVERSEER for modelling of nitrate concentration. If a high result is achieved,

the programme provides a trigger to re-consider input. They also have a management plan for disposal of dairy effluent which is audited by ECan.

73. Given the likely extremely minor increase in effects (if any), the lack of identified water quality concerns within the zone, the existing nutrient modelling and management undertaken by the applicant, and the NRRP policy framework, there appears to be little to be gained by imposing an additional condition.

Relevant provisions of planning and policy documents – RPS/NPS

74. I have referred above to relevant provisions of the operative RPS and NRRP, however the Proposed Regional Policy Statement 2011 and the National Policy Statement on Freshwater ("NPS") must also be considered.
75. Relevant policies in the Proposed RPS include Policy 7.3.4 which relates to management of water quantity and seeks to *"avoid long term decline in groundwater levels and saltwater intrusion of coastal groundwater resources"*, Policy 7.3.6 *"to manage activities which may affect water quality (including land uses), singularly or cumulatively, to maintain water quality"* and Policy 7.3.8, which promotes efficiency in the use of water.
76. These all reflect issues and concerns already found in the NRRP. While the document is at an early stage and little weight should be afforded to it, there is no inconsistency between the activity and the proposed RPS provisions.
77. The NPS took effect on 1 July 2011. One of the key issues the NPS addresses is over allocation. That is defined in the NPS as a situation where the resource *"has been allocated to users beyond a limit or is being used to a point where a freshwater objective is no longer being met."* Objective B2 is to *"avoid any further over allocation of freshwater and phase out existing over allocation,"* while Policy B5 is to ensure that *"no decision will likely result in future over allocation"*.
78. Relying on the Aqualinc report and the evidence of Ms Wilson, I am satisfied that the allocation limit set out in Schedule WQN4 of the NRRP can be safely exceeded.
79. Relevant freshwater objectives in the NPS include maintaining the quality of freshwater (Objective A2) by avoiding over allocation which could lead to saltwater intrusion, or land uses which could adversely affect drinking water

quality where drinking water is drawn from groundwater, and improving and maximising the efficient allocation and efficient use of water (Objective B3). Relevant objectives in the NRRP have been discussed earlier. I am satisfied that use of the resource will not result in a freshwater objective no longer being met, and therefore the decision to grant is consistent with the NPS.

Other matters

80. The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 stipulates various requirements for the metering and reporting and water takes. The metering condition attached to the consent is consistent with these regulations.

Section 104D

81. The application is for a non-complying activity, therefore consent may only be granted if either the adverse effects of the activity on the environment will be minor, or the application is for an activity that will not be contrary to the objectives and policies of the relevant plan or plans (s104D).
82. I am satisfied that the test is met on both counts. The adverse effects of the activity will be no more than minor and the application is consistent with relevant planning provisions.

Part 2

83. The application must be considered in light of Part II of the RMA. There are no matters of national importance (s6) that will be compromised by the proposed activity.
84. A relevant consideration in Section 7 is: *(b) the efficient use and development of natural resources*. This has been discussed earlier.
85. Having regard to section 8, Principles of the Treaty of Waitangi, the application is within the rohe of Arowhenua runanga. Both the runanga and Te Runanga o Ngai Tahu were informed of the application but did not provide comment or lodge a submission. No information has been presented suggesting that values of significance to Maori will be compromised by the granting of this application.

86. The purpose of the Act is to promote sustainable management of natural and physical resources. The proposed groundwater take is within a sustainable allocation limit for the groundwater resource. It will assist the applicant in providing for its economic wellbeing. Adverse effects on the environment, including those on existing groundwater abstractors, will be minor. Consequently I am satisfied the application is consistent with Part 2 of the RMA.

Duration

87. An expiry date of December 2039 was sought, to be consistent with the consent being replaced. While it would be unfair and unjustified to shorten the duration of any water allocated that directly replaces CRC051162.2 (that is, 927,000 cubic metres of water per year), the additional 257,000 cubic metres is new allocation. This is being granted on the basis of ongoing recharge resulting from the RSIS.

88. Consents to take groundwater within Canterbury have in recent years almost all been granted for a duration of 10 years, including the most recent consents granted in this allocation zone, in 2005. The duration has generally been limited to due to uncertainties over the availability of groundwater over a longer duration, and reflects the fact that assessments of the effects of groundwater takes are carried out by modelling and prediction, rather than actual measurement, and are therefore inherently subject to some uncertainty. This includes the effects on downgradient water quality. The decisions also reflect section 1.3.5 of chapter 1 of the NRRP, which sets out matters which Environment Canterbury will have particular regard to. Of particular relevance is clause (a):

(a) the nature and sensitivity of the affected environment, including

(i) the degree to which the sensitivity of the affected environment may become more sensitive over time; and

(ii) the probability of future adverse effects arising from the consented activity; and

(iii) the level of knowledge about the affected environment; and ...

89. Ms Johnston argued that since this consent was to allocate water that in her view should have been allocated to the applicant at the time the original

application was made, then natural justice would suggest that a consistent expiry date is applied. Furthermore, water from the RSIS, on which this grant depends, will be available for longer than 10 years - the consent to operate the scheme expires in 2044.

90. While I understand Ms Johnston's position, the reality is that, rightly or wrongly, this additional allocation was not made at the time of grant of the original permit, and the clock cannot be turned back. This consent does represent a new allocation of water, and a decision must be made on that basis.
91. While in all likelihood the additional water will become available within the next two years, and will continue until at least 2044, this cannot be guaranteed. I therefore consider a duration of 10 years is appropriate. This can be achieved by a condition of consent limiting the new allocation to 11 years (an extra year is allowed as the additional water will not be able to be taken this coming season season). The consent will have an expiry date of 21 December 2039, consistent with consent CRC051162.2. This will allow the remaining water, equivalent to the allocation granted under CRC051162.2, to be taken until that date.
92. If it can be shown that the water continues to be available in 10 years time, an application to change conditions could be made to extend the period that the additional water can be taken. I accept that this approach is not ideal, in that the rights afforded to a consent holder under s124B would not apply to the extra allocation. If this is of concern, the applicant could consider applying to separate the consent into two, each with a separate annual volume, expiry date and appropriate conditions.
93. I have considered granting this application solely for the additional allocation and letting CRC051162.2 remain. However this creates problems in terms of the changes in pump rates sought from the wells and hence I am disinclined to do so.



E Christmas, Independent Commissioner

APPENDIX 1

Conditions of Consent

CRC090713 – To take and use groundwater

1)	<p>Water may be taken only from:</p> <p>(a) Bore K38/1809, 300 millimetres diameter and 83 metres deep, at map reference NZMS 260 K38:86632-75781; and</p> <p>(b) Bore K38/1810, 300 millimetres diameter and 100 metres deep, at map reference NZMS 260 K38:86303-76524.</p>
2)	<p>Water shall only be used for irrigation on the area of land shown in attached plan CRC090713, which forms part of this consent.</p>
3)	<p>(a) Water may be taken at a rate not exceeding 70 litres per second from bore K38/1809 and 30 litres per second from bore K38/1810.</p> <p>(b) The combined volume that may be taken from bores K38/1809 and K38/1810 is as follows:</p> <p style="padding-left: 40px;">(i) Subject to clause (c), for the period effective immediately and expiring on 30 June 2023, a volume of cubic 1,180,000 metres of water may be taken between 1st July in any year and the following 30 June.</p> <p style="padding-left: 40px;">(ii) For the period from 1 July 2023 until the expiry of this consent, a volume of 927,000 cubic metres of water may be taken between 1st July of any year and the following 30 June.</p> <p>(c) The combined volume taken may only exceed 927,000 cubic metres between 1st July and the following 30th June following the provision of a report to the Canterbury Regional Council that determines that the area irrigated in the Rangitata-Orton Groundwater Allocation Zone as a result of the commissioning of the Rangitata South Irrigation Scheme has increased by at least 4,000 hectares.</p>
4)	<p>The consent holder shall surrender CRC051162.2 prior to the first exercise of this consent.</p>
5)	<p>The consent holder shall, before the first exercise of this consent, install an easily accessible straight pipe(s), with no fittings or obstructions that may create turbulent flow conditions, of a length at least 15 times the diameter of the pipe, as part of the pump outlet plumbing or within the mainline distribution system.</p>
6)	<p>The consent holder shall before the first exercise of this consent:</p> <p>(a)</p> <p style="padding-left: 40px;">(i) install a water meter(s) that has an international accreditation or equivalent New Zealand calibration endorsement, and has pulse output, suitable for use with an electronic recording device, which will measure the rate and the volume of water taken to within an accuracy of plus or minus five percent as part of the pump outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total take of water is measured; and</p> <p style="padding-left: 40px;">(ii) install a tamper-proof electronic recording device such as a data logger(s) that shall time stamp a pulse from the flow meter at least once every 60 minutes, and have the capacity to hold at least one season's data of water taken as specified in clauses (b)(i) and (b)(ii), and is telemetered, as specified in clause (b)(iii).</p> <p>(b) The recording device(s) shall:</p> <p style="padding-left: 40px;">(i) be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and</p> <p style="padding-left: 40px;">(ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which the consent holder shall then download and store in a commonly used format and provide to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; and</p>

	<p>(iii) shall be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.</p> <p>(c) The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.</p> <p>(d) The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.</p> <p>(e) All practicable measures shall be taken to ensure that the water meter and recording device(s) are fully functional at all times.</p>
7)	<p>Within one month of the installation of the measuring or recording device(s), or any subsequent replacement measuring or recording device(s), and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, the consent holder shall provide a certificate to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:</p> <p>(a) The measuring and recording device(s) has been installed in accordance with the manufacturer's specifications; and</p> <p>(b) Data from the recording device(s) can be readily accessed and/or retrieved in accordance with clauses (b) and (c) of condition (6).</p>
8)	<p>The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed immediately on first exercise of this consent by the consent holder.</p>
9)	<p>The taking of water in terms of this permit shall cease for a period of up to 48 hours, on notice from the Canterbury Regional Council, to allow measurement of natural groundwater levels.</p>
10)	<p>If the irrigation system is used to distribute diluted effluent, fertilizer or added contaminants the consent holder shall ensure:</p> <p>(a) an effective backflow prevention device is installed and operated within the pump outlet plumbing or within the mainline to prevent the backflow of contaminants into the water source;</p> <p>(b) the backflow prevention device shall be tested at the time of installation and annually thereafter by a suitably qualified or certified person in accordance with Canterbury Regional Council approved test methods for the device used; and</p> <p>(c) a test report shall be provided to the Canterbury Regional Council Attention: Regional Manager RMA Monitoring and Compliance within two weeks of each inspection.</p>
11)	<p>The consent holder shall take all practicable steps to:</p> <p>(a) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and</p> <p>(b) Avoid leakage from pipes and structures; and</p> <p>(c) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips.</p>
12)	<p>The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.</p>
13)	<p>The lapsing date for the purposes of section 125 shall be 30 April 2017.</p>

PLAN CRC090713



Location of area to be irrigated.