

Conditions for water permit CRC071649 (Bellfield Land Company Ltd – Henburn)				
Status of Consent: <u>new</u>				
Catchment: <u>Henburn</u>				
Expiry date sought - 30 th of April 2025.				
No	Proposed Condition	ECan Comments	Meridian comments	Applicant further comment
1	Water shall only be taken from the Henburn Stream located between map reference NZMS 260: H39:615-337 and H39:615-336 or H39:619-339 and H39:621-338.	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 12.00am on the following day) and annual volume (measured between 1 September and the following 30 April) set out in Table A.</p> <p>(b) Water taken in accordance with allocated in Table A of Condition (x) shall be used only for the spray irrigation of 52 hectares for the grazing of <u>pasture and crops</u> on the area of land shown on attached Plan CRC071649.</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 "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.</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 "CRC071649" and any other evidence of registration as the Canterbury Regional Council may require (if any).</p> <p>(e) <u>There shall be a 5 metre setback from any permanently flowing waterways within the irrigation area marked on Plan CRC 071649</u></p>	<p>Previous comments in July 2010 provided to the applicant that reference to "non-milking dairy cows" can be deleted as now specifies sheep and beef cattle.</p> <p>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.</p> <p>Reference to condition number in clause (b) not defined.</p> <p>Suggest parts c and d included as separate conditions. - refer to Paragraph 152 (c) of the addendum s42A report of Susannah Vesey about concern in terms of expectations of Environment Canterbury enforcing this.</p>		<p>In accordance with MIC agreement/MEL derogation approval</p> <p>Second paragraph agreed (except for the recent addition of non-milking dairy cows) Not proposing to "exclude milking dairy cows". Refer to Penman Addendum report para 140 & 67. Consider IO suggestion met by defining stock.</p> <p>Applicant proposes: A minimum irrigation setback of 5m from all natural permanently flowing waterways</p>
3	<p>Water shall only be temporarily diverted within the bed of Henburn Stream as follows:</p> <p>a) diversion shall only be for the purpose of installation and maintenance of a submerged gallery intake, in accordance with consent CRC071650;</p> <p>b) (ii) diversion shall only be over a length of the bed of less than 50 metres, located in accordance with Condition 1; and</p> <p>c) (iii) diversion shall not impede fish passage or cause the stranding of fish in pools or channels.</p>	Refer to para 149 & 150 of s42A addendum report of Claire Penman noting that this activity requires consent and suggests a consent number could be generated as all information regarding the activity was in the application. Commissioners need to make a decision on this.		The issue is whether to include this condition to this existing consent or whether an entirely new consent is required. Either way agreement is reached on the condition itself. The applicant strongly prefers it to be added to this water permit rather than an entirely new consent generated for this minor water permit activity. Refer to McCabe Right of Reply, para 28

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4	<p>The consent holder shall take all practicable steps to:</p> <ul style="list-style-type: none"> 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. 	Agreed		
5	<p>Water may be diverted, taken and used as follows: Whenever the combined flow (expressed in Litres per second) of Hen Burn at Hen Burn Rd NZMS 260 H39: H39:633-335 and the abstracted flows relating to Sutherlands (CRC020508) and this permit, as estimated by the Canterbury Regional Council</p> <p>Map Reference NZMS 260</p> <ul style="list-style-type: none"> a) Is equal or greater than 100 litres per second the maximum rate at which water is taken shall not exceed 30 litres per second, and: a) Falls below the flow shown on the horizontal axis of 'Figure 2A', then the rate of abstraction permitted in terms of this permit shall not exceed those shown as corresponding flows on the vertical axis. b) Is below 20 litres per second the taking of water in terms of this permit shall cease <p>OR provided that the Canterbury Regional Council, in consultation with a Water Users Committee representing, but not limited to, surface water and hydraulically connected groundwater users, who are subject to the above minimum flow, has determined upon a water sharing regime which limits the total daily abstraction from the resource as referred to in (a) and (b) above then the taking of water in accordance with that determination shall be deemed to be in compliance with condition <5> of this consent.</p>	Agree with revised condition		<p>Applicant Comment: Applicant agrees with ECan comment as detailed by Boraman below and therefore has modified the condition in accordance with ECan recommendation:</p> <p>Boraman Comment: For the split with the users, I would have to recommend a users committee formed for the Henburn. There is one slight complication as CRC020508 has a minimum flow site located directly below the intake and not at Henburn Rd as per WCWARP. Suggest relocating the min flow site to Henburn Rd for a workable solution. Also agree that water users condition as suggested below should be added. Graphs and workings attached at end of the conditions for further details.</p>
6		No landscape conditions have been provided by the applicant. Please refer to evidence of Chris Glasson for recommended mitigation measures (paragraph 166 of Report 5 and paragraph 68 of Chris Glasson's addendum s42A report).		Conditions are not considered necessary. With regard to Mr Glasson's evidence, the pump shed falls under the jurisdiction of the District Plan. The plan attached to this consent ensures the irrigation area is well over 50mtrs from the Henburn main stem (a lot of waterways on the map do not exist) therefore we agree that the effects are less than minor. A preference for the applicants and Mr Andrew Craig's evidence is requested.
7	(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 www.ecan.govt.nz).	I recommend the following amended version of this condition to satisfy concerns that the gallery is constructed and maintained appropriately to exclude fish. (a) The consent holder shall ensure that water is		The condition proposed by the applicant had originally been proposed by ECan and agreed by the applicant. ECan are now proposing a new version which the applicant disagrees it is warranted

	<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>	<p>abstracted using a gallery intake and shall be designed to prevent native and exotic fish species from entering the system.</p> <p>(b) The fish screen shall be designed by a person with experience in freshwater ecology and fish screening techniques, and constructed in a manner that ensures the principals of the NIWA fish screening guidelines (Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007. (Copy available on www.ecan.govt.nz)) are achieved.</p> <p>(c) No water may be taken in terms of this permit until, upon completion of the intake structure a report is provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. The report shall be prepared by the consent holder for certification and shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> (i) Design plan for the gallery specifying gallery dimensions; (ii) Detail of depths and sizes of layers of gravel over the gallery; (iii) Photographic evidence of key stages of construction of the gallery, including demonstrating compliance with gravel specifications in sub clause (c)(ii) above; (iv) Any ongoing maintenance required by the manufacturer is carried out in accordance with their specifications." <p>(d) The intake structure shall be maintained in good working order. Records shall be kept of all inspections and maintenance. And those records shall be provided to the Canterbury Regional Council upon request.</p>		
8	<p>The consent holder shall, before the first exercise of this consent at the point of take:</p> <p>a.</p> <ul style="list-style-type: none"> (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). <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> <ul style="list-style-type: none"> (i) store the entire season's data in each 12 month period from 1 July to 30 	<p>Agree but condition number reference appears incorrect</p>		<p>In accordance with MIC agreement/MEL derogation approval.</p>

	<p>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>			
9	<p>(a) The water meter installed in accordance with Condition <8> 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		
10	<p>Within one month of the installation of the measuring or recording device(s), specified in conditions <8> 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		
11	<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> <p>(b) the tamper-proof electronic recording device is operating as specified in condition <10></p>	Agreed		
12	<p>The consent holder shall, prior to exercising this consent, install a water meter measuring device at (map reference NZMS 260 H39: 633-335) in the Henburn 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.</p>	Agreed		

	<p>(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.</p> <p>(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).</p> <p>(c) The recording device(s) shall:</p> <p>(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</p> <p>(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 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>			
	<p><u>Nutrient Loading:</u> <u>For the purposes of interpretation of the following conditions Quailburn Downs shall be defined as the areas in certificates of title and Pastoral Lease numbers, Ot6A/767-8 which total 2194 hectares</u></p>		<p><u>Note title numbers and areas have been done by computer search and will be verified by applicant</u></p>	
13	<p>▼</p> <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® nutrient budgeting model report, and shall prepare, at least once per year, a report of the annual farm nutrient loading for the Quailburn Downs using the model Overseer® (AgResearch model version number 5.4.3 or later</p>	<p>When exactly do these have to be done? Need to specify dates.</p>		<p><u>See comments</u></p>
	<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 = 14?</p>		<p><u>Agreed – but preference to leave final conditions numbering to be determined on grant</u></p>
14	<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 Quailburn Downs shall not exceed 8,761 kg of nitrogen and 240 kg of phosphorus.</p> <p>The NDAs shall be complied <u>with for</u> the first full year (1 July to 30 June) of irrigation development.</p>	<p>Essential to define “Quailburn Downs” by reference to an area (X ha), legal description and/or a map, otherwise there is a risk that authorised nutrient load would be double. The same nutrient load is specified in CRC011987.</p> <p>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.</p>		

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		<p>Needs to be "The annual (01 July to 30 June) nutrient loading (NDA) estimated in accordance with condition X, shall be less than..."</p> <p>Nutrient loads larger than needs plus buffer approach suggested by Christian Whata in ROR to address surplus nutrient issue.</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>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>
15	<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 University or an equivalent qualification.</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>		<p>Leave for commissioners to decide</p>
16	<p>1. Quailburn Downs. The FEMP shall include</p> <ul style="list-style-type: none"> (b) Verification of compliance with NDA's by farm nutrient modelling using the model Overseer® (AgResearch model version number 5.4.3 or later). (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. (d) Implementation of Mandatory Good Agricultural Practices ("MGAPS") and requirements to manage in accordance with the Quailburn Downs Overseer® model inputs specified in the attached Appendix A <u>of the FEMP</u> – Quailburn Downs 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. (f) A requirement to review the risk assessment if there are any significant changes in land use practice <p>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.</p> <p>3. 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</p>	<p>Condition is missing a couple of paragraphs and some wording.</p> <p>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>As above.</p> <p>No Appendix A provided.</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>FEMP has been supplied dated 1 April 2010. Draft watermark to be removed</p> <p><u>Final FEMPS have been sent to Ecan: Com: Phillips -Warnock</u></p> <p>Clause C to be deleted</p> <p>Overseer parameter report attached</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>

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	<p>Overseer[®] modelling.</p> <p>4. Changes may be made to Quailburn Downs 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>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.</p>	<p>Not clear who can undertake this certification. Condition 15 may not apply.</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>Do not see issue – 15 applies to all references to Overseer</u></p> <p><u>Agreed and delete</u></p>
17	<p>Fertiliser</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>(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.</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>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</p> <p>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.</p> <p>6. Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare 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>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>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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 # 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.

	Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore.			
18	<p>Irrigation Infrastructure</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 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>Issued by who? NZWETA?</p> <p>What certified design? Certified by who?</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>Why not the person referred to above?</p> <p>Condition clause number?</p>		<p>NZQA</p> <p>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>
19	<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>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</p>	<p>Agree</p>		

	<p>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>			
20	<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 <u>condition XX</u>. 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>Property defined above</u></p> <p><u>Agreed to altered wording</u></p>
21	<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>		
22	<p>SUB-CATCHMENT SURFACEWATER MONITORING AND MITIGATION</p> <p>The water quality of the Henburn Stream shall be monitored <u>within 6 months of first exercise of consent</u> as follows:</p> <p>(a) Location:</p>	<p>Applicant Comment: An upstream monitoring site has not been proposed as the take point is located downstream of the irrigation area. This take point is located at the confluence of several small waterways that make up the Henburn Stream. Therefore to monitor upstream in this situation is not considered appropriate as there are so many small waterways that sometime are underground upstream before appearing at the</p>		

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	<p>Map reference: H39: 626-337co-ordinates downstream of the discharge</p> <p>Note: Unless otherwise agreed the coordinates for Henburn Stream monitoring shall be as specified – but provided the three characteristics of 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 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>	<p>confluence proposed for the take and water quality. Monitoring</p> <p>ECan comment:</p> <p>Upstream downstream monitoring not critical provided appropriate downstream triggers are applied.</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>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>E. coli</p> <p>Monitoring should be undertaken monthly between 1 December and 30 April with a minimum of three weeks between sampling. Monitoring during November and August is unlikely to be the appropriate time to identify possible adverse effects on water quality. Averaging results over a 12 month period would mask summer adverse effects.</p>	<p><u>Map is in the FEMP and has been supplied</u></p> <p><u>This condition is not intended to mask effects – but is designed to record and monitor long term trends in surface water quality.</u></p> <p><u>The monitoring is not designed to record and monitor a particular spike generated following a long drought or significant rainfall but is to safeguard against any long term reduction in acceptable water quality.</u></p>	
23	<p><u>Pre</u> – 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 condtion 21 which shall either be the trigger levels set out below or the pre-irrigation DIN/DRP levels whichever is the higher.</p>	<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>	<p><u>... sets out the methodology and what is to be monitored . Want to avoid repetition of all of the parameters above</u></p>	
24	<p>TRIGGER RESPONSE CONDITION: EXCEEDANCE OF SURFACE WATER EARLY WARNING TRIGGER – HENBURN STREAM</p> <p>(a) If the monitoring undertaken in accordance with condition 20 shows that the average sample result of the Henburn Stream monitoring site located at</p>			

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<p>H39:626-337 (as shown on the attached plan_CRC071649, 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 a/ m² (early warning trigger) but does not exceed 0.18 mg/l of DIN; or 0.007 mg/l DRP; or 120 mg chl a/ m² (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 exceedence 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"> i. include the experts' conclusion on whether the exceedence(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 ii. include an assessment as to whether there is likely to be a continuation of the monitored results; iii. be completed by 30 July following the sampling; and iv. be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 August following the sampling. <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 Henburn Stream 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 the Henburn Stream monitoring site, located at H39:626-337 (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 a/ m² (early warning trigger) but does not exceed 0.18 mg/l of DIN; or 0.007 mg/l DRP; or 120 mg chl a/ m² (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 52 hectares on a total farm area of 2,200 ha)</p>	<p>No Appendix E provided.</p> <p>What initial monitoring? Would be inappropriate to use observed nutrient concentrations.</p> <p>Should clarify "If both authors of the report..."</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>	<p>Plan CRC071649</p> <p><u>It specifies the plural – if only one concludes then the applicant is not meeting condition</u></p>	
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	<p>(e) Unless the experts conclude that the exceedance was caused by an event or activity other than nutrient loss associated with the irrigation authorised by 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 Henburn Stream 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 Henburn Stream monitoring site, is returned 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/ m² (early warning trigger) for the Henburn Stream 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 approved <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"> 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 ii. Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented. iii. The consent holder shall provide the Canterbury Regional Council with the Remedial Action Plan and an amended FEMP upon request. <p>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 Henburn Stream 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/ m² (early warning trigger), then for the subsequent season no property NDA reduction shall be required under this condition.</p>	<p>Should be ..."both conclude..."</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>Needs a condition number.</p>	<p>Comment as above</p> <p>Agreed see tracked changes</p> <p>See tracked changes</p>	
<p>25</p>	<p>Monitoring of Ahuriri Arm of Lake Benmore and Lower Lake Benmore</p> <p>The water quality of the Ahuriri Arm of Lake Benmore and Lower Lake Benmore shall be monitored as follows:</p> <p>(a) Locations:</p> <p>Ahuriri Arm, Map reference: NZMS 260 [] (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>(b) Depths: depth integrated 0-10m, 25m, 50m</p> <p>(c) Water quality variables: (a) total nitrogen; (d) ammonia; (e) nitrate; (f) nitrite;</p> <p>(g) total Kjeldahl nitrogen; (h) total phosphorus; (i) dissolved reactive</p>	<p>Needs to clearly state when this should start.</p> <p>Incorrect map reference.</p> <p>Correct spelling is "Kjeldahl"</p>		

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	<p>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>(i) $TLc = 2.22 + 2.54 \log(\text{chlorophyll } a)$</p> <p>(ii) $TLp = 0.218 + 2.92 \log(\text{total phosphorus})$</p> <p>(iii) $TLn = -3.61 + 3.01 \log(\text{total nitrogen})$</p> <p>(iv) $TLI = \Sigma (TLc + TLp + TLn)/3$</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 available to the Canterbury Regional Council on request.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p>	<p>Condition numbering error, (a) should be (e)...</p>		
26	<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>	<p><u>Agreed</u></p> <p><u>Not an RMA condition – issue would be extremely onerous on this applicant</u></p>	
27	<p>Trigger Response Condition:</p> <p>(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 Ahuriri 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</p>	<p>Reporting officer recommendation was for an early warning trigger of 2.8 on the basis that existing data indicates current summer mean TLI could be as high as 2.9. Refer to Second Addendum S42A of Dr Freeman.</p>		

<p>(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 52 hectares on a total farm area of 2,200 ha</p> <p>(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.</p> <p>(c) 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>(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.</p> <p>(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.</p> <p>(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 Ahuriri 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 <u>in condition XXX</u>.</p> <p>(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 Ahuriri 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>There is no condition 28. Needs to refer to both monitoring sites.</p> <p>Reference to TLI of 2.75 incorrect.</p> <p>Condition number reference incorrect.</p> <p>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. Condition number references incorrect. Reference to condition 17 is incorrect.</p> <p>No Appendix C provided</p> <p>Condition number reference incorrect.</p>		
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	<p>(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 Ahuriri 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>(i) 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>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 Ahuriri 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.</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 clause number?</p>		
28	The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed immediately on first exercise of this consent by the consent holder.	Agree		
29	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 Henburn Stream and tributaries at which abstraction is required to be reduced or discontinued as set out in condition 5.	Agree		
30	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

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	30 l/s	2,592 m ³ /day	312,000 m ³ /annum
1 September 2011 to 30 April 2012	30 l/s	2,592 m ³ /day	312,000 m ³ /annum
1 September 2012 to 30 April 2013	30 l/s	2,592 m ³ /day	312,000 m ³ /annum
1 September 2013 to 30 April 2014 and every year thereafter	30 l/s	2,592 m ³ /day	312,000 m ³ /annum

Details as per Condition 5 above regarding minimum flow:

Minimum flow site	Hen Burn at Hen Burn Rd
Map Reference	H39:633-335 assuming min flow site at bridge
Min site above/ below SWAP point	Below
Flow sharing	Yes
Annexed Graph Applicable	Yes if flows are naturalised
Conditions	Maximum abstraction = 30L/s
	Minimum flow = 20L/s
Suggested formula(s)	If Natural Flow > 100L/s Rate of Take (L/s) = 30L/s
	If 100L/s > Natural Flow > 20L/s Rate of Take = ((MFS Natural Flow-MF)/Total Allocation)x Bellfield Irrigation Rate of Take = ((MFS Natural Flow-MF)/80)x30

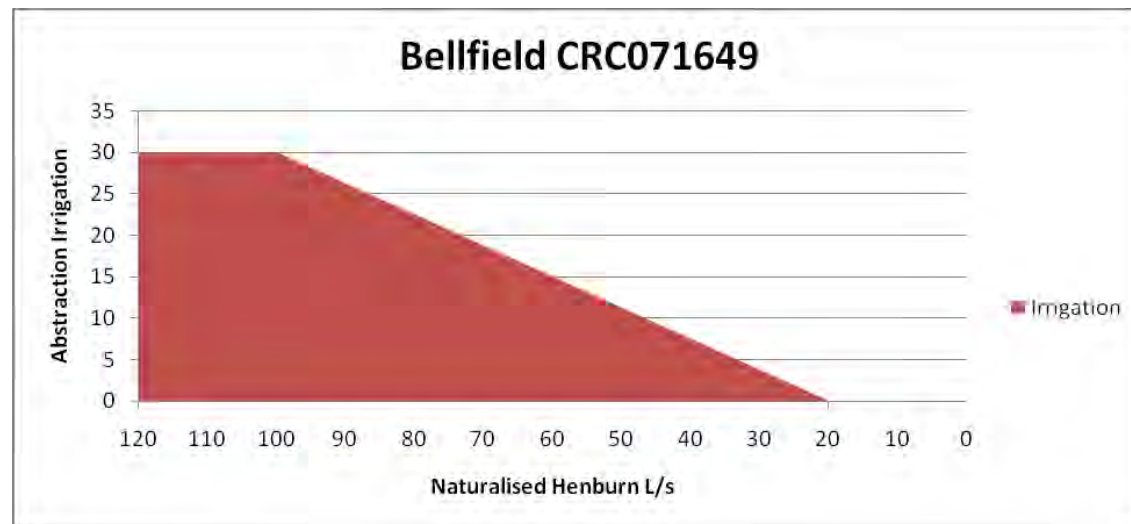
Suggested Conditions

No.	Condition Code	Details
	WP07	<p>Water may be diverted, taken and used as follows: Whenever the combined flow (expressed in Litres per second) of Hen Burn at Hen Burn Rd NZMS 260 H39: H39:633-335 and the abstracted flows relating to Sutherlands (CRC020508) and this permit, as estimated by the Canterbury Regional Council</p> <p>Map Reference NZMS 260</p> <ul style="list-style-type: none"> c) Is equal or greater than 100 litres per second the maximum rate at which water is taken shall not exceed 30 litres per second, and: b) Falls below the flow shown on the horizontal axis of 'Figure 2A', then the rate of abstraction permitted in terms of this permit shall not exceed those shown as corresponding flows on the vertical axis. d) Is below 20 litres per second the taking of water in terms of this permit shall cease

Other comments,

Relating to conditions in table supplied by Irricon (Ecan Conditions)

Incorrect Map Ref, H39: 631-337 relates to approx 200 metres above existing take, assumed min flow site would be at bridge



Conditions for land use permit CRC071650 (Bellfield Land Company Limited - Henburn)		
Expiry date sought - 30 th of April 2025 to coincide with expiry of CRC071649		
No.	Proposed Conditions	ECan Comments
1	The works shall be limited to (a) Installation, maintenance or replacement of gallery intake structures within bed of Hen Burn, including excavation of gravel and sediments, (b) Maintenance necessary to maintain adequate flow of water to irrigation intake.	Agreed
2	The works carried out in accordance with condition (1) shall be located at the Henburn Stream, within the area outlined on Plan "CRC071649" at or about map reference(s) NZMS 260 map references NZMS 260 H39:615-337 and H39:615-336 or H39:619-339 and H39:621-338.	Agreed
3	The installation of the gallery is shall take one day to complete.	Agreed
4	Depth of excavation will be up to 2.5 metres below bed level, with the gallery installed at a depth of at least 1 metre below bed level.	Agreed
6	Any gravel, sand and other natural material excavated as part of the works authorised by this consent during the disturbance of the bed of Hen Burn, must be deposited on, or near to, the excavation site, and shall be reshaped and formed to a state consistent with the surrounding natural riverbed.	Agreed
7		<p>ECan Comment: The following condition relating to the fish exclusion abilities of the gallery are proposed here as the requirements for photos could be missed if included solely on the water permit:</p> <p>(a) The consent holder shall that water is abstracted, under consent CRC071649, using a gallery intake and shall be designed to prevent native and exotic fish species from entering the system.</p> <p>(b) The fish screen shall be designed by a person with experience in freshwater ecology and fish screening techniques, and constructed in a</p>

		<p>manner that ensures the principals of the NIWA fish screening guidelines (Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007. (Copy available on www.ecan.govt.nz)) are achieved.</p> <p>(c) No water may be taken under CRC071649 until, upon completion of the intake structure a report is provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. The report shall be prepared by the consent holder for certification and shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> (i) Design plan for the gallery specifying gallery dimensions; (ii) Detail of depths and sizes of layers of gravel over the gallery; (iii) Photographic evidence of key stages of construction of the gallery, including demonstrating compliance with gravel specifications in sub clause (c)(ii) above; (iv) Any ongoing maintenance required by the manufacturer is carried out in accordance with their specifications." <p>(d) The intake structure shall be maintained in good working order. Records shall be kept of all inspections and maintenance. And those records shall be provided to the Canterbury Regional Council upon request.</p> <p>Applicant Comment: Delete - Disagree this new version proposed is warranted and query whether it is needed on the land use consent? Also See comments on fish screen condition above</p>
8	All practicable measures shall be undertaken to ensure that works do not deflect floodwaters into the berm.	Agreed
9	Works shall not cause erosion of the banks and bed of the Henburn Stream.	Agreed
10	Erosion controls shall be installed on all earthworks to prevent sediment from flowing into any surface water body	Agreed
11	Works shall not be undertaken in any manner likely to cause erosion of or instability to, the banks or bed of Henburn Stream; or reduce the flood-carrying capacity of the waterway	Agreed
12	Prior to commencing excavation, a copy of this resource consent shall be given to all persons undertaking activities authorised by this consent	Agreed
13	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
14	<p>(a) Vehicles/and or machinery shall not operate within 100 metres of birds which are nesting or rearing their young in the bed of the river.</p> <p>(b) For the purposes of this condition, birds are defined as those bird species listed below:</p> <p>South Island Pied Oystercatcher</p> <p>Black Stilt</p> <p>Pied Stilt</p>	Agreed

	<p>Wrybill</p> <p>Banded Dotterel</p> <p>Black-fronted Dotterel</p> <p>Spur-winged Plover</p> <p>Paradise Shelduck</p> <p>Grey Duck</p> <p>NZ Shoveler</p> <p>Grey Teal</p> <p>NZ Scaup</p> <p>Black-billed Gull</p> <p>Red-billed Gull</p> <p>Caspian Tern</p> <p>White-fronted Tern</p> <p>Black-fronted Tern</p> <p>White-winged Black Tern</p> <p>Australasian Bittern</p> <p>Marsh Crake</p> <p>Spotless Crake</p> <p>Cormorant/shag colonies</p>	
15	All practical measures shall be taken to minimise the disturbance of the bed of the Henburn	Agreed
16	<p>The consent holder shall adopt the best practicable options to:</p> <p>a) Minimise soil disturbance and prevent soil erosion;</p> <p>b) Prevent sediment from flowing into any surface water; and</p> <p>c) Avoid placing cut or cleared vegetation, debris, or excavated material in a position such that it may enter surface water.</p>	Agreed
17	<p>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.</p> <p>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.</p>	Agreed
18	All practicable measures shall be undertaken to minimise	Agreed

	vehicles and machinery entering Hen Burn.	
19	<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.</p> <p>c) Fuel shall be stored securely or removed from site overnight.</p>	Agreed
20	Machinery shall be free of plants and plant seeds prior to use in the riverbed	Agreed
21	All practicable measures shall be undertaken to minimise adverse effects on property, amenity values, wildlife, vegetation, and ecological values	Agreed
22	The works shall not prevent the passage of fish, or cause the stranding of fish in pools or channels	Agreed
23	<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 [Runanga], or their representative, 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
24	All spoil and other waste material from the works shall be removed from site on completion of works	Agreed
25	On completion of works, the area shall be restored to its original condition as far as practicable.	Agreed
26	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
27	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

Plan "CRC071649"

