

Conditions for water permit CRC071786 (Lilybank Station Holdings Ltd)		
Status of Consent: <u>new</u>		
Catchment: <u>Tekapo</u>		
Expiry date sought - 30 <sup>th</sup> of April 2025.		
No.	Proposed Condition	ECan Comments
1	Water shall only be taken from the Station Stream located between map references NZMS 260 I36:132-215 and I36:133-219.	Agreed
2	<p>(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 12.00<del>am</del> <u>am the following day</u>) and annual volume (measured between 1 September and the following 30 April) set out in Table A.</p> <p>(b) Water taken in accordance allocated in Table A shall be used only for (i) spray irrigation of crops and pasture for grazing sheep, beef cattle and deer; and (ii) irrigation of a links style golf course to irrigate 242 hectares within the 407 command area with an application not exceeding 425mm/season on the area of land shown on attached Plan "CRC071786".</p> <p>(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 "<i>Agreement in Relation to the Allocation of Water for Irrigation</i>" between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31<sup>st</sup> of October 2006.</p> <p>(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 "CRC071786" and any other evidence of registration as the</p>	<p>In accordance with MIC agreement/MEL derogation approval.</p> <p>Disagreement over annual volume and irrigated hectares as follows:</p> <p><b>ECan Comment:</b></p> <p>"Water shall only be taken from Station Stream, at surface water abstraction point I36/0004, between map references NZMS 260 I36:132-215 and I36:133-219, between 1 September and the following 30 April, at a rate not exceeding 100 litres per second, a daily volume (measured between 12:00am and 12:00pm) not exceeding 8,640 cubic metres, and an annual volume (measured between 1 July and the following 30 June) not exceeding 731,000 cubic metres."</p> <p>Reference to Table A is unnecessary as the rate, daily volume and annual volume do not change. There is disagreement regarding the annual volume and area to be irrigated. Refer to S42 addendum report of Maria Bartlet, paragraphs 92, 106-107, and right of reply of</p>

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	<p>Canterbury Regional Council may require (if any).</p>	<p>Haidee McCabe, paragraph 7. Derogation approval has now been provided for irrigation of 242 hectares, using the requested annual volume of 1,032,000 cubic metres. The application was notified as irrigation of 172 hectares.</p> <p>Memorandum of encumbrance not a resource management matter for CRC consent (see S42a addendum of Susannah Vesey, paragraph 152(c))</p> <p><b>No conditions proposed that specify minimum setback distances of irrigation areas from surface water bodies. These should be specified in a condition e.g., minimum of 20 metres.</b></p> <p><b>Applicant proposes: A minimum irrigation setback of 5m from all natural permanently flowing waterways</b></p> <p><b>Applicant Comment:</b> At the hearing there was discussion on this matter regarding 172ha which if strategic watering was to occur effectively, 242Ha would be irrigated within the command area. It was discussed that this was contrary to derogation approval. Therefore the applicant sought and has received modified derogation approval from Meridian (which firstly required MIC written agreement). These are the two main parties affected by the notification wording. Please also refer to the McCabe right of reply for Lilybank. Lilybank maintain 1,032,000 cubic metres should be consented.</p>
	<p><u><b>There shall be a 5 metre setback from any permanently flowing waterways within the irrigation area marked on Plan CRC071786</b></u></p>	
3	<p>The consent holder shall take all practicable steps to:</p> <ul style="list-style-type: none"> <li>a) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and</li> <li>b) Avoid leakage from pipes and structures; and</li> <li>c) Avoid the use of water onto non-productive land such as impermeable</li> </ul>	<p>Agreed</p>

	surfaces and river or stream riparian strips.	
4	<p>Whenever the combined flow (expressed in litres per second) of Station Stream as estimated by the Canterbury Regional Council from measurements at the Station Stream recorder site, map reference NZMS 260 I36:1259-2119 and the abstracted flow relating to CRC071786:</p> <p>a) <i>is equal to or greater than 420 litres per second, the maximum rate at which water is taken shall not exceed 100 litres per second;</i></p> <p>b) <i>is equal to or less than 420 litres per second, and greater than 395 litres per second, the maximum rate at which water is taken shall not exceed 75 litres per second;</i></p> <p>c) <i>is equal to or less than 395 litres per second, and greater than 370 litres per second, the maximum rate at which water is taken shall not exceed 50 litres per second;</i></p> <p>d) <i>is equal to or less than 370 litres per second, and greater than 345 litres per second, the maximum rate at which water is taken shall not exceed 25 litres per second;</i></p> <p>e) <i>is equal to or less than 345 litres per second, and greater than 320 litres per second, the rate of water taken shall not exceed half of the amount available above 320 litres per second</i></p> <p>f) <i>is equal to or less than 320 litres per second, abstraction shall cease.</i></p>	<p>Disagreement over the flow-sharing regime as follows:</p> <p><b>ECan Comment:</b> Refer to S42 addendum report of Maria Bartlett, paragraphs 97-99 and 108. The 1:1 flow sharing noted in evidence of Dean Olsen is recorded as a typographical error in the right of reply of Haidee McCabe. The disputed position is between 1:1 flow sharing steps and a stepped regime from 420 litres per second.</p> <p><b>Applicant Comment:</b> Disagree with flow-sharing regime proposed. Refer to evidence of McCabe Section 5.3 and McCabe Right of Reply, para 10-19</p> <p><b>Boraman comment:</b> proposed conditions by ECan promote flow sharing, where it was agreed with F+G that stepping the abstraction would suffice variation in the flow from 420l/s.</p>
5	<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 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</p>	<p>In accordance with MIC agreement/MEL derogation approval.</p>

	<p>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>	
6	<p>(a) The water meter installed in accordance with Condition &lt;5&gt; 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
7	<p>Within one month of the installation of the measuring or recording device(s), specified in conditions &lt;5&gt; 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</p>	Agreed

	<p>Council, attention: RMA Compliance and Enforcement Manager, signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:</p> <ul style="list-style-type: none"> <li>(a) the measuring and recording device(s) is installed in accordance with the manufacturers specifications; and</li> <li>(b) data from the recording device(s) can be readily accessed and/or retrieved in accordance with clauses (b) and (c) of condition &lt;5&gt;.</li> </ul>	
8	<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> <ul style="list-style-type: none"> <li>(a) the water meter(s) is measuring the rate of water taken as specified in condition &lt;5&gt; and</li> <li>(b) the tamper-proof electronic recording device is operating as specified in condition &lt;5&gt;</li> </ul>	Agreed
9	<p>The consent holder shall, prior to exercising this consent, install a water level measuring device at (map reference NZMS 260 I36:1259-2119) in the Station Stream that will enable the determination of the continuous rate of flow in the reach of the waterbody to within an accuracy of 10 percent. The measuring device shall, as far as is practicable, be installed at a site likely to retain a stable relationship between flow and water level. The measuring device shall be installed in accordance with the manufacturer's instructions.</p> <ul style="list-style-type: none"> <li>(a) The measuring device shall, as far as is practicable, be installed at a site likely to retain a stable relationship between flow and water level. The measuring device shall be installed in accordance with the manufacturer's instructions.</li> <li>(b) install a tamper-proof electronic recording device such as a data logger(s) that shall time stamp a pulse from the flow meter at least once every 15 minutes, and have the capacity to hold at least one season's data of water taken as specified in clauses (d)(i) and (d)(ii), and which is telemetered, as specified in clause (d)(iii).</li> <li>(c) The recording device(s) shall: <ul style="list-style-type: none"> <li>(i) be set to wrap the data from the measuring device such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and</li> <li>(ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which the consent holder shall then download</li> </ul> </li> </ul>	Agreed

	<p>and store and provide to the Canterbury Regional Council in a format and standard specified in the Canterbury Regional Councils form for Water Metering Data Collection; and be readily accessible to be downloaded by the Canterbury Regional Council or by a person authorized by the Canterbury Regional Council: RMA Compliance and Enforcement Manager; and</p> <p>(iii) shall be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder.</p> <p>(d) The measuring and recording devices described in clauses (a) and (c) shall be available for inspection at all times by the Canterbury Regional Council.</p> <p>All data from the recording device described in clause (c), and the corresponding relationship between the water level and flow (b), shall be provided to the Canterbury Regional Council annually in the month of June, and shall be accessible and available for downloading at all times by the Canterbury Regional Council.</p>	
10	<p>Fish Screen</p> <p>(a) No water shall be taken in terms of this permit as referred to in condition 1 until a report is provided to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager demonstrating the existing fish exclusion measures have been designed and installed in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007. (Copy available on <a href="http://www.ecan.govt.nz">www.ecan.govt.nz</a>).</p> <p>(b) The fish exclusion measures shall be maintained in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007,</p>	Agree - CRC093264 sets our clear conditions as to how the gallery should be constructed.
11	<p>The consent holder shall prepare once per year <u>and not less than one month prior to the commencement of the irrigation season</u>, an Overseer<sup>®</sup> nutrient budgeting model report, and shall prepare, at least once per year, a report of the annual farm nutrient loading for the Lilybank Station using the model Overseer<sup>®</sup> (AgResearch model version number 5.4.3 or later</p>	When exactly do these have to be done? Need to specify dates.
12	<p>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.</p>	<p>Condition number? Condition xx = 11?</p> <p>Applicant comment</p> <p><u>Agreed – but preference to leave final conditions numbering to be determined on grant</u></p>

	<p><u>For the purposes of interpretation of the following conditions the Lilybank Station shall be defined as the areas in certificates of title and Pastoral Lease numbers CB10K/888,CB432/22, which total 27526,</u></p>	
<p>13</p>	<p>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 Lilybank Station shall not exceed 37,714 kg of nitrogen and 2,900 kg of phosphorus.</p> <p>The NDAs shall be complied following the first full year (1 July to 30 June) of irrigation development.</p>	<p><b>Essential to define “Lilybank Station” 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.</b></p> <p><b>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.</b></p> <p>Needs to be “The annual (01 July to 30 June) nutrient loading (NDA) estimated in accordance with condition X, shall not exceed...”</p> <p>The final clause appears to be an attempt to broaden the compliance requirement but is missing some words and is not clear.</p> <p><u>Applicant Comment</u></p> <p><u>The condition requires compliance and verification annually</u></p> <p><u>Not opposed to this wording</u></p> <p><u>Do not understand. There is no attempt to broaden wording.</u></p>
<p>14</p>	<p>Overseer Modelling:</p> <p>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</p>	<p>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>

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	University or an equivalent qualification.	
15	<p>Farm Environmental Management Plan</p> <ol style="list-style-type: none"> <li>1. The Farm Environmental Management Plan prepared for the Lilybank Station and supplied to Environment Canterbury on an annual basis within two months of commencement of the current irrigation season</li> <li>2. The consent holder shall implement, and update annually the Farm Environmental Management Plan (FEMP) for Lilybank Station. The FEMP shall include <ol style="list-style-type: none"> <li>(b) Verification of compliance with NDA's by farm nutrient modelling using the model Overseer<sup>®</sup> (AgResearch model version number 5.4.3 or later).</li> <li>(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.</li> <li>(d) Implementation of Mandatory Good Agricultural Practices ("MGAPS") and requirements to manage in accordance with the Lilybank Station Overseer<sup>®</sup> model inputs specified in the attached Appendix A <u>of the FEMP</u>– Lilybank Station Overseer<sup>®</sup> parameter report. Appendix A forms part of this consent.</li> <li>(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.</li> <li>(f) A requirement to review the risk assessment if there are any significant changes in land use practice</li> </ol> </li> <li>3. 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</li> </ol>	<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.</p> <p>No Appendix A provided.</p>

	<p>budgeting model.</p> <p>4. A report based on Overseer<sup>®</sup> 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<sup>®</sup> modelling.</p> <p>5. Changes may be made to Lilybank Station Overseer<sup>®</sup> model inputs, provided that written certification is provided that the change is modelled using Overseer<sup>®</sup>, and that the result of that modelling demonstrates that the NDAs are not exceeded.</p> <p>6. 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>Should be a person “with the qualifications described...”.</p> <p>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 14 may not apply.</p> <p><u>Applicant Comment</u></p> <p><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 Ecan wants</u></p> <p><u>Do not see issue – 13 applies to all references to Overseer</u></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>
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 “Significant changes” constitut  
 major change in the stock rati  
 between sheep, cattle, and de  
 major change in the farming s  
 for the property. . For exampl  
 from extensive sheep and bee  
 to dairy farming or cropping. I  
 include changes in stock num  
 would be expected to deal wit  
 seasonal variations arising fro  
 conditions or changes in stock  
 due to market demand.

		<p><u>Applicant Comment</u> <u>Agreed and delete</u></p>
16	<p>Fertiliser</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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. <ol style="list-style-type: none"> <li>(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.</li> <li>(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.</li> </ol> </li> <li>4. Nitrogen fertiliser shall not be applied to land between 31<sup>st</sup> May and 1<sup>st</sup> September in any year except for the use of nitrification inhibitors</li> <li>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.</li> <li>6. Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare</li> </ol>	<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> <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</u></p>

	<p>per application.</p> <p>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.</p> <p>Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore.</p>	<p><a href="#">information to be supplied upon request</a></p> <p>Condition clause number?</p>
17	<p><b>Irrigation Infrastructure</b></p> <p>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.</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</p>	<p>Issued by who? NZWETA?</p> <p>What certified design? Certified by who?</p> <p><a href="#">Applicant Comment</a></p> <p><a href="#">NZQA</a></p> <p>This code of practice is not written as an enforceable document, which means that this condition could not be</p>

	<p>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>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:</p> <p>(a) The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation.</p> <p>(b) This report shall be obtained within three months of the first exercise of the consent.</p> <p>(c) 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>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><u>Applicant Comment</u>  <u>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</u></p> <p>Why not the person referred to above?</p> <p>Condition clause number?</p>
		No fertigation - backflow prevention condition

		<b>Applicant Comment – not required as gravity system</b>
18	<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> <u>Agreed to altered wording</u></p>
19	<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>Agree</p>
20	<p>SUB-CATCHMENT SURFACEWATER MONITORING AND MITIGATION</p> <p>The water quality of Woolwash Stream shall be monitored <u>within 6 months of first exercise of consent</u> as follows:</p> <p>(a) Location:</p> <p>Map reference: I36:131-208 co-ordinates immediately upstream of all irrigation takes on Woolwash Stream</p> <p>Map reference: I36:127-188 co-ordinates downstream of the discharge</p> <p><b>Note:</b> Unless otherwise agreed the coordinates for Woolwash Stream monitoring shall be as specified – but provided the three characteristics of</p>	<p>Not enough information to comment on whether or not monitoring of Woolwash Stream would be appropriate.</p> <p>Needs to clearly state when this should start.</p> <p>A map should be provided to show locations. Full eight digit map references preferable. Ideally map reference s should also include current NZTopo map references.</p> <p><u>Applicant comment</u> <u>Map is in the FEMP and has been supplied</u></p>

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<p>the monitoring points are adhered to ( being upstream of all intakes; downstream of all intakes; and the Swamp receiving environment) then within those parameters the consent holder may vary the actual coordinates with the prior agreement of Ecan so as to more appropriately monitor the localised river effects arising from the exercise of this take consent</p> <p>(b) Water quality variables to include: (a) Dissolved inorganic nitrogen (b) dissolved reactive phosphorus; (c) dissolved oxygen (d) conductivity (e)turbidity (f)Water Temperature (g) periphyton biomass as chlorophyll a per square metre;(h) ecoli</p> <p>(c) This monitoring may be carried out on an individual basis, or may be prepared in collaboration with other consent holders, or on a collective basis by a suitable independent body appointed by all relevant consent holders in the sub catchment.</p> <p>(d) Frequency of monitoring: Quarterly during the months of November, February, May and August in each year.</p> <p>(e) Methods: The methods of sampling and analysis shall be those that are generally accepted by the scientific community as appropriate for monitoring river water quality and periphyton biomass. The methods of sampling shall be documented and made available to the Canterbury Regional Council on request.</p> <p>(f) The water quality monitoring shall be undertaken by a suitably qualified and/or experienced person who demonstrates that they understand the appropriate methods to use for surface water quality sampling, including 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.</p> <p>(g) 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>The results of all sampling shall be provided to the Canterbury Regional Council</p>	<p>Don't consider that a secondary approval is appropriate, but an alternative approach would be to state "at or about" to give some flexibility. Locations should be specific to the irrigation areas.</p> <p>phosphorus E. coli</p>
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	Attention: RMA Compliance and Enforcement Manager by 30 May each year. This shall include copies of reports from the laboratory that undertook the analyses	
21	The pre – irrigation monitoring shall be carried out in the full year prior to commencement of irrigation using the methodology set out above to determine the environmental trigger levels for condition 21 which shall either be the trigger levels set out below or the pre-irrigation DIN/DRP levels whichever is the higher.	<p>What pre-irrigation monitoring?</p> <p>Where is this specified?</p> <p>Are some proposed conditions missing or is this left over from an earlier conceptual approach?</p>
22	<p><b>TRIGGER RESPONSE CONDITION: EXCEEDANCE OF SURFACE WATER EARLY WARNING TRIGGER IN UNNAMED TRIBUTARIES OF THE GODLEY RIVER</b></p> <p>(a) If the monitoring undertaken in accordance with condition 20 shows that the average sample result for any of the two Woolwash Stream monitoring sites located at I36:131-208 and I36:127-188 (as shown on the attached map (Appendix E), over the annual period (November to August test results as above) is greater than 0.14 mg/l of DIN; or 0.006 mg/l DRP; or 90 mg chl <i>a</i>/ m<sup>2</sup> (early warning trigger) but does not exceed 0.18 mg/l of DIN; or 0.007 mg/l DRP; or 120 mg chl <i>a</i>/ m<sup>2</sup> (environmental standard trigger),(OR the pre-irrigation monitoring shows that the DIN/DRP levels are higher than the ANZECC guidelines then those pre-irrigation actual annual average sample results shall be substituted for the trigger levels) the consent holder shall prepare a report into the cause of the breach of the early warning trigger ( or any exceedance of the pre- irrigation sample results, as the case may be). The report shall be prepared by an expert review panel consisting of two qualified and experienced independent scientists. One of the scientists shall be nominated by the Canterbury Regional Council, and the other shall be appointed by the consent holder.</p> <p>(b) The report shall:</p> <ol style="list-style-type: none"> <li>i. include the experts' conclusion on whether the exceedance(s) were as a result of natural influences, one off events, or in whole or part by nutrient loss associated with the irrigation authorised by this consent; and</li> <li>ii. include an assessment as to whether there is likely to be a continuation of the monitored results;</li> </ol>	<p>Why would a trigger be linked to an upstream monitoring site?</p> <p>What pre-irrigation monitoring?</p> <p><b>Would be inappropriate to use observed nutrient concentrations.</b></p>

<p>iii. be completed by 30 July following the sampling; and</p> <p>iv. be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling.</p> <p>(c) If the authors of the report prepared in accordance with clauses (a) and (b) conclude, after considering all the relevant available information, including on-site monitoring, sub-catchment monitoring, and catchment resource consent compliance 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, or if the report concludes that it is unlikely that there is a trend towards exceedence of the environmental standard trigger pertaining to the Unnamed tributaries of the Godley River monitoring sites, then no further action needs to be undertaken by the consent holder, and no nutrient load reductions and investigations shall be required, if.</p> <p>(d) If the monitoring undertaken in accordance with condition 20 shows that the average sample result for any the two Woolwash Stream monitoring sites, located at I36:131-208 and I36:127-188 (as shown on the attached map (Appendix E), over the period December to April is greater than 0.14 mg/l of DIN; or 0.006 mg/l DRP; or 90 mg chl <i>a</i>/ m<sup>2</sup> (early warning trigger) but does not exceed 0.18 mg/l of DIN; or 0.007 mg/l DRP; or 120 mg chl <i>a</i>/ m<sup>2</sup> (environmental standard trigger), then the property nutrient load (NDA), as specified in condition 19, shall be reduced by 5% x Irrigation Proportion Factor (IPF) for the irrigation season subsequent to the monitoring period. The IPF shall be the proportion of the total authorised irrigation area developed for irrigation at the time of the exceedence under this resource consent divided by the total farm area (being 190 irrigated hectares on a total farm area of <b>2,246</b> hectares.</p> <p>(e) Unless the experts conclude that the exceedence was caused by an event or activity other than nutrient loss associated with the irrigation authorised by</p>	<p>Should clarify "If both authors of the report..."</p> <p><u>Applicant Comment</u></p> <p><u>It specifies the plural – if only one concludes then the applicant is not meeting condition</u></p> <p>No Appendix E provided.</p> <p>Needs to be a compounding requirement for continuing breach e.g., "The NDA reduction shall compound on any currently reduced NDA."</p>
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<p>this consent or if the experts conclude that it is unlikely that there is a trend towards exceedance of the environmental standard trigger pertaining to the Unnamed tributaries of the Godley River monitoring sites, then the consent holder shall prepare a Remedial Action Plan.</p> <p>(f) The Remedial Action Plan shall set out the methods and timeframes for altering and/or adapting farm land use practices to ensure that the exceedance in the early warning trigger pertaining to the Unnamed tributaries of the Godley River monitoring site, is returned <u>as soon as practicable</u> to and maintained below the average sample results of 0.14 mg/l of DIN; or 0.006 mg/l of DRP; or 90 mg chl a/ m<sup>2</sup> (early warning trigger) for the Unnamed tributaries of the Godley River monitoring site, over the period December to April.</p> <p>(g) The Remedial Action Plan shall be prepared by a suitably qualified and experienced person using <u>Overseer or an equivalent method to demonstrate</u> that the actions to be undertaken will achieve the necessary nutrient reductions <u>as soon as practicable</u>;</p> <ol style="list-style-type: none"> <li>i. If the Remedial Action Plan outlined in clauses (e) and (f) is prepared in collaboration with other consent holders who are required to prepare a Remedial Action Plan for this sub catchment the Remedial Action Plan shall be deemed to comply with this condition</li> <li>ii. Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented.</li> <li>iii. The consent holder shall provide the Canterbury Regional Council with the Remedial Action Plan and an amended FEMP upon request.</li> <li>iv. If a required reduction in nutrient load is in effect under clause (d) and monitoring for that period shows that the average sample results for the Unnamed tributaries of the Godley River monitoring site over the period December to April is less than 0.14 mg/l of DIN; or 0.006 mg/l of DRP; or 90 mg chl a/ m<sup>2</sup> (early warning trigger), then for the subsequent season no property NDA reduction shall be required</li> </ol>	<p>Should be ...”both conclude...”</p> <p><u>Applicant Comment</u> <u>Comment as above</u></p> <p>Need to add “as soon as practicable” after “... is returned...”.</p> <p>“approved” should be deleted and the sentence changed to “...using Overseer or an equivalent method...” Change “show” to “demonstrate”. Add “as soon as practicable” after “...reductions...”</p> <p><u>Applicant Comment</u> <u>Agreed see tracked changes</u></p> <p><u>Should record full year period</u></p> <p><u>See tracked changes</u></p>
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**Deleted:** approved methods, Overseer® to show

	under this condition.	Should be a separate clause.
23	The pre – irrigation monitoring shall be carried out in the full year prior to commencement of irrigation using the methodology set out above to determine the environmental trigger levels for condition 21 which shall either be the trigger levels set out below or the pre-irrigation DIN/DRP levels whichever is the higher.	What pre-irrigation monitoring?
24	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
25	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 (a) any cumulative adverse effect on a waterway arising from abstractions; and amending the flow in the Station Stream and tributaries at which abstraction is required to be reduced or discontinued as set out in condition 5.	Agreed
26	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 <2> above – Maximum rates of volumes**

<b>Year</b>	<b>Maximum rate of abstraction (litres / second)</b>	<b>Maximum Daily Volume (cubic metres / day)</b>	<b>Maximum Annual Volume (cubic metres / year)</b>
1 September 2009 to 30 April 2010	<b>100 l/s</b>	<b>8,640 m<sup>3</sup>/day</b>	<b>1,032,000 m<sup>3</sup>/annum</b>
1 September 2010 to 30 April 2011	<b>100 l/s</b>	<b>8,640 m<sup>3</sup>/day</b>	<b>1,032,000 m<sup>3</sup>/annum</b>
1 September 2011 to 30 April 2012	<b>100 l/s</b>	<b>8,640 m<sup>3</sup>/day</b>	<b>1,032,000 m<sup>3</sup>/annum</b>
1 September 2012 to 30 April 2013	<b>100 l/s</b>	<b>8,640 m<sup>3</sup>/day</b>	<b>1,032,000 m<sup>3</sup>/annum</b>
1 September 2013 to 30 April 2014 and every year thereafter	<b>100 l/s</b>	<b>8,640 m<sup>3</sup>/day</b>	<b>1,032,000 m<sup>3</sup>/annum</b>

**Plan “CRC071786”**



