

	<p>4,896 cubic metres per.</p> <p>4. The total volume taken for irrigation, once converted to spray irrigation, shall not exceed 519,000 cubic metres between 1 July and the following 30th June.</p> <p>b) Omarama Stream</p> <p>1. Water shall be diverted from the Omarama Stream at or about map reference NZMS 260 H40: 6141-1588 at a rate not exceeding 350 litres per second for irrigation and stock water and with a volume not exceeding 18,900 cubic metres per day.</p> <p>2. Diverted water shall be dammed by a storage header pond at a maximum volume of 45,000 cubic metres located at or about map reference NZMS 260 H40: 6156-1619</p> <p>3. Water shall be taken and used for irrigation from the storage pond shall not exceed 350 litres per second, with a volume not exceeding 18,900 cubic metres per day</p> <p>4. On conversion to spray irrigation, this take, dam and use shall cease.</p>		
2	<p>Water taken shall be used for the border dyke irrigation of 107ha and once converted to spray irrigation, for 86.5 hectares of crops and pasture for grazing of sheep, beef cattle and non-milking dairy cows, on the area of land shown in attached plans "CRC011361 A" which forms part of this consent.</p>		<p>MF - 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. Refer to general section, condition 3.</p>

Plus general conditions for water permit

Conditions for water permit CRC011361(Dunstan Peaks Station)			
Expiry date sought – 35 years			
N o.	Proposed Condition: CRC011361 B (Dunstan Peaks – Middle Gully)	UWAG Comment	ECan Comments
			<p><i>The new proposed conditions, developed subsequent to the presentation of section 42A reports, do not currently contain all the necessary conditions to satisfactorily address cumulative water quality issues.</i></p> <p><i>Please note these conditions have been commented on without auditing the proposed changes to the applications. As such reporting officer comments are in relation to the enforceability and structure of the conditions, rather than if they will appropriately mitigate adverse effects. For other issues refer to S42A reports and responses to commissioner questions.</i></p>
		Located in general section	Minimum flow + monitoring of min flow?
1	<ol style="list-style-type: none"> Water shall be diverted, taken and used for border dyke irrigation from Omarama Stream at or about map reference NZMS 260 H40: 6136-1752 at a rate not exceeding 290 litres per second and with a volume not exceeding 11,185 cubic metres per day. Water shall be diverted, taken and used for border dyke irrigation from Middle Gully at or about map reference NZMS 260 H40: 6097-1851 at a rate not exceeding 150 litres per second and with a volume not exceeding 		No annual volume proposed for border-dyke irrigation before conversion.

	<p>90,720 cubic metres per day.</p> <p>3. Once the irrigation area is converted to spray irrigation, divert, take and use of water from 2 and 3 above shall cease and be replaced by 4 below.</p> <p>4. Water shall be diverted at 150 litres per second, taken and used for spray irrigation from Middle Gully between approximate map references NZMS 260 H40: 6061-1831 and H40: 6019-1811 at a rate not exceeding 35 litres per second and with a volume not exceeding 3,024 metres per day and 300,000 cubic metres between 1 July and the following 30th June.</p>		
2	<p>Water shall only be temporarily diverted within the bed of Middle Gully 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 CRC011363;</p> <p>b) 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) diversion shall not impede fish passage or cause the stranding of fish in pools or channels.</p>		

3	Water taken in accordance with condition (1) shall be used for the border dyke of 20ha and once converted to spray irrigation, for 50 hectares of crops and pasture for grazing of sheep, beef cattle and non-milking dairy cows, on the area of land shown in attached plans "CRC011361 B" which forms part of this consent.		MF - 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. Refer to general section, condition 3
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Plus general conditions for water permit

Conditions for water permit CRC011361(Dunstan Peaks Station)			
Expiry date sought – 35 years			
No.	Proposed Condition: CRC011361 C (Dunstan Peaks – Twaddles Creek)	UWAG Comment	ECan Comments
		Located in general section	Minimum flow and min flow monitoring conditions
1	a) Water shall be diverted, taken and used for border dyke irrigation from Twaddles Creek at or about map reference NZMS		No AV for border dyke.

	<p>260 H40: 6029-1981 at a rate not exceeding 100 litres per second and with a volume not exceeding 8,640 cubic metres per day.</p> <p>b) The volume of water taken between 1 July and the following 30th June shall not exceed 144,000 cubic metres, once converted to spray irrigation</p>		
2	<p>Water taken in accordance with condition (1) shall be used for the border dyke of 15ha and once converted to spray irrigation, for 24 hectares of crops and pasture for grazing of sheep, beef cattle and non-milking dairy cows, on the area of land shown in attached plans "CRC011361 C" which forms part of this consent.</p>		<p>MF - 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. Refer to general section, condition 3</p>

Plus general conditions for water permit

Conditions for water permit CRC011361(Dunstan Peaks Station)			
Expiry date sought – 35 years			
N o.	Proposed Condition: CRC011361 D (Clifton Downs)	UWAG Comment	<p>ECan Comments</p> <p><i>The new proposed conditions, developed subsequent to the presentation of section 42A reports, do not currently contain all the necessary conditions to satisfactorily address cumulative water quality issues.</i></p> <p><i>Please note these conditions have been commented on without auditing the proposed changes to the applications. As such reporting officer comments are in relation to the enforceability and structure of</i></p>

			<i>the conditions, rather than if they will appropriately mitigate adverse effects. For other issues refer to S42A reports and responses to commissioner questions.</i>
1	<p>a) Water shall be diverted, taken and used for spray irrigation from Omarama Stream between map references NZMS 260 H40:6163-1866 and NZMS 260 H40: 6139-1922 at a rate not exceeding 125 litres per second and with a volume not exceeding 10,800 cubic metres per day.</p> <p>b) The total volume of water taken, shall not exceed 1,089,000 cubic metres between 1 July and the following 30th June.</p> <p>c) The taking of this water shall only occur once border dyke irrigation at Twin Burn and Middle Gully is converted to spray irrigation</p>		<p>Condition ensuring written notice to ECan when this happens would be useful.</p> <p>Longer lapse date sought for this?</p>
2	<p>Water shall only be temporarily diverted within the bed of Omarama 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 CRC011363;</p> <p>b) 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) diversion shall not impede fish</p>		

	passage or cause the stranding of fish in pools or channels.		
3	Water taken in accordance with condition (1) shall be used for the spray irrigation of 181.5 hectares of crops and pasture for grazing of sheep, beef cattle and non-milking dairy cows, on the area of land shown in attached plans "CRC011361 D" which forms part of this consent.		MF - 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. Refer to general section, condition 3

Plus general conditions for water permit

Conditions for water permit CRC011361(Dunstan Peaks Station)			
Expiry date sought – 35 years			
No.	Proposed Condition: CRC011361 E (Augmentation Race)	UWAG Comment	ECan Comments
1	Water shall be diverted for augmentation purposes, into an irrigation augmentation race from Middle Gully at or about map reference NZMS 260 H40: 6133-1920 and or from Omarama Stream between approximate map references NZMS 260		<p><i>The new proposed conditions, developed subsequent to the presentation of section 42A reports, do not currently contain all the necessary conditions to satisfactorily address cumulative water quality issues.</i></p> <p><i>Please note these conditions have been commented on without auditing the proposed changes to the applications. As such reporting officer comments are in relation to the enforceability and structure of the conditions, rather than if they will appropriately mitigate adverse effects. For other issues refer to S42A reports and responses to commissioner questions.</i></p>

	<p>H40:6163-1866 and H40: 6139-1922 at a combined rate not exceeding 150 litres per second and with a volume not exceeding 12,960 cubic metres per day.</p>		
<p>2</p>	<p>The consent holder shall, upon conversion of the use of an existing intake for a spray irrigation system and for all new intakes upon construction.</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);</p>		<p>This only relates to this consent, so surely the start of this condition can be specified from the start. This intake may become redundant as run-off from Middle Gully area will cease once spray irrigation occurs. Therefore race is likely to be supplied by the intake directly from Omarama Stream that also supplies the Clifton Downs spray system. So practically a discharge from the Clifton spray intake into the race.</p> <p>Refer to addendum s42A report of Susannah Vesey, paragraphs 135-142 and response to questions report for discussion about metering</p> <p>I understand that the MEL/MIC agreement may have had a metering condition included, but I had understood that MEL were happy with this being amended as long as it still had the same intent.</p>

	<p>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 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(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>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</p>		
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	<p>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 10%.</p>		
3	<p>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</p> <p>(a) any cumulative adverse effect on a waterway arising from abstractions; and</p> <p>(b) amending the flow in the Omarama Stream and tributaries at which abstraction is required to be reduced or discontinued as set out in condition x.</p>		Condition reference
4	<p>The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for each quarter].</p>		

General Conditions for water permit CRC011361(Dunstan Peaks Station)

Expiry date sought – 35 years

No .	Proposed Condition: Common to A, B C, D consents	UWAG Comment	ECan Comments <i>The new proposed conditions, developed subsequent to the presentation of section 42A reports, do not currently contain all the necessary conditions to satisfactorily address cumulative water quality issues.</i> <i>Please note these conditions have been commented on without auditing the proposed changes to the applications. As such reporting officer comments are in relation to the enforceability and structure of the conditions, rather than if they will appropriately mitigate adverse effects. For other issues refer to S42A reports and responses to commissioner questions.</i>
1	The combined irrigation area of CRC011361A, B, C & D shall not exceed 342 ha at any one time.		Difficult to enforce. Applicant provide written summary of area irrigated each season to CRC? This is covered by condition 10
2	The consent holder shall take all practicable steps to: <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. 		
3	For the exercise of all spray irrigation systems there shall be a 5 metre setback from any permanently flowing waterways within the irrigation area marked on Plan CRC011361A, B, C & D		

4	<p>a) For the period 1 November to 30 April the taking of water for irrigation purposes in terms of this consent shall cease whenever the flow in the Omarama Stream as estimated by the Canterbury Regional Council at either of the following sites is at or below the following flows</p>		<p>The applicant is proposing the Ahuriri Water Conservation Minimum flow. I</p> <p>The additional ECan minimum flow is not proposed for two reasons:</p> <p>Firstly, it is not a 1 in 5 year low flow as measured at the downstream end of the catchment. The proposed minimum flow has been determined at the upper most intake point of the applicants.</p>	<p>See s42A report of Yvette Rodrigo for discussion on minimum flow.</p> <p>Monitoring of minimum flows recommended by s42A officer required by the applicant?</p>
	SITE	MAP REFERENCE	FLOW (Litres per second)	
	Omarama Station Bridge	NZMS 260 H39:678-306	590	
	Tara Hills Recorder	NZMS 260 H39:624-250	250	
<p>b) For the period 1 May to 31 October the taking of water for irrigation purposes in terms of this consent shall cease whenever the flow in the Omarama Stream as estimated by the Canterbury Regional Council at either of the following sites is at or below the following flows.</p>		<p>Secondly, this applicant is a renewal and as such Policy 28 anticipates that renewals will be retained within the same allocation band as others within the catchment. All other takes from the upper reaches of the Omarama Stream only have the AWCO minimum flows imposed upon them, thus an additional minimum flow would result in this applicant being in a different allocation regime as the other takes within the Omarama Stream catchment.</p>		
SITE	MAP REFERENCE	FLOW (Litres per second)		
Omarama Station Bridge	NZMS 260 H39:678-306	1200		
Tara Hills Recorder	NZMS 260 H39:624-250	750		
<p>c) For the period 1 November to 30 April the taking of water for irrigation purposes in terms of this consent shall be reduced to half the maximum rate noted in condition (1) above, whenever the flow in the Omarama Stream</p>				

	<p>at the Omarama Station Bridge recorder site (at or about map reference NZMS 260 H39:678-306), as estimated by the Canterbury Regional Council, is at or below 800 litres per second.</p> <p>PROVIDED THAT whenever the Canterbury Regional Council, in consultation with the Water Users Group representing all water users who are subject to this condition, has determined upon a water sharing regime which restricts abstraction from the Omarama Stream in accordance with the minimum flow of 500 litres per second at the Omarama Station Bridge recorder site, then the taking of water in accordance with that determination shall be deemed to be a compliance with this condition.</p>		
5	<p>a) A fish exclusion device shall be installed, operated and maintained on the intakes remaining upon conversion to spray irrigation and on all new intakes to ensure that fish are prevented from passing into the intake.</p> <p>b) The fish exclusion device shall be positioned to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the fish screening device.</p> <p>c) The fish exclusion device shall be designed or supplied by a person with experience in freshwater</p>		

	<p>ecology and fish screening techniques, who shall ensure that the performance criteria specified in clauses (a) and (b) of this condition are achieved, and that the device is designed in accordance with best practice, as outlined in the document Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007.</p> <p>d) Prior to the installation of the fish screen, a report containing final design plans that demonstrate that the fish screen will meet the performance criteria specified in clauses (a) and (b) of this condition, and an operation and maintenance plan for the fish screen, shall be provided to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.</p> <p>e) Before the taking of any water in terms of this permit, a certificate shall be provided to Canterbury Regional Council, by a person with experience in freshwater ecology and fish screening techniques, to certify that the design plans and operation and maintenance plan for the fish screen will meet performance criteria as outlined in this condition, and that the fish screen has been installed in accordance with the details provided to Canterbury Regional Council in</p>		
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	<p>accordance with clause (d) of this condition.</p> <p>f) The fish screen shall be maintained in good working order. Records shall be kept of all inspections and maintenance, and those records shall be provided to Canterbury Regional Council upon request.</p>		
6	<p>The consent holder shall, upon conversion of an existing intake proposed to be utilised for the spray irrigation system, and for new intakes:</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</p>	<p>The meter should be located on the take point rather than the divert. The volume is proposed on the point of take, which coincides with the metering point.</p>	<p>No metering requirements for border dyke irrigation.</p> <p>Metering regulations require metering on all new consents from first exercise The condition says all new intakes will be metered immediately upon conversion and before the first exercise of any spray irrigation system associated with the intake</p> <p>Refer to addendum s42A report of Susannah Vesey, paragraphs 135-142 and response to questions report for discussion about metering</p> <p>I understand that the MEL/MIC agreement may have had a metering condition included, but I had understood that MEL were happy with this being amended as long as it still had the same intent.</p>

	<p>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 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(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>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</p>		
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	<p>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>		
7	<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, within six months of the commencement date 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	
8	<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</p>	Agreed	

	<p>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 <8>. 		
9	<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"> (a) the water meter(s) is measuring the rate of water taken as specified in condition <10> and (b) the tamper-proof electronic recording device is operating as specified in condition <10> 	Agreed	
10	<ul style="list-style-type: none"> (a) The consent holder shall within a period of 2 years from the grant of this consent, convert one of the following border dyke areas to spray irrigation: Twinburn (CRC011361A), Dunstan Middle Gully (CRC011361B) or Dunstan Twaddles Creek CRC011361C) (b) Every 2 years after this, a further border dyke area shall be converted to spray irrigation 		Suggested wording – at no more than two yearly intervals, a further border

	<p>(c) Any rights to continue border dyke irrigation shall cease 8 years from the date of this consent</p> <p>(d) Within 8 years spray irrigation shall commence at the Clifton Downs area CRC011361D)</p> <p>(e) The consent holder shall advise the Canterbury Regional Council of the completion of each area of conversion prior to the commencement and use of the new spray system.</p> <p>(f) For the avoidance of doubt, any conditions requiring testing as a precursor to the exercise of consent shall, with respect to the exercise of this replacement consent, occur prior to the next irrigation season following the commencement date.</p>		<p>dyke area of: Twinburn (CRC011361A), Dunstan Middle Gully (CRC011361B) or Dunstan Twaddles Creek CRC011361C), shall be converted to spray irrigation Happy with this alternate wording</p> <p>Suggested wording – All irrigation shall only be spray irrigation by six years from the date of this consent. ** Agree</p> <p>Not needed for other consents. Is a longer lapsing period sought for the Clifton Downs area? This consent is only for the spray irrigation, so in fact this condition wouldn't be needed.</p> <p>The proposal is for Clifton to be tail end Charlie and to be done in the last two year period – so 8 years needs to be requested to completely convert the property – to this end a longer lapse date may be required</p> <p>Canterbury Regional Council, Attn: RMA Compliance and Enforcement Manager. Written or verbal?</p> <p>(f) - I don't understand the intent of this condition. Exercise of this consent is simply that – maybe where you don't mean exercise of the consent then this should be stated in the particular condition? Could be better as an advisory note rather than a condition It may not be needed given that the consent holder is subject to trigger and threshold conditions which specify testing regimes and when they are to be completed.</p> <p>This subclause was there to set the parameters for signing off on any water efficiency requirements for the proposed new spray system</p>
11	<p>Nutrient Loading:</p> <p>The consent holder shall prepare once per year, an Overseer® nutrient budgeting model report, and shall prepare, at least once per year, a report of the annual farm nutrient loading for the Dunstan Peaks using the model Overseer® (AgResearch model version number 5.4.3 or later</p>	Condition number?	
12	A copy of the report prepared in accordance with condition xx shall be given to the Canterbury Regional Council,		Condition number? Condition xx = 14?

	Attention: RMA Compliance and Enforcement Manager, upon request.								
13	<p>Following conversion 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 Twin Burn Dunstan Peaks and Clifton Downs shall not exceed 20,964 kg of nitrogen and 675 kg of phosphorus.</p> <p>The NDAs shall be complied with at the earlier of the first full year (1 July to 30 June) following completion of the irrigation conversion or 8 years from the commencement of consent.</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 Dunstan already complies with NDA's but annual monitoring of NDA levels needs to be a condition of consent in line with comments for other consents. Dunstan's conversion programme is likely to show N and P levels for the property dropping.</p> <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>Condition XX = 14? <i>That is the intent</i></p> <p>Essential to define "Twin Burn, Dunstan Peaks and Clifton Downs" by reference to an area (X ha), legal description and/or a map, otherwise there is a risk that the authorised nutrient load would be uncertain.</p> <p><i>We have a standard "property boundary" consent condition in other consents which needs to be duplicated here</i></p> <p><i>Property areas are</i></p> <table data-bbox="1169 790 1541 943"> <tr> <td>Twinburn</td> <td>360ha</td> </tr> <tr> <td>Dunstan Peaks</td> <td>5376ha</td> </tr> <tr> <td>Clifton Downs</td> <td>1281ha</td> </tr> </table>	Twinburn	360ha	Dunstan Peaks	5376ha	Clifton Downs	1281ha
Twinburn	360ha								
Dunstan Peaks	5376ha								
Clifton Downs	1281ha								
14	<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>						

15	<p>Farm Environmental Management Plan</p> <ol style="list-style-type: none"> 1. The Farm Environmental Management Plan prepared for the Dunstan Peaks and supplied to Environment Canterbury on an annual basis within two months of the irrigation season on request 2. The consent holder shall implement, and update annually the Farm Environmental Management Plan (FEMP) for Dunstan Peaks. The FEMP shall include <ol 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 Dunstan Peaks Overseer® model inputs specified in the attached Appendix A – Dunstan Peaks Overseer® parameter report. Appendix A forms part of this consent. 		<p>Condition clause 1 is missing some wording. It appears to be some form of statement rather than a requirement.</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>
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	<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>3. Detailed records shall be maintained of fertilizer application rates, types of crops (including winter feed/forage crops), cultivation methods, stock units by reference to 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>4. A report based on Overseer[®] modelling shall be provided within one month of completion of the Overseer modelling by the person 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</p>		<p>Should be a person “with the qualifications described...”.</p> <p>Condition 13 should be condition 17?</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”</p>
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	<p>holder shall supply to the Canterbury Regional Council all model inputs relied upon for the annual Overseer[®] modelling.</p> <p>5. Changes may be made to Appendix A Dunstan Peaks 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>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>calculated total N and total P leaching/runoff.</p> <p>Not clear who can undertake this certification. Condition 17 may not apply.</p>
16	<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</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>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</p>		<p>Not clear what use could be made of "a record of the contractor".</p>
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	<p>to land between 31st May and 1st September in any year except for the use of nitrification inhibitors</p> <ol style="list-style-type: none"> 5. All fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering waterways. 6. Applications of nitrogen fertiliser shall not exceed 50 kg nitrogen / hectare per application. 7. If liquid fertilisers, excluding liquid effluent, are stored on-site for more than three working days, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements. 8. Fertiliser filling areas shall not occur within 50 metres from a water course, spring or bore. 		
17	<p>Irrigation Infrastructure</p> <ol style="list-style-type: none"> 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>Issued by who? NZWETA? What certified design? Certified by who?</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 installation of the new irrigation infrastructure 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</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>
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	<p>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>		
			No backflow prevention condition. Not needed if gravity-fed system.
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. There is no condition 12!</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 proportionment 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>

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>		Agree
20	A minimum irrigation setback of 5m from all natural permanently flowing waterways for all new spray irrigation		A five metre set-back is considered to be too small. No definition of “natural”. Many streams may not be “permanent”. Should also be a setback for border dyke areas, particularly for those that may be in existence for a further eight years. Border dyke areas for this situation, it is difficult to have setbacks from headraces and discharge areas, such as streams. Hence the wording. Border dykes are in existence under the conditions for 6 years.
21	<p>The water quality of the Omarama Stream shall be monitored as follows:</p> <p>(a) Location:</p> <p>Map reference: H40:614-161 co-ordinates immediately upstream of all irrigation takes on Omarama Stream</p> <p>Map reference: H40: 614-193 and H39:606-245 co-ordinates downstream of the discharge</p> <p>Note: Unless otherwise agreed the coordinates for Omarama Stream monitoring shall be as specified – but provided the two characteristics</p>		<p>Needs to clearly state when this should start.</p> <p>A map should be provided to show locations. Ideally map references 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>of the monitoring points are adhered to (being upstream of all intakes and downstream of all intakes) 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 phosphorous (c)Dissolved oxygen (d) conductivity (e)conductivity (f) turbidity; (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</p>		<p>phosphorus</p> <p>E. coli</p>
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	<p>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>Condition number</p>
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22	<p>The initial monitoring shall be carried out in the first calendar year following the grant of consent 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 initial annual average sample results for DIN/DRP levels whichever is the higher</p>		<p>What initial monitoring?</p>
23	<p>(a) If the monitoring undertaken in accordance with condition 20 shows that the average sample result for any of the three Omarama Stream monitoring sites located at H40:614-161, H40: 614-193 and H39:606-245 (as shown on the attached map (Appendix E), over the annual period (November to August test results as above)in any year is greater than 0.14 mg/l of DIN; or 0.006 mg/l DRP; or 90 mg chl <i>a</i>/ m² (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>/ m²) ,(OR if the initial monitoring shows that the DIN/DRP levels are higher than the ANZECC guidelines then initial actual annual average sample results shall be substituted for the trigger levels) (environmental standard trigger), the consent holder shall prepare a report into the cause of the breach of the early warning trigger. The report shall be prepared by an expert review panel consisting of two</p>		<p>Condition number reference is incorrect.</p> <p>No Appendix E provided</p> <p>What initial monitoring?</p>

	<p>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> <ul 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</p>		<p>Should clarify "If both authors of the report..."</p>
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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 Omarama 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.

(d) If the monitoring undertaken in accordance with condition20 shows that the average sample result for any of the three Omarama Stream monitoring sites, located at H40:614-161, H40: 614-193 and H39:606-245 (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

Condition number reference incorrect.

No Appendix E provided.

	<p>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 342 hectares on a total farm area of 7,017 ha)</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 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 Omarama 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</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>Should be ...”both conclude...”</p>
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<p>use practices to ensure that the exceedance in the early warning trigger pertaining to the Omarama 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 <i>a</i> / m² (early warning trigger) for the Omarama 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 methods, such as Overseer[®] to show that the actions to be undertaken will achieve the necessary nutrient reductions;</p> <p>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</p> <p>ii. Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented.</p> <p>iii. The consent holder shall provide the Canterbury Regional</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>
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	<p>Council with the Remedial Action Plan and an amended FEMP upon request.</p> <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 Omarama 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>Needs a condition number.</p>
			<p>Condition missing for “Trigger response condition: exceedence of surface water environmental standard trigger” Refer to Simons Hill/Simons Pass proposed conditions for possible wording.</p>
<p>24</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 style="padding-left: 40px;">Ahuriri Arm, Map reference: NZMS 260 [] (NZTopo50 CA16:7828-7366) (as shown on the attached map (Appendix F))</p> <p style="padding-left: 40px;">Lower Lake Benmore, Map reference: NZMS 260 H39:8802-2371 (NZTopo50 CA16:7808-6205) (as shown on the attached</p>		<p>Map reference</p>

<p>map (Appendix F)</p> <p>(b) Depths: depth integrated 0-10m, 25m, 50m</p> <p>(c) Water quality variables: (a) total nitrogen; (d) ammonia; (e) nitrate; (f) nitrite; (g) total Kjeldahl nitrogen; (h) total phosphorus; (i) dissolved reactive phosphorus; (j) Secchi disc depth; (k) chlorophyll <i>a</i>.</p> <p>(d) Calculated key water quality variable: Trophic Lake Index (TLI), using the following equations:</p> <p>(i) $TL_c = 2.22 + 2.54 \log(\text{chlorophyll } a)$</p> <p>(ii) $TL_p = 0.218 + 2.92 \log(\text{total phosphorus})$</p> <p>(iii) $TL_n = -3.61 + 3.01 \log(\text{total nitrogen})$</p> <p>(iv) $TLI = \frac{\sum (TL_c + TL_p + TL_n)}{3}$</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</p>		<p>Correct spelling is "Kjeldahl"</p> <p>Condition numbering error</p>
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	<p>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</p>		
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	analyses.		
25	<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>	(a)	<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>
26	<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>Condition number? Condition number references?</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 (being 342 hectares on a total farm area of 7,017 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</p>		<p>Area ? noted above</p> <p>Incorrect condition number reference.</p> <p>Needs to refer to both monitoring sites.</p> <p>Reference to TLI of 2.75 incorrect.</p> <p>Condition number reference incorrect.</p>
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	<p>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</p>		<p>Reference to TLI of 2.75 incorrect.</p>
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	<p>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 in Appendix C.</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</p>		<p>Reference to condition 17 is incorrect.</p> <p>Reference to condition 28 is incorrect</p> <p>Reference to condition 17 is incorrect.</p> <p>No Appendix C provided</p> <p>Reference to condition 28 is incorrect</p>
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	<p>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>(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</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>
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	<p>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>		Condition clause number
27	<p>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</p> <p>(c) any cumulative adverse effect on a waterway arising from abstractions; and</p> <p>amending the flow in the Omarama Stream and tributaries at which abstraction is required to be reduced or discontinued as set out in condition 5.</p>	Agree	Numbering
28	<p>The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for</p>	Agree	From When?

each quarter].		
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CRC011363 – TO UNDERTAKE WORKS WITHIN THE BED OF VARIOUS WATERWAYS

These conditions remain mainly the same as proposed by Begley and commented on by ECan. Haidee McCabe has made comments in red or provided the detail required by ECan

No.	Details	UWAG Comments	ECan Comments
Duration			
	Consent is granted for a term of 35 years	Same duration proposed as the divert/take consent	Duration not generally included as a condition of consent. Agreed
Scope			
1.	<p>The works shall be limited to the disturbance of the bed and banks of the Little Omarama Stream, Omarama Stream, Twaddles Creek and Middle Gully for the purpose of the placement, extension, removal or demolition associated with maintenance of intake structures and diversion channels for the diversion and abstraction of water under consent CRC011361 A - E and CRC011362 [These consent numbers may change depending on how the consent are split. For a discussion of this, refer to Report 11A].</p> <p>The works for the new galleries located in Omarama Stream and Middle Gully shall be limited to:</p> <ul style="list-style-type: none"> (a) Installation, maintenance or replacement of gallery intake structures within bed, including excavation of gravel and sediments, (b) Maintenance necessary to maintain adequate flow of water to the intake. 		Paragraph formatting
Location			
2.	<p>Intake Locations:</p> <ul style="list-style-type: none"> (a) The works carried out in accordance with condition [1] shall be located at Little Omarama Stream, at or about map reference(s) NZMS 260 H40:6346-1667 (b) The works carried out in accordance with condition [1] shall be located at Omarama Stream, at or about map reference(s) NZMS 260 H40:6141-1588 		<p>Applicant should confirm that all these points were applied for and notified.</p> <p>Also, recommend that the locations of works are clearly shown on a plan attached to the consent that shows the location of all works. Now shown in the</p>

No.	Details	UWAG Comments	ECan Comments
	<p>(c) The works carried out in accordance with condition [1] shall be located at Omarama Stream, at or about map reference(s) NZMS 260 H40:6136-1752 and between NZMS 260 H40:6163-1866 and H40: 6139-1922</p> <p>(d) The works carried out in accordance with condition [1] shall be located at Middle Gully, at or about map reference(s) NZMS 260 H40:6097-1851, between NZMS 260 H40:6061-1831 and H40: 6019-1811 and H40: 6133-1920</p> <p>(e) The works carried out in accordance with condition [1] shall be located at Twaddle Creek, at or about map reference(s) NZMS 260 H40:6029-1981;</p> <p>Discharge Locations:</p> <p>(f) The works carried out in accordance with condition [1] shall be located at Twaddle Creek, at or about map reference(s) NZMS 260 H40:6073-2010, Omarama Stream . NZMS 260 H40: 6165-1852 and NZMS 260 H40: 6170-1810, and Middle Gully between approximate map reference NZMS 260 H40: 6122-1864 and H40: 6127-1881</p>	<p>(f) This is in relation to any possible land use works related to discharges, as per CRC011362</p>	<p>attached maps</p>
Limits of Works			
3.	<p>(a) Works to maintain intakes shall not exceed one day and replacement or establishment of a new intake shall not exceed two days.</p> <p>(b) Depth of excavation for gallery intakes will be up to 3 metres below bed level, with gallery intakes installed at a depth of at least 1 metre below bed level.</p> <p>(c) The extent of the earth works in relation to condition 1 b), at each site shall be limited to 50 mtrs upstream and downstream of the intake structure.</p>		
4.	<p>Excavation shall not occur within 100 metres of birds, which are nesting or rearing their young in the bed of the river.</p>		<p>Agree with minor amendment:</p> <p>(a) Excavation or the operation of vehicles/and or machinery shall not occur 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: (same as Appendix A)</p> <p>Agreed</p>

No.	Details	UWAG Comments	ECan Comments
5.	Any gravel, sand and other natural material excavated as part of the works authorised by this consent during the disturbance of the bed of Little Omarama Stream, Omarama Stream, Middle Gully and Twaddles Creek, 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.
Erosion Protection			
6.	Erosion controls shall be installed on all earthworks to prevent sediment from flowing into any surface water body.		<p>Agreed, however the following condition is recommended to ensure that any erosion and sediment control measures are designed, installed, operated and maintained appropriately.</p> <p><i>Recommended condition:</i></p> <p>“Erosion and sediment control measures shall be constructed and maintained in accordance with the Environment Canterbury Erosion and Sediment Control Guidelines, and any amendments to that document.”</p> <p>Condition 10 below deals with this matter and is considered more practical as well as the additional condition proposed below:</p> <p>Erosion controls shall be installed on all earthworks to prevent sediment from flowing into any surface water body</p>
7.	Works shall not be undertaken in a manner likely to cause erosion of, or instability to, the banks or bed of the Little Omarama Stream, Omarama Stream, Twaddle Creek or Middle Gully; or reduce the flood-carrying capacity of these waterways.		Agreed.
Prior to Construction			
8.	The Canterbury Regional Council Compliance Monitoring Officer shall be notified at least 48 hours prior to the commencement of work.		Agreed.
9.	Prior to commencing excavation, a copy of this resource consent shall be given to all persons undertaking activities authorised by this consent		Agreed.
During Construction			

No.	Details	UWAG Comments	ECan Comments
10.	<p>The consent holder shall adopt the best practicable options to:</p> <ul style="list-style-type: none"> (a) Minimise soil disturbance and prevent soil erosion; (b) Prevent sediment from flowing into any surface water; and (c) Avoid placing cut or cleared vegetation, debris, or excavated material in a position such that it may enter surface water. 		Agreed.
11.	<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.
12.	<p>All practicable measures shall be undertaken to minimise vehicles and machinery entering the Little Omarama Stream, Omarama Stream Twaddle Creek or Middle Gully.</p>		Agreed.
13.	<ul style="list-style-type: none"> (a) All practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery. (b) There shall be no storage of fuel or refuelling of vehicles and machinery within 20 metres of the bed of a river. (c) Fuel shall be stored securely or removed from site overnight. 		Agreed.
14.	<p>Machinery shall be free of plants and plant seeds prior to use in the riverbed</p>		Agreed.
15.	<p>All practicable measures shall be undertaken to minimise adverse effects on property, amenity values, wildlife, vegetation, and ecological values</p>		Agreed.
16.	<p>The works shall not prevent the passage of fish, or cause the stranding of fish in pools or channels</p>		Agreed.
Accidental Discovery Protocol			
17.	<p>In the event of any disturbance of Koiwi Tangata (human bones) or taonga (treasured artefacts), the consent holder shall immediately:</p> <ul style="list-style-type: none"> (a) Advise the Canterbury Regional Council of the disturbance; (b) Advise the Upoko Runanga of Moreaki, or their representative, and the New Zealand Historic Places Trust, of the disturbance; and (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 		Agreed.

No.	Details	UWAG Comments	ECan Comments
	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		
Upon Completion			
18.	On completion of works, the area shall be restored to its original condition as far as practicable	ECan had suggested two conditions (LU28 and a non-standard condition). The two conditions were contradictory so we have proposed the non standard condition.	<p>It is unclear why the applicant considers that the two recommended conditions are contradictory. These conditions are still recommended.</p> <p><i>Recommended conditions:</i></p> <p>All spoil and other waste material from the works shall be removed from site on completion of works.</p> <p>On completion of works, the area shall be restored to its original condition as far as practicable.</p> <p>Agreed</p>
Administrative Conditions			
19.	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.
20.	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.

CRC011362 – TO DISCHARGE WATER

No.	Details	UWAG Comments	ECan Comments
	Duration		<i>**It should be noted that the IO recommendation in Report 11B and the s42A addendum report relating to this application did not support the granting of</i>

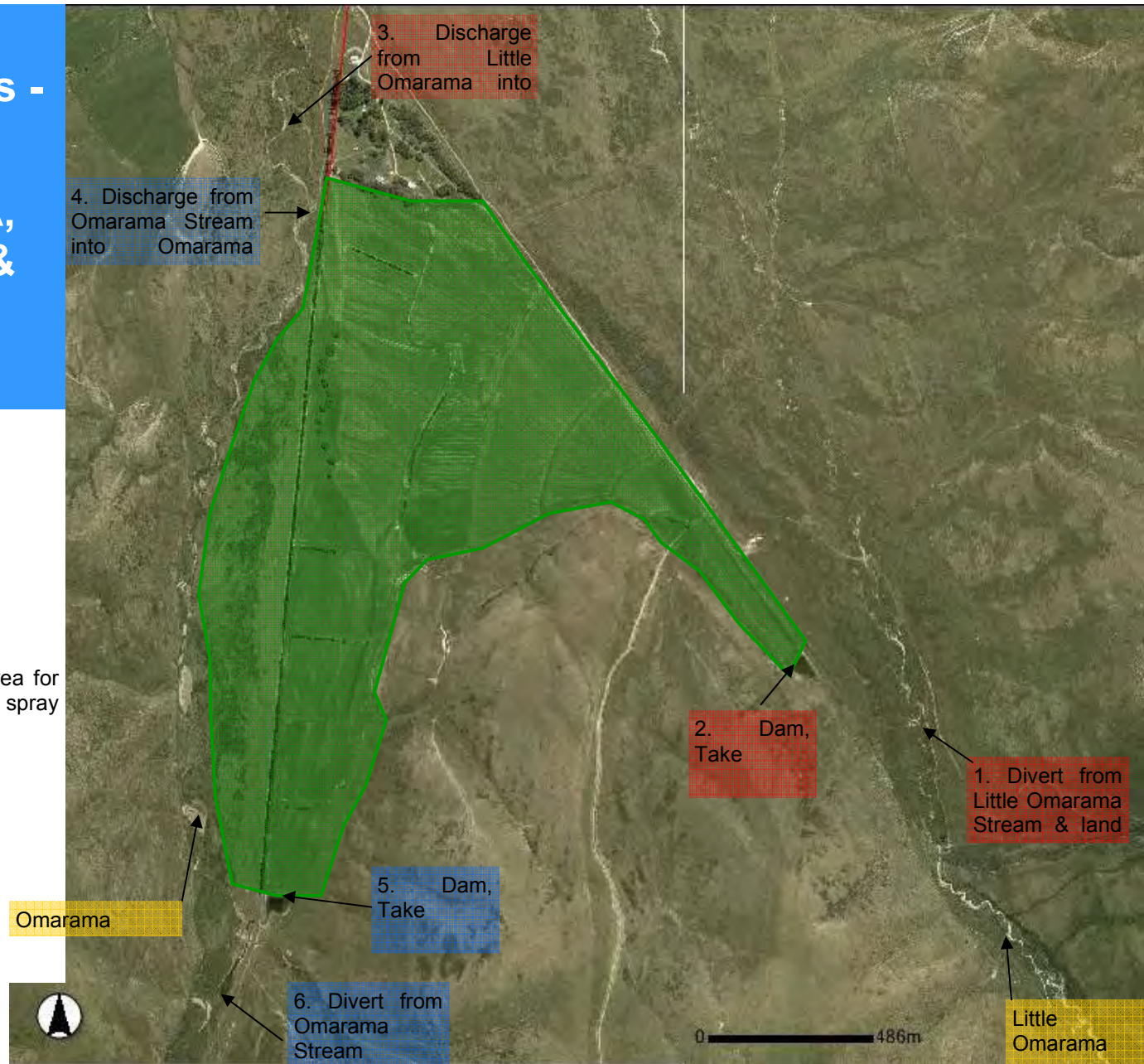
		<p><i>this consent. On this basis, I am not satisfied that the following conditions will adequately mitigate the effects of the discharges.</i></p> <p><i>The application should only be granted if there is a condition that only allows the discharge to occur if the applicant can show ECan that the Omarama Stream water quality complies with the environmental standards proposed by Dr Freeman i.e., periphyton biomass <120 mg chl a/m2, DRP <0.007 mg/l and DIN <0.18 mg/l. This could work on the basis of monitoring over the prior season, i.e., if the monitoring for the prior season shows that all three standards have been met then the consent could be exercised for the coming season together with monitoring that would dictate whether the consent can be exercised in the subsequent season, ad infinitum...</i></p> <p><i>The applicant has now modified the application to address these water quality concerns identified as per the Statement of Haidee McCabe in mid October to Commissioners. Furthermore new local water quality conditions have been proposed</i></p>	
	Consent is granted for a term of 35 years	Same duration proposed as the divert/take consent	Duration not generally included as a condition of consent. Agreed
Scope			
1.	<p>(a) Water shall only be discharged to the Omarama Stream at or about map reference NZMS 260 H40: 6165-1852, at a rate not exceeding 170 litre per second.</p> <p>(b) Water shall only be discharged to the Omarama Stream at or about map reference NZMS 260 H40: 6170-1810, at a rate not exceeding 350 litres per second</p> <p>(c) Water shall only be discharged to the Middle Gully between approximate map reference NZMS 260 H40: 6122-1864 and H40: 6127-1881 at a rate not exceeding 440 litres per second</p> <p>(d) Water shall only be discharged to the Twaddles Creek at or about map reference NZMS 260 H40:6073-2010 at a rate not exceeding 250 litres per second</p>		<p>Applicant needs to:</p> <ul style="list-style-type: none"> • provide confirmed grid references; <p>Also, these discharges should be shown on a Plan attached to the consent.</p>

Operation and Maintenance			
2.	<p>(a) All practicable measures shall be undertaken to avoid erosion of the bed or banks of the Omarama Stream and Twaddles Creek occurring as a result of the discharge.</p> <p>(b) In the event of any erosion occurring to the bed or banks of the Omarama Stream and Twaddles Creek as a result of the discharge, the consent holder shall be responsible for rectifying the situation as soon as practicable.</p>		
3.	The discharge, after reasonable mixing, shall not cause a change in the colour or a reduction of the clarity of the receiving water body		See water quality comments above.
Administrative Conditions			
4.	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.		
5.	The lapsing date for the purposes of section 125 shall be [between 5 years and 5 years three months, date set for each quarter].		

**Dunstan Peaks -
Twin Burn
CRC011361A,
CRC011362 &
CRC011363**

Irrigation Command Area

Irrigation Command Area for border dyke irrigation and spray conversion.



Dunstan Peaks - Middle Gully CRC011361B, CRC011362 & CRC011363



Irrigation Command Area for border dyke irrigation and spray conversion.

Middle Gully

3. Divert, take and use from Middle Gully &

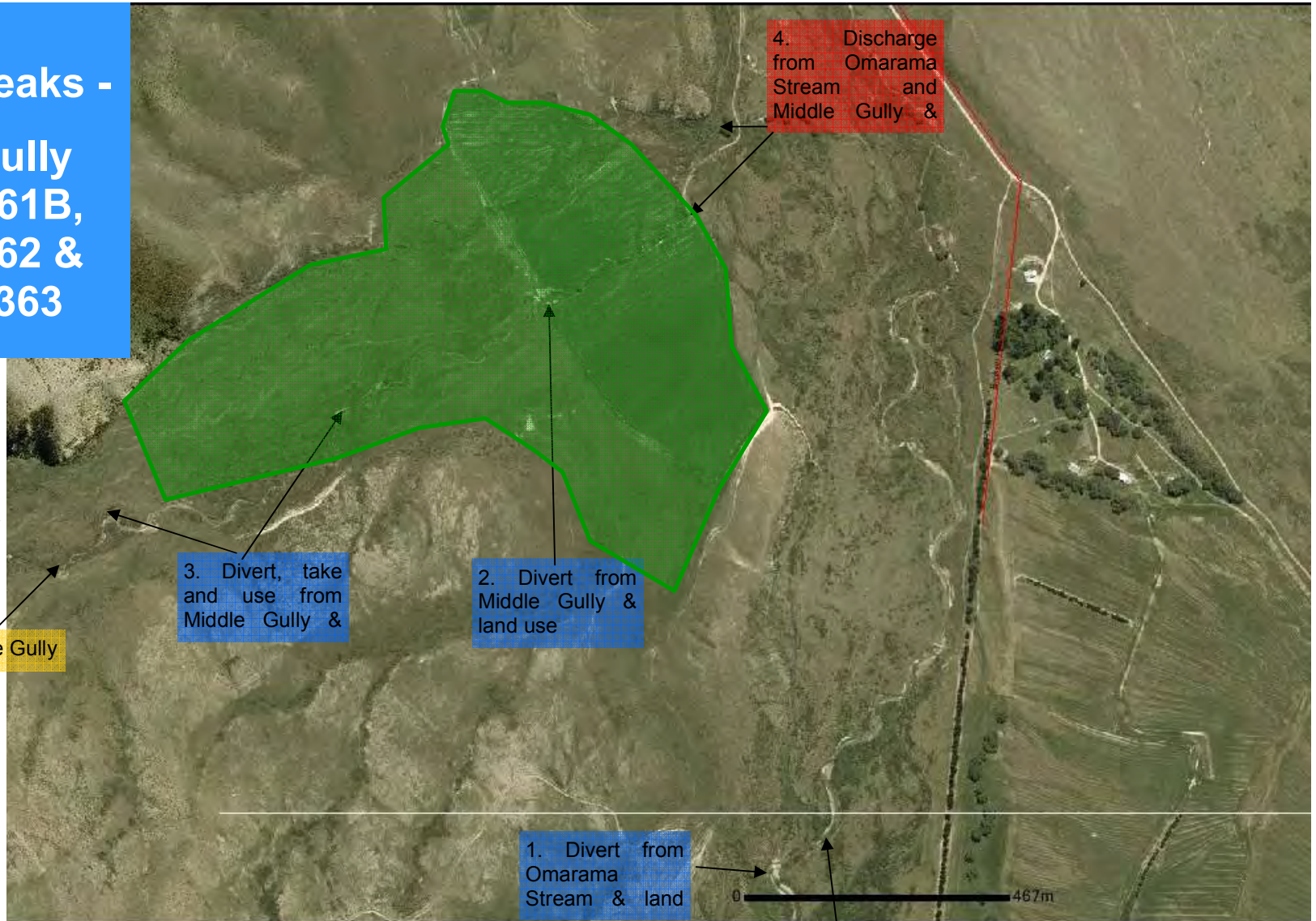
2. Divert from Middle Gully & land use

1. Divert from Omarama Stream & land

4. Discharge from Omarama Stream and Middle Gully &

Omarama Stream

0 467m



Dunstan Peaks - Twaddles Creek CRC011361C, CRC011362 & CRC011363



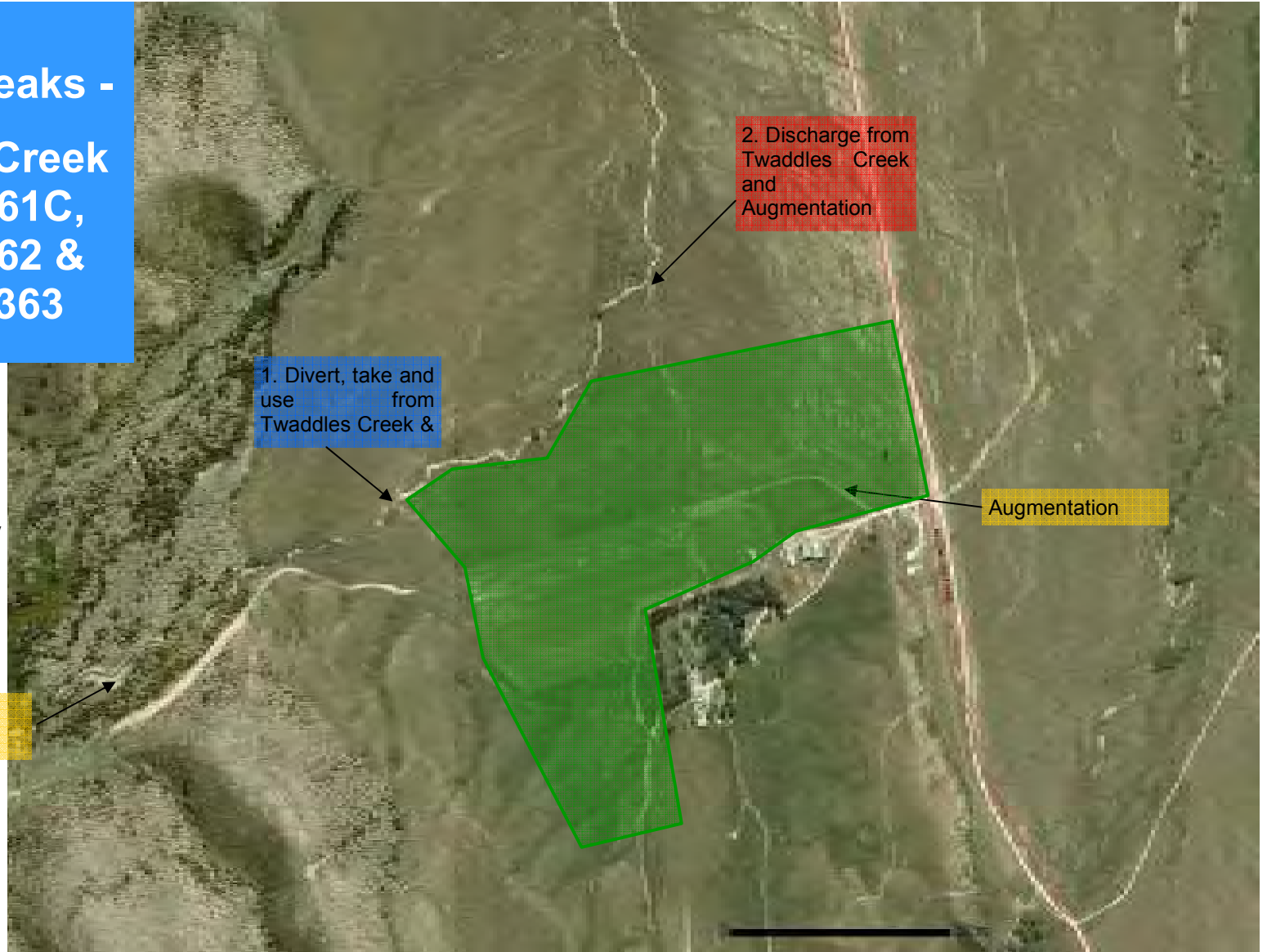
Irrigation Command Area for border dyke irrigation and spray conversion.

Twaddles Creek

1. Divert, take and use from Twaddles Creek &

2. Discharge from Twaddles Creek and Augmentation

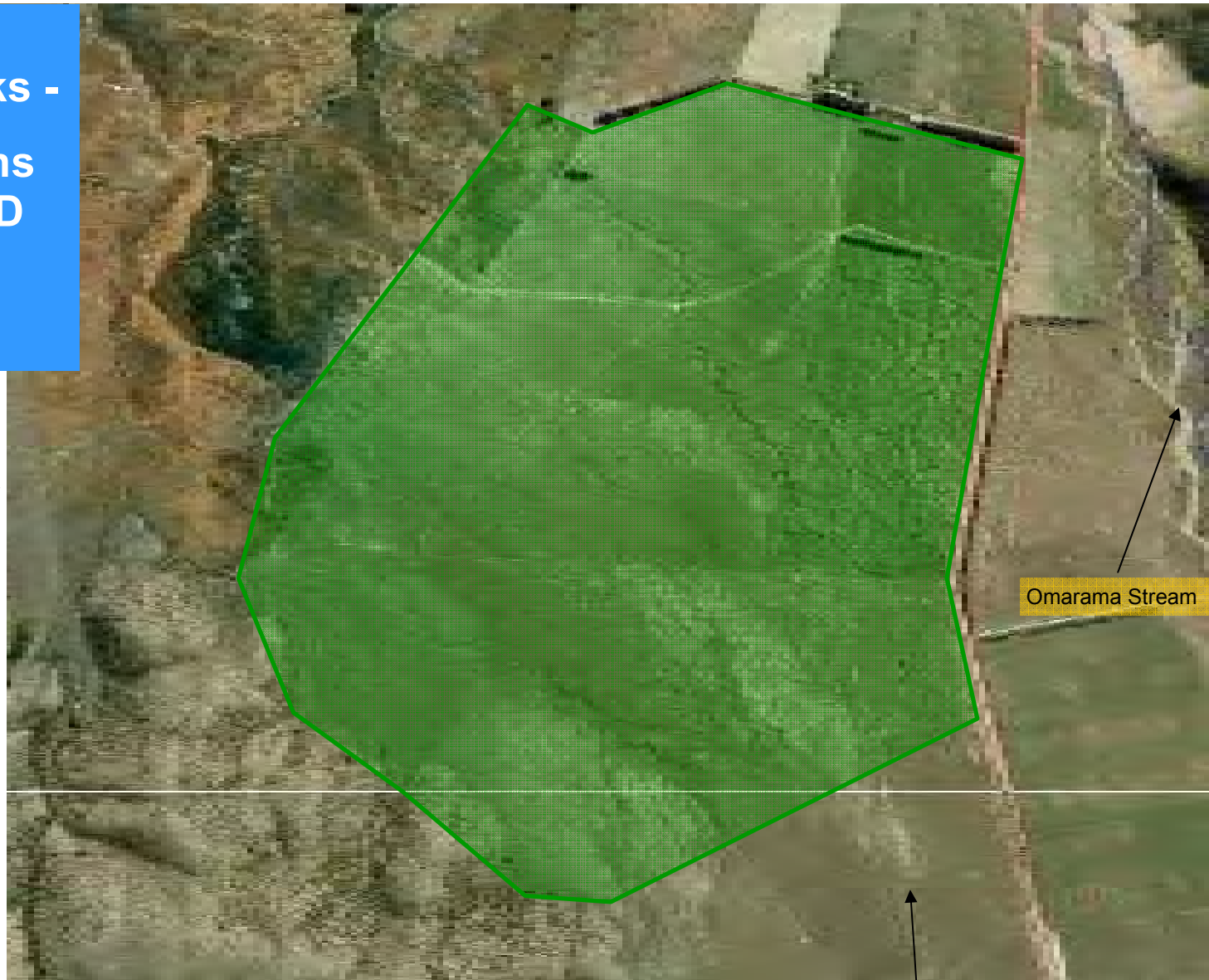
Augmentation



Dunstan Peaks - Clifton Downs CRC011361D



Irrigation Command Area for
border dyke irrigation and
spray conversion.



Twaddles
Creek

**Dunstan Peaks -
Clifton Downs &
Augmentation
Intakes
CRC011361 E
& CRC011363**

3. Augmentation
Race: Divert from
Middle Gully & land

1. Clifton Down: Divert, take & use
water from Omarama Stream
between two points & land use

2. Augmentation Race: Divert water
from Omarama Stream between two
points

Middle Gully
Stream

Omarama Stream

