

Mr F I Graham

Conditions for Water Permit CRC072363

| Condition No. | Applicant Proposed Condition | ECan Comments | Meridian Comments | Applicant Comments | Applicant Final Proposed Conditions | | | | | | | | | | | | | | | | |
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| Take | | | | | | | | | | | | | | | | | | | | | |
| 1 | Water may only be taken and / or diverted from Black Jack Stream located at or about map reference NZMS 260 I39:956-25 at the property referred to as Te Akatarawa Station. | | | | | | | | | | | | | | | | | | | | |
| 2 | <p>Water for irrigation shall only be taken 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 July and the following 30 June) set out in Table A.</p> <p>Table A – Maximum Rates & Volumes</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Maximum rate of abstraction (litres / second)</th> <th>Maximum Daily Volume (cubic metres / day)</th> <th>Maximum Annual Volume (cubic metres / year)</th> </tr> </thead> <tbody> <tr> <td>1 September 2009 to 30 April 2010</td> <td>12 l/s</td> <td>1,037 m³/day</td> <td>150,000 m³/annum</td> </tr> <tr> <td>1 September 2010 to 30 April 2011</td> <td>12 l/s</td> <td>1,037 m³/day</td> <td>150,000 m³/annum</td> </tr> <tr> <td>1 September 2011 to 30 April 2012</td> <td>12 l/s</td> <td>1,037 m³/day</td> <td>150,000 m³/annum</td> </tr> </tbody> </table> | 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 | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | 1 September 2010 to 30 April 2011 | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | 1 September 2011 to 30 April 2012 | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | | | | |
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| 1 September 2009 to 30 April 2010 | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | | | | | | | | | | | | | | | | | | |
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| | 1 September 2012 to 30 April 2013 | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | | | | |
| | 1 September 2013 to 30 April 2014 and every year thereafter | 12 l/s | 1,037 m ³ /day | 150,000 m ³ /annum | | | | |
| Use | | | | | | | | |
| 3 | Water allocated in Table A of Condition (2) shall be used only for the spray irrigation of pasture for the grazing of stock and viticulture of 25 hectares on the area of land shown on attached Plan CRC072363 . | | | | | | | |
| 4 | The consent holder shall take all practicable steps to: (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 | | | | | | | |
| Minimum flows | | | | | | | | |
| | The taking of water shall cease when the natural flow in the Sutton Stream as estimated by the Canterbury Regional Council at or about map reference NZMS 260 I39:967-215 is less than or equal to 80 litres per second. | | | | | | | |
| Measuring & Metering | | | | | | | | |
| 5 | (a) The consent holder shall, within six months after the grant of this consent, install a water meter measuring device in a location | | | | | | | |

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| | <p>that will enable the determination of the continuous rate of flow and volume of water being diverted to within an accuracy of 10 percent.</p> <p>(b) 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> <p>(c) 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).</p> <p>(d) The recording device(s) shall:</p> <ul style="list-style-type: none"> (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 (ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which the consent holder shall then download and store 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 | | | | |
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| | <p>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>(e) The measuring and recording devices described in clauses (a) and (c) shall be available for inspection at all times by the Canterbury Regional Council, including access to the data recorded in accordance with clause (d).</p> <p>(f) 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> | | | | |
| 6 | <p>(a) The water meter installed in accordance with Condition 5 shall be an electromagnetic or ultrasonic meter; or</p> <p>(b) The consent holder shall, within 6 months of the 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> | | | | |

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| 7 | <p>Within one month of the installation of the measuring or recording device(s), specified in conditions 5 and 6 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> <ul style="list-style-type: none"> (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 6. | | | | |
| 8 | <p>Within 6 months of the commencement date and 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"> (c) the water meter(s) is measuring the rate of water taken as specified in condition 5; and (d) the tamper-proof electronic recording device is operating as specified in condition 5. | | | | |
| 9 | <p>The taking of water in terms of this permit shall cease for a period of up to 48 hours on notice from the Canterbury Regional Council, to allow</p> | | | | |

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| | measurement of the flow in Black Jet Stream. | | | | |
| Nutrient Loading (NDA limits) | | | | | |
| 13 | The annual (1 July to 30 June) nutrient loading (the nutrient discharge allowances (NDAs)) to water from Te Akatarawa Station shall not exceed 26302 kg of nitrogen and 748 kg of phosphorus. | | | | |
| Overseer Modelling | | | | | |
| 15 | 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. | | | | |
| Farm Environmental Management Plan | | | | | |
| 16 | <p>The consent holder shall implement, and update annually the Farm Environmental Management Plan (FEMP) for Te Akatarawa Station. The FEMP shall include:</p> <p>(b) 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>(c) When undertaking the modelling outlined in clause (b), the consent holder shall use either weather records collected on-farm or from constructed data</p> | | | | |

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| | <p>from the nearest weather station.</p> <p>(d) Implementation of Mandatory Good Agricultural Practices (“MGAPS”) and requirements to manage in accordance with the Te Akatarawa Station Overseer[®] model inputs specified in the attached Appendix A - Te Akatarawa Station Overseer[®] parameter report. Appendix A forms part of this consent.</p> <p>(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.</p> <p>(f) A requirement to review the risk assessment if there are any significant changes in land use practice</p> | | | | |
| <p>17</p> | <p>Detailed records shall be maintained of nutrient inputs to the nearest kilogram, types of crops (including winter feed/forage crops), cultivation</p> | | | | |

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| | methods, stock movements and yields, prediction of realistic crop yields that are used to determine crop requirements and all other inputs to the Overseer nutrient budgeting model. Such reports are to be used as inputs to the Overseer method as described in condition 16. | | | | |
| 18 | A report based on Overseer [®] modelling shall be provided within one month of completion 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. | | | | |
| 19 | Significant Changes may be made to Appendix A Te Akatarawa Station 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. | | | | |
| 20 | 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. | | | | |

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| <i>Advisory notes</i> | | | | | |
| <p># 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> | | | | | |
| Fertiliser | | | | | |
| 21 | 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. | | | | |
| 22 | The consent holder shall keep a record of all fertilizer applications applied to the property, including fertilizer type, concentration, date and location of application, climatic conditions, mode of application and any report of the fertilizer contractor regarding the calibration of the spreader. | | | | |
| 23 | <p>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>(a) Where an independent fertiliser spreading contractor</p> | | | | |

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| | <p>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>(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.</p> | | | | |
| <p>24</p> | <p>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>25</p> | <p>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> | | | | |

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| 26 | Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare per application. | | | | |
| 27 | 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. | | | | |
| 28 | Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore. | | | | |
| Irrigation Structures | | | | | |
| 29 | <p>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, 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</p> | | | | |

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| | <p>'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>30</p> | <p>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</p> | | | | |

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| | <p>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> | | | | |
| Fertigation | | | | | |
| 31 | i. Gravity feed system | | | | |
| 32 | | | | | |
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| Subdivision | | | | | |
| 37 | The NDAs shall be recalculated if there is a sale or transfer of any part, but not the whole, of the | | | | |

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| | total farm area specified in Appendix [should be Appendix A]*. The recalculated NDAs shall replace the NDAs specified in condition 15. 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. | | | | |
| Soil Management | | | | | |
| 38 | <p>The consent holder shall use, where practicable, direct drilling as the principal method for establishing pastures</p> <p>On the irrigation area the consent holder shall sow and irrigate all ploughed areas as soon as possible following ground disturbance.</p> | | | | |
| Administrative Conditions | | | | | |
| 39 | The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed immediately on first exercise of this consent by the consent holder. | | | | |
| 40 | 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 wan which it is appropriate to deal with at a later stage, including | | | | |

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| | <p>(a) any cumulative adverse effect on a waterway arising from abstractors;</p> <p>(b) amending the flow in Black Jet Stream at which abstraction is required to be reduced or discontinued as set out in condition [x]</p> | | | | |
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APPENDIX A – RELEVANT PLANS

Area to be irrigated (includes area irrigated under CRC001883)

