



Your ref: CRC181650, CRC181649 CRC181686
Our ref: 12548863

19 July 2023

**Victoria Wilson
Environment Canterbury
200 Tuam Street
Christchurch Central City
Christchurch 8011**

CRC181650, CRC181649, CRC181686 Harris Farm's – Resource Consent Application Summary

Dear Victoria

Environment Canterbury (ECan) has recently made the decision to publicly notify Mr N J & Mrs L M Harris & Harakeke Nominees Limited (the applicant) resource consent application (CRC181650) to renew their farming land use (FLU) consent at Hurunui Mouth Road, Domett.

Renewal of the FLU consent was sought together with and operates alongside an application to renew the property's surface water take and use permit.

This consenting proposal is also seeking to increase the potential irrigation and farming area at the same time, this expanded area is to be authorised via replacement activities that are being processed with the renewal applications.

The four applications were lodged together with ECan in October 2017 (hereafter referred to as the application). During the six years the application has been in process, there have been some minor amendments to the application and proposed monitoring and management conditions.

This letter is intended to summarise the history of the application and outline the scope of the activities that are publicly notified. This is detailed in the sub-headings below.

1. Background Information

The applicant is the trading farm entity for the Harris Family Trust that owns and operates a farming operation on Hurunui Mouth Road, Domett. The Trust property is located on the northern side of the Hurunui River and covers an area of approximately 350 ha, known as the Wharenui Block.

The property was purchased by the Harris Family Trust in 2016 with the properties associated A-permit surface water take and FLU consent transferred to the Harris Family Trust the same year. The Harris Family Trust acquired the property due to its proximity to other existing landholdings and enabled the applicant to expand its farming operations. The acquisition was made with the intention of undertaking significant investment to fully develop the property in an environmentally sustainable manner within consented limits.

To enable Harris Farms to further develop the property and to fully and efficiently utilise the A-permit water volume consented, it is proposed to extend the farming operation onto the adjacent land known as McLaughlin's Block¹. The application seeks to renew the property's existing surface water take and FLU consents and via a change of conditions seeks to incorporate McLaughlin's block within the

¹ McLaughlin's Block was to be leased from the neighbour at the time.

operational farm footprint. No increase in the volume of surface water allocated under the existing water permit is sought to incorporate McLaughlin's Block.

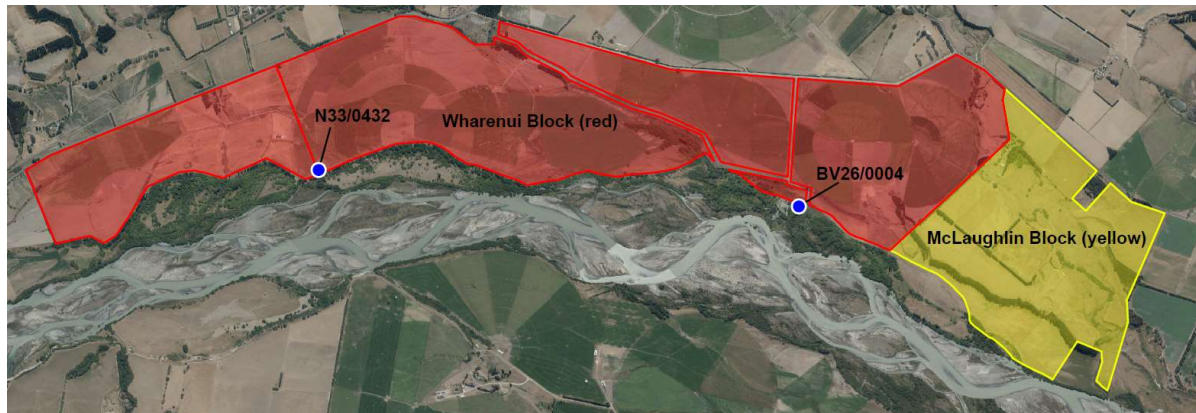


Figure 1 Harris Farms proposed operational farming areas

The resulting proposal seeks to authorise farming activities over a total farmed area of 478 ha over the two blocks with a potential irrigation area of 370 ha as shown in Figure 1.

As the application was lodged more than three months before expiry of CRC169648 and CRC169646 (the consents being renewed), the applicant has been granted a section 124 authorisation to enable the continued exercise of these consents while the replacement consents are under consideration.

1.1 Summary of Consenting Timeline

The consent applications were lodged in October 2017. A timeline of the lengthy consent processing history is provided in Attachment 1.

2. Overview of Application being notified

2.1 Take and Use of surface water

The applicant is seeking to replace the same A-permit allocation authorised under their existing resource consent, this being; 206 litres per second and a total volume not exceeding 1,904,000 cubic metres per year. The existing consent was granted in 2008 and is subject to minimum flow restrictions and provides for the take and use of spray irrigation of 341ha of crops and pasture, for grazing stock, excluding milking dairy cows, together with stock drinking water.

The proposed abstraction may occur from one of two surface water abstraction points located on the northern bank of the Hurunui River, as identified in Figure 1 as Surface Water Abstraction Points (SWAP) N33/0432 and BV/0004.

The existing consent allowed for the abstraction of surface water at four SWAP locations along the Hurunui River, however, the replacement consent has proposed to reduce this to the two points above. Both of these intakes have the required resource consents for the maintenance and operation of the associated diversion channels.

Since acquiring the property, and following significant investment, the applicant has been able to upgrade systems and use irrigation water more efficiently to optimise the water demand requirements. This has resulted in approximately 278 ha under irrigation, with the intention of infilling another 22 ha of land for irrigation (i.e 300 ha of proposed irrigation area within Wharenui Block)



While further land could be developed for irrigation within the Wharenui Block, the applicant elected to include the adjacent McLaughlin's block within the potential irrigation and farming area covered by the replacement consents. The land area of McLaughlin's Block is approximately 125 ha, however following avoidance of some areas, and once appropriate setbacks are applied, the potential irrigation area within McLaughlin's has been identified as approximately 60 ha.

The applicant has proposed the following management and mitigation measures in relation to the surface water take permits:

- Compliance with the Environmental Flow and Allocation Regime for Lower Hurunui mainstem (Domett Plains) as defined by Table 1 of the Hurunui Waiau River Regional Plan (HWRRP).
- Compliance with Environment Canterbury's fish screen requirement for the water intakes.
- Standard water metering and reporting requirements, including water take data to be telemetered to Environment Canterbury, as already undertaken.
- Taking all practicable steps to promote efficient use of water, it is noted this includes the use of soil moisture probes

Draft consent conditions have been developed with the Council's Consenting planning team. The most recent version of the draft conditions recommended by ECan is provided in Attachment 2.

2.2 Farming Land Use

As detailed above, the FLU application is intended to cover both the Wharenui and McLaughlin's blocks and covers a total proposed farming area of 478 ha. As above, better utilisation of water has enabled the applicant to reduce the consented irrigation area on the Wharenui block from 341 ha to 300 ha, and using the same volume of water already consented incorporate up to 70 ha of land on the McLaughlin Block for irrigation.

The increase in farming area and additional changes in the proposed cropping and stocking rates have resulted in an increase in the estimated total nitrogen losses across both properties when determined by Overseer.

As McLaughlin's Block has previously been a dryland farming block, the development of this block with irrigation has increased the block's nutrient loss compared to the baseline period. However, when averaged between both properties, the change in Overseer modelled phosphorus loss, when compared against CRC169646, is minimal.

In light of the Overseer modelling, further mitigation measures have already been actioned and/ or proposed through the consent renewal, including:

- Replacing existing irrigation infrastructure with more efficient pivots.
- Increased fencing and setback requirements around waterways including riparian planting, specifically around Honeymoon Creek and other ephemeral waterways.
- Implementation of good farming management practices, including; soil moisture monitoring, wetland planting, fencing of seeps, inclusion of sediment traps, targeted fertiliser use and active management of pasture and stock.
- Reducing stocking numbers and potential inputs onto the lower terraces of the property.
- Development of an on-farm environmental enhancement project in collaboration with representatives from Te Runanga o Kaikoura and Te Ngai Tuahuriri Runanga (requirement of CRC190984).

Draft consent conditions have been developed with the Council's Consenting planning team. The most recent version of the draft conditions recommended by ECan is provided in Attachment 2. Of note, these agreed draft conditions include the following additional requirements:

- Farm System Description includes dairy support, stock finishing and Arable 2 (mixture of crops grown for harvest and stock grazing).
- A maximum winter grazing area of 47.8 hectares.
- Additional consenting requirements for riparian planting and grass buffer strips to reduce phosphorous transportation.
- Environmental Monitoring and Remedial Action Plan (discussed below)

2.3 Environmental Monitoring and Adaptive Management Conditions

In early 2021, ECan surface water technical staff acknowledged that the current nutrient status of the Hurunui River is generally better than the limits set out in the HWRRP. Isolated records of exceedance of phosphorus load limits in the upper Hurunui River have been identified. However, there is limited water quality data available for the state of the Hurunui River below SH1.

Given the variabilities in nutrient loads (function of river concentrations and flows), ECan technical staff consider that there is a potential risk of cumulative effects on the Hurunui River. Due to the high level of dilution, the applicant's technical advice confirms that the proposal/ combined farming operation would have a negligible change in the concentrations in the main braid of the Hurunui River (worse case increase of 0.0013 mg/L for nitrogen and 0.000027 mg/L for phosphorus). However, to address ECan's concern of the potential cumulative effects of nutrients on the wider Hurunui catchment, a robust environmental monitoring and adaptive management framework was developed.

This framework is set out in draft Conditions 10 – 17 of CRC181650. The framework follows the following steps:

1. If ECan notifies the applicant prior to the irrigation season of an exceedance of the Trigger Values² within the Hurunui River below SH1, the applicant shall commence environmental monitoring upgradient and downgradient of the property during the irrigation season to determine its potential contribution to any exceedances.
2. If the exceedance is maintained throughout the irrigation season, the applicant shall commission an independent report into the causes of the exceedances and/ or the association of the exceedance with the property, this report shall be provided to Regional Council for peer review.
3. If the independent expert and ECan technical review agree that the exceedance is likely to have been caused in part or wholly by the land use activities, then a Remedial Action Plan (RAP) shall be prepared to ensure water quality limit(s) are met.
4. Any actions to be undertaken within the RAP, shall be included in the Farm Environmental Plan.

2.4 Duration of Resource Consent

The application has requested a consent duration to align with Policy 9.1 of the HWRRP.

Policy 9.1 To generally limit the duration of any new resource consent (including the replacement of expired resource consents) to take, use or divert surface water or stream-depleting groundwater from within the Hurunui, Waiau and Jed river catchments to ten years and to an initial common catchment expiry date of 1 January 2025; with subsequent common catchment expiry dates occurring at ten yearly intervals thereafter. Consents granted within three years prior to the next common catchment expiry date may be granted with a duration to align with the subsequent common catchment expiry date (that is the number of years to the next common catchment expiry date plus ten years).

² Trigger Values are based around Policy 5.3 of the HWRRP.

When the application was lodged in 2017, Policy 9.1 directed the council to consider a common catchment expiry date of 1 January 2025. However, the second part of this policy allows resource consents granted within three years of this date to be granted to align with a subsequent common catchment expiry date 10 years beyond this (i.e 1 January 2035).

3. Summary of Potential Environmental Effects

Table 1 below provides a summary of each of the key potential environmental effects associated with the applications.

Table 1 *Summary of Potential Environmental Effects*

Potential Environmental Effects	Management of Effect	Commentary
Surface Water Allocation and minimum flows	- The application is for the renewal of its existing A-permit surface water permit, the application is seeking a replacement of the same annual volume and rate of take. - A-permits are considered fully allocated and are for existing water permit holders only. - The surface water abstraction will comply with the minimum flow requirements as set out by Part 4 of the HWRRP.	A-permit allocations are existing surface water consent holders within the HWRRP. The plan recognises that within the A permit allocation, existing consent holders will continue to have priority for future allocation.
Efficient Use of Water	- The application and supporting documents, specifically the proposed irrigation area of 370 ha meets the required Water Use Efficiency requirements for irrigation. - Soil moisture monitoring probes are also to be used over the property to ensure half the water-holding capacity of the soil is not exceeded.	An irrigation development plan was provided with the original application, however, the potential irrigation area within McLaughlin's Block has since been reduced. Therefore, changes in the irrigation development within McLaughlin's Block will differ.
Fish screen	Proposed intakes will have fish screens installed and certified to the required standards.	Intakes have existing fish screens, however, ECan has advised they are in the development of new fish screen guidelines, and upgrades may be required.
Nutrient Management	- The farming activities will be managed via a Farm Environment Plan, which is intended to promote good farm practices and nutrient management. - Additional good farming practices (over and above those required under GMP) are also set out as the requirements of the draft conditions, these conditions included practices to reduce phosphorus runoff and limit fertiliser application. - Overseer modelling has been provided to ECan on nutrient management. These scenarios have been updated a number of times as new versions of Overseer have been produced.	FEPs are the farm practices that are regularly audited via ECan's set requirements. The frequency of monitoring depends on the previous audit grade.
Terrestrial Ecology	A terrestrial ecology assessment has been prepared through the application process. The assessment identified areas that should not be developed for irrigation.	A terrestrial ecology assessment was provided to the council in 2022. This assessment was focused on the effects on terrestrial ecology from the

Potential Environmental Effects	Management of Effect	Commentary
	The resulting assessment further refined the areas appropriate for potential irrigation of water within McLaughlin's Block.	conversion of McLaughlin's dryland block to irrigation. All recommendations have been adopted by the applicant.
Surface water quality	- The contribution of the activity to surface water quality in the Hurunui River (through groundwater and surface water interaction) is considered to be low. - Environmental monitoring and adaptive management conditions to monitor and manage cumulative effects on surface water quality in the Hurunui River have been developed with Environment Canterbury planning and technical staff.	Refer to Section 2.3 above

Regards



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limitations

This report: has been prepared by GHD for Harris Farms and may only be used and relied on by Environment Canterbury for the purpose agreed between GHD and Environment Canterbury as set out in section [00] of this report.

GHD otherwise disclaims responsibility to any person other than Harris Farms arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

Attachment 1

Summary of Consenting Timeline

Table 2 *Consenting Timeline*

Estimated Date	Event	Notes
October 2017	Application Lodged and accepted under Section 88 of the RMA.	A Section 124 Continuation granted by ECan
May 2018	A Section 92 Further Information Request by ECan	The request focused around: 1. An assessment of the hydraulic connection of the gallery takes (groundwater) and surface water 2. Identification of nearby wetlands, and affect the take may have on these
	Section 92 Response provided by GHD	The response identified that the surface water takes were not occurring from infiltration galleries and instead by a surface water intake and pump station installed by the previous owners of the property. The number of abstraction locations where also reduced.
July 2018	Identification of additional resource consents required to authorise existing diversion channel	ECan advised via email that surface water intake identified in the Section 92 response also required additional consents. The renewal applications could not be granted until the additional consents were authorised.
August 2018	Resource Consent Application lodged for the identified diversion	Consent application included Section 13 (works in Riverbed) and Section 14 (diversion of water) activities. The application was to authorise the existing diversion channel and its ongoing use and maintenance of it.
	Consultation with Rūnanga through Mahaanui Kurataiao	The applications were initially placed on-hold while the applicant consulted with Rūnanga on the applications.
September 2018	Additional consent is required due to changes in what is considered a riverbed	Due to changes in what is considered a riverbed, ECan advised an additional Section 13 land use consent is required for farming land use applications. The additional consent did not require any further information.
		Further assessments were undertaken to identify what was now considered the outer extent of the Hurunui Riverbed, this was worked through with the ECan River Engineering team.
November 2018	Additional information supplied on the diversion consent application	Natural Character Assessment Consultation from Te Ngāi Tuahuriri Rūnanga and Te Rūnanga o Kaikōura on the application provided
January 2019	Draft conditions provided for CRC181649 and CRC181686	Draft conditions were provided for the water renewal and expansion consent application.
	Council notification recommendation on diversion consent applications	ECan deemed that the applications should be limited notified to Te Ngāi Tuahuriri Rūnanga, Te Rūnanga o Kaikōura and Ngai Tahu. This was not a final notification decision, as further information was also requested on: • Expanded natural character assessment • Justification on the functional design of the diversion
		The application was placed on-hold while the applicant further consulted with Rūnanga.
March - July 2019	Consultation undertaken within Te Ngāi Tuahuriri Rūnanga and Te Rūnanga o Kaikōura via Mahaanui Kurataiao	This consultation also included a site visit with representatives from Te Ngāi Tuahuriri Rūnanga and Te Rūnanga o Kaikōura

Estimated Date	Event	Notes
July 2019	Limited Notification Decision on diversion consents	ECan issued the limited notification decision on diversion consent applications. Notification served in August 2019 with submissions received from Te Rūnanga o Ngāi Tahu
October 2018	Court of Appeal Dewhurst decision	The decision further refined how the term “bed of river” was to be interpreted.
December 2019	Pre-hearing meetings held between parties	During the end of 2019, pre-hearing meetings were held between the applicant and Te Rūnanga o Ngāi Tahu. During the meeting, appropriate consent conditions were agreed between the parties for the consent to be granted.
January 2020	Diversion consent applications granted by independent commissioners.	
	Further questions/ clarity requested on the Farming Land use and Water Take consent application	A senior consent planner had taken over the consents application and further clarifications were requested to enable the processing to continue
Feb – Aug 2020	LINZ Approval and purchasing of Fulton Hogan (Darrochs Road) block	Affected Party Approvals and access agreement obtained from LINZ. Fulton Hogan block purchased (as the pivot traversed part of this area) and transferred into applicant ownership
Sep 2020	Further Information Requested on Water Permits	Further information associated with: • Scope of Resource Consents and Changes of Condition • An assessment against the National Policy Statement for Freshwater Management 2020 • An assessment against the National Environmental Standards Freshwater 2020
	Potential Effects on Hurunui Lower Rural Water Scheme	An assessment on the Potential Effects on Hurunui Lower Rural Water Scheme Community Drinking Water Protection Zones provided to ECan
Oct 2020	Change of condition applications changed to “new” applications	Due to changes in how ECan approach the “change of condition” application, the change of condition applications (expanded irrigation area) were changed to a new application.
Nov 2020	A new consent planner assigned	A new consent planner was assigned by ECan for the water permits
	Further information response was provided.	The letter provided by GHD included an assessment of the NES-FW and NPS-FM
Dec 2020	Applications sent for Surface Water technical review	ECan advised that the applications have been sent for technical advice from the Surface Water Science team.
January 2021	ECan’s Surface Water technical review respond	ECan’s surface water science team raises concerns around cumulative effects within the Hurunui Catchment. This is the first point the Council has raised this matter
February – June 2021	Adaptive Management Conditions and development of draft conditions for all consents	Over numerous meetings and discussions between the applicant and ECan, the topic of potential cumulative effects was discussed and expanded on. At the end of the period, additional environmental monitoring conditions had been developed.

Estimated Date	Event	Notes
July 2021		Numerous draft conditions were developed and agreed in principle between ECan and the applicant.
		ECan had advised that if adaptive management conditions are not part of the consent, the Council would recommend public notification (10 th June 2021).
Aug 2021	Further assessment of effects assessments request	An additional information request was provided by ECan to address: • Terrestrial ecology assessment to investigate potential land ecology effects from irrigation of drylands farm; and • Potential effects on wetland and riparian habitats in McLaughlin's Block.
March 2022	McLaughlin's Block Ecological Assessment provided	An ecological assessment associated with the irrigation of McLaughlin's Block was provided to ECan. This assessment identified areas that was to be avoided for irrigation development and identified the areas that would be appropriate for irrigation.
April 2022	Requested consent duration changes	GHD requests that an expiry date of 2035 is now considered in line with Policy 9.1. Due to the long processing time, it was identified that a longer duration could now be extended in line with Policy 9.1
June – August 2022	Draft Conditions received from ECan for all consents	A response was provided on the draft conditions by GHD, the comments were focused around different consents having different fish screening requirements for the same take and other minor changes
Oct 2022	Request for an update on consent application progress	A request for a follow up of the draft conditions and changes requested from ECan, as no responses had been received in two months.
Nov 2022	Updated draft conditions received for each resource consent application	
	The application was placed on hold as McLaughlin's Block had been sold	Due to the selling of McLaughlin's Block to another owner, the applicant sought updated approval from the new land owner for the consent to proceed.
Dec 2022	Written Approval from Le Pine received	Written approval from Le Pine provided for McLaughlin's Block.
	ECan advise that Te Ngāi Tuahuriri Rūnanga wishes to make comment on Water applications	ECan advise that Te Ngāi Tuahuriri Rūnanga wish to review and comment on the water take applications.
Jan 2023	External Decision Maker and unbundling of farming land use and water permits	ECan advises that due to the number of internal decision-makers involved, the application is being sent to an external decision-maker.
		Due to Te Ngāi Tuahuriri Rūnanga wanting to comment on the water permits, ECan decided to unbundle the applications and send the Farming Land Use consent to an external decision maker with a non-notified recommendation.
Mar 2023	External Decision Maker on Notification	ECan advises that the external decision-maker had disagreed with the Council non-notified recommendation and instead recommended Public Notification.
		ECan also request the applicant to confirm a processing pathway for unbundled water permit applications.



Estimate d Date	Event	Notes
April 2023	Request to process water take and farming land use activities together	The applicant requests ECan to continue processing the water take renewal and expansion application together with the water permit renewals. This results in the water take permits being joined within the Public Notification.

Attachment 2

Draft Conditions



Resource Consent CRC181650

Applicant: Mr N J & Mrs L M Harris & Harakeke Nominees Limited

Recommended Duration: 1 January 2035

	<u>Definition</u> <u>Base year/s</u> means the period in which the nitrogen loss limit for a particular farm system is determined. <u>Base year inputs</u> mean records (C22C/110922) that describes the farm system during the base year. <u>Effective area</u> means total area of property used for effective farmland as defined in the application. <u>Farm system category</u> means farm system of a property as defined by the relevant categories set out in Appendix CRC181650A, attached to, and forming part of the consent. <u>Farm system descriptor</u> means a description of the farm system which is based on the total effective area, total irrigation, total winter grazing and farm system category of a property. <u>Good Management Practice (GMP)</u> means the practices described in the document entitled "Industry-agreed Good Management Practices relating to water quality" - dated 18 September 2015. <u>Irrigation area</u> means lawfully irrigated land on a property. <u>Mitigation measures</u> means actions taken on the property that will decrease the nitrogen loss risk OR On-farm changes that will decrease the nitrogen loss risk. <u>Nitrogen Loss Limit (NLL)</u> for the property is based on the base year inputs, farm system descriptors and farm system category based on record: CRC181650 Base Year Inputs. <u>Winter grazing</u> means the grazing of cattle on a property within the period of 1 May to 30 September, where the cattle are contained for break-feeding of: a. in-situ brassica and root vegetable forage crops; or b. for consuming supplementary feed that has been brought onto the property
	<u>LIMITS</u>
1	The use of land for farming shall only be within the area shown on Plan CRC181650, attached to and forming part of this consent.

	Advice Note: This resource consent authorises the use of land for farming, in terms of nutrient management. Other resource consent requirements or restrictions may apply in relation to any activity, including activities within or near the riverbed and wetlands.
	FARM ENVIRONMENT PLAN AND AUDITING REQUIREMENTS
2	Prior to the first exercise of this consent, the consent holder shall: a. Prepare a Farm Environment Plan (FEP) in accordance with Appendix CRC181650, which forms part of this consent; b. Include in the FEP: i. a description of a process to identify the areas of phosphorous loss risk (i.e. Critical Source Areas); ii. the location of all small gullies, creeks, drains and seepage points on the property that may transport phosphorous to surface water; iii. the location of all riparian planting and/or grass buffer strips on the property as per Condition 6; iv. details of how the consent holder is going to comply with the mitigation measures in Condition 6. c. Ensure that a suitably qualified person has certified that: i. the consent holder has identified all small gullies, creeks, drains and seepage points which may transport phosphorous to the rivers and tributaries bordering or within the property; and ii. that the mitigation implemented in accordance with Condition 6 is adequate to prevent nutrient loss and is functioning in accordance with the FEP. d. Submit a copy of the FEP and certification to Canterbury Regional Council, Attention: RMA Regional Leader - Monitoring and Compliance.
3	The Farm Environment Plan (FEP) shall: a. be audited in accordance with Part C of Appendix CRC181650. A copy of the audit shall be provided to the Canterbury Regional Council, Attention: RMA Regional Leader - Monitoring and Compliance within two months of the audit being completed; and b. be audited within two years of the first exercise of this consent with subsequent audits in accordance with the frequency required by the property's FEP.
4	The farm shall be managed to achieve and maintain a Farm Environment Plan audit grade, as assigned in accordance with Part C of Appendix

	CRC181650, of B grade at the minimum. The farm shall be managed such that it is not assigned any C or D grades.
	FARM SYSTEM DESCRIPTION AND NITROGEN LOSS LIMITS
5	For the purpose of Objective 5A (Management Area: Nutrients) in the FEP prepared in accordance with Condition (5), the consented nitrogen loss limit is described by the following farm system descriptors and base year inputs as described in the application: a. Maximum area of irrigation: 370 hectares b. Maximum area of winter grazing: 47.8 hectares; c. Maximum effective area: 478 hectares; d. Farm System Category B, D & J as described in Appendix CRC181650A The determination of whether a farm meets the nitrogen loss limit will be whether the farm is: a. consistent with the farm system descriptors; and b. in accordance with the base year inputs as assessed using Environment Canterbury Nutrients Management - Guidelines for FEP Auditors. unless the property has been influenced by a severe extraordinary event (including but not limited to droughts and floods). Advice Note: To assist the FEP auditor and the Consent Holder this Objective and Target has been inserted into Appendix CRC181650 attached to this consent. Advice Note 2: The base year inputs can be found in Canterbury Regional Council electronic file reference C22C/110922, referred to as "CRC181650 Base Year Inputs."
6	Prior to the first exercise of the consent, the consent holder shall ensure that for all irrigated areas: a. Riparian planting and/or grass buffer strips are in place and functioning along creeks, drains and gullies that may transport phosphorous to the rivers and tributaries bordering or within the property; b. Riparian planting and/or grass buffer strips are in place and functioning around any cropped paddocks (including fodder crops) that may transport phosphorous to the rivers and tributaries bordering or within the property; c. Riparian planting and/or grass buffer strips are in place and functioning below any seepage zones that may transport

	phosphorous to the rivers and tributaries bordering or within the property; d. Infrastructure surfaces, including but not limited to, tracks and laneways, shall drain away from waterways and onto vegetated surfaces; e. Soil test Olsen P levels shall not exceed the agronomic optimum levels specific to the crop being grown; and f. Ensure all gullies that may transport phosphorous are isolated through fencing or planting.
7	The consent holder shall: a. Not apply fertiliser on land within 20 metres of any surface water bodies; b. Exclude intensively farmed stock from any water bodies within the property boundary; and c. Ensure erosion and sediment control measures are in place to prevent sediment entering waterways. Advice Note: For the purposes of this consent intensively farmed stock is defined as: 1. cattle or deer grazed on irrigated land or contained for break-feeding of winter feed crops; 2. dairy cattle, including cows, whether dry or milking, and whether on irrigated land or not; or 3. farmed pigs
8	Good management practices shall be implemented to minimise the loss of sediment and phosphorous to surface waters. Good management practices shall be specified in a Farm Environment Plan prepared in accordance with Condition 2. Such measures shall include but are not limited to: a. Fertiliser shall be applied in accordance with a nationally recognised quality assurance program for fertiliser application. b. For the purposes of this condition an approved quality assurance program is: i. The New Zealand Fertiliser Manufacturers Research Association Code of Practice for Fertiliser Use; or ii. The Code of Practice for Nutrient Management (with emphasis on fertiliser use) NZFMRA 07; or iii. Any other method approved by the Canterbury Regional Council.
9	Detailed records shall be maintained of: a. fertiliser application rates; b. location and crop type (including winter feed/forage crops);

	c. cultivation methods; d. stock units by reference to type and breed; and e. all other inputs to the Overseer, or equivalent, nutrient budgeting model. A copy of these records shall be provided to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager on request.
MONITORING AND REMEDIAL ACTION PLAN	
10	Prior to the commencement of the irrigation season (01 September every year) if Surface Water Quality Monitoring undertaken by the Canterbury Regional Council within the Hurunui River between: 1. State Highway one, located at NZTM 2000: 5250443mN 1607912mE, and 2. Downstream of the consent holder's property, located at NZTM 2000: 5251418mN 1620374mE within the previous year shows an exceedance of any of the Trigger Values in condition 10(a) – 10 (e), and where Canterbury Regional Council – Surface Water Quality Scientists have determined that the exceedance in any of the Trigger values is not able to be attributed to other factors, including but not limited to natural variability, within the catchment, then the Canterbury Regional Council Compliance and Enforcement Manager may serve notice on the consent holder, prior to the commencement of the irrigation season (01 September), that the consent holder must undertake a Surface Water Quality and Ground Water Quality Investigation required by Condition 11. <u>Trigger Values:</u> a. Dissolved reactive phosphorus (DRP) - 0.0044 mg/L; b. nitrate-nitrogen (NO₃-N) – 2.3 mg/L (annual median); c. nitrate-nitrogen (NO₃-N) – 3.6 mg/L (95th Percentile); d. Periphyton biomass -120 mg/m² chlorophyll a (95th percentile); e. Filamentous algae (>2 cm long) 20% cover. If Canterbury Regional Council determines the exceedance of the Trigger Values in condition 10(a) – 10(e) are due to natural variability within the Hurunui River or due to other factors then conditions 11-14 are not required for that irrigation season.

	Advice note: Surface water quality data can be requested from Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance
11	Within 14 days of receiving notification under Condition 10, the consent holder shall commence surface water monitoring within the Hurunui River and groundwater monitoring on the applicant's property. 1. The surface water monitoring: a. Water quality samples shall be collected by a Suitably Qualified and Experienced person sampled at the following two monitoring locations: i. At or about NZTM2000 5252085mN 1614786mE (upstream of property) ii. At or about NZTM2000 5251630mN 1619893mE, , (downstream of property – northern most braid) b. Include a minimum of four rounds of water quality sampling: i. the samples shall be undertaken during the irrigation period following any notification received under Condition 10; and ii. sampling rounds must be undertaken 4 weeks apart from previous round. 2. The groundwater monitoring shall: a. Water quality samples shall be collected by a Suitably Qualified and Experienced person sampled at the following two monitoring locations: i. Upgradient of the applicant's property; and ii. Downgradient of the applicant's property b. Include a minimum of four rounds of water quality sampling: i. the samples shall be undertaken during the irrigation period following any notification received under Condition 10; and ii. sampling rounds must be undertaken 4 weeks apart from previous round Advice note: Irrigation period for the purposes of this condition are defined as being between September and April
12	The water quality samples collected under Condition 11 shall be assessed as follows: a. The samples shall be analysed against the Trigger Values for dissolved reactive phosphorus and nitrate nitrogen stated in Condition 10(a) and 10(b); b. The samples shall be analysed using the most appropriate method, by a laboratory that is certified for the method by International Accreditation New Zealand or an equivalent accreditation body;

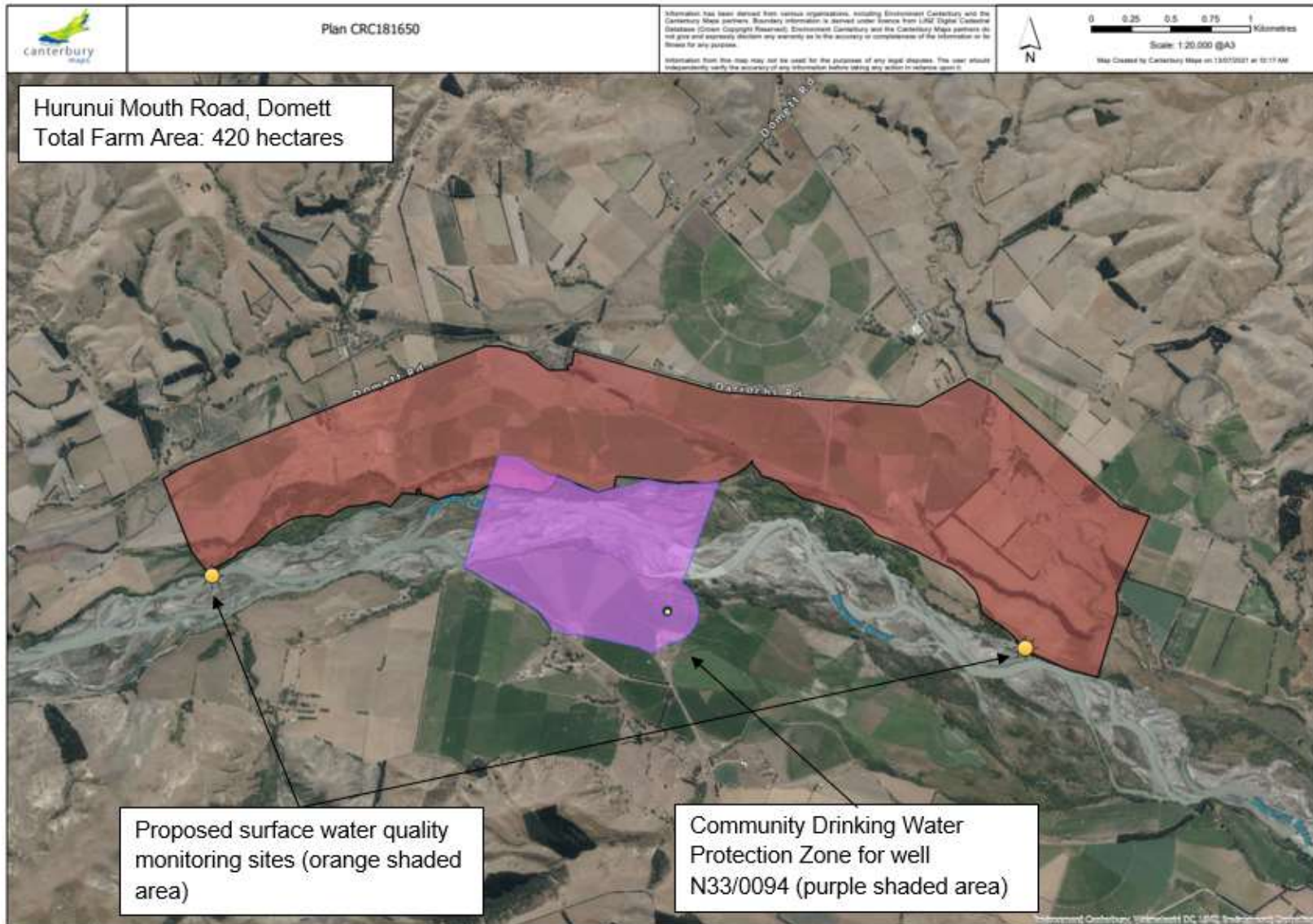
	c. The results of the analysis shall be reported in milligrams per litre. Results of the analyses including the name of the person who collected the samples, the methods used, and the date and time of sampling, shall be provided to the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance, within ten working days of receipt of the results by the consent holder.
13	If the monitoring undertaken in accordance with Condition 11 of this consent shows an exceedance in the trigger values identified in Condition 10 (a)-10(e) and which is maintained across more than one sampling round identified at condition 11 above, the consent holder shall: a. Commission a report into the cause of the exceedance, prepared in accordance with Condition 14, and provide a copy of the report to the Canterbury Regional Council, by 30 July the year following the water quality investigation is undertaken; and b. If required by Condition 15, prepare a Remedial Action Plan and provide it to the Canterbury Regional Council by 30 September that year, or prior to any irrigation commencing on the property for the season; whichever is sooner; and c. If required by condition 15, Implement any measures required by the Remedial Action Plan within the timeframes specified in that document. Advice note: The timeframes specified in this condition are intended to ensure that immediate action is taken prior to and during the first irrigation season after any exceedance of the limits is detected, and the longer-term RAP measures are implemented prior to the second irrigation season after any exceedance is detected.
14	The report required under condition (13)(a) shall at minimum: a. be prepared by a suitably qualified and experienced independent scientist and shall be peer reviewed by either: i. Canterbury Regional Council Scientist(s); or ii. A suitably qualified person that has been approved in writing by Canterbury Regional Council. b. include the experts' conclusion on whether the exceedance(s) above the trigger values were as a result of natural influences, influences outside the consent holder's control, or in whole or part by the use of land authorised by this consent, or by nutrient loss associated with the farming practice authorised by this consent; and c. include an assessment as to whether the exceedance measured by the monitoring is likely to continue; and

	d. be completed and provided to the to the Canterbury Regional Council, Attention: Regional Leader - Monitoring and Compliance, by 30 July following the sampling.
15	If both the author and peer review of the report prepared in accordance with Condition (14) of this consent 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: c. the exceedance of a trigger value identified in Condition 13 was unlikely to have been caused in whole or in part by nutrient loss associated with the land use authorised by this consent, then no further action needs to be undertaken by the consent holder; or d. the exceedance of a trigger values identified in Condition 10 was likely to be caused in part or wholly by the land use authorised by this consent. Then the consent holder shall engage an independent, suitably qualified person to prepare a Remedial Action Plan (RAP), which must include mitigation recommendations to ensure that the water quality limit(s) are met, to the extent that exceedance(s) are determined to be a result of the farming activity authorised under this consent, including if a reduction in the consented loss limit is required, the quantum of the reduction if required, and the date at which the reduced consented loss limit is to apply from; e. any actions to be undertaken to remedy this will be included in the FEP required by condition (2). Advice Note: This report may be prepared for an individual consent holder, or on a collective basis for all relevant consent holders who may also be subject to the limit that has been breached limit.
16	If the RAP requires mitigation this must be adhered to by the consent holder until the trigger values in Condition 10 are no longer in exceedance.
17	In relation to the RAP referred to in Condition (15b): a. It shall set out the methods altering and/or adapting farm land use practices, including irrigation management practices, to ensure that the exceedance of the limit in the trigger values is returned as soon as practicable to the specified level for the relevant monitoring site. b. It shall set out timeframes for implementing the methods described in (a) above, including immediate action to reduce nutrient losses from the property. c. If the RAP is prepared in collaboration with other consent holders who are required to prepare a RAP for this sub catchment a common RAP shall be deemed to comply with this condition.

	d. Subject to condition 16 above, any actions required by the RAP shall be incorporated into the consent holder's FEP. The amended FEP shall be implemented as soon as physically possible.
18	Conditions 10-17 only apply where there has been a conversion from dryland to irrigated land use on the McLachlan block identified in Plan CRC181650 attached to this consent.
COMMUNITY DRINKING WATER SUPPLY	
19	The consent holder shall as soon as is reasonably practicable, notify the owner of community supply well N33/0094 and the Canterbury Regional Council, Attention: Regional Leader - Compliance, if an event occurs due to the exercise of this consent that may have a significant adverse effect on the quality of the water in well N33/0094. Advice Note: Such an event may be, but not limited to, an incident within the well protection zone of well N33/0094 that may contaminate the water supply from that well; such as accidental release of pollutants or stock access, combined with the saturation of soil beyond the water retaining capacity (e.g. flood, over-irrigation etc.).
20	Within the area marked 'Community Drinking Water Protection Zone for well N33/0094' as shown on Plan CRC181650; a. There shall be no irrigation applied.
ADMINISTRATION	
21	The Canterbury Regional Council, Attention: Regional Leader - Monitoring and Compliance, shall be informed within five days of first exercise of this consent by the consent holder.
22	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: a. dealing with any adverse effect on the environment which may arise from the exercise of the consent; and b. ensuring that the provisions of Appendix CRC181650 relating to the FEP audit grading system and timeframes are still appropriate.

Appendix CRC181650A: Farm System Categories

CATEGORY	FARM SYSTEM	DESCRIPTION
A	DAIRY 1	Tonnes DM/ha (Calculate feed eaten per ha, as per defined process)
B	DAIRY SUPPORT	Mixture of crops and pasture grown for the rearing of dairy replacements and/or wintering of milking cows
C	SHEEP & BEEF	Mixture of pasture and crops grown for the breeding of sheep, beef and/or deer, and could include a mixture of breeding and finishing
D	STOCK FINISHING	Mixture of pasture and crops grown for stock finishing
E	DEER	Mixture of pasture and crops grown for deer breeding and/or finishing
F	OUTDOOR PIGS	Management of land for production of pigs
G	OTHER LIVESTOCK	Horses, camelids and other livestock categories
H	CUT AND CARRY	Production of a range of forage crops for use off-paddock
I	ARABLE 1	Mixture of crops (small seed, cereals and/or vegetable) grown for harvest
J	ARABLE 2	Mixture of crops (small seed, cereals, pasture and/or vegetable) grown for harvest and stock grazing
K	HORTICULTURE	Fruit, nuts and/or vegetables grown for harvest
L	VITICULTURE	Production of grapes grown for wine production
M	OTHER	Describe:



Appendix CRC181650 – Farm Environment Plan

Definitions

In Schedule 7 the following definitions apply:

Management Area means the areas of farm management practice as set out below:

- (a) Nutrients
- (b) Irrigation
- (c) Cultivation and soil structure
- (d) Animal effluent and solid animal waste
- (e) Waterbodies (riparian areas, drains, rivers, lakes, wetlands)
- (f) Point sources – offal pits, farm rubbish pits, silage pits
- (g) Water use (excluding water associated with irrigation) – stock water and wash-down water

Objective – means the overarching outcome sought in relation to each **Management Area**.

Target – means a measurable, auditable statement that contributes to achievement of the **Objective** in each **Management Area**.

Part A – Farm Environment Plans

A Farm Environment Plan can be based on either of:

1. The material set out in Part B below;

OR

2. Industry prepared Farm Environment Plan templates and guidance material that:
 - (a) includes the following minimum components:
 - (i) the matters set out in 1, 2, 3, 4B and 5 of Part B below;
 - (ii) contains a methodology that will enable development of a plan that will identify actual and potential environmental effects and risks specific to the property, addresses those effects and risks and has a high likelihood of appropriately avoiding, remedying or mitigating those effects;
 - (iii) performance measures that are capable of being audited as set out in Part C below; and
 - (iv) matters or requirements set out in Part B of Schedule 7 that have been added as a result of a sub-region planning process; and
 - (b) has been approved as meeting the criteria in (a) and being acceptable to the Canterbury Regional Council by the Chief Executive of the Canterbury Regional Council.

Part B – Farm Environment Plan Default Content

The plan requirements will apply to:

- (a) a plan prepared for an individual property or farm enterprise; or
- (b) a plan prepared for an individual property which is part of a collective of properties, including an irrigation scheme, principal water supplier, or an Industry Certification Scheme

The plan shall contain as a minimum:

1. Property or farm enterprise details
 - (a) Physical address
 - (b) Description of the ownership and name of a contact person
 - (c) Legal description of the land and farm identifier
2. A map(s) or aerial photograph at a scale that clearly shows:

- (a) The boundaries of the property or land areas comprising the farming enterprise.
 - (b) The boundaries of the main land management units on the property or within the farming enterprise.
 - (c) The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.
 - (d) The location of riparian vegetation and fences adjacent to water bodies.
 - (e) The location on all waterways where stock access or crossing occurs.
 - (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.
 - (g) The location of any critical source areas for phosphorus or sediment loss for any part of the property including any land within the High Runoff Risk Phosphorus Zone.
 - (h) The location of flood protection or erosion control assets, including flood protection vegetation.
 - (i) Public access routes or access routes used to maintain the rivers, streams, or drains.
3. A list of all Canterbury Regional Council resource consents held for the property or farming enterprise.
- 4A. An assessment of the adverse environmental effects and risks associated with the farming activities and how the identified effects and risks will be managed, including irrigation, application of nutrients, effluent application, stock exclusion from waterways, offal pits and farm rubbish pits.
- 4B Nutrient budgets which show the nitrogen discharge allowance
5. A description of how each of the following objectives and targets for each Management Area, where relevant, will be met and the specific actions that will be implemented to attain the targets.

5A Management Area: Nutrients

Objectives:

- (1) Use nutrients efficiently and minimise nutrient losses to water.
- (2) Nutrient losses do not exceed consented nitrogen loss limits.

Targets:

- (1) Nitrogen losses from farming activities are at or below the:
 - (a) Baseline GMP Loss Rate or Good Management Practice Loss Rate (whichever is the lesser); or
 - (b) consented nitrogen loss limits.
- (2) Available nitrogen loss mitigation measures (excluding those associated with irrigation, fertiliser or effluent management) are implemented.
- (3) Phosphorus and sediment losses from farming activities are minimised.
- (4) Manage the amount, timing and application of fertiliser inputs to match the predicted plant requirements and minimise nutrient losses
- (5) Store and load fertiliser to minimise the risk of spillage, leaching and loss into water bodies.

Advice Note 1:

The consented loss limits (as per condition 5 of CRC181650) are:

- a. Maximum area of irrigation: 370 hectares
- b. Maximum area of winter grazing: 47.8 hectares;
- c. Maximum effective area: 478 hectares;
- d. Farm System Category B, D & J as described in Appendix CRC181650A

The determination of whether a farm meets the nitrogen loss limit will be whether the farm is:

- a. consistent with the farm system descriptors; and

b. in accordance with the base year inputs as assessed using Environment Canterbury Nutrients Management - Guidelines for FEP Auditors.
unless the property has been influenced by a severe extraordinary event (including but not limited to droughts and floods).

Advice Note: To assist the FEP auditor and the Consent Holder this Objective and Target has been inserted into Appendix CRC181650 attached to this consent.

Advice Note 2: The base year inputs can be found in Canterbury Regional Council electronic file reference C22C/110922, referred to as "CRC181650 Base Year Inputs.

5B Management Area: Irrigation

Objective:

The amount and timing of irrigation is managed to meet plant demands, minimise risk of leaching and runoff and ensure efficient water use.

Targets:

- (1) New irrigation systems are designed and installed in accordance with industry codes of practice and standards.
- (2) The performance of irrigation systems is assessed annually and irrigation systems are maintained and operated to apply irrigation water at their optimal efficiency.
- (3) The timing and depth of irrigation water applied takes account of crop requirements and is justified through soil moisture monitoring or soil water budgets and climatic information.
- (4) Staff are trained in the operation, maintenance and use of irrigation systems.

5C Management Area: Cultivation and Soil Structure

Objective:

The physical and biological condition of soils is maintained or improved in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.

Targets:

- (1) Farming activities are managed so as to not exacerbate erosion.
- (2) Farming practices are implemented that optimise infiltration of water into the soil profile and minimise run-off of water, sediment loss and erosion.

5D Management Area: Animal Effluent and Solid Animal Waste

Objective:

Animal effluent and solid animal waste is managed to minimise nutrient leaching and run-off.

Targets:

- (1) Effluent systems meet industry Codes of Practice or an equivalent standard.
- (2) The timing and rate of application of effluent and solid animal waste to land is managed so as to minimise the risk of contamination of groundwater or surface water bodies.
- (3) Sufficient and suitable storage is available to enable animal effluent and wash-down water to be stored when soil conditions are unsuitable for application.
- (4) Staff are trained in the operation, maintenance and use of effluent storage and application systems.

5E Management Area: Waterbodies (wetlands, riparian areas, drains, rivers, lakes)

Objective:

Wetlands, riparian areas and the margins of surface waterbodies are managed to avoid damage to the bed and margins of the water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

Targets:

- (1) Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.
- (2) Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.
- (3) Farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other farming activities that are potential sources of sediment, nutrients and microbes are located so as to minimise the risks to surface water quality.
- (4) Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health.

5F **Management Area: Point Sources (offal pits, farm rubbish pits, silage pits)**

Objective:

The number and location of pits are managed to minimise risks to health and water quality.

Target:

- (1) All on-farm silage, offal pit and rubbish dumps are managed to avoid direct discharges of contaminants to groundwater or surface water.

5G **Management Area: Water-use (excluding irrigation water)**

Objective:

To use water efficiently ensuring that actual use of water is monitored and efficient.

Targets:

- (1) Actual water use is efficient for the end use.

The plan shall include for each objective and target in section 5 above:

- (a) detail commensurate with the scale of the environmental effects and risks;
 - (b) a description of the actions and Good Management Practices (and a timeframe within which those actions will be completed) that will be implemented to achieve the objectives and targets.
 - (c) records required to be kept for measuring performance and attainment of the targets and objectives.
6. Nutrient budgets, prepared by a suitably qualified person using the Overseer nutrient budget model, or equivalent model approved by the Chief Executive of Environment Canterbury, for each of the identified land management units and the overall farm or farming enterprise.

Part C – Farm Environment Plan Audit Requirements

The Farm Environment Plan must be audited by a Certified Farm Environment Plan Auditor who is independent of the farm being audited (i.e. is not a professional adviser for the property) and has not been involved in the preparation of the Farm Environment Plan.

The farming activity occurring on the property will be audited against the following minimum criteria:

1. An assessment of the performance of the farming activity against the objectives, targets, and timeframes specified in the Farm Environment Plan;
2. An assessment of the robustness of the nutrient budget/s;
3. An assessment of the efficiency of water use (if irrigated).

The auditor shall determine the level of confidence they have that each objective has been achieved. This level of confidence shall be categorised into the following:

1. High = The objective has probably been achieved;
2. Medium = The objective has possibly been achieved; or
3. Low = It is unlikely that the objective has been achieved.

The audit shall record the justification for each level of confidence assessment, including noting the evidence, or lack of, used to make the determination. Where an objective has received a Medium or Low level of confidence, the audit shall include the required actions for the farm to meet the objective. Where an objective has received a Medium level of confidence (and the farm has

received no Lows), the audit shall also determine whether or not the farm is on-track to achieve the objectives.

The audit shall record the overall audit grade based on the results of the level of confidence assessment as follows:

1. A grade = All Highs;
2. B grade = One or more Mediums and no Lows, but on-track to achieve the objectives;
3. C grade = One or more Mediums and no Lows, but not on-track to achieve the objectives; or
4. D grade = Any Lows.

The grade of the previous audit sets the timeframe until the next audit is required as follows:

1. A grade = 3 years;
2. B grade = 2 years;
3. C grade = 12 months; or
4. D grade = 6 months.

Exceptions to the timeframes for repeat audits apply in the following circumstances:

1. Where an audit grade of A or B has been achieved, but where the manager of the farm changes or the farm system changes, then an audit shall be undertaken within 12 months of the change.
 - A change in the farm system means whole farm operation conversions, including but not limited to, converting between dairy support, dairy platform, sheep & beef and cropping; and also any introduction of a new stock type to the farm, e.g. deer or wintering dairy cows. Changes such as, varying the type of crop grown or varying the relative proportions of stock types do not constitute a farm system change.
2. Where a farm is subject to Farm Environment Plan audit requirements under a nutrient discharge consent held by an irrigation scheme, the audit frequency specified in the irrigation scheme's consent shall prevail over the timeframes set out above.
3. Where a farm is subject to a Farm Environment Plan audit as part of an ISO Accredited audit programme, then the audit frequency for an A or B grade shall be consistent with that of the ISO accredited audit programme for a 'passed' audit under the programme.

The Environment Canterbury Certified Farm Environment Plan Auditor Manual sets out the standards and methods to be used by a Certified Farm Environment Plan Auditor to demonstrate proficiency and competency in the auditing of Farm Environment Plans.

DEFINITIONS

Base year/s means the period in which the nitrogen loss limit for a particular farm system is determined.

Base year inputs mean records (C22C/110922) that describes the farm system during the base year.

Effective area means total area of property used for effective farmland as defined in the application.

Farm system category means farm system of a property as defined by the relevant categories set out in Appendix CRC181650A, attached to, and forming part of the consent.

Farm system descriptor means a description of the farm system which is based on the total effective area, total irrigation, total winter grazing and farm system category of a property.

Good Management Practice (GMP) means the practices described in the document entitled "Industry-agreed Good Management Practices relating to water quality" - dated 18 September 2015.

Irrigation area means lawfully irrigated land on a property.

Mitigation measures means actions taken on the property that will decrease the nitrogen loss risk OR On-farm changes that will decrease the nitrogen loss risk.

Nitrogen Loss Limit (NLL) for the property is based on the base year inputs, farm system descriptors and farm system category based on record: CRC181650 Base Year Inputs.

Winter grazing means the grazing of cattle on a property within the period of 1 May to 30 September, where the cattle are contained for break-feeding of:

- a. in-situ brassica and root vegetable forage crops; or
- b. for consuming supplementary feed that has been brought onto the property

Recommended Conditions for Consent Application CRC181649

Proposed Activity: Water Permit (s14) to take and use surface water

1	Water may only be taken only from the Hurunui River at: a. Surface water abstraction point (SWAP) N33/0432, 300 millimetres diameter and four metres deep, located at map reference NZTM2000: 1616065mE - 5252687mN; and b. Surface water abstraction point (SWAP) N33/0434, 300 millimetres diameter and four metres deep, located at map reference NZTM2000: 1618753mE - 5252470mN.																
2	Water may only be taken: i. at a combined rate not exceeding 206 litres per second; ii. with a combined volume not exceeding 17,000 cubic metres per day; and iii. with a combined volume not exceeding 1,904,000 cubic metres between 1 July and the following 30 June.																
3	Water shall only be used for irrigation 300 ha within the command area identified as the Wharenuhi Block as shown on attached plan CRC181649, which forms part of this consent.																
4	Whenever the: a. Mean flow in the Hurunui River for the 24 hour period ending at noon on any one day falls below the following flows, the taking of water in terms of this permit shall cease: <table><tr><td>Month</td><td>JAN – APR</td><td>MAY – AUG</td><td>SEP – DEC</td></tr><tr><td>Flow (m³/s)</td><td>15</td><td>12</td><td>15</td></tr></table> b. Mean flow in the Hurunui River for the 24 hour period ending at noon on any one day falls below the following flows: <table><tr><td>Month</td><td>JAN – APR</td><td>MAY – AUG</td><td>SEP – DEC</td></tr><tr><td>Flow (m³/s)</td><td>17.03</td><td>14.03</td><td>17.03</td></tr></table> Then the rate at which water is taken shall reduce to that shown on the attached graph, CRC181649. c. Canterbury Regional Council, in consultation with a Water User Committee representing water users who are subject to the same restrictions, has determined a water sharing regime that restricts the taking of water to that	Month	JAN – APR	MAY – AUG	SEP – DEC	Flow (m³/s)	15	12	15	Month	JAN – APR	MAY – AUG	SEP – DEC	Flow (m³/s)	17.03	14.03	17.03
Month	JAN – APR	MAY – AUG	SEP – DEC														
Flow (m³/s)	15	12	15														
Month	JAN – APR	MAY – AUG	SEP – DEC														
Flow (m³/s)	17.03	14.03	17.03														

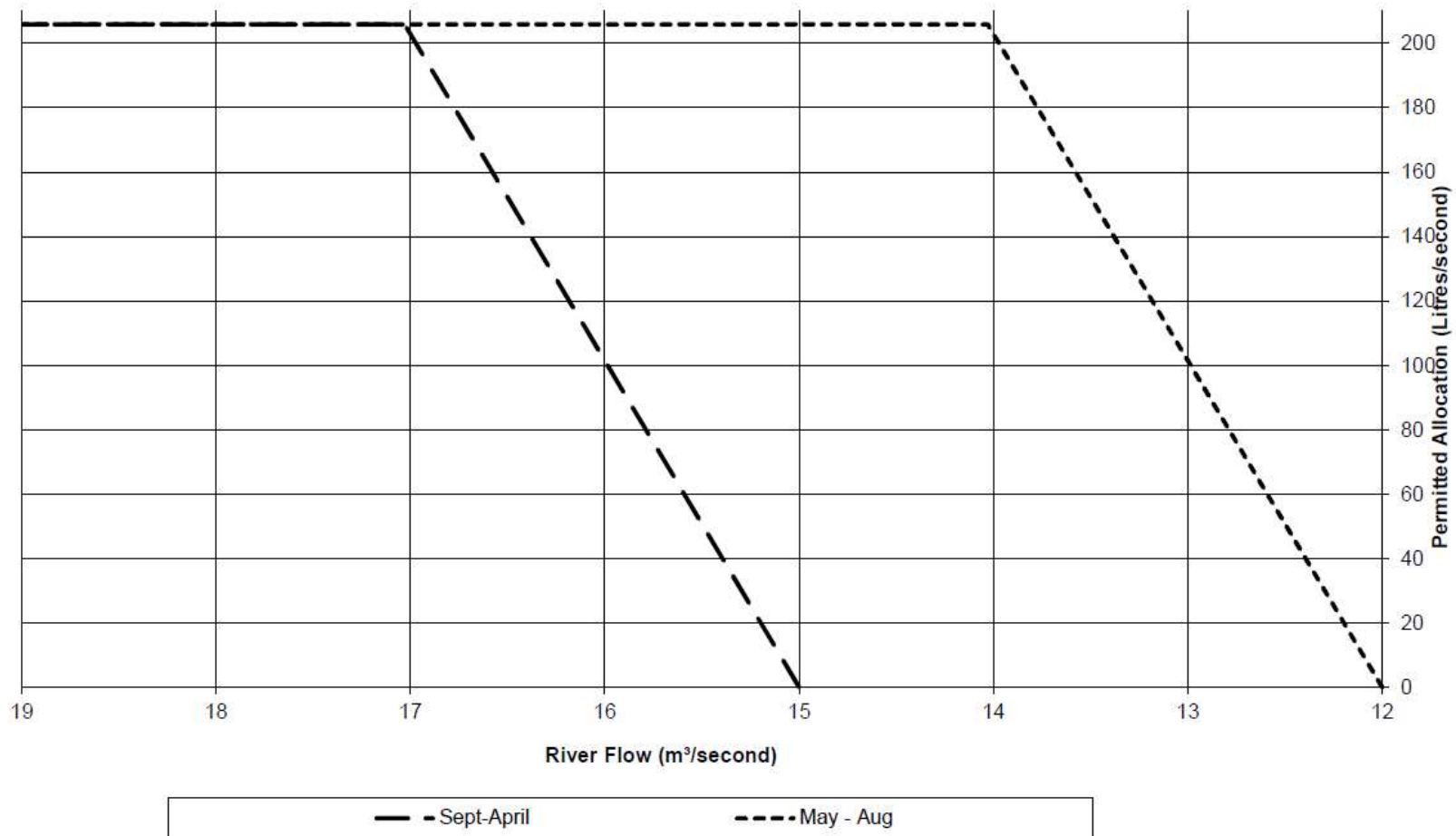
	available to those consent holders who are members of the same Water User Committee above the minimum flow in clause (a), then the taking of water in accordance with that determination shall be deemed in compliance with clause (b).
5	Fish screen scope and design: - Water shall only be taken when a fish screen with a maximum mesh width and height size of three millimetres or slot width and height of two millimetres is operated and maintained across the intake to ensure that fish and fish fry are prevented from passing through the intake screen. - The fish screen shall be positioned to ensure that there is unimpeded fish passage to and from the waterway and to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the screen face. - The fish screen shall be designed and installed to ensure that: - The majority of the screen surface is oriented parallel to the direction of water flow. - Where practicable, the screen is positioned in the water column a minimum of 300 millimetres above the bed of the waterway and a minimum of one screen radius from the surface of the water. - The approach velocity perpendicular to the face of the screen shall not exceed 0.06 metres per second if no self-cleaning mechanism exists, or 0.12 metres per second if a self-cleaning mechanism is operational. - The sweep velocity parallel to the face of the screen shall exceed the design approach velocity.
6	Design, construction and maintenance specifications: - The fish screen shall be designed or supplied by a suitably qualified person who shall ensure that the design criteria specified in condition (5)(a) –(c)(iv) of this consent is achieved. Prior to the installation of the fish screen, a report containing final design plans and illustrating how the fish screen will meet the required design criteria, and an operation and maintenance plan for the fish screen shall be provided to Environment Canterbury, Attention: RMA Compliance and Enforcement Manager. - A certificate shall be provided to Environment Canterbury by the designer or supplier of the fish screen to certify that the fish screen has been installed in accordance with the details provided to Environment Canterbury in accordance with Condition (5)(a) of this consent. - 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 Environment Canterbury upon request.
7	Repair or replacement procedures: - The consent holder shall regularly check the fish screen to ensure that it is fully operational and can meet the requirements outlined in condition (5). - In the event that the fish screen becomes damaged or requires repair such that it can no longer meet the requirements outlined in condition (5), the consent holder shall: - Stop operating the intake structure so that water does not flow through the fish exclusion barrier and intake structure. The intake

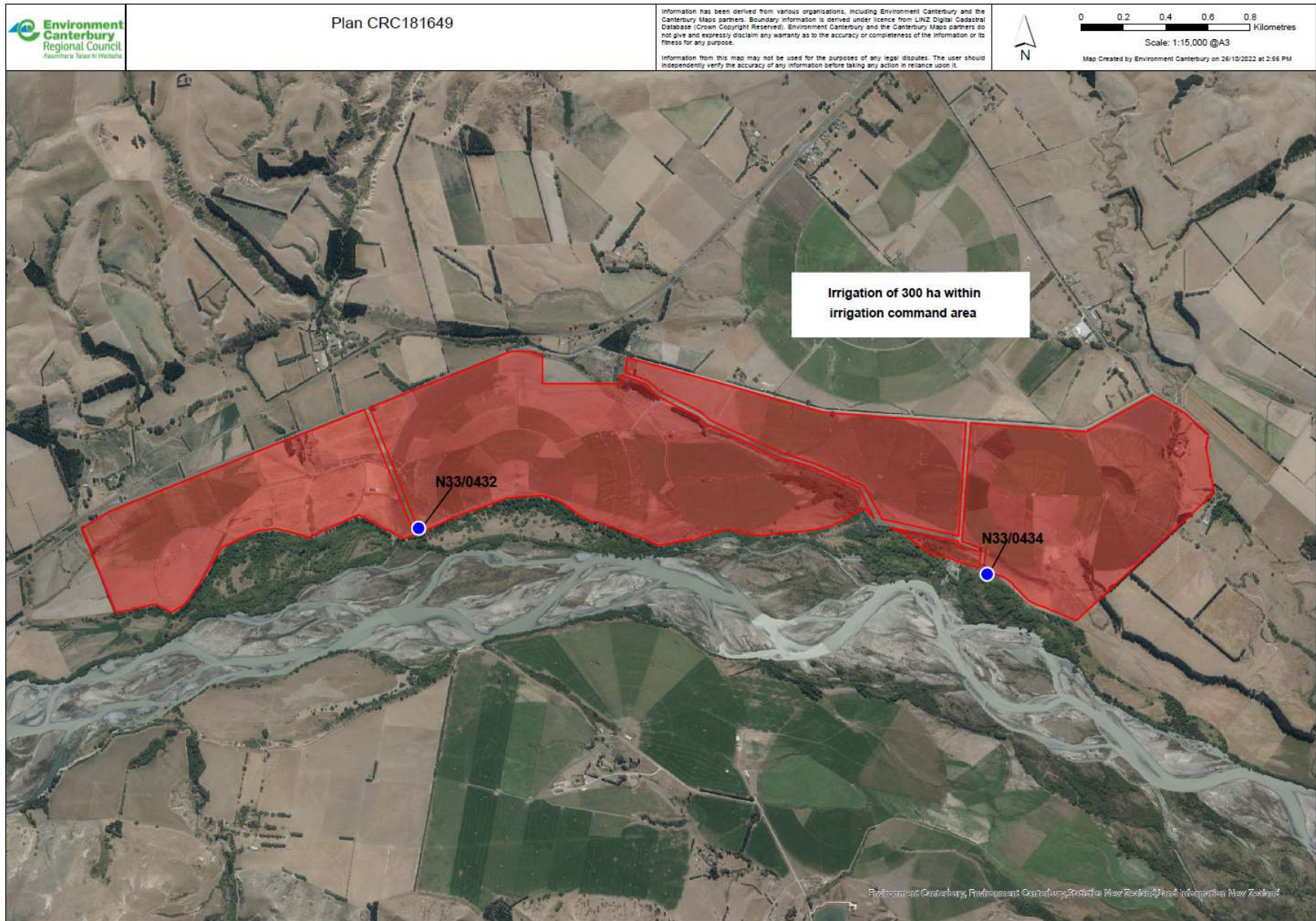
	structure may not resume operation until the requirements of condition (5) are met. ii. Repair the fish screen so that it operates in accordance with the requirements specified in condition (5). iii. Ensure that the repaired fish screen is inspected by a suitably qualified person to assess performance against condition (5). The suitable qualified person shall prepare a report in accordance with condition (6)(b) which shall be submitted to Environment Canterbury attention Regional Leader- Monitoring and Compliance within five working days of the report being supplied to the consent holder. Definition: For the purpose of conditions (5) – (7) a ‘suitably qualified person’ shall mean: An experienced fisheries ecologist with experience in salmonid and New Zealand native fisheries and in the design, construction and testing of fish exclusion devices.
8	The taking of water in terms of this permit shall cease for a period of up to 48 hours on notice from the Canterbury Regional Council, to allow measurement of the flow in the Hurunui River.
9	The flow referred to in condition 4 shall be the flow estimated by the Canterbury Regional Council in the Hurunui River at State Highway one recorder site at map reference NZTM2000 1607700 mE 5250950 mN.
10	The consent holder shall, before the first exercise of this consent, install an easily accessible straight pipe(s), 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.
11	The consent holder shall before the first exercise of this consent: a. i. install a water meter(s) that has an international accreditation or equivalent New Zealand calibration endorsement, and has pulse output, suitable for use with an electronic recording device, which will measure the rate and the volume of water taken to within an accuracy of plus or minus five percent as part of the pump outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total take of water is measured; and ii. 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 (b)(i) and (b)(ii), or which is telemetered, as specified in clause (b)(iii). b. The recording device(s) shall: a. 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

	b. 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 in a commonly used format and provide to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; and c. 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. No data in the recording device(s) shall be deliberately changed or deleted. c. The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval. d. 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. e. All practicable measures shall be taken to ensure that the water meter and recording device(s) are fully functional at all times.
12	Within one month of the installation of the measuring or recording device(s), or any subsequent replacement measuring or recording device(s), and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, the consent holder shall provide a certificate to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that: a. The measuring and recording device(s) has been installed in accordance with the manufacturer's 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 (11).
13	The Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, shall be informed within five days of first exercise of this consent by the consent holder.
14	If the irrigation system is used to distribute diluted effluent, fertiliser or added contaminants the consent holder shall ensure: a. An effective backflow prevention device is installed and operated within the pump outlet plumbing or within the mainline to prevent the backflow of contaminants into the water source; and b. The backflow prevention device is tested at the time of installation and annually thereafter by a suitably qualified or certified person in accordance with Canterbury Regional Council approved test methods for the device used; and c. The test report is provided to the Canterbury Regional Council Attention Regional Leader - Monitoring and Compliance, within two weeks of each inspection. Advice Note: This is not authorisation to discharge fertiliser or other contaminants to land, water or air under section 15 of the Resource Management Act.
15	The consent holder shall take all practicable steps to:

	a. Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and b. Avoid leakage from pipes and structures; and c. Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips and wetlands.
16	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.
17	If this consent is not exercised before 19 December 2025 then it shall lapse in accordance with section 125 of the Resource Management Act.

Graph CRC181649: Maximum allowable abstraction rates when the Hurunui River flow is above the monthly minimum flow as stated in Condition 4 of consent CRC181649





Recommended Conditions for Consent Application CRC181686

Proposed Activity: Water Permit (s14) To take & use water

1

Water may only be taken only from the Hurunui River at:

a.

Surface water abstraction point (SWAP) N33/0432, 300 millimetres diameter and four metres deep, located at map reference NZTM2000: 1616065mE - 5252687mN; and

b.

Surface water abstraction point (SWAP) BV26/0004, 720 millimetres diameter and four metres deep, located at map reference NZTM2000: 1618615E – 5252517N.

2

Water may only be taken:

i.

at a combined rate not exceeding 206 litres per second;

ii.

with a combined volume not exceeding 17,000 cubic metres per day; and

iii.

with a combined volume not exceeding 1,904,000 cubic metres between 1 July and the following 30 June.

3

Water shall only be used for irrigation of:

a.

300 ha within the command area identified as the Wharenui Block; and

b.

70 ha within the command area identified as the McLaughlin Block

as shown on Plan CRC181686, which forms part of this consent.

4

Whenever the:

a.

Mean flow in the Hurunui River for the 24 hour period ending at noon on any one day falls below the following flows, the taking of water in terms of this permit shall cease:

Month	JAN – APR	MAY – AUG	SEP – DEC
Flow (m³/s)	15	12	15

b.

Mean flow in the Hurunui River for the 24 hour period ending at noon on any one day falls below the following flows:

Month	JAN – APR	MAY – AUG	SEP – DEC
Flow (m³/s)	17.03	14.03	17.03

	Then the rate at which water is taken shall reduce to that shown on the attached graph, CRC181686. c. Canterbury Regional Council, in consultation with a Water User Committee representing water users who are subject to the same restrictions, has determined a water sharing regime that restricts the taking of water to that available to those consent holders who are members of the same Water User Committee above the minimum flow in clause (a), then the taking of water in accordance with that determination shall be deemed in compliance with clause (b).
5	Fish screen scope and design: - Water shall only be taken when a fish screen with a maximum mesh width and height size of three millimetres or slot width and height of two millimetres is operated and maintained across the intake to ensure that fish and fish fry are prevented from passing through the intake screen. - The fish screen shall be positioned to ensure that there is unimpeded fish passage to and from the waterway and to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the screen face. - The fish screen shall be designed and installed to ensure that: - The majority of the screen surface is oriented parallel to the direction of water flow. - Where practicable, the screen is positioned in the water column a minimum of 300 millimetres above the bed of the waterway and a minimum of one screen radius from the surface of the water. - The approach velocity perpendicular to the face of the screen shall not exceed 0.06 metres per second if no self-cleaning mechanism exists, or 0.12 metres per second if a self-cleaning mechanism is operational. - The sweep velocity parallel to the face of the screen shall exceed the design approach velocity.
6	Design, construction and maintenance specifications: - The fish screen shall be designed or supplied by a suitably qualified person who shall ensure that the design criteria specified in condition (5)(a) –(c)(iv) of this consent is achieved. Prior to the installation of the fish screen, a report containing final design plans and illustrating how the fish screen will meet the required design criteria, and an operation and maintenance plan for the fish screen shall be provided to Environment Canterbury, Attention: RMA Compliance and Enforcement Manager. - A certificate shall be provided to Environment Canterbury by the designer or supplier of the fish screen to certify that the fish screen has been installed in accordance with the details provided to Environment Canterbury in accordance with Condition (5)(a) of this consent. - 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 Environment Canterbury upon request.

7	Repair or replacement procedures: a. The consent holder shall regularly check the fish screen to ensure that it is fully operational and can meet the requirements outlined in condition (5). b. In the event that the fish screen becomes damaged or requires repair such that it can no longer meet the requirements outlined in condition (5), the consent holder shall: i. Stop operating the intake structure so that water does not flow through the fish exclusion barrier and intake structure. The intake structure may not resume operation until the requirements of condition (5) are met. ii. Repair the fish screen so that it operates in accordance with the requirements specified in condition (5). iii. Ensure that the repaired fish screen is inspected by a suitably qualified person to assess performance against condition (5). The suitable qualified person shall prepare a report in accordance with condition (6)(b) which shall be submitted to Environment Canterbury attention Regional Leader- Monitoring and Compliance within five working days of the report being supplied to the consent holder. Definition: For the purpose of conditions (5) – (7) ‘suitably qualified person’ shall mean: An experienced fisheries ecologist with experience in salmonid and New Zealand native fisheries and in the design, construction and testing of fish exclusion devices.
8	The taking of water in terms of this permit shall cease for a period of up to 48 hours on notice from the Canterbury Regional Council, to allow measurement of the flow in the Hurunui River.
9	The flow referred to in condition 4 shall be the flow estimated by the Canterbury Regional Council in the Hurunui River at State Highway one recorder site at map reference NZTM2000 1607700 mE 5250950 mN.
10	The consent holder shall, before the first exercise of this consent, install an easily accessible straight pipe(s), 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.
11	The consent holder shall before the first exercise of this consent: a. i. install a water meter(s) that has an international accreditation or equivalent New Zealand calibration endorsement, and has pulse output, suitable for use with an electronic recording device, which will measure the rate and the volume of water taken to within an accuracy of plus or minus five percent as part of the pump outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total take of water is measured; and ii. 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 (b)(i) and (b)(ii), or which is telemetered, as specified in clause (b)(iii). b. The recording device(s) shall: iii. 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 iv. 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 in a commonly used format and provide to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; and v. 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. No data in the recording device(s) shall be deliberately changed or deleted. c. The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval. d. 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. e. All practicable measures shall be taken to ensure that the water meter and recording device(s) are fully functional at all times.
12	Within one month of the installation of the measuring or recording device(s), or any subsequent replacement measuring or recording device(s), and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, the consent holder shall provide a certificate to the Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that: a. The measuring and recording device(s) has been installed in accordance with the manufacturer's 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 (12).
13	The Canterbury Regional Council, Attention Regional Leader - Monitoring and Compliance, shall be informed within five days of first exercise of this consent by the consent holder.
14	If the irrigation system is used to distribute diluted effluent, fertiliser or added contaminants the consent holder shall ensure: a. An effective backflow prevention device is installed and operated within the pump outlet plumbing or within the mainline to prevent the backflow of contaminants into the water source; and b. The backflow prevention device is tested at the time of installation and annually thereafter by a suitably qualified or certified person in accordance with Canterbury Regional Council approved test methods for the device used; and

	c. The test report is provided to the Canterbury Regional Council Attention Regional Leader - Monitoring and Compliance, within two weeks of each inspection. Advice Note: This is not authorisation to discharge fertiliser or other contaminants to land, water or air under section 15 of the Resource Management Act.
15	The consent holder shall take all practicable steps to: i. Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and ii. Avoid leakage from pipes and structures; and iii. Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips and wetlands.
16	A setback of 10 metres shall be maintained between any irrigation areas and a wetland. Definition: Wetland shall have the definition included in the National Policy Statement Freshwater 2020 or any iterations thereof.
17	Before the first exercise of this resource consent CRC181649 shall be surrendered.
18	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.
19	If this consent is not exercised before 19 December 2025 then it shall lapse in accordance with section 125 of the Resource Management Act.

Graph CRC181686: Maximum allowable abstraction rates when the Hurunui River flow is above the monthly minimum flow as stated in Condition 4 of consent CRC181649

