

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

**IN THE MATTER OF** The Resource Management Act  
1991

**AND**

**IN THE MATTER OF** Application CRC082311 by  
Simons Pass Station Limited for  
a Water Permit to take & use  
surface water.

**Section 42A Officer's Report of Maria Bartlett**

**Date of Hearing: 21 September 2009**

1. Pukaki Irrigation Company Limited proposes to install infrastructure for a new irrigation scheme, to be utilised by three properties to the south of Lake Pukaki, including Simons Pass Station. See Attachment One for a diagram showing the relationship of applications in process for the Pukaki Irrigation Scheme.
2. This report should be read in conjunction with the report prepared for surface water take application CRC062867, and associated discharge application CRC062869, which provide for irrigation of the same land area from an alternative intake location, both lodged by Simons Pass Station Limited.
3. Reports for applications CRC082300, as well as CRC062866, CRC062870, CRC062871, CRC062872, lodged by Pukaki Irrigation Company Limited (PIC) for construction of irrigation scheme infrastructure are relevant to this report, as the applicant will rely on PIC infrastructure. The report for application CRC082304, lodged by Simons Hill Station, is relevant to the extent that the applications were lodged together, the applicants have requested to be considered of equal priority, and the Pukaki Irrigation scheme is dependent on the outcome of these two applications.
4. This report should also be read together with the introductory s42A report which gives an overview of all applications presented at this hearing (Report 1), the planning and technical reports on hydrology and minimum flows (Report 2A and 2B), the planning report outlining annual allocations (Report 3) and the reports on cumulative landscape and water quality effects in the catchment (Reports 4 and 5).

**INTRODUCTION**

5. Simons Pass Station Limited (the applicant) has applied for a resource consent to:

To take and use surface water at a maximum rate not exceeding 1,328 litres per second, and a volume not exceeding 14,581,330 cubic metres per year, from Tekapo Stilling Basin at or about map reference NZMS 260 H38:8842-7328 for spray irrigation of up to 2,400 hectares of crops and pasture, and for stock water use, at Simons Pass Station, State Highway 8, Lake Pukaki;

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

6. The applicant engaged Aqualinc Research Limited to prepare the application and assessment of environmental effects, and SolutionNZ RM Limited to provide further information.
7. A consent duration to 30 April 2025 is sought.
8. This is an application for a new activity.
9. A site visit was carried out on 4 December 2008, by consents staff of Canterbury Regional Council, with Peter Glasson representing Simons Pass Station. Photographs are not included from the site visit. Attachment Three of Report 34a includes photographs supplied by the applicant, and two photographs taken on a site visit to Glentanner Station on 4 January 2009.

## **Background**

10. CRC082311 was lodged on 21 December 2007 and considered to be notifiable from that date. The application specifies a location of take consistent with Pukaki Irrigation Company Limited land use application CRC082300, which proposes a pipeline route from the Tekapo Stilling Basin (Option 3) to the irrigation command area, crossing four ephemeral streams.
11. An earlier application, CRC062867, was lodged on 14 February 2006 (with discharge application CRC062869), proposing to irrigate the same land area, specifying locations of take consistent with Pukaki Irrigation Company Limited application CRC062866, which proposes to construct two possible intake sites for a new irrigation supply scheme, one in Pukaki Canal (Option 1) and one in Lake Pukaki (Option 2).
12. All three possible intake locations are subject to application. I understand that the applicant intends to choose the most viable option, at which point one of the water permits, if granted, will no longer be required. In this respect, the outcome of the Pukaki Irrigation Company Limited land use applications will contribute to the decision regarding which water permit, CRC082311 or CRC062867, is implemented.
13. On 14 May 2009 the applicant confirmed that the intake location from Tekapo Stilling Basin would not be from the notified location of between NZMS 260 H38:8220-7260 and H38:8845-7324, but from NZMS 260: H38:8842-7328, approximately 50 metres north of the upper extent of the notified range, as a result of concerns expressed by Meridian Energy Limited. This change to the intake location was not considered cause for further notification of the application, as there is a reduction in effects on Meridian Energy Limited, and there are no parties adversely affected by the change who had not already submitted on the application.
14. On 25 August 2009, the applicant revised the irrigation command area to exclude certain areas for the purposes of mitigating against adverse effects on natural character and landscape values (see Attachment Two).
15. The applicant is a joint holder of consent CRC011554, under the name of Maryburn Irrigation Company, which authorises abstraction of 230 litres per second from the Mary Burn for borderdyke irrigation of a total of 270 hectares, 51 hectares of which is irrigation on Simons Pass Station. The applicant intends to surrender share of this

consent in the event that CRC062867 and/or CRC082311 are granted, and borderdyke irrigation will cease on Simons Pass Station.

## Notification

16. Details of the notification and wording are contained in Appendix 4 of the introductory s42a report (Report 1). This application was publicly notified on 18 October 2008.

## Submissions

17. In the 2008 public notification, 9 submissions in total were made on this application. Of these:
- (a) 3 were in support;
  - (b) 6 in opposition; and
  - (c) 0 neither supported nor opposed the application.
18. A summary of submissions received on this application is contained in Table 1 below.

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Mr A J Gloag	Will reduce rabbit infestation and risk of soil degradation through drought and wind erosion caused by climate change, and vegetation change. Increase carbon absorbing capacity of plants in eastern Mackenzie Basin	Support	No
Ruataniwha Farm Limited	Farm will be more viable; will stop areas blowing away, help get rid of rabbits and put more money into the local economy	Support	No
Canterbury Aoraki Conservation Board	AEE deficient, WQ effects, natural character, indigenous species habitat, landscape changes, 35 yr duration too long	Oppose	Yes
Land Information New Zealand	Consent required from Commissioner of Crown Lands	Oppose	No
Killermont Station Limited	Support agricultural growth and sustainability	Support	Yes
Meridian Energy Limited	Need MIC shares and to comply with tranching agreement; WQ effects; volume for stockwater required; take into account need for MEL to maintain canal, and civil & safety issues; water metering required; inconsistent with Part II of the RMA	Oppose	Yes
Department of Conservation	AEE deficient; WQ effects on habitats, species & ecosystems; natural character, indigenous flora, fauna & threatened species; fish exclusion	Oppose	Yes
Royal Forest & Bird Protection Society	Land use intensification; change in landscape character; WQ effects; adverse effects on remnant native flora and fauna; increase Canada goose population	Oppose	Yes
Fish and Game New Zealand	WQ effects; metering; fish screening; intensification	Oppose	Yes

**Table 1: Summary of submissions on application CRC062867**

## DESCRIPTION OF THE PROPOSED ACTIVITY

19. The applicant proposes the following:

- a) To take and use surface water at a maximum rate not exceeding 1,328 litres per second, and a volume not exceeding 14,581,330 cubic metres per year, from the Tekapo Stilling Basin at or about map reference NZMS 260 H38:8842-7328;
- b) To comply with the minimum lake level for Lake Tekapo, as specified in Rule 3, Table 4 of the WCWARP;
- c) To use water for spray irrigation of up to 2400 hectares of crops and pasture for grazing at Simons Hill Station, State Highway 8, Lake Pukaki, within a total command area of approximately 2800 hectares, using centre pivot irrigators only;
- d) To use an on-farm flow rate of 1,392 litres per second, equivalent to approximately 0.58 litres per second per hectare, and an application depth of 5mm per day;
- e) To use an annual volume of water that provides for application of 600mm per hectare, from October to April inclusive, irrigating for up to 120 days;
- f) To take and use water for stock drinking water supply, at 497m<sup>3</sup> per day, and 181,300m<sup>3</sup> annually;
- g) To install a suitable fish screening device, determined after consultation with Fish and Game New Zealand, installed at the joint intake location, shared with Simons Hill Station Limited, Glentanner Station Limited and Classic Properties Limited.
- h) To install centre pivot irrigators such that a distance of between 11 and 22 metres is maintained from the nearest transmission tower;
- i) To deliver water to the irrigation areas under gravity from the Tekapo Stilling Basin
- j) To install a water metering device, with international accreditation or equivalent, at the shared intake location, suitable for use with an electronic recording device and capable of recording the rate and volume of water taken within an accuracy of plus or minus five percent;
- k) To install an additional water metering and recording device within the proposed Pukaki Irrigation Company Limited irrigation supply pipeline at the boundary of Simons Pass Station;
- l) To undertake irrigation outside of moraine landform areas, on flat land suitable for installation of centre pivot irrigators;
- m) To use soil moisture sensors under centre pivots to monitor soil moisture and effectively manage irrigation;
- n) To measure rainfall on the property;

- o) To apply no more than half the average water holding capacity of the soil per return period of irrigation;
- p) To apply from less than 20mm up to 35mm per return period, within a return period of 2-5 days, depending on soil water holding capacity;
- q) To increase stocking rates to between 12 and 18 stock units per hectare;
- r) To include a 100 metre buffer zone beside the Pukaki River, fenced off from stock access;
- s) To institute a farm management plan and additional measures to mitigate against effects of irrigation on surface water and groundwater, as identified by the Mackenzie Water Research Limited study;
- t) To abide by standard conditions assigned by Mackenzie Irrigation Company Limited.

## LEGAL AND PLANNING MATTERS

### Consent Requirements

20. The consent requirements under the Resource Management Act (RMA), Transitional Regional Plan, Proposed Natural Resources Regional Plan (PNRRP) and Waitaki Catchment Water Allocation Regional Plan (WCWARP) for water permit applications are outlined in the introductory s42A report (Report 1). A summary of the requirements for these applications are provided below:

#### WCWARP

- (a) Rule 3, clause (1) – The applicant proposes to adopt the minimum lake level for Lake Tekapo of 704.1 metres above mean sea level in the period October to March, and 701.8 metres above mean sea level in April (Table 4, row (ii)).
  - (b) Rule 6 – The proposed annual volume of 14,581,330 cubic metres is within the annual allocation limit of 275 million cubic metres for agricultural activities upstream of Waitaki Dam (applicable to abstraction from canals leading from the glacial lakes as per footnote 23, pg 52 of the WCWARP).
  - (c) Rule 18 – Classifying rule, complies with Rule 2 and Rule 6.
21. In summary, the proposed water permit is a **discretionary** activity and requires consent under S14 of the RMA.

### Additional Requirements

22. The applicant is likely to require an archaeological authority from the Historic Places Trust before installation of irrigation infrastructure, where that infrastructure will disturb existing archaeological sites.

### Priority

23. In terms of instantaneous allocation under Rule 3, a detailed list of all applicants who fall within Table 4, Row (ii) can be found in Report 2A. There are existing consent holders taking water from Lake Tekapo-Pukaki Canal for irrigation, and other applications seeking to take water from the canal, but Rule 3 does not contain a limit

affecting priority for activities that must comply with the minimum lake level for Lake Tekapo. I note also that Meridian Energy Limited control flows in the canal and the cumulative rate of abstraction from the canal.

24. For Rule 6, all applications upstream of Waitaki Dam are within the allocation limit for agricultural and horticultural activities, so priority is not a concern with regards to the abstraction from Tekapo Stilling Basin (see Report 3 for annual allocation tables).

### **Derogation Approval**

25. At the time of writing this report, Meridian Energy Limited has not provided approval for Simons Pass Station Limited to derogate from its consents.

### **CONSULTATION**

26. The applicant has been in consultation with Meridian Energy Limited regarding the intake design and metering, Land Information New Zealand regarding further authorisations that may be required, Department of Conservation regarding ecological values within the proposed irrigation area, and Fish and Game New Zealand regarding screening at the intake. Details of consultation have not been provided.

### **DESCRIPTION OF THE AFFECTED ENVIRONMENT**

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

28. In this section, I generally agree with the applicant's statements unless otherwise stated.

29. *Tekapo Stilling Basin and Entry Canal*

a) The applicant states:

- i. Outflows and lake levels are controlled by Meridian Energy Limited for hydroelectricity generation purposes.
- ii. It is a manmade structure with limited environmental value.

b) I note that:

- i. Levels of Lake Tekapo are controlled by Meridian Energy Limited for the purposes of hydroelectricity generation, and lake levels are publicised on the Meridian Energy website at the following address, [www.meridianenergy.co.nz/AboutUs/LakeLevels](http://www.meridianenergy.co.nz/AboutUs/LakeLevels)
- ii. The Tekapo Canal is approximately 26.5 kilometres long, with an average depth of 5.3 metres, a typical peak flow of 110 cumecs and a maximum flow of 130 cumecs.
- iii. The Tekapo Stilling Basin is situated prior to the Tekapo B power station, which discharges into Lake Pukaki and produces a nominal annual generation of 800 GWh.
- iv. State Highway 8 runs alongside the canal and Stilling Basin, and tourists can view the Stilling Basin from a side road off the State Highway.

- v. Salmonids inhabit the canal, including salmon, rainbow and brown trout, and recreational anglers make use of the canals and Stilling Basin.
- vi. Mount Cook Salmon Farm is situated in the canal several kilometres upstream of the proposed abstraction site.
- vii. Consented users of the Tekapo-Pukaki Canal, taking water for irrigation, are Mr & Mrs Andrew & Karen Simpson of Balmoral Station (CRC951545.1), The Wolds Station Limited (CRC952547 & CRC952550) and Irishman Creek Station Limited (CRC991667).
- viii. Didymo has been detected in the Tekapo-Pukaki Canal.

30. *Property Location – Simons Pass Station*

a) The applicant states:

- i. Existing irrigation on the property is limited to 51 hectares of borderdyke irrigation to the east of the Mary Range.
- ii. Land is currently used for low intensity sheep and cattle farming, and stocking rates are traditionally very low.

b) I note that:

- i. A full property description is available in the Conservation Resources Report prepared by the Department of Conservation for Land Information New Zealand as part of the tenure review process (see [www.linz.govt.nz/crown\\_property/tenure\\_review/property\\_status](http://www.linz.govt.nz/crown_property/tenure_review/property_status)). The Historic and Recreational Values Map referred to in the report is not available online, so is included in Attachment Four of Report 34a.
- ii. The proposed command area is bordered by a line of power pylons to the northwest, Wolds Station land to the northeast, Mary Range, Simons Hill Station and Maryburn Station to the east, Simons Hill Station to the south, and Pukaki River to the west.
- iii. State Highway 8 runs through the eastern extent of the proposed irrigation area west of the Mary Range, and is adjacent to the southern extent of the irrigation area east of the Mary Range.
- iv. A Rabbit Fence built in 1888, originating on Glentanner Station, runs through the southwest corner of the proposed irrigation area west of the Mary Range, heading towards Simons Hill Station, and is classified as an archaeological site under the Historic Places Act.
- v. The Bullock Trail, which is purported to be the first road through the Mackenzie country, runs from west to east through the southern area of Simons Pass Station.

31. *Climate*

a) The applicant states:

- i. A description of climate has been provided in the *Simons Pass Tenure Review Botanical Assessment*, prepared for the applicant by Dr Peter Espie (February 2009). This report identifies rainfall variability within the property, with lower rainfall at the southern boundary, and consistent soil moisture deficit during the growing season.
- b) I note that:
  - i. Effective seasonal rainfall is estimated to range between 190mm and 200mm in the Canterbury Regional Council GIS system.

### 32. *Soils and Vegetation*

- a) The applicant states:
  - i. A full description of soils and vegetation cover has been provided in the *Simons Pass Tenure Review Botanical Assessment*, prepared for the applicant by Dr Peter Espie (February 2009).
  - ii. Soils within the command area are at risk of erosion, and reduced vegetation cover is expected to further degrade as a result of rabbit activity, hieracium and weed encroachment.
- b) I note that:
  - The Espie report does not identify specific water holding capacity of soils within the irrigation command area, which has been identified by CRC land resources scientist Jeromy Cuff, based on the work of Trevor Webb, as shown in Appendix Five. The soil descriptions otherwise correspond closely.

### 33. *Landscape and amenity*

- a) The applicant states:
  - i. Land within the irrigation command area can be classified as in a semi-natural state, with a naturalness ranging from Moderate-Moderate High.
- b) I note that:
  - The Conservation Resources Report (referred to in paragraph 34 above) describes Simon Pass Station as comprising 'large classic examples of the key landform elements that contribute significantly to the Basin's character' including characteristic low tussock grassland, and identifies much of the proposed irrigation area southwest of the Mary Range as having significant inherent landscape values.
  - A DOC reserve, public access track and geopreservation site exists to the north of the proposed irrigation area within an area of terminal moraine, including pillow lava forms.
  - Mackenze District Council district plan identifies a Scenic Viewing Area within the irrigation command area to the west of State Highway 8, looking west to an area of terminal moraine landforms.

34. *Surface water*

a) The applicant states:

- i. The Pukaki River, along the eastern extent of the proposed irrigation area, is predominantly dry, subject to flow releases over the Lake Pukaki spillway, managed by Meridian Energy Limited, with flows ranging from 0 to 1000 cumecs, and an average release flow of 180 cumecs.
- ii. Samples of water from Lake Pukaki and the Tekapo River show low concentrations of Nitrate-N (0.0015mg/L and 0.0018mg/L respectively) and the same low concentration of P (0.004mg/L), based on 1 May 2009 samples taken by the applicant.

b) I note that:

- i. There is no regularly flowing water on the Pukaki outwash flats. The paths of ephemeral streams on Simons Pass Station to the north run on to Simons Hill Station, but flows after heavy rainfall are likely to run to ground before the boundary of Simons Hill Station.
- ii. Water quality monitoring has been undertaken regularly for the Mary Burn at the state highway bridge (SQ10275), approximately 800m east of the proposed irrigation area, from 1983 to the present, with a total of 24 sampling records. These show variable levels of Total N (<0.08mg/L to 0.70mg/L) and Total P (<0.008mg/L to 0.039/mg/L), and variable E Coli counts October to April (from 12 MPN/100ml to 980 MPN/100ml).
- iii. There are ephemeral watercourses, and ephemeral wetlands (kettleholes in the moraine landform) within the proposed irrigation command area.

35. *Groundwater*

a) The applicant states:

- i. The applicant installed 6 bores ranging between 6.1 and 7.1 metres in depth within the proposed area of irrigation to assess groundwater levels. Two bores in the area west of the Mary Range did not intercept groundwater, and of the four bores in the area east of the Mary Range, one intercepted shallow groundwater at approximately 4 metres below ground level. See Attachment Six of Report 34a for location of sampling bores in relation to irrigation area, including initial groundwater levels for those bores and other existing bores in the area.
- ii. Bores I38/0012 and I38/0015 are on the eastern boundary of the area of irrigation east of the Mary Range and show groundwater levels at approximately -34 metres and -11 metres respectively.
- iii. Bore I38/0100 (SP4 in Attachment Six of Report 34a), within the proposed irrigation area east of the Mary Range, shows Nitrate-N concentration of 0.002mg/L and P concentration of 0.023mg/L, based on a single sample taken on 1 May 2009.

b) I note that:

- i. Based on the applicant's sampling data, from five bores southwest of the Mary Range, by the Pukaki River and Tekapo River, the average concentration of Nitrate-N is 0.03mg/L and the average concentration of P is 0.005mg/L.
- ii. Test pit excavations, up to 5m deep, undertaken by Riley Consultants<sup>1</sup> for Pukaki Irrigation Company Limited found that outwash gravels located within the bed of ephemeral watercourses crossed by the proposed supply race were moist or occasionally saturated.

### 36. Ecology

#### a) The applicant states:

- i. Botanical values within the proposed area of irrigation have been assessed in the *Simons Pass Tenure Review Botanical Assessment*, prepared for the applicant by Dr Peter Espie (February 2009).
- ii. DOC tenure review recommendations for Simons Pass propose two conservation areas and one conservation covenant within the proposed area of irrigation.
- iii. Natural short tussock grasslands have been replaced by a sparse, and largely exotic community of grasses and herbaceous weeds, interspersed with extensive areas of bare soil, as a result of changing environmental conditions, the invasion of herbaceous and woody weeds and rabbit infestation.

#### b) I note that:

- i. The DOC Conservation Resources Report (referred to in paragraph 34) identifies Critically Underprotected, At Risk and Acutely Threatened species and habitats within the proposed area of irrigation.
- ii. The southwest area of proposed irrigation, on arid land with low vegetation cover is described in the DOC report as providing productive habitat for threatened invertebrate species, including the *sigaus minutus* grasshopper.
- iii. The DOC report identified three endemic lizard species present within the proposed irrigation, generally on the Pukaki outwash plain, and spotted skink (a species in gradual decline) on the western margin by the Pukaki River.
- iv. Threatened bird species are recorded in the DOC report as nesting in the arid southern area of the Pukaki outwash plain, including banded dotterel and black fronted terns.

---

<sup>1</sup> Further information provided with Pukaki Irrigation Company Limited application CRC062866 (15 December 2006, Appendix B)

## ASSESSMENT OF PROPOSED ACTIVITY

37. The proposed water permit is a discretionary activity and must be considered in the context of s104 of the RMA.
38. 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))

39. The effects that have been considered for this type of activity (to take and use water) are presented in the introductory s42A report. That report includes the presentation of the relevant planning provisions which direct us to consider these effects. A summary 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	IO assessment	Conclusion
Ecosystems	Lake Tekapo minimum lake level proposed; provide access for control of Canada geese; control wilding pines with increased revenue; fish screen proposed; modified vegetation communities present within the irrigation area; habitats protected in adjacent conservation areas	Assessment of effects on threatened endemic invertebrate, lizard and bird species within the irrigation command area has not been provided; identified rare botanical species present, specific protection not proposed; fish screen to comply with NIWA guidelines; didymo threat to canal system	Effects more than minor, additional mitigation required
Other water users	MIC shares held; no abstractors other than Meridian; metering proposed at the intake and at the property boundary; comply with MIC conditions re abstraction during canal maintenance or reduced canal flows	Combined intake with Simons Pass, Simons Hill and Glentanner Station; MIC shares held by all parties, joint and individual metering proposed; Assessment on other irrigation abstractors not provided, but Meridian control abstractions from canal and flow rates	Effects minor
People, communities & amenity values	Economic benefits of irrigation	Tekapo Stilling Basin angling values unaffected; likely benefits of increased production; archaeological assessment required for 1888 Rabbit Fence and Bullock Trail	Effects may be more than minor on archaeological sites
Landscape	Agricultural landscape; improve vegetation cover degraded by changing environment, weed and rabbit infestation; expansive views unchanged by greening and pivot structures; change to	Modification of irrigation command area appropriate in areas adjacent to SH8 and around moraine boulder areas; landscape change from vast area of arid, bare ground to heavily populated	Effects may be more than minor

	moderate-moderate low state of naturalness; no irrigation west of Mary Range and north of SH8; no irrigation of Scenic Viewing area or rock outcrops; setback 600m from SH8, except for NW 100m buffer.	green area; change visible from Scenic Viewing Area, DOC reserve and walking tracks; block irrigation preferable to patchy effect; high naturalness area sensitive to change;	
Efficient use	Proposed volume of 14,581,330 is MIC share annual volume of 14,400,000m <sup>3</sup> , with additional stockwater requirement for up to 18 stock units per hectare, based on heifers (equivalent to 4 units); gravity fed system, with some pumping to the east of Mary Range; fully piped scheme with no discharges; centre pivots only to be used	No Policy 16 assessment provided; Policy 16(c)(ii) method volume is 13,689,600m <sup>3</sup> for 2400ha	Effects may be more than minor, requested volume exceeds reasonable use assessment
Water quality	Baseline water quality data collected; 21kg/ha/year Nitrate-N assumed to drain through property at >12 su/ha; insignificant 0.005g/m <sup>3</sup> increase in concentration of Nitrate-N in Lake Benmore predicted; centre pivots only to be used; farm management plan proposed	No assessment of effects on Mary Burn; no buffer zones proposed to ephemeral streams; farm management plan not available at time of writing	Effects may be more than minor, depending on results of MWRL report and additional mitigation proposed.
Tangata Whenua values	Not identified.	Submission in opposition from Te Runanga o Ngai Tahu; Lake Pukaki is Statutory Acknowledgement Area	Effects uncertain,

**Table 2: Summary of Assessment of Effects**

### Effects on ecosystem values

40. The applicant proposes to surrender share of CRC011554, which authorise abstraction from the Mary Burn of 230 litres per second. There will be a positive benefit to species present in the river as result of restored flow.
41. The applicant has not provided details of fish screen design. Provided the applicant accepts a condition requiring installation of a fish screen that complies with guidelines in the NIWA *Fish Screening: good practice guidelines for Canterbury*, effects on fish and fish fry at the intake will be minor.
42. Water storage is not proposed, but 2400ha of improved pasture may attract an increase in Canada geese numbers. The applicant proposes to address this by allowing access for hunting.
43. Didymo was detected in the Tekapo-Pukaki canal at the Mt Cook salmon farm on 24 June 2009, approximately 3 kilometres from the Tekapo Stilling Basin. The organism would challenge performance of the intake and fish screen if it does establish in the canal.

44. Regarding ecosystem values within the proposed irrigation command area, In his botanical assessment report, provided by the applicant, Dr Espie has identified one of the recommended covenant sites as an area requiring protection due to the presence of the rare New Zealand mousetail (*myosurus minimis*), which the applicant has not, to date, proposed to exclude from the proposed irrigation command area. Irrigation in this location is likely to result in degradation or loss of ecological values in this location.
45. Dr Espie acknowledges that indigenous botanical species dominate the canopy cover, including sparse to dense fescue tussock, on the moraine systems south of the main late glacial terminal moraine (adjacent to Lake Pukaki), and the southern morainic and fluvioglacial outwash surfaces, which includes areas within the proposed irrigation command area. He concludes that: due to the fact that the sub-canopy is highly modified, there has been deterioration in fescue tussock grassland communities, and there are similar vegetation communities already protected in adjacent areas<sup>2</sup>, consideration should be given to use of these areas for pastoral farming, taking a balanced approach to conservation and pastoral viability.
46. The DOC Conservation Resources Report identifies significant inherent botanical values over an extensive area within the proposed irrigation area southwest of the Mary Range, but excludes an area of land in the centre of this part of the property, which it describes as the Farm Block. This area is within the Balmoral moraine formation (identified in Dr Espie's report as the early Otiran glaciation) and has been divided into large non-irrigated paddocks 'edged with uniform coniferous shelterbelts in a chevron formation'<sup>3</sup>. As well as exclusion from the area of significant inherent botanical value, the Farm Block area does not feature as a habitat for threatened endemic invertebrate, lizard or bird species. The area totals approximately 650 hectares, based on re-creation in the CRC GIS system.
47. In addition, the DOC report identifies an area close to the homestead and Mary Range, north of State Highway 8, which has been developed into cultivated paddocks. However, outside of the cultivated blocks, on areas of ephemeral watercourses, kettlehole depressions, valley floors and lower slopes, species of conservation interest are present. The applicant has revised the irrigation command area to exclude irrigation in this part of the property, north of the highway.
48. East of the Mary Range, borderdyke irrigation has occurred over approximately 51 hectares of the proposed irrigation area, and generally the proposed area has been subject to cultivation and development. This part of the proposed irrigation area is approximately 490 hectares. Species of conservation interest have not been identified in this area, and it is not part of the pastoral lease.
49. With respect to Dr Espie's conclusion regarding balancing the interests of habitat and species conservation and pastoral viability, it appears that the applicant could irrigate a total of 1,140 hectares of the property, within the Farm Block and blocks east of the Mary Range, 1,089 hectares of which has not previously been irrigated, without adversely affecting threatened endemic species or areas identified in the DOC report as being of significant inherent botanical value, which are present on other areas of the property. 1140 hectares represents 47.5% of the total area proposed to be

---

<sup>2</sup> Dr Espie identifies the Lake Pukaki Terminal Moraine Conservation Area (located to the northwest), and the Simons Hill Conservation Area (located on the crest and eastern slopes of Simons Hill).

<sup>3</sup> See DOC Conservation Resources Report, p10, and maps of Landscape Values and Botanical Values

irrigated (2400 hectares), within the irrigation command area of approximately 4200 hectares.

50. Without further assessment by the applicant of effects on specific habitats and species present within the irrigation command area, or appropriate mitigation proposed, including modification of the irrigation command area, I expect effects of the proposed activity to be more than minor.

### **Effects on other water users**

51. The applicant proposes to comply with standard conditions assigned by the Mackenzie Irrigation Company Limited, including ceasing abstraction during periods when maintenance of the canal and stilling basin is undertaken or flows in the canal and stilling basin are reduced, at request from Meridian Energy Limited. Effects on the operations of Meridian Energy Limited can therefore be considered to be minor.
52. The applicant proposes water metering in relation to the proposed abstraction. Metering at the intake location will be for a combined rate of abstraction by Simons Pass Station Limited, Simons Hill Station Limited, Glentanner Station Limited and Classic Properties Limited. Accurate metering and monitoring of the entire combined abstraction from the Tekapo Stilling Basin will be necessary to ensure that the combined rate authorised by all consents does not exceed the rate Meridian Energy Limited have agreed to supply.
53. Regarding other users of the canal, further abstraction from the Tekapo-Pukaki Canal has the potential to reduce reliability of supply to existing abstractors. I note, however, that Meridian control the overall rate of abstraction from the canal and the rate of flow, such that reliability of supply is a matter between abstractors and Meridian Energy Limited.

### **Effects on people, communities and amenity values**

54. Effects on amenity values will be primarily related to enjoyment of the landscape, which is discussed in the following section.
55. I acknowledge that there may be positive effects on the local community, and regional and national economic benefits as a result of the proposed activity, due to increased production. In addition, climate change may impact on frequency of dry years in the future, affecting the viability of the property in the long term.
56. The proposed activity is likely to disturb the Rabbit Fence, built in 1888, that runs through the irrigation command area, as well as the Bullock Trail, which is remnant of the first road through the Mackenzie Basin. Both are archaeological sites under the Historic Places Act. The applicant has not provided an archaeological assessment or considered effects of the proposed activity on these sites. Without such an assessment, I cannot be certain that effects on people, communities and amenity values, related to heritage preservation, will be minor.

### **Effects on natural character and landscape**

57. The applicant has assessed the predicted changes in landscape, including the introduction of centre pivot structures and increased greening, as a shift from a state of naturalness described as semi-natural (moderate to moderate-high) to quasi-natural (moderate to moderate-low). The applicant has argued that expansive views across to the mountain ranges will not be affected by the proposal, and that pivot

structures are generally low profile, semi-transparent, with horizontal form and characteristically rural.

58. An assessment of the change in state of naturalness, presumably assessing the level of visible human intervention, does not entirely capture the extent of change to colour, character and texture that will result from the introduction of green pasture blocks, irrigation infrastructure and heavily populated paddocks in an area that is characterised by a generally dry, barren, expansive, uniform, uncluttered and unpopulated appearance.
59. Installation of irrigation infrastructure may also necessitate the removal of glacial boulders within the proposed irrigation command area. Boulder fields are characteristic of the moraine landform and extensive or concentrated removal of boulders will further impact the form and character of the area. The applicant has revised the irrigation command area to exclude major boulder field areas, which is considered appropriate.
60. The applicant proposes to also exclude the Scenic Viewing Area to the west of State Highway 8 from the proposed irrigation command area, previously included. In addition, the applicant proposes a 600 metre buffer from the highway, except for a section at the north western extent of the proposed irrigation area adjacent to the highway, which will have a 100 metre buffer. Rolling moraine provides screening between the road and southern areas of irrigation. These mitigation measures are considered appropriate and will reduce effects on landscape resulting from the proposal.
61. Landscape changes across the property will be visible from the DOC administered public access track within the Lake Pukaki Terminal Moraine Conservation Area to the north of the property, the Scenic Viewing Area and access tracks through the property (including the path of the Bullock Trail).
62. Impact of the proposal could be minimised by confining development within the area described as the Farm Block in the DOC Conservation Resources Report, which is enclosed in shelter belts and already subject to a greater level of cultivation, distinct from the surrounding open environment. Development here, and on the block east of the Mary Range (as discussed in paragraph 48), would have considerably less impact on the character of the landscape, and provide protection of the landscape values identified in the DOC report on areas of the property that are being considered for Crown ownership as part of the tenure review process.
63. In relation to cumulative landscape effects, I note that this proposal is being advanced in conjunction with other proposals to utilise a shared intake to be built by the Pukaki Irrigation Company Limited. Simons Hill Station Limited represents an additional proposal to irrigated 2400 hectares, the majority of which is on the outwash flats south of the proposed area of irrigation for Simons Pass Station. Glentanner Station Limited proposes to irrigate a further 200 hectares to the northwest of the proposed area of irrigation for Simons Pass Station, in an existing cultivated area of moraine. Glentanner Station Limited has an independent intake option in process, but Simons Hill Station and Simons Pass Station, totalling 4800 hectares, will be dependent on the PIC intake and supply system, and it is not clear to what extent the proposals would proceed independently of one another.
64. A separate report has been prepared in relation to effects on landscape (refer to Report 5). The applicant has adopted mitigation measures proposed in that report, revising the irrigation command area in response to its findings, which has addressed

many of the concerns regarding effects on landscape. However, given the number of submissions concerned about effects on natural character and landscape, as well as acknowledgement from the applicant that the state of naturalness of the area as a whole will reduce from between a moderate-high to moderate-low state, I am not satisfied that adverse effects of the proposal in its current form can be considered minor.

### Effects of inefficient take and use of water

65. Regarding delivery of water to Simons Pass Station, I note that the proposed abstraction from Tekapo Stilling Basin will utilise gravity feed, which represents an efficient use of energy resources. It may not be possible to gravity feed all proposed areas within the property, particularly the area east of the Mary Range, but the majority of the 2400 hectares will be gravity fed.
66. Regarding management of the abstraction to ensure compliance with stated efficiencies, in addition to metering at the intake location, metering of the use of water on Simons Pass Station will be required to ensure that the consent holder does not exceed the maximum rate of take and use of water authorised by CRC082311. This should involve metering at a point in the pipeline that captures all water supplied to Simons Pass Station, and is likely to be located at the boundary of the property. Location will be dependant on collaboration between the applicant and Pukaki Irrigation Company Limited.
67. The applicant proposes to take water at a rate not exceeding 1,328 litres per second, and use up to 14,400,000 m<sup>3</sup> of water annually for irrigation of 2,400 hectares, and to use 181,330 m<sup>3</sup> of water annually for stockwater purposes.
68. The irrigation volume has been based on share allocation issued by Mackenzie Irrigation Company to allow application of 600 millimetres per hectare per year. The applicant has not provided an assessment of reasonable annual volume requirements, as required by Policy 16 of the WCWARP.
69. I have undertaken an assessment of reasonable annual volume requirements using the Policy 16(c)(ii) method for intensive pasture, with effective seasonal rainfall of 190mm, for the differing soil types within the irrigation command area (see Attachment Five of Report 34a for map of soil types). The following assessment was undertaken prior to the applicant amending the irrigation command area on 25 August 2009. Any amendment to the command area affects the percentage of command area in each soil type, and therefore the final figure. I have not revised the figures at the time of writing this report, but will provide them on request.

Soil Type	% of command area represented	# ha/2400ha	Irrigation Demand	Annual Volume (m3)
Light soils PAW average <75mm	48	1152	625mm	7,200,000
Medium soils PAW average 75-110mm	26	624	560mm	3494,400
Heavy soils PAW average >110mm	26	624	480mm	2995,200
			<b>Total</b>	<b>13,689,600</b>

**Table 3: Policy 16(c)(ii) assessment for CRC082311**

70. The above table indicates that the reasonable irrigation requirement is likely to be less than the 600mm per hectare MIC share allocation, and more like a requirement of 570mm per hectare.
71. In addition, the requested annual volume incorporates an allowance for stock water of 497m<sup>3</sup> per day, which equates to 181,300m<sup>3</sup> annually. This allowance is based on a stocking rate of 18 stock units per hectare, with a combination of 1 year and 2 year rising heifers, requiring 45 litres per head per day, which is consistent with Policy 17. Up to 18 stock units per hectare over 2400 hectares equates to a maximum of 43,200 stock units, with a requirement of 1,944m<sup>3</sup> per day if one stock unit equalled one head. The applicant has assumed that four stock units equals one head in the calculation of daily requirement for heifers.
72. The daily rate proposed for stock drinking water is equivalent to approximately 6 litres per second. Simons Hill Station are proposing the same stocking rate over the same number of hectares, which would be an additional 6 litres per second, while Glentanner Station and Maryburn Station (Classic Properties limited) have not specified a rate for stockwater, but both have existing supply systems.
73. In summary, given that the reasonable use requirement per hectare has been assessed as less than 600mm per hectare, I am not satisfied that the proposed annual volume of 14,400,000 for irrigation represents an efficient and effective use of water.

#### **Effects of water use on water quality**

74. There are a number of submissions which identify water quality as a result of land use intensification as a concern, including from Meridian Energy Limited, Department of Conservation, Royal Forest and Bird Protection Society, and Fish and Game New Zealand.
75. I acknowledge that the proposed mitigation measures are generally appropriate as a means of reducing potential nutrient leaching and run-off from the proposed irrigation area.
76. I note, however, that there are ephemeral streams and wetlands within the proposed irrigation command area, and an ephemeral tributary of the Mary Burn shown within the block east of the Mary Range. The applicant has not proposed buffer zones to these waterbodies or assessed the effects of the proposed activity on them.
77. With respect to groundwater, one bore installed by the applicant has detected shallow groundwater east of the Mary Range in close proximity to a Mary Burn tributary shown on the CRC GIS system.
78. In addition, test pit excavations undertaken by Riley Consultants for Pukaki Irrigation Company Limited to assess the proposed canal route for design and construction requirements (Option 1 and 2 of the Pukaki Irrigation Scheme), indicated moist and sometimes saturated soils within the 5 metre depth of excavation where Mackenzie type soils (outwash gravels) were present. These soils are intercepted where the proposed canal for Option 1 and Option 2 of the scheme crosses ephemeral streams, suggesting that shallow groundwater is likely to be associated with these generally dry watercourses. The applicant did not install bores in these areas to determine existing GW levels, and bore SP2 is the only bore associated with Mackenzie soils on the property, which is located between two ephemeral watercourses.

79. The applicant has considered the potential for nitrate-N to leach through groundwater to the Pukaki River, but did not identify shallow groundwater in the vicinity and noted that the Pukaki River is often dry, with high flows when it is flowing, which would aid dilution. The applicant has not assessed the potential for leachate to enter the Mary Burn.
80. Existing groundwater and surface water quality is generally high, with the exception of the Mary Burn which has periodic spikes in the presence of E Coli and has variable nitrate-N and P levels. Additional nutrient leaching and run-off could exacerbate existing variability and increase the concentration of undesirable contaminants.
81. In terms of cumulative effects, the applicant identifies an increase in nitrate-N leaching to groundwater can be expected as a result of the proposed activity, and calculates that 20kg/ha may leave the site annually as a consequence of irrigation, assuming an increase from <1 stock unit per hectare to 15 stock units per hectare and assuming a conservative leachate concentration of 8g/m<sup>3</sup> at the increased stocking rate. From 2400 hectares of irrigation, the increase of Nitrate-N entering Lake Benmore is predicted to be 48,000kg per year, resulting in an increased concentration in the lake of 0.005g/m<sup>3</sup> (based on average lake inflows and lake area inputs), which the applicant concludes is insignificant. I note that the applicant has allowed for a stocking rate of up to 18 stock units per hectare in assessing stock drinking water requirements, so the applicant has underestimated nitrate-N leaving the property.
82. I note that the applicant has allowed for a stocking rate of up to 18 stock units per hectare in assessing stock drinking water requirements, so the applicant has underestimated potential nitrate-N leaving the property.
83. The report by MWRL has been audited and a separate s42a report prepared (see Report 4).
84. Given that the applicant has not assessed effects on the Mary Burn, or ephemeral streams and wetlands within the proposed area of irrigation, and that mitigation proposed to address cumulative water quality effects has not been identified, pending a farm management plan from the applicant, adverse effects on water quality from the proposed activity may be more than minor.

## Conclusion

85. With regard to s104(1)(a), the actual and potential effects of the proposed activity have been discussed above. For this application, I am not satisfied that under s104(1)(a), the actual and potential effects of the proposed activity in its current form will be minor. In particular, there remains uncertainty regarding effects on ecosystems, landscape and water quality, and effects of inefficient use of water.

## Relevant Statutory Provisions (s104(1)(b))

### National Policy Statement on Electricity Transmission (NPS)

86. The National Policy Statement on Electricity Transmission has been operative since 10 April 2008.
87. Policy 10 of the NPS states:

*"In achieving the purpose of the Act, decision-makers must to the extent reasonably possible manage activities to avoid reverse sensitivity effects on the*

*electricity transmission network and to ensure that operation, maintenance, upgrading, and development of the electricity transmission network is not compromised.”*

88. Policy 11 of the NPS states:

*“Local authorities must consult with the operator of the national grid, to identify an appropriate buffer corridor within which it can be expected that sensitive activities will generally not be provided for in plans and/or given resource consent. To assist local authorities to identify these corridors, they may request the operator of the national grid to provide local authorities with its medium to long-term plans for the alteration or upgrading of each affected section of the national grid (so as to facilitate the long-term strategic planning of the grid).”*

89. The applicant proposes a buffer zone between irrigation infrastructure and transmission lines running through the property, consistent with the NZ Electricity Code of Practice for setback distances from 220kV lines with a distance between towers of 251 - 375 metres. The CRC GIS system indicates that some structures on the property have a distance to the next structure greater than 375 metres. In order to be consistent with the code of practice, and therefore the NPS, the applicant will need to consult an engineer with regard to placement of irrigation infrastructure near those structures.

### **Regional Policy Statement (RPS)**

90. 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.
91. Of significance to this application are: Chapter 7, which relates to management of soils and land use; Chapter 8, which relates to management of landscape, ecology and heritage, and Chapter 9, which relates to the management of the Region’s water resources.
92. The proposal appears to be inconsistent with Chapter 8 (Objective 1, Policy 1, Objective 2, Policy 3, Objective 3, Policy 4, Objective 4, Policy 5) and Chapter 9 (Objective 1, Policy 3, Policy 6, Objective 3, Policy 9) of the RPS, outlined in the introductory S42a report (Report 1).

### **Waitaki Catchment Water Allocation Regional Plan (WCWARP)**

93. 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 applicable to this application is appended in Attachment Three. A discussion of the objectives and policies which are particularly relevant to this application is provided in the following paragraphs.

#### **Objectives**

94. Objectives 1 and 2 are 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. This is a finely balanced decision and that while the proposal may not entirely be consistent with Objective 1 and the associated policies it is difficult to determine if the inconsistencies are significant enough to make the proposal contrary to Objective 1.

95. 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.
96. Objective 4 aims to achieve a high level of technical efficiency in the use of water. The use of centre pivots only is in line with this objective, and use of gravity feed.

#### ***Policies on environmental flow & level regimes***

97. Policy 2 identifies the Mary Burn as a high natural character waterbody, which is afforded a high level of protection. The applicant proposes to surrender share in an existing consent to take from the Mary Burn, reducing effects of abstraction on the river, in the event this application is granted.

#### ***Policy on water quality***

98. 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 4, by Dr Mike Freeman, addresses water quality matters in more detail, particularly on the cumulative scale. Until the applicant provides details of the farm management plan, and given the conclusions in Dr Freeman's report, I cannot be certain that the application is consistent with this policy at the time of writing this report.

#### ***Policies on efficient and effective use***

99. Policies 15 – 20 deal with efficient and effective use and all are applicable to this application.
100. 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 requested annual volume is reasonable for the intended use.
101. 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 meets the reasonable use test in this policy.
102. Policy 17 provides guidance for determining reasonable and efficient use for stock water drinking supply systems. As discussed in the assessment of effects, the proposal is consistent with this policy.
103. Policy 19 encourages the piping or sealing of water distribution systems. The proposal is consistent with this policy.

#### ***Policies on low water availability***

104. Policy 24 refers to exemption from the minimum lake level for reasonable stock drinking water and reasonable losses from reticulated supply systems. The stock water component of this application may be exempt from the minimum lake level.

#### **Conclusion**

105. With regard to s104(1)(b), the relevant provisions of the RPS and WCWARP have been considered above. I cannot be certain the application is consistent with Policy13

due to likely effects on water quality, and the proposed activity is inconsistent with Policy 15 and Policy 16 due to effects of inefficient use. In addition, I cannot make a conclusion about whether the application is consistent with Objective 1 of the WCWARP given the number of submissions to be heard.

## **Other Matters**

106. With regard to s104(1)(c), the consent authority can consider any other matter relevant and reasonably necessary to determine the applications. I consider that the high court decision *Aoraki Water Trust and Others v Meridian Energy Limited*<sup>4</sup> is relevant to this application (see discussion in Report 1).

## **Part II Purpose and Principles**

### **Purpose of the RMA (s5)**

107. Under Section 104, the consent authority must consider applications “subject to part II” of the RMA. The purpose of the RMA (Section 5(1)) is to:

*“promote the sustainable management of natural and physical resources.”*

108. 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 has proposed measures to “avoid, remedy or mitigate” the potential impacts on ecosystems, water quality and landscape values as required in Section 5(2)(c), but there are effects identified that require further mitigation.

### **Matters of National Importance (s6)**

109. Sub-sections (a), (b), (c), (e) and (f) of Section 6 of the RMA are particularly relevant to this application. The proposal will result in a change in natural character within an area of outstanding natural landscape. Some mitigation has been proposed to address effects on natural character and landscape. Areas of significant indigenous flora and fauna are present within the proposed irrigation command area, which the applicant has not proposed to protect. The relationship of Maori to their ancestral lands and water is relevant, and Te Runanga o Ngai Tahu have submitted in opposition to the application. The applicant has not proposed to protect historic heritage with the irrigation command area, or assessed effects on archaeological sites present.

### **Other Matters (Section 7)**

110. 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.
111. Sub-sections (a), (b), (c), (d), (f), (g), (h) and (i) are relevant to this application. Kaitiakitanga, or good stewardship, is represented by a change in irrigation practice on Simons Hill Station and the proposal to restore flow to the Mary Burn, however there may be an issue of good stewardship in relation to the location of irrigation, the option chosen with regards to the Pukaki Irrigation Scheme, management of water, and protection of conservation values on the property.
112. Section (b) relates to the efficient use of water and, as discussed above, the requested annual volume may not represent an efficient use of water

---

<sup>4</sup> [2004] NZMRA 251

113. Section (c) relates to maintenance or enhancement of amenity values. The applicant proposes to reduce visual effects of the activity adjacent to the state highway, which is appropriate and will help to maintain amenity values in this area.
114. Section (d) relates to intrinsic values of ecosystems, which is relevant to areas of the property classified in the DOC report as areas of Acutely Threatened or At Risk habitat.
115. Section (f) refers to maintenance and enhancement of the quality of the environment. The applicant has proposed some mitigation with regards to effects of the proposed activity on water quality, but further mitigation is required, and it is not clear that water quality would be maintained. The quality of naturalness of the proposed irrigation area will not be maintained.
116. Section (g) relates to the finite characteristics of natural resources and is relevant to the taking and use of water. The requested volume of water does not recognise the finite nature of the resource in the Upper Waitaki Catchment, as it may be in excess of requirements.
117. Section (h) refers to protection of habitat of trout and salmon, which is adequately addressed by screening to exclude fish at the intake.
118. Section (i) refers to the effects of climate change. Abstraction from the hydroelectricity lakes and canals, while putting pressure on generation capacity, will reduce pressure on naturally flowing rivers and streams, which may experience lower flows due to increased frequency of dry years and reduced snowmelt.

### **Principles of the Treaty of Waitangi (s8)**

100. Section 8 of the RMA requires the consent authority to take into account the principles of the Treaty of Waitangi. The site lies within the rohe of Arowhenua Runanga. Te Runanga o Ngai Tahu have submitted in opposition to the proposal and wish to be heard.

## **RECOMMENDATION**

### **Grant or Refuse**

119. 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.
120. The application proposes to establish irrigation over 2400 hectares of Simons Pass Station within an overall command area of approximately 4200 hectares, 2,349 hectares of which has not been previously irrigated, using centre pivot irrigator only. The applicant intends to use infrastructure installed by the Pukaki Irrigation Company Limited, which has three options in process. This application seeks to make use of the option to run a buried pipeline from the Tekapo Stilling Basin entry canal to the proposed irrigation area (Option 3).
121. There are, however, a number of outstanding issues associated with this proposal as listed below:
  - (a) *Ecosystems* – Adverse effects on threatened indigenous flora and fauna within the proposed irrigation command area have not been addressed;

- (b) *People, community and amenity values* - Adverse effects on archaeological sites within the proposed irrigation command area have not been addressed;
- (c) *Natural character and landscape* – Adverse effects on natural character and landscape within the command area are expected, although mitigation of visual effects adjacent to the state highway and effects on moraine boulderfields has been provided;
- (d) *Efficient and reasonable use* – The applicant proposes an annual volume greater than reasonable use estimates predict is required;
- (e) *Water quality* – Cumulative and localised effects on water quality are anticipated as a result of the proposed activity, which have yet to be addressed by the applicant.

122. Given inconsistency with Policy 15 and Policy 16, regarding efficient use of water, and uncertainty regarding effects on water quality with regards to Policy 13; and given that there are a number of adverse effects of the activity that the applicant has not proposed to avoid, remedy or mitigate, as outlined above, I am unable to recommend that the application be granted.

## RECOMMENDED CONDITIONS

123. If the Commissioners decide to grant this application, a list of conditions that are usually included in a water permit, and explanation for their inclusion, are provided in Appendix 6 of the introductory s42A report. A list of conditions for this application is included below. The italicised conditions are shorthand, with the full condition listed against the unique identifier in Report 1, Appendix 6.
124. I am not satisfied that these conditions would adequately mitigate adverse effects of the proposed activity.

### CRC082311 – To take and use surface water

1. *WP01*  
Water shall only be taken from Tekapo Stilling Basin, at surface water abstraction point H38/0227, at or about map reference NZMS 260: H38:8842-7328, at a maximum rate of 1,328 litres per second, with an annual volume not exceeding 13,870,900 cubic metres between 1<sup>st</sup> July and the following 30<sup>th</sup> June.
2. *WP04*  
Water shall be used only for centre pivot irrigation of 2400 hectares of crops and pasture for grazing sheep, beef cattle, deer or non-milking dairy cows, as described in the application, on the area of land shown in attached plan CRC082311, which forms part of this consent.
3. *WP08 Fish Screen*
4. *WP05 Avoid wastage of water*
5. *WP06 Backflow prevention*
6. Whenever the level of Lake Tekapo is at or below 701.8 metres above mean sea level in the months April to September inclusive, and at or below 704.1 metres above mean sea level in the months October to March inclusive, abstraction shall cease.
7. *Metering condition – MIC Conditions 12-15 – from Tekapo Stilling Basin*
8. *ME04 Certification*
9. *ME05 Certification*
10. *Metering condition – MIC Conditions 12-15 – from the irrigation supply canal at the boundary of Simons Pass Station, such that all flow to Simons Pass Station passes the metering device*
11. *ME04 Certification*

- 12. ME05 Certification
- 13. AD03 Review
- 14. AD04 Lapse

Signed:



*Maria Bartlett*  
*Consents Investigating Officer*

Date: 28 August 2009

## REFERENCES

Aqaulinc Research Limited Pukaki Irrigation Company Limited Application CRC062866  
February 2006

Biosecurity New Zealand Didymo Samples Database [www.didymosamplesdb.org.nz](http://www.didymosamplesdb.org.nz)

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

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

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

Department of Conservation Conservation Resources Report – Simons Pass, prepared for  
Land Information New Zealand May 2008

Espie, P Simons Pass Station Tenure Review Botanical Assessment, prepared for Simons  
Pass Station February 2009

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.

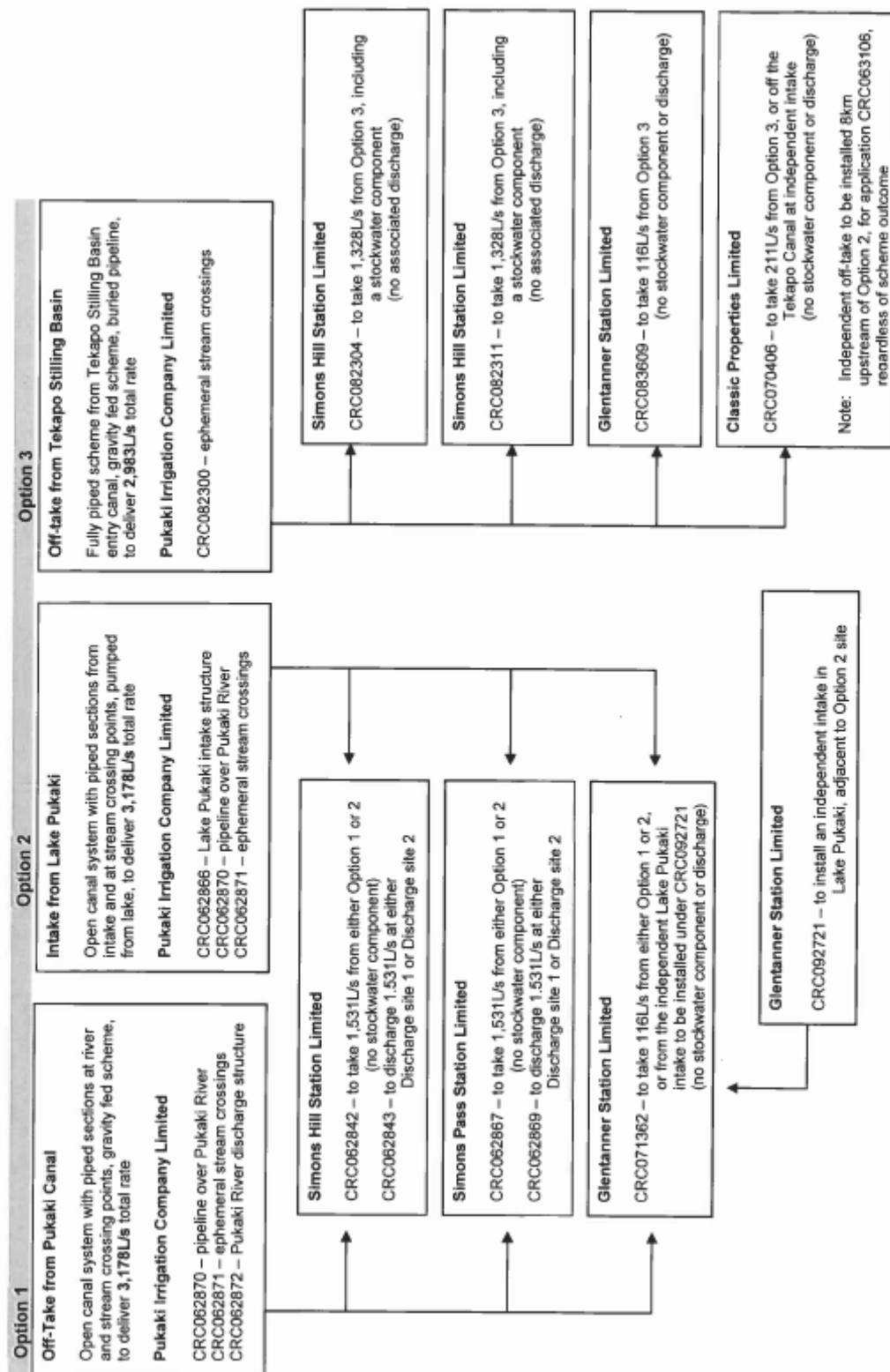
Waitaki Catchment Water Allocation Board 2006. Waitaki Catchment Water Allocation  
Regional Plan, Material Incorporated by Reference. ISBN: 0-9582620-6-3.

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.

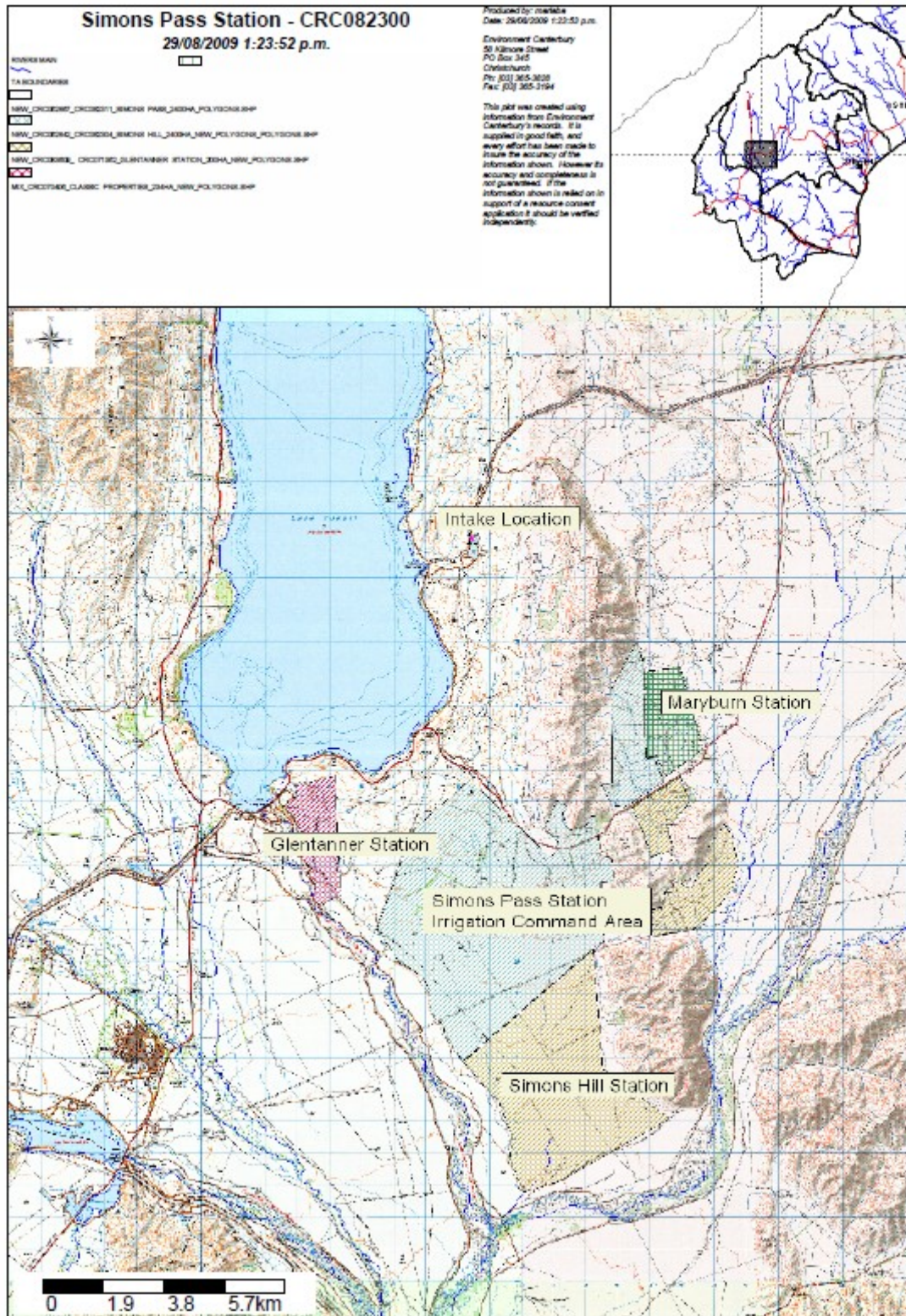
# ATTACHMENT ONE: PUKAKI IRRIGATION SCHEME

This diagram shows the relationship of applications lodged by all applicants that are part of the scheme.

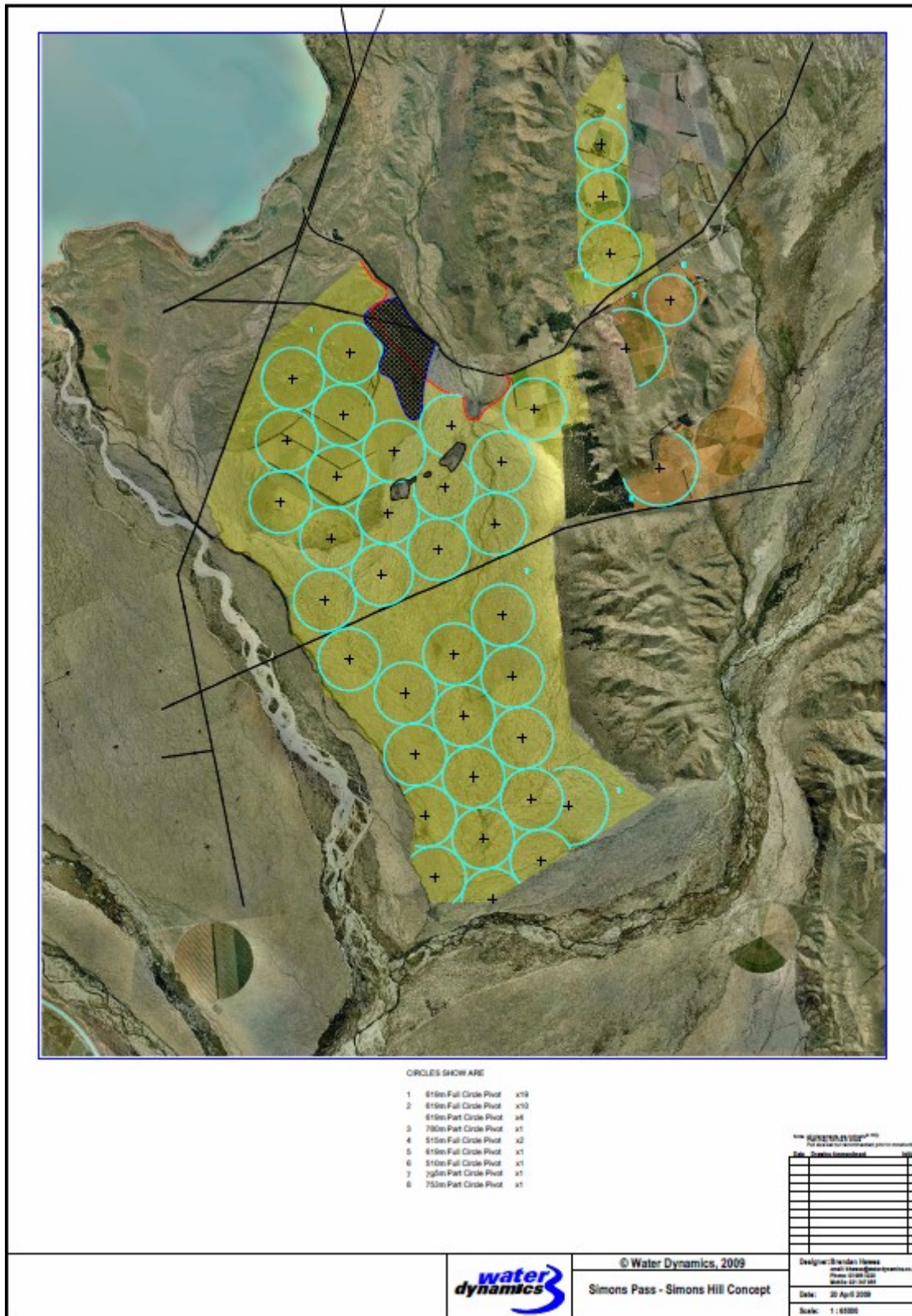


## ATTACHMENT TWO: LOCATION MAPS

Relationship of Simons Pass Station to other users of proposed Pukaki Irrigation Scheme infrastructure from Tekapo Stilling Basin



Revised command area from amendment to application on 25 August 2009, showing draft pivot plan, which will be subject to change.



## ATTACHMENT THREE – OBJECTIVES & POLICIES

Objective / Policy	Description	Assessment
Objective 1	To sustain the qualities of the environment of the Waitaki River and associated beds, banks, margins, tributaries, islands, lakes, wetlands and aquifers.	Submissions concerned about values in Objective, cannot determine that application is consistent with these values.
Objective 2	Provide water for different activities.	Activity is within allocation limit for activities above Waitaki Dam
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 is proposing a technically efficient system.
Objective 5	Provide for practical and fair sharing of allocated water during times of low water availability.	Appropriate minimum lake level proposed
Policy 1	Recognising connectedness between all parts of the catchment	Matters related to cumulative effects have been considered
Policy 2	High natural character of Mary Burn afforded high degree of protection	Applicant proposes to surrender share of existing take from the Mary Burn, which takes below Braemar Road
Policy 3	Setting of environment flow and level regimes for all activities in Objective 2 and consistent with Objective 1.	The minimum lake level is set for Lake Tekapo and accepted by the applicant
Policy 4	Outlines a number of matters that must be considered when setting an environmental flow and level regime	The minimum lake level is set for Lake Tekapo and accepted by the applicant
Policy 11	Consider effects on Tangata Whenua values, local and national effects when allocating water to activities	Effects on Tangata Whenua have been considered, and national and local effects
Policy 12	Outlines matters that must be considered when establishing allocation limits.	The allocation limit is set for agricultural activities above the Waitaki Dam and applicant is within the limit
Policy 13	Addresses water quality objectives in the NRRP	Water quality effects on rivers, lakes and groundwater are uncertain
Policy 15	Ensuring take and use of water is reasonable for its intended use	Applicant is requesting water above what may be reasonably required
Policy 16	Requiring irrigation applications to meet the specified reasonable use test	Applicant is requesting water above what may be reasonably required
Policy 17	Stock drinking water supply systems to meet a reasonable use test	The reasonable use test is met by the applicant in terms of requirement per head of stock
Policy 19	By encouraging the piping or otherwise sealing of water distribution systems	Fully piped scheme proposed
Policy 21	By requiring the installation of water measuring and recording devices	The applicant proposes appropriate metering
Policy 23	Restricting water use in times of low water availability, except for reasonable domestic and stockwater needs	The minimum lake level is set for Lake Tekapo and accepted by the applicant
Policy 24	To take reasonable stockwater requirements in times of low water	The applicant proposes to take reasonable stock drinking water requirements below the

	availability	minimum lake level
Policy 35	Setting a minimum lake level for these lakes, to apply to agricultural activities	The minimum lake level is set for Lake Tekapo and accepted by the applicant