

Conditions for water permit CRC083609 (Glentanner Station Ltd)

Status of Consent: **new**

Catchment: **irrigation on moraine terrace; no immediate downstream catchment**

Expiry date sought - 30th of April 2025.

No. Proposed Condition

ECan Comments

The new proposed conditions, developed subsequent to the presentation of section 42A reports, do not currently contain all the necessary conditions to satisfactorily address cumulative water quality issues. For other issues refer to S42A reports and responses to commissioner questions.

- 1 Water shall only be taken from the Tekapo Stilling Basin located between NZMS 260: H38:8842-7328 and NZMS 260: H38:8820-7260.
- 2 (a) Water for irrigation shall only be used between 1 September and the following 30 April and only in accordance with the maximum rate, daily volume (being from 12.00am to ~~12.00am the following day~~) and annual volume (measured between 1 September and the following 30 April) set out in Table A.
(b) Water taken in accordance with allocated in Table A shall be used only for the spray irrigation of 200 hectares for crops and pasture on the area of land shown on attached Plan CRC083609.
(c) Water for irrigation shall only be used on or applied to land that is subject to a memorandum of encumbrance that complies with the requirements of the agreement entitled "Agreement in Relation to the Allocation of Water for Irrigation" between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31st of October 2006.
(d) The consent holder shall, six months prior to this consent being exercised, provide to the Canterbury Regional Council a certificate from the Consent Holder's solicitor certifying that the memorandum of encumbrance provided for in Condition 2(d) is registered on the computer registers for the land shown on Plan "CRC083609" and any other evidence of registration as the Canterbury Regional Council may require (if any).
(e) This consent shall not be exercised concurrently with consent CRC071362.

ECan Comment:

Refer to S42 Report 15A, paragraph 13 and page 19, and S42a addendum report of Maria Bartlett, paragraphs 63 and 78.

~~"(a) Water shall only be taken from the Tekapo Stilling Basin at surface water abstraction point H38/0227, at or about map reference NZMS 260 H38: 8842-7328, between 1 September and the following 30 April, at a rate not exceeding 116 litres per second, a daily volume (measured between 12:00am and 12:00am the following day) not exceeding 10,022 cubic metres, and an annual volume (measured between 1 July and the following 30 June) not exceeding 1,076,000 cubic metres. (b) This consent shall not be exercised concurrently with consent CRC071362."~~

Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.

Reference to Table A is unnecessary as the rate, daily volume and annual volume do not change. See S42a addendum of Susannah Vesey, paragraph 152(c)

Applicant Comment:

The applicant disagrees with the volume proposed by ECan. Table A volume is based on MIC shareholding & Irricalc. Reference McCabe Evidence Section 5.3 & S42a IO Clarification report dated 12/2/2010

The applicant has reduced the command area during this process and maintains the area proposed is what is required.

3

ECan proposed condition:

Irrigation shall not occur within the following areas:

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- i. on soils with an average water holding capacity of 25mm or less;
- ii. within 130 metres of the bed of the Pukaki River;
- iii. within 50 metres of the bed of any watercourse;
- iv. within moraine areas containing ephemeral wetlands or tarns;
- v. within any area unsuitable for use of centre pivot irrigators due to natural topography.

ECan comment: Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.

Applicant Comment: Delete condition as applicant maintains this condition is non-standard and not required as per McCabe evidence para 69-71 and revised FEMP proposed

4

ECan proposed condition:

There shall be no levelling of glacial moraine landforms to enable use of centre pivot irrigation.

ECan Comment: Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.

Applicant Comment: Delete - Applicant maintains this is not required as per McCabe evidence para 74 and previous comments related to this matter above.

5

ECan proposed condition:

This proposal will affect recorded archaeological sites. Works affecting archaeological sites is subject to a consent process under the Historic Places Act 1993. An authority (consent) from Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorized site damage. The consent holder is advised to contact the New Zealand Historic Places Trust for more information.

ECan Comment: Refer to S42a addendum report of Maria Bartlett, paragraph 77, where original Condition 5 in S42 Report 15A was replaced with this advice note.

Applicant Comment: Delete - Applicant maintains this condition is not required as per McCabe evidence para 81 and hearing discussion

- 6 The consent holder shall take all practicable steps to:
- Agreed
- a) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and
 - b) Avoid leakage from pipes and structures; and
 - c) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips.
- 7 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.
- The taking of water in terms of this consent shall cease for a period required by the owner and/or operator of the Waitaki Power Scheme, where the owner and/or operator considers it necessary to undertake maintenance on, to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, the Waitaki Power Scheme.
- The taking of water in terms of this consent shall cease whenever the owner and/or operator of the Waitaki Power Scheme ceases to take, divert and/or discharge water into the Tekapo – Pukaki Canal(s), unless the owner and/or operator of the Waitaki Power Scheme gives written agreement to the continuation of take
- First paragraph is Agreed.
Paragraph 2 & 3:
ECan Comment: Refer to S42a addendum of Susannah Vesey, paragraphs 153-155
“The taking of water in terms of this consent shall cease upon written advice from Canterbury Regional Council or the person responsible for the operation of the Waitaki Power Scheme that: (i) the flow of water into Tekapo Canal has ceased, or is to cease, as a result of the operational requirements of the Waitaki Power Scheme; or (ii) maintenance is to be undertaken to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, Waitaki Power Scheme infrastructure, and such maintenance is unable to be undertaken while abstraction authorised in terms of this consent is occurring, particularly when such maintenance results in a restricted flow of water into Tekapo Canal.”
Applicant Comment: Considers these paragraphs need to remain to be in accordance with MIC agreement/MEL derogation approval.
- 8
- (a) A fish exclusion device shall be installed, operated and maintained on the intake to ensure that fish are prevented from passing into the intake.
 - (b) The fish exclusion device shall be positioned to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the fish screening device.
 - (c) The fish exclusion device shall be designed or supplied by a person with experience in freshwater ecology and fish screening techniques, who shall ensure that the performance criteria specified in clauses (a) and (b) of this condition are achieved, and that the device is designed in accordance with best practice, as outlined in the document Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007.
 - (d) Prior to the installation of the fish screen, a report containing final design plans that demonstrate that the fish screen will meet the performance criteria specified in clauses (a) and (b) of this condition, and an operation and maintenance plan for the fish screen, shall be provided to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.
 - (e) Before the taking of any water in terms of this permit, a certificate shall be provided to Canterbury Regional Council, by a person with experience in freshwater ecology and fish screening techniques, to certify that the design plans and operation and maintenance plan for the fish screen will meet performance criteria as outlined in this condition,
- Agreed

and that the fish screen has been installed in accordance with the details provided to Canterbury Regional Council in accordance with clause (d) of this condition.

- (f) The fish screen shall be maintained in good working order. Records shall be kept of all inspections and maintenance, and those records shall be provided to Canterbury Regional Council upon request.

| 9

ECan Proposed Condition:

- (a) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water into the bore.
- (b) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified person. A test report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within two weeks of each inspection.

ECan Comment: Include with revised wording in clause (a) as follows: "... to prevent the backflow of water into the fresh water source", as proposed for Pukaki Irrigation Company scheme takes

Applicant Comment: Gravity fed system therefore this condition is not required (as per other IO recommendations). Furthermore this condition has been superseded by Freemans version.

| 10 The consent holder shall, before the first exercise of this consent at the point of take:

- a.
 - (i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined to within an accuracy of plus or minus five percent at a location(s) that will ensure the total take of water from [specify] is measured; and
 - (ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's (as specified in conditions (3) and (4(a))) data of water taken as specified in clause (b) (i), or which is telemetered, as specified in clause (b)(ii).
- b. The water meter and recording device(s) shall 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 shall:
 - (i) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the

ECan Proposed Condition:

- (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(s) outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total take of water is measured, including: the total take of water from the Tekapo Stilling Basin; and the total take of water from the Pukaki Irrigation Company Limited pipeline at the point at which water is supplied to Glentanner Station; and

ECan Comment:

Refer to S42a addendum report of Maria Bartlett, paragraph 79, and report 15A, paragraphs 44 and 56. There remains a point of disagreement regarding the requirement for two metering sites, one at the Tekapo Stilling Basin to meter the combined take of Simons Hill, Simons Pass, Classic Properties and Glentanner Station from the canal (which will need to be specified on each permit, although it will be a single meter shared by all

	Canterbury Regional Council; or	
	(ii) 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.	
	c. The measuring device shall be installed at a site likely to retain a stable rating (i.e. a man-made channel, concrete, steel or fibreglass pipe). Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person.	
	d. The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.	
	e. 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.	
	f. All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of 5%.	
11	(a) The water meter installed in accordance with Condition <10> shall be an electromagnetic or ultrasonic meter; or (b) The consent holder shall, before first exercise of this consent install or make available an easily accessible straight pipe(s) at a location where the total water take is passing through, 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, to allow the Canterbury Regional Council to conduct independent measurements.	Agreed
12	Within one month of the installation of the measuring or recording device(s), specified in conditions <10> or any subsequent replacement measuring or recording device(s), or 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: (a) the measuring and recording device(s) is installed in accordance with the manufacturers specifications; and (b) data from the recording device(s) can be readily accessed and/or retrieved in accordance with clauses (b) and (c) of condition <8>.	Agreed
13	At five yearly intervals or 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 that: (a) the water meter(s) is measuring the rate of water taken as specified in condition <10> and (b) the tamper-proof electronic recording device is operating as specified in condition <10>	Agreed
14		ECan proposed condition: 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 ECan Comment: Refer to S42a addendum report of Maria Bartlett, paragraph 79

properties) and one at the boundary of the property to measure water supplied to Glentanner Station. If a single meter is accepted, then reference should be to metering at the point of abstraction from the canal, at the shared intake site.

Applicant Comment:

Applicant proposes only a water meter is required at the applicants boundary, given this is a piped system and no discharge. All the telemetered individual takes from the scheme will provide the overall take

Applicant Comment: Applicant proposes only a water meter is required at the applicants boundary, given this is a piped system and no discharge all the telemetered individual takes from the scheme will provide the overall take

For the purposes of interpretation of the following conditions the Glentanner Station shall be defined as the areas in certificates of title and Pastoral Lease numbers XXXXXXXXXXXX which total XXXXX

Nutrient Loading:

15

The consent holder shall prepare once per year and not less than one month prior to the commencement of the irrigation season, an Overseer® nutrient budgeting model report, and shall prepare, at least once per year, a report of the annual farm nutrient loading for the Catherine Fields using the model Overseer® (AgResearch model version number 5.4.3 or later

When exactly do these have to be done? Need to specify dates.

Applicant comment:

See tracked changes

16

A copy of the report prepared in accordance with condition xx shall be given to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, upon request.

Condition number? Condition xx = 15?

Applicant comment:

Agreed – but preference to leave final conditions numbering to be determined on grant

17

The consent holder shall not commence annually irrigation under this consent unless the annual (1 July to 30 June) nutrient loading (the nutrient discharge allowances (NDAs))as estimated in accordance with condition XX from Catherine Fields shall not exceed 4,432 kg of nitrogen and 135 kg of phosphorus.

Essential to specify and define the property “Glentanner Station - Catherine Fields” by reference to an area (X ha), legal description and/or a map, otherwise there is a risk that authorised nutrient load would be uncertain

The NDAs shall be complied with following the first full year (1 July to 30 June) of irrigation development.

The first clause of the proposed condition only requires compliance for commencement to occur, i.e., subsequent compliance would not be required. This is not appropriate. The condition should require ongoing compliance with the NDA.

Needs to be “The annual (01 July to 30 June) nutrient loading (NDA) estimated in accordance with condition X, shall not exceed...”

The final clause appears to be an attempt to broaden the compliance requirement but is missing some words and is not clear.

Applicant comment:

The condition requires compliance and verification annually

Not opposed to this wording

Do not understand. There is no attempt to broaden wording.

18

Overseer Modelling:

Where Overseer, or Overseer modelling, is referred for the purposes of determining compliance with the NDA limits associated with activities on the property it shall undertaken by an independent person with an Intermediate or Advanced Sustainable Nutrient Management Certificate issued by Massey

Don't consider that the three day intermediate course is adequate. Should require the more intensive Advanced Certificate. Majority of fertiliser representatives have this qualification and an increasing number of agricultural consultants.

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University or an equivalent qualification.

19 Farm Environmental Management Plan

1. The consent holder shall implement, and update annually the Farm Environmental Management Plan (FEMP) for Catherine Fields. The FEMP shall include

Condition is missing some wording. It appears to be some form of statement rather than a requirement. A final FEMP should be submitted prior to making a decision.

Deleted: <#>The Farm Environmental Management Plan prepared for the Catherine Fields and supplied to Environment Canterbury on an annual basis within two months of commencement of the current irrigation season¶

(b) Verification of compliance with NDA's by farm nutrient modelling using the model Overseer® (AgResearch model version number 5.4.3 or later).

A FEMP including verification of NDA compliance is not the same as an actual requirement to comply with the NDA.

(c) When undertaking the modelling outlined in clause (b), the consent holder shall use either weather records collected on-farm or from constructed data from the nearest weather station.

Applicant Comment
Final FEMPS have been sent to Ecan: Com: Phillips - Warnock

(d) Implementation of Mandatory Good Agricultural Practices ("MGAPS") and requirements to manage in accordance with the Catherine Fields Overseer® model inputs specified in the attached Appendix A of the FEMP – Catherine Fields Overseer® parameter report. Appendix A forms part of this consent.

(e) A property specific environmental risk assessment (including a description of the risks to water quality arising from the physical layout of the property and its operation which are not factored in as an Overseer parameter) prepared by a suitably qualified person which identifies any farm specific environmental risks along with measures to mitigate the farm specific environmental risks.

As above.
No Appendix A provided.

(f) A requirement to review the risk assessment if there are any significant changes in land use practice

2. Detailed records shall be maintained of fertilizer application rates, types of crops (including winter feed/forage crops), cultivation methods, stock units by type, breed and age, prediction of realistic crop yields that are used to determine crop requirements and all other inputs to the Overseer nutrient budgeting model.

3. A report based on Overseer® modelling shall be provided within one month of completion of the Overseer modelling by the person with the qualifications described in condition 13 and no later than two months prior to the start of the next irrigation season to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. The consent holder shall supply to the Canterbury Regional Council all model inputs relied upon for the annual Overseer® modelling.

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4. Changes may be made to Catherine Fields Overseer® model inputs, provided that written certification is provided that the change is modelled using Overseer®, and that the result of that modelling demonstrates that the NDAs are not exceeded.

Should be a person "with the qualifications described...".
The full Overseer output and input reports should be provided not a report "based on Overseer modelling". These should include the "Current farm" calculated total N and total P leaching/runoff.

5. A copy of that certification plus a copy of the resultant Overseer parameter report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, prior to the implementation of that change.

Not clear who can undertake this certification. Condition X may not apply.

Deleted: Advisory notes (Conditions 8 and 9)¶
for the purposes of this consent "Significant changes" constitutes a major change in the stock ratios between sheep, cattle, and deer or a major change in the farming systems for the property. . For example going from extensive sheep and beef farming to dairy farming or cropping. It does not include changes in stock numbers as would be expected to deal with inter seasonal variations arising from climatic conditions or changes in stocking rates due to market demand.

Applicant Comment:
Applicant thought that with difficulties in opening and

reading Overseer that Ecan wanted a report from the person in 13. We're happy to provide whatever form Ecan wants

Do not see issue – 13 applies to all references to Overseer

Advisory note condition references appear to be incorrect.

Not clear why this is needed. Conditions should allow for any change provided that the NDA is complied with and annual Overseer modelling is carried out.

Applicant CommentL

Agreed and deleted

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20

Fertiliser

1. Fertiliser shall be managed and applied in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates.
2. The consent holder shall keep a record of all fertiliser applications applied to the property, including fertiliser type, concentration, date and location of application, climatic conditions, mode of application and any report of the fertiliser contractor regarding the calibration of the spreader.
3. For land based spreading of fertiliser an independent fertiliser spreading contractor shall be used to spread any fertiliser on the property except as provided for by clause (b) below.
 - (a) Where an independent fertiliser spreading contractor is used the consent holder shall keep a record of the contractor used which can be supplied to the Canterbury Regional Council upon request.
 - (b) Where the applicant's own fertiliser spreaders are used, the consent holder shall test and calibrate the fertiliser spreaders at least annually, and every 5 years the fertiliser spreader will be certified by a suitably qualified person in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates and the results of testing shall be provided to the Canterbury Regional Council upon request.
4. Nitrogen fertiliser shall not be applied to land between 31st May and 1st September in any year except for the use of nitrification inhibitors
5. All fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering waterways.
6. Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare per application.
7. If liquid fertilisers, excluding liquid effluent, are stored on-site for more than three working days, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements.

This code of practice is generally not written as an enforceable document, which means that this condition could not be enforced, doesn't provide any assurance about effects and is therefore not necessary. Retention may give an impression that many aspects of fertiliser use can be controlled via a consent condition and enforced when they cannot. Therefore recommend deletion unless specific and enforceable components could be separated out and applied.

Applicant Comment:

Fertiliser clause to be read as a whole. It has specific controls but in addition this overarching Code control provides for best overall practices to be adopted – as they may be developed from time to time.

Not clear what use could be made of "a record of the contractor".

Applicant Comment:

The issue was to avoid requirement for calibration to occur for every separate spreading operation – where it is not within applicant's control to request calibration.

Subclause 2 requirements for record keeping and calibration record the information. Ecan may wish this information to be supplied upon request

Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore.

21

Irrigation Infrastructure

1. The consent holder shall ensure that all new (not on the property at the time of commencement of this consent) irrigation infrastructure is designed and certified by a suitably qualified independent expert holding National Certificate in Irrigation Evaluation Level 4, and installed in accordance with the certified design.

Issued by who? NZWETA?

What certified design? Certified by who?

Applicant Comment:

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(a) Copies of certified design documents shall be provided to the Canterbury Regional Council upon request.

NZQA

(b) All irrigation infrastructure shall be tested within 12 months of the first exercise of this consent and afterwards every five years in accordance with the 'Irrigation Code of Practice and Irrigation Design Standards, Irrigation NZ, March 2007' (code of practice) by a suitably qualified independent expert.

This code of practice is not written as an enforceable document, which means that this condition could not be enforced, doesn't provide any assurance about effects and is therefore not necessary. Retention may give an impression that aspects of irrigation design can be controlled via conditions and enforced when they cannot. Therefore recommend deletion unless specific and enforceable components could be separated out and applied.

(c) The expert shall prepare a report within two months of the testing, outlining their findings and shall identify any changes needed to comply with the code of practice.

(d) Any changes needed to comply with this code of practice shall be implemented within five years from the date of the report. A copy of the report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, within three months of the report being completed.

Applicant Comment:

This clause provides a cross check on water efficiency requirements in that the certification parameters of the design could not be signed off unless the irrigation "as built" structures meet the efficiency parameters – Applicants consider it appropriate that a check within first 12 months should be a condition

2. If existing irrigation infrastructure is being used, the consent holder shall obtain an evaluation report prepared by a suitably qualified person, on the following terms:

(a) The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation.

(b) This report shall be obtained within three months of the first exercise of the consent.

(c) Any recommendations identified in the report shall be implemented within five years from the date of receipt of the report.

Why not the person referred to above?

A copy of the report shall be forwarded to the Canterbury Regional Council within 3 months of the report being completed.

22

Subdivision

The NDAs shall be recalculated if there is a sale or transfer of any part, but not the whole, of the total farm area specified in Appendix [should be Appendix A]*. The recalculated NDAs shall replace the NDAs specified in condition 12. The recalculation of the NDAs shall be undertaken and certified using Overseer, completed and provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager together with a copy of the full Parameter report, within one month of the sale or transfer.

No Appendix A provided.

Condition 12 does not specify the NDA.

Suggest add after "The recalculated NDAs..." "...shall be undertaken to accurately redistribute the NDA between the resultant properties and...". Also need to add: "The new NDAs may be recalculated on any apportionment as long as the total of all the NDAs does not exceed the NDAs of the parent title as set out in condition X.

Deleted: proportionment

Applicant Comment

Agreed to altered wording

23	<p>Soil Management</p> <p>(a) The consent holder shall use, where practicable, direct drilling as the principal method for establishing pastures; and</p> <p>(b) On the irrigation area the consent holder shall, where practicable, sow and irrigate all cultivated areas as soon as possible following ground disturbance.</p>	<p>No fertigation - backflow prevention condition. Not required as gravity fed system</p> <p>Agree</p>
24	<p>Monitoring of Haldon (Northern) Arm of Lake Benmore and Lower Lake Benmore</p> <p>The water quality of the Haldon (Northern) Arm of Lake Benmore and Lower Lake Benmore shall be monitored within 6 months of first exercise of consent as follows:</p> <p>(a) Locations:</p> <p style="padding-left: 20px;">Haldon (Northern) Arm, Map reference: NZMS 260 H39:8823-3531 (NZTopo50 CA16:7828-7366) (as shown on the attached map (Appendix F)</p> <p style="padding-left: 20px;">Lower Lake Benmore, Map reference: NZMS 260 H39:8802-2371 (NZTopo50 CA16:7808-6205) (as shown on the attached map (Appendix F)</p> <p>(b) Depths: depth integrated 0-10m, 25m, 50m</p> <p>(c) Water quality variables: (a) total nitrogen; (d) ammonia; (e) nitrate; (f) nitrite; (g) total Kjeldahl nitrogen; (h) total phosphorus; (i) dissolved reactive phosphorus; (j) Secchi disc depth; (k) chlorophyll a.</p> <p>(d) Calculated key water quality variable: Trophic Lake Index (TLI), using the following equations:</p> <p style="padding-left: 20px;">(i) $TLc = 2.22 + 2.54 \log(\text{chlorophyll } a)$</p> <p style="padding-left: 20px;">(ii) $TLp = 0.218 + 2.92 \log(\text{total phosphorus})$</p> <p style="padding-left: 20px;">(iii) $TLn = -3.61 + 3.01 \log(\text{total nitrogen})$</p> <p style="padding-left: 20px;">(iv) $TLI = \frac{\sum(TLc + TLp + TLn)}{3}$</p> <p>(a) Frequency of monitoring: Once per month from 01 December to 30 April each year, with a minimum of three weeks between sampling.</p> <p>(b) Methods: The methods of sampling and analysis shall be those that are generally accepted by the scientific community as appropriate for monitoring lake water quality. The methods of sampling shall be documented and made</p>	<p>Applicant Comment: No monitoring is proposed for: SUB-CATCHMENT SURFACEWATER MONITORING AND MITIGATION and Trigger Response Condition are proposed, given there are no permanently flowing waterways within the vicinity of the irrigation area.</p> <p>ECan comment:</p> <p>Agree</p> <p>Needs to clearly state when this should start.</p> <p>No Appendix F provided.</p> <p>Correct spelling is "Kjeldahl"</p> <p>Condition numbering error, (a) should be (e)...</p>

available to the Canterbury Regional Council on request.

- (c) The water quality monitoring shall be undertaken by a suitably qualified and/or experienced person that demonstrates that they understand the appropriate methods to use for lake water quality sampling, including depth integrated sampling, and preservation of samples. That person shall certify in writing that each batch of samples has been sampled and preserved in accordance with generally accepted scientific methods. A copy of those certifications and the person's qualifications shall be provided to the Canterbury Regional Council on request.
- (d) The laboratory undertaking analyses shall be accredited for those analyses by International Accreditation New Zealand (IANZ) or an equivalent accreditation organisation that has Mutual Recognition Agreement with IANZ.
- (e) The results of all sampling including calculated average summer TLI shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager by 30 May each year. This shall include copies of reports from the laboratory that undertook the analyses.

25

Advice Note: It is anticipated that all consent holders subject to this condition would coordinate and cooperate together to ensure that the lake water quality monitoring is undertaken and the costs of that monitoring is shared between those consent holders. The Canterbury Regional Council will provide resources to facilitate that coordination and the costs of that facilitation will be recoverable from the relevant resource consent holders as a cost of supervising and administering the resource consents.

Any non-compliance with water quality monitoring requirements would be a matter for all relevant consent holders.

This should be an advice note to the previous condition and not have a condition number.
Advice note needs clarifying: "...matter for all relevant consent holders, jointly and severally."

26

Trigger Response Condition

- (a) If the monitoring undertaken in accordance with condition (xx) shows that the average TLI for the 1 - 10 m depth integrated samples for the Haldon (Northern) Arm site over the period December to April is greater than 2.75 (early warning trigger) but does not exceed 3.0 (environmental standard trigger), then the property nutrient loads, as specified in condition (xx), shall be reduced temporarily by 5% x the Irrigation Proportion Factor (IPF) for the irrigation season subsequent to the monitoring period. The IPF shall be the proportion of the area developed for irrigation under this resource consent divided by the total farm area being **200 hectares on a total farm area of 16,435 ha**
- (b) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples over the period December to April is greater than 2.75 but does not exceed 3.0, then a report into the cause of the breach of the early warning trigger shall be prepared by a person with an appropriate post-graduate science qualification, by 30 July following the sampling. A copy of this report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling.
- (c) If a reduction in nutrient loading is required under any part of this

Reporting officer recommendation was for an early warning trigger of 2.5 on the basis that existing data indicates current TLI could be 2.4. **An early warning TLI of 2.75 for the Haldon Arm would provide for a significant WQ deterioration.** Refer to Second Addendum S42A of Dr Freeman.

There is no condition 28. Condition 20?
Needs to refer to both monitoring sites.

condition and monitoring in the period that that reduction applies shows that the average TLI for the 1 – 10 m depth integrated samples for the monitoring site over the period December to April continues to be greater than 2.75 but does not exceed 3.0 then there shall be a further property nutrient load reduction of 5% x IPF for the subsequent irrigation season.

- (d) The above nutrient load reductions and investigation (condition 29 (a)-(c)) shall not be required if a two person expert panel with one expert nominated by the Canterbury Regional Council both conclude after considering all the relevant available information including catchment resource consent compliance, FEMP compliance monitoring pertaining to this consent and audit reports made available by the Canterbury Regional Council, that the cause of the breach of the early warning trigger was unlikely to have been caused in whole or in part by nutrient loss associated with the irrigation authorised by this consent. Condition number reference incorrect.
- (e) If a required reduction in nutrient load is in effect under this condition and monitoring for that period shows that the average TLI for the 1 – 10 m depth integrated samples for the monitoring site over the period December to April is less than 2.75, then for the subsequent season the full NDA for the property, as specified in condition (17) shall be restored. Needs to refer to both monitoring sites. Reference to condition 17 is incorrect. Should refer to a re-written condition currently unnumbered between conditions 12 and 13. Reference to TLI of 2.75 incorrect.
- (f) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April is greater than 3.0 (environmental standard trigger), then the property nutrient load, as specified in condition (17), shall be reduced by 10% x Irrigation Proportion Factor (IPF) for the irrigation season subsequent to the monitoring period. The IPF shall be the proportion of the area authorised for irrigation under this resource consent divided by the total farm area, as specified in Appendix C. Condition number references incorrect. Reference to condition 17 is incorrect.
- (g) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples over the period December to April is greater than 3.0 for either the Haldon (Northern) Arm or the Lower Benmore monitoring sites, then a report into the cause of the breach of the environmental standard trigger shall be prepared by a person with an appropriate post-graduate science qualification, by 30 July following the sampling. A copy of this report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling. No Appendix C provided Condition number reference incorrect.
- (h) If a reduction in nutrient loading is required under any part of this condition and monitoring in the period that that reduction applies shows that the average TLI for the 1 – 10 m depth integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April continues to be greater than 3.0 then there shall be a further property nutrient load reduction of 15% x IPF for the subsequent irrigation season and rising to 20% for any further irrigation season 10%, 15% 20% reduction approach would mean a relatively slow response, compared to a standard 20% reduction approach. Condition number reference incorrect.
- (a) The above nutrient load reductions and investigation (condition 30 (a)-(c))

shall not be required if a two person expert panel with one expert nominated by the Canterbury Regional Council both agree that the cause of the breach of the environmental standard was unlikely to have been caused in whole or in part by nutrient loss associated with the irrigation authorised by this consent.

Condition clause number?

If a required reduction in nutrient load is in effect under this condition and monitoring for that period shows that the average TLI for the 1 – 10 m depth integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April is less than 3.0, then for the subsequent season no property nutrient load reduction shall be required under this condition.

27 The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed immediately on first exercise of this consent by the consent holder.

Agreed

28 The Canterbury Regional Council may, once per year, on any of the last 5 working days of March or July serve notice of its intention to review the conditions of this resource consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the resource consent and which it is appropriate to deal with at a later stage, including any cumulative adverse effect on a waterway arising from abstractions;

CRC Proposed Condition: The CRC 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 purpose of dealing with any adverse effect o the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage.

ECan Comment: AD03 sufficient

Applicant Comment: Either AD02 (Applicant condition) or AD03 (ECan condition). Please note for consistency with other IO, AD02 should be used.

29 The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for each quarter].

From when?

Conditions for water permit CRC071362 (Glentanner Station Ltd)		
Expiry date sought - 30 th of April 2025.		
No.	Proposed Condition	Comments
1	Water shall only be taken from Lake Pukaki located between NZMS 260 H38:8214-6511 or NZMS H38: 821-651 and the Pukaki Canal at or about map reference NZMS 260: H38:805-641.	ECan Comment: Refer to S42 Report 15B, paragraph 14 and page 20, and S42a addendum report of Maria Bartlett, paragraphs 63 and 78. Revise wording of Condition 1 to incorporate Clause 15.3(d) specifications not previously included (with revision of daily timeframe references to cover missing minutes), to incorporate nonconcurrent use, and to include all three intake options, as follows:
2	(f) Water for irrigation shall only be used between 1 September and the following 30 April and only in accordance with the maximum rate, daily volume (being from 12.00am to 12.00am the following day) and annual volume (measured between 1 September and the following 30 April) set out in Table A. (g) Water taken in accordance with allocated in Table A shall be used only for the spray irrigation of 200 hectares for crops and pasture for grazing sheep, beef cattle, deer and non-milking dairy cows on the area of land shown on attached Plan CRC071362. (h) Water for irrigation shall only be used on or applied to land that is subject to a memorandum of encumbrance that complies with the requirements of the	(a) Water shall only be taken from Pukaki Canal, at surface water abstraction point H38/0208, at or about map reference NZMS 260: H38:805-641, or from Lake Pukaki, at surface water abstraction point H38/0223, at or about map reference NZMS 260: H38:822-652, or at surface water abstraction point H38/0249, at or about map reference NZMS 260 H38:8214-6511, between 1 September and the following 30 April, at a rate not exceeding 116 litres per second, a daily volume (measured between 12:00am and 12:00pm) not exceeding 10,022 cubic metres, and an annual volume (measured between 1 July and the

Deleted: 11.59pm

	<p>agreement entitled <i>“Agreement in Relation to the Allocation of Water for Irrigation”</i> between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31st of October 2006.</p> <p>(i) The consent holder shall, six months prior to this consent being exercised, provide to the Canterbury Regional Council a certificate from the Consent Holder’s solicitor certifying that the memorandum of encumbrance provided for in Condition 2(d) is registered on the computer registers for the land shown on Plan “CRC071362” and any other evidence of registration as the Canterbury Regional Council may require (if any).</p> <p>(j) This consent shall not be exercised concurrently with consent CRC083609.</p>	<p>following 30 June) not exceeding 1,076,000 cubic metres. (b) This consent shall not be exercised concurrently with consent CRC083609.</p> <p>Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.</p> <p>Reference to Table A is unnecessary as the rate, daily volume and annual volume do not change. See S42a addendum of Susannah Vesey, paragraph 152(c)</p> <p>Applicant Comment:</p> <p>12am to 12pm only provides for 12 hours. 12am to 11.59pm more appropriate. Needs to be consistent with DA which therefore requires the table. Happy for non-concurrent condition to be located here. Table A included to comply with DA.</p> <p>The applicant disagrees with the volume proposed by ECan. Table A volume is based on MIC shareholding & Irricalc. Reference McCabe Evidence Section 5.3 & S42a IO Clarification report dated 12/2/2010</p> <p>The applicant has reduced the command area during this process and maintains the area proposed is what is required.</p>
<p>3</p>		<p>ECan proposed condition:</p> <div style="border: 1px solid black; padding: 5px;"> <p>Irrigation shall not occur within the following areas:</p> <ul style="list-style-type: none"> i. on soils with an average water holding capacity of 25mm or less; ii. within 130 metres of the bed of the Pukaki River; iii. within 50 metres of the bed of any watercourse; iv. within moraine areas containing ephemeral wetlands or tarns; v. within any area unsuitable for use of centre pivot irrigators due to natural topography. </div> <p>ECan comment: Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.</p> <p>Applicant Comment: Delete condition as applicant maintains this condition is non-standard and not required as per McCabe evidence para 69-71 and revised FEMP proposed</p>

4		<p>ECan proposed condition:</p> <p>There shall be no levelling of glacial moraine landforms to enable use of centre pivot irrigation.</p> <p>ECan Comment: Refer to S42a addendum report of Maria Bartlett, paragraph 76, and right of reply of Haidee McCabe, paragraph 3, regarding differences in position regarding the command area to be shown on the attached plan.</p> <p>Applicant Comment: Delete - Applicant maintains this is not required as per McCabe evidence para 74 and previous comments related to this matter above.</p>
5		<p>ECan proposed condition:</p> <p>This proposal will affect recorded archaeological sites. Works affecting archaeological sites is subject to a consent process under the Historic Places Act 1993. An authority (consent) from Historic Places Trust must be obtained for the work prior to commencement. It is an offence to damage or destroy a site for any purpose without an authority. The Historic Places Act 1993 contains penalties for unauthorized site damage. The consent holder is advised to contact the New Zealand Historic Places Trust for more information.</p> <p>ECan Comment: Refer to S42a addendum report of Maria Bartlett, paragraph 77, where original Condition 5 in S42 Report 15A was replaced with this advice note.</p> <p>Applicant Comment: Delete - Applicant maintains this condition is not required as per McCabe evidence para 81 and hearing discussion</p>
6	<p>The consent holder shall take all practicable steps to:</p> <ul style="list-style-type: none"> d) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and e) Avoid leakage from pipes and structures; and f) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips. 	<p>Agreed</p>
7	<p>Whenever the level of Lake Pukaki is at or below 518 metres above mean sea level, abstraction shall cease.</p> <p>The taking of water in terms of this consent shall cease for a period required by the owner and/or operator of the Waitaki Power Scheme, where the owner and/or operator considers it necessary to undertake maintenance on, to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, the Waitaki Power Scheme.</p> <p>The taking of water in terms of this consent shall cease whenever the owner</p>	<p>First paragraph is Agreed.</p> <p>Paragraph 2 & 3:</p> <p>ECan Comment: Refer to S42a addendum of Susannah Vesey, paragraphs 153-155</p> <p>"The taking of water in terms of this consent shall cease upon written advice from Canterbury Regional Council or the person responsible for the operation of the Waitaki</p>

	and/or operator of the Waitaki Power Scheme ceases to take, divert and/or discharge water into the Tekapo – Pukaki Canal(s), unless the owner and/or operator of the Waitaki Power Scheme gives written agreement to the continuation of take	Power Scheme that: (i) the flow of water into Tekapo Canal has ceased, or is to cease, as a result of the operational requirements of the Waitaki Power Scheme; or (ii) maintenance is to be undertaken to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, Waitaki Power Scheme infrastructure, and such maintenance is unable to be undertaken while abstraction authorised in terms of this consent is occurring, particularly when such maintenance results in a restricted flow of water into Tekapo Canal.” Applicant Comment: Considers these paragraphs need to remain to be in accordance with MIC agreement/MEL derogation approval.
8	<p>(g) A fish exclusion device shall be installed, operated and maintained on the intake to ensure that fish are prevented from passing into the intake.</p> <p>(h) The fish exclusion device shall be positioned to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the fish screening device.</p> <p>(i) The fish exclusion device shall be designed or supplied by a person with experience in freshwater ecology and fish screening techniques, who shall ensure that the performance criteria specified in clauses (a) and (b) of this condition are achieved, and that the device is designed in accordance with best practice, as outlined in the document Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007.</p> <p>(j) Prior to the installation of the fish screen, a report containing final design plans that demonstrate that the fish screen will meet the performance criteria specified in clauses (a) and (b) of this condition, and an operation and maintenance plan for the fish screen, shall be provided to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.</p> <p>(k) Before the taking of any water in terms of this permit, a certificate shall be provided to Canterbury Regional Council, by a person with experience in freshwater ecology and fish screening techniques, to certify that the design plans and operation and maintenance plan for the fish screen will meet performance criteria as outlined in this condition, and that the fish screen has been installed in accordance with the details provided to Canterbury Regional Council in accordance with clause (d) of this condition.</p> <p>(l) The fish screen shall be maintained in good working order. Records shall be kept of all inspections and maintenance, and those records shall be provided to Canterbury Regional Council upon request.</p>	Agreed
9	<p>The consent holder shall, before the first exercise of this consent at the point of take:</p> <p>a.</p> <p>(i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined to within an accuracy of plus or minus five percent at a location(s) that will ensure the total take of water from [specify] is measured; and</p> <p>(ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season’s (as specified in conditions (3) and (4(a))) data of water taken as specified in clause (b) (i), or which is</p>	<p>ECan Proposed Condition:</p> <p>(a) 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(s) outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total take of water is measured, including: the total take of water from Lake Pukaki or Pukaki Canal; and, in the event that</p>

	<p>telemetered, as specified in clause (b)(ii).</p> <p>b. The water meter and recording device(s) shall 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 shall:</p> <p>(i) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or</p> <p>(ii) 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 measuring device shall be installed at a site likely to retain a stable rating (i.e. a man-made channel, concrete, steel or fibreglass pipe). Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person.</p> <p>d. 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>e. 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>f. All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of 5%.</p>	<p>water is abstracted from map references NZMS 260 H38:805-641 or NZMS 260 H38:822-652, the total take of water from the Pukaki Irrigation Company Limited pipeline at the point at which water is supplied to Glentanner Station; and</p> <p>ECan Comment:</p> <p>Refer to S42a addendum report of Maria Bartlett, paragraph 80, and report 15B, paragraphs 46 and 57. There remains a point of disagreement regarding the requirement for two metering sites, one at the lake or canal intake, to meter the combined take of Simons Hill, Simons Pass, and Glentanner Station (which will need to be specified on each permit, although it will be a single meter shared by all properties) and one at the boundary of the property to measure water supplied to Glentanner Station. If a single meter is accepted for the PIC related take options, then reference should be to metering at the point of abstraction from the canal or lake, at the shared intake site. A single meter at the point of abstraction will be sufficient for the independent intake option.</p> <p>Applicant Comment:</p> <p>Applicant proposes only a water meter is required at the applicants boundary. If there is no discharge then all the telemetered individual takes from the scheme will provide the overall take. If scheme discharges then intake and/or discharge will need a meter. Agree a single meter required on the independent intake.</p>
10	<p>(a) The water meter installed in accordance with Condition <9> shall be an electromagnetic or ultrasonic meter; or</p> <p>(b) The consent holder shall, before first exercise of this consent install or make available an easily accessible straight pipe(s) at a location where the total water take is passing through, 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, to allow the Canterbury Regional Council to conduct independent measurements.</p>	Agreed
11	<p>Within one month of the installation of the measuring or recording device(s), specified in conditions <9> or any subsequent replacement measuring or recording device(s), or 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) is installed in accordance with the manufacturers 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 <8>.</p>	Agreed
12	<p>At five yearly intervals or 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 that:</p> <p>(a) the water meter(s) is measuring the rate of water taken as specified in condition <10> and</p>	Agreed

	(b) the tamper-proof electronic recording device is operating as specified in condition <10>	
	<u>For the purposes of interpretation of the following conditions the Glenmore Station shall be defined as the areas in certificates of title and Pastoral Lease numbers XXXXXXXXXXXX which total XXXXXXXX</u>	
13	Nutrient Loading: The consent holder shall prepare once per year, an Overseer® nutrient budgeting model report, and shall prepare, at least once per year, a report of the annual farm nutrient loading for the Catherine Fields using the model Overseer® (AgResearch model version number 5.4.3 or later)	When exactly do these have to be done? Need to specify dates.
14	A copy of the report prepared in accordance with condition xx shall be given to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, upon request.	Condition number? Condition xx = 15? <u>Applicant Comment</u> <u>Agreed – but preference to leave final conditions numbering to be determined on grant</u>
15	The consent holder shall not commence annually irrigation under this consent unless the annual (1 July to 30 June) nutrient loading (the nutrient discharge allowances (NDAs)) as estimated in accordance with condition XX from Catherine Fields shall not exceed 4,432 kg of nitrogen and 135 kg of phosphorus. The NDAs shall be complied following the first full year (1 July to 30 June) of irrigation development.	Essential to specify and define the property “Glentanner Station - Catherine Fields” by reference to an area (X ha), legal description and/or a map, otherwise there is a risk that authorised nutrient load would be uncertain The first clause of the proposed condition only requires compliance for commencement to occur, i.e., subsequent compliance would not be required. This is not appropriate. The condition should require ongoing compliance with the NDA. Needs to be “The annual (01 July to 30 June) nutrient loading (NDA) estimated in accordance with condition X, shall not exceed...” The final clause appears to be an attempt to broaden the compliance requirement but is missing some words and is not clear. <u>Applicant Comment</u> <u>The condition requires compliance and verification annually</u> <u>Not opposed to this wording</u> <u>Do not understand. There is no attempt to broaden wording.</u>
16	Overseer Modelling: Where Overseer, or Overseer modelling, is referred for the purposes of determining compliance with the NDA limits associated with activities on the property it shall undertaken by an independent person with an Intermediate or Advanced Sustainable Nutrient Management Certificate issued by Massey University or an equivalent qualification.	Don't consider that the three day intermediate course is adequate. Should require the more intensive Advanced Certificate. Majority of fertiliser representatives have this qualification and an increasing number of agricultural consultants.

<p>17</p>	<p>Farm Environmental Management Plan</p> <p>8. The Farm Environmental Management Plan prepared for the Catherine Fields and supplied to Environment Canterbury on an annual basis within two months of commencement of the current irrigation season</p> <p>9. The consent holder shall implement, and update annually the Farm Environmental Management Plan (FEMP) for Catherine Fields. The FEMP shall include</p> <p>(g) Verification of compliance with NDA's by farm nutrient modelling using the model Overseer® (AgResearch model version number 5.4.3 or later).</p> <p>(h) When undertaking the modelling outlined in clause (b), the consent holder shall use either weather records collected on-farm or from constructed data from the nearest weather station.</p> <p>(i) Implementation of Mandatory Good Agricultural Practices ("MGAPS") and requirements to manage in accordance with the Catherine Fields Overseer® model inputs specified in the attached Appendix A <u>of the FEMP</u> – Catherine Fields Overseer® parameter report. Appendix A forms part of this consent.</p> <p>(j) A property specific environmental risk assessment (including a description of the risks to water quality arising from the physical layout of the property and its operation which are not factored in as an Overseer parameter) prepared by a suitably qualified person which identifies any farm specific environmental risks along with measures to mitigate the farm specific environmental risks.</p> <p>(k) A requirement to review the risk assessment if there are any significant changes in land use practice</p> <p>10. Detailed records shall be maintained of fertilizer application rates, types of crops (including winter feed/forage crops), cultivation methods, stock units by type, breed and age, prediction of realistic crop yields that are used to determine crop requirements and all other inputs to the Overseer nutrient budgeting model.</p> <p>11. A report based on Overseer® modelling shall be provided within one month of completion of the Overseer modelling by the <u>person with the qualifications</u> described in condition 13 and no later than two months prior to the start of the next irrigation season to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. The consent holder shall supply to the Canterbury Regional Council all model inputs relied upon for the annual Overseer® modelling.</p> <p>12. Changes may be made to Catherine Fields Overseer® model inputs, provided that written certification is provided that the change is modelled using Overseer®, and that the result of that modelling demonstrates that the NDAs are not exceeded.</p> <p>13. A copy of that certification plus a copy of the resultant Overseer parameter report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, prior to the implementation of that change.</p>	<p>Condition is missing some wording. It appears to be some form of statement rather than a requirement. A final FEMP should be submitted prior to making a decision.</p> <p>A FEMP including verification of NDA compliance is not the same as an actual requirement to comply with the NDA.</p> <p><u>Applicant Comment</u> <u>Final FEMPS have been sent to Ecan: Com: Phillips - Warnock</u></p> <p>As above. No Appendix A provided.</p> <p>Should be a person "with the qualifications described...". The full Overseer output and input reports should be provided not a report "based on Overseer modelling". These should include the "Current farm" calculated total N and total P leaching/runoff.</p> <p>Not clear who can undertake this certification. Condition X may not apply. <u>Applicant Comment:</u> <u>Applicant thought that with difficulties in opening and reading Overseer that Ecan wanted a report from the person in 13. We're happy to provide whatever form</u></p>
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Deleted: person

Deleted: Advisory notes (Conditions 8 and 9)¶
for the purposes of this consent "Significant changes" constitutes a major change in the stock ratios between sheep, cattle, and deer or a major change in the farming systems for the property. . For example going from extensive sheep and beef farming to dairy farming or cropping. It does not include changes in stock numbers as would be expected to deal with inter seasonal variations arising from climatic conditions or changes in stocking rates due to market demand.

		<p><u>Ecan wants</u></p> <p><u>Do not see issue – 13 applies to all references to Overseer</u></p> <p>▼</p> <p>Advisory note condition references appear to be incorrect.</p> <p>Not clear why this is needed. Conditions should allow for any change provided that the NDA is complied with and annual Overseer modelling is carried out.</p> <p><u>Applicant Comment</u></p> <p><u>Agreed and deleted</u></p>
18	<p>Fertiliser</p> <p>14. Fertiliser shall be managed and applied in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates.</p> <p>15. The consent holder shall keep a record of all fertiliser applications applied to the property, including fertiliser type, concentration, date and location of application, climatic conditions, mode of application and any report of the fertiliser contractor regarding the calibration of the spreader.</p> <p>16. For land based spreading of fertiliser an independent fertiliser spreading contractor shall be used to spread any fertiliser on the property except as provided for by clause (b) below.</p> <p>(c) Where an independent fertiliser spreading contractor is used the consent holder shall keep a record of the contractor used which can be supplied to the Canterbury Regional Council upon request.</p> <p>(d) Where the applicant's own fertiliser spreaders are used, the consent holder shall test and calibrate the fertiliser spreaders at least annually, and every 5 years the fertiliser spreader will be certified by a suitably qualified person in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates and the results of testing shall be provided to the Canterbury Regional Council upon request.</p> <p>17. Nitrogen fertiliser shall not be applied to land between 31st May and 1st September in any year except for the use of nitrification inhibitors</p> <p>18. All fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering waterways.</p> <p>19. Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare per application.</p>	<p>Condition clause numbering.</p> <p>This code of practice is generally not written as an enforceable document, which means that this condition could not be enforced, doesn't provide any assurance about effects and is therefore not necessary. Retention may give an impression that many aspects of fertiliser use can be controlled via a consent condition and enforced when they cannot. Therefore recommend deletion unless specific and enforceable components could be separated out and applied.</p> <p>Not clear what use could be made of "a record of the contractor".</p> <p><u>Applicant Comment</u></p> <p><u>Fertiliser clause to be read as a whole. It has specific controls but in addition this overarching Code control provides for best overall practices to be adopted – as they may be developed from time to time.</u></p> <p><u>The issue was to avoid requirement for calibration to occur for every separate spreading operation – where it is not within applicant's control to request calibration.</u></p> <p><u>Subclause 2 requirements for record keeping and calibration record the information. Ecan may wish this information to be supplied upon request</u></p>

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	<p>20. If liquid fertilisers, excluding liquid effluent, are stored on-site for more than three working days, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements.</p> <p>Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore.</p>	
19	<p>3. The consent holder shall ensure that all new (not on the property at the time of commencement of this consent) irrigation infrastructure is designed and certified by a suitably qualified independent expert holding National Certificate in Irrigation Evaluation Level 4, and installed in accordance with the certified design.</p> <p>(a) Copies of certified design documents shall be provided to the Canterbury Regional Council upon request.</p> <p>(b) All irrigation infrastructure shall be tested within 12 months of the first exercise of this consent and afterwards every five years in accordance with the 'Irrigation Code of Practice and Irrigation Design Standards, Irrigation NZ, March 2007' (code of practice) by a suitably qualified independent expert.</p> <p>(c) The expert shall prepare a report within two months of the testing, outlining their findings and shall identify any changes needed to comply with the code of practice.</p> <p>(d) Any changes needed to comply with this code of practice shall be implemented within five years from the date of the report. A copy of the report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, within three months of the report being completed.</p> <p>4. If existing irrigation infrastructure is being used, the consent holder shall obtain an evaluation report prepared by a suitably qualified person, on the following terms:</p> <p>(d) The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation.</p> <p>(e) This report shall be obtained within three months of the first exercise of the consent.</p> <p>(f) Any recommendations identified in the report shall be implemented within five years from the date of receipt of the report.</p> <p>A copy of the report shall be forwarded to the Canterbury Regional Council within 3 months of the report being completed.</p>	<p>Condition clause numbering. Issued by who? NZWETA? What certified design? Certified by who?</p> <p>Applicant Comments NZQA</p> <p>This code of practice is not written as an enforceable document, which means that this condition could not be enforced, doesn't provide any assurance about effects and is therefore not necessary. Retention may give an impression that aspects of irrigation design can be controlled via conditions and enforced when they cannot. Therefore recommend deletion unless specific and enforceable components could be separated out and applied.</p> <p>Applicant Comment This clause provides a cross check on water efficiency requirements in that the certification parameters of the design could not be signed off unless the irrigation "as built" structures meet the efficiency parameters – Applicants consider it appropriate that a check within first 12 months should be a condition</p> <p>Why not the person referred to above?</p>
20	<p>Fertigation</p> <p>1. If the irrigation system used in association with taking water in terms of this permit is to be used to distribute effluent, fertiliser or any other added contaminant, then one of the following shall be installed upstream of the point of addition of the effluent, fertiliser or other added contaminant:</p> <p>i. a reduced pressure zone device (RPZD), or</p>	<p>Agree</p>

	<p>ii. a pressure vacuum breaker (PVB), or</p> <p>iii. an air gap backflow prevention system.</p> <p>2. Installation of a RPZD or a PVB shall be in accordance with section 9 (PVB) or section 12 (RPZD) of Australian/New Zealand Standard AS/NZS 2845.1 Water supply - Backflow prevention devices, Part 1: Materials, design and performance requirements, or an equivalent standard.</p> <p>3. An air gap backflow prevention system shall have an unobstructed vertical air gap separation of at least twice the diameter of the inlet pipe, from the lowest point of the inlet pipe to the flood level rim of the receptacle into which it discharges.</p> <p>4. Field testing and maintenance shall be carried out of an RPZD or a PVB at commissioning of the use of the system for application of effluent or fertiliser and annually afterwards, in accordance with AS 2845.3 Water supply— Backflow prevention devices, Part 3: Field testing and maintenance, or an equivalent standard.</p> <p>5. An air gap backflow prevention system shall be tested at commissioning and annually afterwards. Maintenance shall be undertaken as necessary to ensure that backflow prevention is effective.</p> <p>6. Installation, testing and maintenance shall be undertaken by a certified irrigation evaluator. A report on the annual testing shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within two weeks of initial commissioning and within two weeks of each annual testing. Each report shall be accompanied with the name, qualifications and experience of the person who undertook the installation, testing or maintenance.</p> <p><i>Advice note</i></p> <p><i>The discharge of effluent, fertiliser or any contaminant would require authorisation as a permitted activity or via a discharge permit. Contact the Canterbury Regional Council for advice on the relevant regional rules.</i></p>	
21	<p>Subdivision</p> <p>The NDAs shall be recalculated if there is a sale or transfer of any part, but not the whole, of the total farm area specified in Appendix [should be Appendix A]*. The recalculated NDAs shall replace the NDAs specified in condition 12. The recalculation of the NDAs shall be undertaken and certified using Overseer, completed and provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager together with a copy of the full Parameter report, within one month of the sale or transfer.</p>	<p>No Appendix A provided.</p> <p>Condition 12 does not specify the NDA.</p> <p>Suggest add after “The recalculated NDAs...” “...shall be undertaken to accurately redistribute the NDA between the resultant properties and...”. Also need to add: “The new NDAs may be recalculated on any <u>apportionment</u> as long as the total of all the NDAs does not exceed the NDAs of the parent title as set out in condition X.</p> <p><u>Applicant Comment</u></p> <p><u>Agreed to altered wording</u></p>
22	<p>Soil Management</p> <p>(a) The consent holder shall use, where practicable, direct drilling as the principal method for establishing pastures; and</p> <p>(b) On the irrigation area the consent holder shall, where practicable, sow</p>	<p>Agree</p>

Deleted: proportionment

	and irrigate all cultivated areas as soon as possible following ground disturbance.	
		Applicant Comment: No monitoring is proposed for: SUB-CATCHMENT SURFACEWATER MONITORING AND MITIGATION and Trigger Response Condition are proposed, given there are no permanently flowing waterways within the vicinity of the irrigation area. ECan comment: Agree
23	<p>Monitoring of Haldon (Northern) Arm of Lake Benmore and Lower Lake Benmore</p> <p>The water quality of the Haldon (Northern) Arm of Lake Benmore and Lower Lake Benmore shall be monitored <u>within 6 months of first exercise of consent</u> as follows:</p> <p>(e) Locations:</p> <p>Haldon (Northern) Arm, Map reference: NZMS 260 H39:8823-3531 (NZTopo50 CA16:7828-7366) (as shown on the attached map (Appendix F))</p> <p>Lower Lake Benmore, Map reference: NZMS 260 H39:8802-2371 (NZTopo50 CA16:7808-6205) (as shown on the attached map (Appendix F))</p> <p>(f) Depths: depth integrated 0-10m, 25m, 50m</p> <p>(g) Water quality variables: (a) total nitrogen; (d) ammonia; (e) nitrate; (f) nitrite; (g) total Kjeldahl nitrogen; (h) total phosphorus; (i) dissolved reactive phosphorus; (j) Secchi disc depth; (k) chlorophyll a.</p> <p>(h) Calculated key water quality variable: Trophic Lake Index (TLI), using the following equations:</p> <p>(v) $TLc = 2.22 + 2.54 \log(\text{chlorophyll } a)$</p> <p>(vi) $TLp = 0.218 + 2.92 \log(\text{total phosphorus})$</p> <p>(vii) $TLn = -3.61 + 3.01 \log(\text{total nitrogen})$</p> <p>(viii) $TLI = \frac{TLc + TLp + TLn}{3}$</p> <p>(f) Frequency of monitoring: Once per month from 01 December to 30 April each year, with a minimum of three weeks between sampling.</p> <p>(g) Methods: The methods of sampling and analysis shall be those that are generally accepted by the scientific community as appropriate for monitoring lake water quality. The methods of sampling shall be documented and made available to the Canterbury Regional Council on request.</p> <p>(h) The water quality monitoring shall be undertaken by a suitably qualified and/or experienced person that demonstrates that they understand the appropriate methods to use for lake water quality sampling, including depth integrated sampling, and preservation of samples. That person shall certify in writing that each batch of samples has been sampled and preserved in accordance with generally accepted scientific methods. A copy of those</p>	<p>Needs to clearly state when this should start.</p> <p>No Appendix F provided.</p> <p>Correct spelling is "Kjeldahl"</p> <p>Condition numbering errors</p>

	<p>certifications and the person's qualifications shall be provided to the Canterbury Regional Council on request.</p> <p>(i) The laboratory undertaking analyses shall be accredited for those analyses by International Accreditation New Zealand (IANZ) or an equivalent accreditation organisation that has Mutual Recognition Agreement with IANZ.</p> <p>(j) The results of all sampling including calculated average summer TLI shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager by 30 May each year. This shall include copies of reports from the laboratory that undertook the analyses.</p>	
24	<p><i>Advice Note: It is anticipated that all consent holders subject to this condition would coordinate and cooperate together to ensure that the lake water quality monitoring is undertaken and the costs of that monitoring is shared between those consent holders. The Canterbury Regional Council will provide resources to facilitate that coordination and the costs of that facilitation will be recoverable from the relevant resource consent holders as a cost of supervising and administering the resource consents.</i></p> <p><i>Any non-compliance with water quality monitoring requirements would be a matter for all relevant consent holders.</i></p>	<p>This should be an advice note to the previous condition and not have a condition number.</p> <p>Advice note needs clarifying: "...matter for all relevant consent holders, jointly and severally."</p>
25	<p>Trigger Response Condition</p> <p>(i) If the monitoring undertaken in accordance with condition (xx) shows that the average TLI for the 1 - 10 m depth integrated samples for the Haldon (Northern) Arm site over the period December to April is greater than 2.75 (early warning trigger) but does not exceed 3.0 (environmental standard trigger), then the property nutrient loads, as specified in condition (xx), shall be reduced temporarily by 5% x the Irrigation Proportion Factor (IPF) for the irrigation season subsequent to the monitoring period. The IPF shall be the proportion of the area developed for irrigation under this resource consent divided by the total farm area being 200 hectares on a total farm area of 16,435 ha</p> <p>(j) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples over the period December to April is greater than 2.75 but does not exceed 3.0, then a report into the cause of the breach of the early warning trigger shall be prepared by a person with an appropriate post-graduate science qualification, by 30 July following the sampling. A copy of this report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling.</p> <p>(k) If a reduction in nutrient loading is required under any part of this condition and monitoring in the period that that reduction applies shows that the average TLI for the 1 – 10 m depth integrated samples for the monitoring site over the period December to April continues to be greater than 2.75 but does not exceed 3.0 then there shall be a further property nutrient load reduction of 5% x IPF for the subsequent irrigation season.</p> <p>(l) The above nutrient load reductions and investigation (condition 29 (a)-</p>	<p>Reporting officer recommendation was for an early warning trigger of 2.5 on the basis that existing data indicates current TLI could be 2.4. An early warning TLI of 2.75 for the Haldon Arm would provide for a significant WQ deterioration. Refer to Second Addendum S42A of Dr Freeman.</p> <p>There is no condition 28. Condition 20? Needs to refer to both monitoring sites.</p> <p>Condition number reference incorrect.</p>

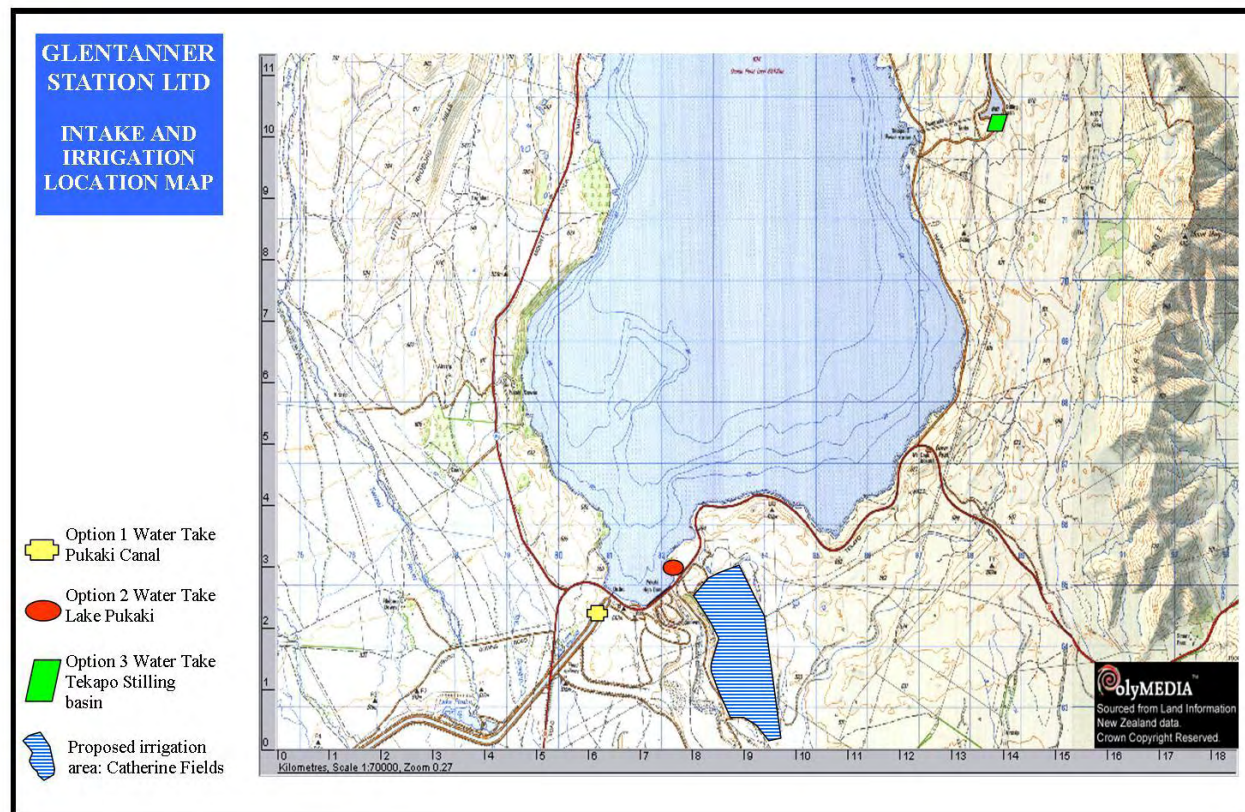
<p>(c) shall not be required if a two person expert panel with one expert nominated by the Canterbury Regional Council both conclude after considering all the relevant available information including catchment resource consent compliance, FEMP compliance monitoring pertaining to this consent and audit reports made available by the Canterbury Regional Council, that the cause of the breach of the early warning trigger was unlikely to have been caused in whole or in part by nutrient loss associated with the irrigation authorised by this consent.</p> <p>(m) If a required reduction in nutrient load is in effect under this condition and monitoring for that period shows that the average TLI for the 1 – 10 m depth integrated samples for the monitoring site over the period December to April is less than 2.75, then for the subsequent season the full NDA for the property, as specified in condition (17) shall be restored.</p> <p>(n) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April is greater than 3.0 (environmental standard trigger), then the property nutrient load, as specified in condition (17), shall be reduced by 10% x Irrigation Proportion Factor (IPF) for the irrigation season subsequent to the monitoring period. The IPF shall be the proportion of the area authorised for irrigation under this resource consent divided by the total farm area, as specified in Appendix C.</p> <p>(o) If the monitoring undertaken in accordance with condition (28) shows that the average TLI for the 1 - 10 m depth integrated samples over the period December to April is greater than 3.0 for either the Haldon (Northern) Arm or the Lower Benmore monitoring sites, then a report into the cause of the breach of the environmental standard trigger shall be prepared by a person with an appropriate post-graduate science qualification, by 30 July following the sampling. A copy of this report shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling.</p> <p>(p) If a reduction in nutrient loading is required under any part of this condition and monitoring in the period that that reduction applies shows that the average TLI for the 1 – 10 m depth integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April continues to be greater than 3.0 then there shall be a further property nutrient load reduction of 15% x IPF for the subsequent irrigation season and rising to 20% for any further irrigation season</p> <p>(b) The above nutrient load reductions and investigation (condition 30 (a)-(c)) shall not be required if a two person expert panel with one expert nominated by the Canterbury Regional Council both agree that the cause of the breach of the environmental standard was unlikely to have been caused in whole or in part by nutrient loss associated with the irrigation authorised by this consent.</p> <p>(c) If a required reduction in nutrient load is in effect under this condition and monitoring for that period shows that the average TLI for the 1 – 10 m depth</p>	<p>Needs to refer to both monitoring sites.</p> <p>Reference to condition 17 is incorrect. Should refer to a re-written condition currently unnumbered between conditions 12 and 13.</p> <p>Reference to TLI of 2.75 incorrect.</p> <p>Condition number references incorrect.</p> <p>Reference to condition 17 is incorrect.</p> <p>No Appendix C provided</p> <p>Condition number reference incorrect.</p> <p>10%, 15% 20% reduction approach would mean a relatively slow response, compared to a standard 20% reduction approach.</p> <p>Condition number reference incorrect.</p> <p>Condition number errors</p>
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	integrated samples for the Haldon (Northern) Arm monitoring site over the period December to April is less than 3.0, then for the subsequent season no property nutrient load reduction shall be required under this condition.	
26	The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed immediately on first exercise of this consent by the consent holder.	Agreed
27	The Canterbury Regional Council may, once per year, on any of the last 5 working days of March or July serve notice of its intention to review the conditions of this resource consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the resource consent and which it is appropriate to deal with at a later stage, including any cumulative adverse effect on a waterway arising from abstractions;	<p>CRC Proposed Condition: The CRC 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 purpose of dealing with any adverse effect o the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage.</p> <p>ECan Comment: AD03 sufficient</p> <p>Applicant Comment: Either AD02 (Applicant condition) or AD03 (ECan condition). Please note for consistency with other IO, AD02 should be used.</p>
28	The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for each quarter].	From when?

**Table A for
Condition <1>
above –
Maximum rates
of volumes**

Year	Maximum rate of abstraction (litres / second)	Maximum Daily Volume (cubic metres / day)	Maximum Annual Volume (cubic metres / year)
1 September 2009 to 30 April 2010	0 l/s	0 m ³ /day	0 m ³ /annum
1 September 2010 to 30 April 2011	116 l/s	10,022 m ³ /day	1,200,000 m ³ /annum
1 September 2011 to 30 April 2012	116 l/s	10,022 m ³ /day	1,200,000 m ³ /annum
1 September 2012 to 30 April 2013	116 l/s	10,022 m ³ /day	1,200,000 m ³ /annum
1 September 2013 to 30 April 2014 and every year thereafter	116 l/s	10,022 m ³ /day	1,200,000 m ³ /annum

Plan "CRC083609" and "CRC071362"



Conditions for land use permit CRC092721 (Glentanner Station Limited)	
Expiry date sought - 30 th of April 2025 to coincide with expiry of CRC071362	
No.	Proposed Conditions
Comments	

1	a) Works in the bed and banks of Lake Pukaki shall be limited to construction, maintenance and operation of an irrigation intake structure, consisting of a submersible pump and up to [200]mm diameter pipeline, sufficient to carry a maximum flow of 116 litres per second; b) The irrigation intake pipeline shall be buried within the bed of the lake, above the minimum lake level of 518 metres above mean sea level, to a depth of 600mm below natural bed level.	Agreed
2	Excavation shall not exceed a depth of 1 metre below the level of the natural lake bed prior to excavation.	Agreed
3	Works shall only be carried out within the bed and banks of Lake Pukaki between map reference NZMS 260 H38:8235-6520 and H38:8214-6511, which will enable the proposed intake structure to extend below the minimum lake level of 518 metres above mean sea level.	Agreed
4	i) Works to install the intake structure described in Condition 1 shall take no longer than one month to complete ii) (ii) Works to maintain the intake structure described in Condition 1 shall take no longer than one month to complete iii) Works shall not be carried out on weekends or public holidays	Agreed
5	Works shall not cause erosion of the banks or bed of Lake Pukaki All practicable measures shall be undertaken to minimise the discharge of sediment to Lake Pukaki, arising from the works, including, but not limited to: a) minimizing disturbance of lake bed; b) keeping works in water to the minimum required to undertake the works; c) and planning to undertake works during periods of low lake levels.	Agreed
6	Prior to commencing excavation, a copy of this resource consent shall be given to all persons undertaking activities authorised by this consent	Agreed
7	The Canterbury Regional Council Compliance Monitoring Officer shall be notified of the intention to carry out works and their intended type and scope at least 48 hours prior to the commencement of work.	Agreed
8	To prevent the spread of Didymo or any other aquatic pest, the consent holder shall ensure that activities authorised by this consent are undertaken in accordance with the Biosecurity New Zealand's hygiene procedures. <u>Note: You can access the most current version of these procedures from the Biosecurity New Zealand website http://www.biosecurity.govt.nz or Environment Canterbury Customer Services.</u>	Agreed
9	All practicable measures shall be undertaken to minimise adverse effects on property, amenity values, wildlife, vegetation, and ecological values.	Agreed

10	There shall be no stockpiling of materials at the works site.	Agreed
11	<p>(a) All practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery.</p> <p>(b) There shall be no storage of fuel or refuelling of vehicles and machinery within 20 metres of the bed of a river or lake.</p> <p>(c) Fuel shall be stored securely or removed from site overnight.</p>	Agreed
12	Cement shall be stored securely or removed from site overnight.	Agreed
13	Machinery shall be free of plants and plant seeds prior to use in the riverbed.	Agreed
14	<p>In the event of any disturbance of Koiwi Tangata (human bones) or taonga (treasured artefacts), the consent holder shall immediately:</p> <p>(a) Advise the Canterbury Regional Council of the disturbance;</p> <p>(b) Advise the Upoko Runanga of Arowhenua, Waihao and Moeraki, or their representatives, and the New Zealand Historic Places Trust, of the disturbance; and</p> <p>(c) Cease earthmoving operations in the affected area until an area has been marked off around the site, and Kaumatua and archaeologists have given approval for the earthmoving to recommence. Note: This condition is in addition to any agreements that are in place between the consent holder and the Upoko Runanga (Cultural Site Accidental Discovery Protocol) or the New Zealand Historic Places Trust.</p>	Agreed
15	All spoil and other waste material from the works shall be removed from site on completion of works	Agreed
16	On completion of works, the area shall be restored to its original condition as far as practicable.	Agreed
17	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.	Agreed
18	The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for each quarter].	Agreed