

CONDITION MASTER TEMPLATE

1. Location of take condition – surface water

Water may only be taken from the <name of waterbody>, at or about map reference <map reference>.

2. Location of take – groundwater

Water may be taken only from bore <bore no>, <diameter> millimetres diameter and <depth> metres deep, at or about map reference <map reference>.

3. Rate of take and annual volume

Water may be taken at a rate not exceeding [instantaneous rate] litres per second, with a volume not exceeding [volume] cubic metres in any period of [design return period] consecutive days, and [seasonal volume] cubic metres between 1st July and the following 30th June.

4. Rate of take – combined volume if used with existing consents

The taking of water in terms of this consent [consent number] and consent [consent number] shall not exceed a combined rate of [rate] litres per second and a combined volume of [volume] cubic metres in any period of [design return period] consecutive days.

5. Use of water and area to be irrigated

The water taken in condition (x) shall only be used for irrigation of <LAND USE>, as described in the application, on the area of land shown in attached plan CRC<XYZXYZ>.

6. Straight length of pipe

- (a) The consent holder shall, before the implementation of the consent, install an easily accessible straight pipe(s), with no fittings or obstructions on it, 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 for the purposes of enabling the Council to attach a water meter to check compliance with condition 4.
- (b) Clause (a) shall not apply where an electromagnetic water meter is installed pursuant to Condition [] [Water Metering and Rate and

Volume recording] and certification of this is provided pursuant to Condition [[Certification of Installation of Rate, Volume and Level Measuring Devices]

7. Certification

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 Council, the consent holder shall provide a certificate to the Council (Attention: RMA Compliance and Enforcement Manager), signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:

- (i) each measuring and recording device(s) is installed in accordance with the manufacturers specifications; and
- (ii) data from the recording device can be readily accessed and/or retrieved in accordance with the conditions above.

8. Flow meter – pumped take

- (a) The consent holder shall, before the implementation of the consent:
 - (i) install a water meter(s) that has an international accreditation or 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 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 that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's data of water taken as specified in clauses (b) (i), or which is telemetered, as specified in clause (b)(ii).
- (b) The water meter and recording device(s) shall be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and shall:
 - (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 provide to the Council in a form and to a standard specified in writing by the 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 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 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 at all times fully functional and have an accuracy standard of $\pm 5\%$.

9. Flow meter – diversion

- (a) The consent holder shall, prior to exercising this consent, install a water level measuring device in a location that will enable the determination of the continuous rate of flow and volume of water being diverted to within an accuracy of 10 percent.
- (b) The measuring device shall, as far as is practicable, be installed at a site likely to retain a stable relationship between flow and water level. The measuring device shall be installed in accordance with the manufacturer's instructions.
- (c) The flow at the measuring site shall be gauged at least every three months whilst this consent is being exercised, and at any other time when required as determined by a site inspection, to be carried out at least once every month.
- (d) Gaugings and site inspections shall be carried out in accordance with the following manuals: Hydrologists Field Manual (NIWA 1991) and Procedure for Rating a Flow Station (NIWA 1993) or any equivalent publication.
- (e) The level of water in the race, and times of abstraction, shall be recorded by electronic means, at not greater than fifteen minute intervals in a tamper-proof recording device such as a data-logger, kept for that purpose. The recorded data shall not be changed or deleted by any person, unless twelve months have passed since the date of recording.
- (f) The measuring and recording devices described in clauses (a) and (e) shall be available for inspection at all times by the Canterbury Regional Council.
- (g) All data from the recording device described in clause (e), and the corresponding relationship between the water level and flow, shall be provided to the Canterbury Regional Council on request, and shall be accessible and available for downloading at all times by the Canterbury Regional Council.
- (h) Within one month of the commencement of this consent, at two-yearly intervals thereafter, and at any other time when requested by Canterbury

Regional Council, the consent holder shall calibrate the measuring device and provide to the Canterbury Regional Council:

- (i) a certificate signed by a suitably qualified person certifying the current accuracy of the measuring and recording devices, and also certifying that data from the recording device described in clause (e) can be readily accessed in accordance with clause (f); and
- (ii) supporting information containing details of the calibration test.

10. Standing water level

- (a) Where reasonably required, the taking of water in terms of this permit shall cease for a period of up to 48 hours on notice from the Council, to allow measurement of groundwater levels; and
- (b) The Council will provide not less than seven working days notice of its requirement to measure groundwater levels in accordance with this condition. A consent holder may refuse to allow measurement under this condition if the required notice has not been given.

11. Backflow prevention – groundwater

- (a) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water into the bore.
- (b) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified person. A test report shall be provided to the Canterbury Regional Council, attention RMA Compliance and Enforcement Manager within two weeks of each inspection.

12. Backflow prevention – surface water

- (a) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water into the waterway.
- (b) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified person. A test report shall be

provided to the Canterbury Regional Council, attention RMA Compliance and Enforcement Manager within two weeks of each inspection.

13. Efficient use of water

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. In this condition field capacity means the soil moisture content in the crop root zone after drainage (1-3 days) after thorough wetting (such as a large rainfall event that exceeds the root zone water holding capacity when the macro pores contain air and micro pores water); and
- (ii) Avoid leakage from pipes and structures; and
- (iii) Avoid the application of water onto non-productive land such as impermeable surfaces and river or stream riparian strips.

14. Fish Screen

- (a) Water shall only be taken when a fish screen with a maximum mesh width and height of 3 millimetres or maximum slot width and height of 2mm is operated and maintained across the intake to ensure that fish and fish fry are prevented from passing through the intake screen;
- (b) 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; and
- (c) The fish screen shall be designed and installed to ensure that:
 - (i) the majority of the screen surface is oriented parallel to the direction of water flow;
 - (ii) 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;
 - (iii) 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; and
 - (iv) the sweep velocity parallel to the face of the screen shall exceed the design approach velocity.
- (d) The fish screen specified in Condition (Y) shall be designed or supplied by a suitably qualified person who shall ensure that the design criteria specified in Condition (Y)(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;

- (e) 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 (6)(a) of this consent; and (c) 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.

15. Nitrate management

Nitrates- Nitrogen

1.

- (a) With the exception of the first period ending 30 June during which this consent is first exercised, for each preceding 12 month period ending 30 June:
 - (i) An approved method shall be used to model the nitrate-nitrogen concentration in the soil drainage water below the plant root zone and to prepare a nutrient budget for the subject land for that prior 12 month period;
 - (ii) Records shall be maintained throughout the year of the farm management practices and associated data that will be used as input to the approved method;
 - (iii) Predictions shall be made of the farm management practices that will be used for the following 12 month period to provide input data to the approved method taking regard of the need to reduce nitrate leaching below the plant root zone where possible.
- (b) A record of the predicted and measured input data, the calculations undertaken and the calculated nitrate-nitrogen concentration in the soil drainage water below the plant root zone in accordance with clause (a) shall be:
 - (i) prepared by 31 August each year;
 - (ii) certified as an accurate record by a suitably qualified person;
 - (iii) maintained for the property for the duration of the consent; and
 - (iv) Provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 September each year, or upon request.

- (c) For the purposes of this condition an approved method is
 - (i) 'Overseer' (AgResearch)
 - (ii) The Soil Plant Atmosphere Model (SPASMO- HortResearch)
 - (iii) Any other method approved by the Canterbury Regional Council.
- (d) For the purposes of this condition, the subject land means the area that is irrigated between 1 July and 30 June of the following year.
- (e) Between the 1st September and 30th November of each year a groundwater sample ('the Sample') will be taken from the shallowest bore on the property to which this consent applies; and
- (f) The Sample shall be analysed by a laboratory that is certified for that method of analysis for nitrate-nitrogen; and
- (g) The results of this analysis shall be provided to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager by the 30th January of each year.

2.

- (a) Fertiliser shall be applied in accordance with a nationally recognized quality assurance program for fertilizer application.
- (b) For the purposes of this condition a quality assurance program is:
 - i. The New Zealand Fertiliser Manufacturers' Research Association Code of Practise for Fertiliser Use;
 - ii. The Code of Practise for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07;
 - iii. Any other method approved by the Canterbury Regional Council.

Nutrient Budget

- 3. A nutrient budget is prepared and implemented for all properties receiving water from the Scheme;

Irrigation Infrastructure

- 4. All new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
- 5. If a consent holder is using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months of the first

exercise of the consent. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

Farm Management Plan

6.

- (a) Prior to exercise of this consent, the consent holder shall prepare and submit to the Canterbury Regional Council a Farm Management Plan.
- (b) The Farm Management Plan shall provide details of the practices and procedures to be put into place manage the environmental effects arising from the use of the water within the irrigated area, in order to ensure compliance with the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.
- (c) A Farm Management Plan shall be prepared and shall address the following objectives:
 - To achieve technically efficient use of water, minimising runoff and drainage;
 - To minimise contamination of groundwater and surface water, particularly in terms of fecal contamination, nitrogen and phosphorus;
 - To minimise nutrient losses to water while managing soil fertility to optimise pasture and crop productivity;
 - To minimise adverse effects on groundwater and surface water levels;
 - Soil in good physical condition;
 - To minimise adverse effects on water bodies and riparian areas through healthy riparian margins;
 - To safeguard significant indigenous biodiversity and ecosystem values within the Scheme area;
 - To provide information to the consent holder including land use, area irrigated, stock numbers, and fertiliser use.
 - Procedures to ensure the preparation, implementation, regular review, updating of the Farm Management Plan.

- (d) An audit shall be undertaken by an appropriately qualified person to determine compliance by the consent holder with the provisions of the Farm Management Plan. The audit shall take place each year for the first 3 years after taking of water commences under this consent and thereafter at least once every 5 years. A copy of the audit shall be provided to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

16. Hakataramea Valley Water Quality Management

Nitrates- Nitrogen

1.

- (a) With the exception of the first period ending 30 June during which this consent is first exercised, for each preceding 12 month period ending 30 June:
- (i) An approved method shall be used to model the nitrate-nitrogen concentration in the soil drainage water below the plant root zone and to prepare a nutrient budget for the subject land for that prior 12 month period;
 - (ii) Records shall be maintained throughout the year of the farm management practices and associated data that will be used as input to the approved method;
 - (iii) Predictions shall be made of the farm management practices that will be used for the following 12 month period to provide input data to the approved method taking regard of the need to reduce nitrate leaching below the plant root zone where possible.
- (b) A record of the predicted and measured input data, the calculations undertaken and the calculated nitrate-nitrogen concentration in the soil drainage water below the plant root zone in accordance with clause (a) shall be:
- (i) prepared by 31 August each year;
 - (ii) certified as an accurate record by a suitably qualified person;
 - (iii) maintained for the property for the duration of the consent; and
 - (iv) Provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 September each year, or upon request.
- (c) For the purposes of this condition an approved method is
- (i) 'Overseer' (AgResearch)

- (ii) The Soil Plant Atmosphere Model (SPASMO- HortResearch)
 - (iii) Any other method approved by the Canterbury Regional Council.
- (d) For the purposes of this condition, the subject land means the area that is irrigated between 1 July and 30 June of the following year.
- (e) Between the 1st September and 30th November of each year a groundwater sample ('the Sample') will be taken from the shallowest bore on the property to which this consent applies; and
- (f) The Sample shall be analysed by a laboratory that is certified for that method of analysis for nitrate-nitrogen; and
- (g) The results of this analysis shall be provided to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager by the 30th January of each year.

2.

- (a) Fertiliser shall be applied in accordance with a nationally recognized quality assurance program for fertilizer application.
- (b) For the purposes of this condition a quality assurance program is:
- i. The New Zealand Fertiliser Manufacturers' Research Association Code of Practise for Fertiliser Use;
 - ii. The Code of Practise for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07;
 - iii. Any other method approved by the Canterbury Regional Council.

Nutrient Budget

3. A nutrient budget is prepared and implemented for all properties receiving water from the Scheme;

Irrigation Infrastructure

4. All new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
5. If a consent holder is using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months of the first exercise of the consent. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be

given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

Farm Management Plan

6.

- (a) Prior to exercise of this consent, the consent holder shall prepare and submit to the Canterbury Regional Council a Farm Management Plan.
- (b) The Farm Management Plan shall provide details of the practices and procedures to be put into place manage the environmental effects arising from the use of the water within the irrigated area, in order to ensure compliance with the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.
- (c) A Farm Management Plan shall be prepared and shall address the following objectives:
 - To achieve technically efficient use of water, minimising runoff and drainage;
 - To minimise contamination of groundwater and surface water, particularly in terms of faecal contamination, nitrogen and phosphorus;
 - To minimise nutrient losses to water while managing soil fertility to optimise pasture and crop productivity;
 - To minimise adverse effects on groundwater and surface water levels;
 - Soil in good physical condition;
 - To minimise adverse effects on water bodies and riparian areas through healthy riparian margins;
 - To safeguard significant indigenous biodiversity and ecosystem values within the Scheme area;
 - To provide information to the consent holder including land use, area irrigated, stock numbers, and fertiliser use.
 - Procedures to ensure the preparation, implementation, regular review, updating of the Farm Management Plan.

- (d) An audit shall be undertaken by an appropriately qualified person to determine compliance by the consent holder with the provisions of the Farm Management Plan. The audit shall take place each year for the first 3 years after taking of water commences under this consent and thereafter at least once every 5 years. A copy of the audit shall be provided to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

Fencing

7.

Within the irrigated area:

- (a) Permanent fencing shall be erected at a minimum setback distance of 12 metres from the edge of any natural, permanently flowing , surface water feature.
- (b) Where practicable, riparian planting shall be carried out within fenced areas.
- (c) Temporary fencing will be erected when stock are grazing areas of the property where there is access to other waterways, excluded from condition 7(a) above.
- (d) All fencing will be maintained in a good state of repair.

Shelter Belts

8.

- (a) Within 12 months of the commencement of this consent, shelter belts will be planted on the northern side of irrigated land within the consent holder's property, except where this will result in shading of a road causing treacherous conditions.
- (b) Shelter belts will be maintained in a good state of repair.

17. Hakataramea Valley Water Quality Management (modified for Haka Valley Irrigation Inc)

Nitrates- Nitrogen

1.

- (a) With the exception of the first period ending 30 June during which this consent is first exercised, for each preceding 12 month period ending 30 June:
 - (i) An approved method shall be used to model the nitrate-nitrogen concentration in the soil drainage water below the plant root zone and to prepare a nutrient budget for the subject land for that prior 12 month period;

- (ii) Records shall be maintained throughout the year of the farm management practices and associated data that will be used as input to the approved method;
 - (iii) Predictions shall be made of the farm management practices that will be used for the following 12 month period to provide input data to the approved method taking regard of the need to reduce nitrate leaching below the plant root zone where possible.
- (b) A record of the predicted and measured input data, the calculations undertaken and the calculated nitrate-nitrogen concentration in the soil drainage water below the plant root zone in accordance with clause (a) shall be:
- i. prepared by 31 August each year;
 - ii. certified as an accurate record by a suitably qualified person;
 - iii. maintained for the property for the duration of the consent; and
 - iv. Provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 September each year, or upon request.

For the purposes of this condition an approved method is

- i. 'Overseer' (AgResearch)
- ii. The Soil Plant Atmosphere Model (SPASMO- HortResearch)
- iii. Any other method approved by the Canterbury Regional Council.

For the purposes of this condition, the subject land means the area that is irrigated between 1 July and 30 June of the following year.

2.

- (a) Fertiliser shall be applied in accordance with a nationally recognized quality assurance program for fertilizer application.
- (b) For the purposes of this condition a quality assurance program is:
- i. The New Zealand Fertiliser Manufacturers' Research Association Code of Practise for Fertiliser Use;
 - ii. The Code of Practise for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07;
 - iii. Any other method approved by the Canterbury Regional Council.

Nutrient Budget

3. A nutrient budget is prepared and implemented for all properties receiving water from the Scheme;

Irrigation Infrastructure

4. All new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
5. If a consent holder is using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months of the first exercise of the consent. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

Farm Management Plan

6.
 - (a) Prior to exercise of this consent, the consent holder shall prepare and submit to the Canterbury Regional Council a Farm Management Plan.
 - (b) The Farm Management Plan shall provide details of the practices and procedures to be put into place manage the environmental effects arising from the use of the water within the irrigated area, in order to ensure compliance with the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.

Fencing

7.

Within the irrigated area:

- (a) Permanent fencing shall be erected at a minimum setback distance of 12 metres from the edge of any natural, permanently flowing , surface water feature.
- (b) Where practicable, riparian planting shall be carried out within fenced areas.
- (c) Temporary fencing will be erected when stock are grazing areas of the property where there is access to other waterways, excluded from condition 7(a) above.
- (d) All fencing will be maintained in a good state of repair.

Shelter Belts

8.

- (a) Within 12 months of the commencement of this consent, shelter belts will be planted on the northern side of irrigated land within the consent holder's property, except where this will result in shading of a road causing treacherous conditions.
- (b) Shelter belts will be maintained in a good state of repair.

Farm Management Program

9.

- (a) Prior to exercise of this consent and the commissioning of the Haka Valley Irrigation Ltd scheme (the Scheme), the consent holder shall prepare and submit to the Canterbury Regional Council a Scheme Management Plan.
- (b) The Scheme Management Plan shall provide details of the practices and procedures to be put into place to operate the water take and delivery of water to the Scheme area and to monitor and manage the environmental effects arising from the use of the water within the Scheme, in order to ensure compliance with the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.
- (c) The Scheme Management Plan shall, as a minimum, address the following matters:
 - (i) Operational requirements for the take of water for the Scheme from the Waitaki River.
 - (ii) Operational rules for the Scheme including responsibilities and arrangements for water management and distribution, including allocation during water shortages;
 - (iii) A template to be used as the basis for individual Farm Management Plans. That template shall have the following objectives:
 - To achieve technically efficient use of water, minimising runoff and drainage;
 - To minimise contamination of groundwater and surface water, particularly in terms of faecal contamination, nitrogen and phosphorus;

- To minimise nutrient losses to water while managing soil fertility to optimise pasture and crop productivity;
- To minimise adverse effects on groundwater and surface water levels;
- Soil in good physical condition;
- To minimise adverse effects on water bodies and riparian areas through healthy riparian margins;
- To safeguard significant indigenous biodiversity and ecosystem values within the Scheme area;
- To provide information to the consent holder including land use, area irrigated, stock numbers, and fertiliser use.
- Procedures to ensure the preparation, implementation, regular review, updating and obtaining of consent holder approval for Individual Farm Management Plans for all properties receiving water in terms of this consent.

Water Supply Agreement

10.

- (a) A water supply agreement between the scheme and owners of properties where water is to be used ('water user') shall be entered into and shall include terms which will achieve the following outcomes:
- i. That no water from the Have Valley Irrigation Ltd Scheme shall be provided by the consent holder to any property unless a Farm Management Plan has been prepared for the water user in accordance with the Template and has been approved by the consent holder;
 - ii. A requirement for an audit to be undertaken by an appropriately qualified person to determine compliance by each water user with the provisions of their Farm Management Plan. The audit shall take place each year for the first 3 years after taking of water commences under this consent and thereafter at least once every 5 years. A copy of the audit shall be provided to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.
 - iii. Provision for access on to the property by the Scheme Manager or their nominated representative, in order to undertake such an audit and/or to undertake spot checks of compliance with the implementation

requirements of the Farm Management Plan and/or to undertake environmental monitoring in accordance with the requirements of the resource consent for the Haka Irrigation Company Scheme;

- iv. A provision that all new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
- v. A provision that if the water user is taking water using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months after water is first delivered to the property. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.
- vi. A provision enabling the consent holder to either not initially supply, or once supply has commenced, to restrict or cease the supply of water to a property in the circumstances where there is non-compliance with either the objectives of the Template or the Farm Management Plan.
- vii. The annual volume of water provided to each property by the consent holder shall not exceed the volume identified in the Farm Management Plan for that property.
- viii. Any change of party to a Water Supply Agreement under these conditions shall be notified to the Canterbury Regional Council.

18. Maerewhenua District Water Resources Co Limited- Nitrates Management

Nitrates- Nitrogen

1.

- (a) With the exception of the first period ending 30 June during which this consent is first exercised, for each preceding 12 month period ending 30 June:
 - (i) An approved method shall be used to model the nitrate-nitrogen concentration in the soil drainage water below the plant root zone and to prepare a nutrient budget for the subject land for that prior 12 month period;

- (ii) Records shall be maintained throughout the year of the farm management practices and associated data that will be used as input to the approved method;
 - (iii) Predictions shall be made of the farm management practices that will be used for the following 12 month period to provide input data to the approved method taking regard of the need to reduce nitrate leaching below the plant root zone where possible.
- (b) A record of the predicted and measured input data, the calculations undertaken and the calculated nitrate-nitrogen concentration in the soil drainage water below the plant root zone in accordance with clause (a) shall be:
- i. prepared by 31 August each year;
 - ii. certified as an accurate record by a suitably qualified person;
 - iii. maintained for the property for the duration of the consent; and
 - iv. Provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 September each year, or upon request.

For the purposes of this condition an approved method is

- i. 'Overseer' (AgResearch)
- ii. The Soil Plant Atmosphere Model (SPASMO- HortResearch)
- iii. Any other method approved by the Canterbury Regional Council.

For the purposes of this condition, the subject land means the area that is irrigated between 1 July and 30 June of the following year.

2.

- (a) Fertiliser shall be applied in accordance with a nationally recognized quality assurance program for fertilizer application.
- (b) For the purposes of this condition a quality assurance program is:
 - i. The New Zealand Fertiliser Manufacturers' Research Association Code of Practise for Fertiliser Use;
 - ii. The Code of Practise for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07;
 - iii. Any other method approved by the Canterbury Regional Council.

Nutrient Budget

3. A nutrient budget is prepared and implemented for all properties receiving water from the Scheme;

Irrigation Infrastructure

4. All new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
5. If a consent holder is using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months of the first exercise of the consent. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.

Farm Management Plan

6.
 - (c) Prior to exercise of this consent, the consent holder shall prepare and submit to the Canterbury Regional Council a Farm Management Plan.
 - (d) The Farm Management Plan shall provide details of the practices and procedures to be put into place manage the environmental effects arising from the use of the water within the irrigated area, in order to ensure compliance with the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.

Farm Management Program

7.
 - (a) Prior to exercise of this consent and the commissioning of the Maerewhenua District Water Resources Co Ltd (the Scheme), the consent holder shall prepare and submit to the Canterbury Regional Council a Scheme Management Plan.
 - (b) The Scheme Management Plan shall provide details of the practices and procedures to be put into place to operate the water take and delivery of water to the Scheme area and to monitor and manage the environmental effects arising from the use of the water within the Scheme, in order to ensure compliance with

the conditions of consent and to minimise the potential for adverse effects on the environment arising from the exercise of this consent.

(c) The Scheme Management Plan shall, as a minimum, address the following matters:

- (i) Operational requirements for the take of water for the Scheme from the Waitaki River.
- (ii) Operational rules for the Scheme including responsibilities and arrangements for water management and distribution, including allocation during water shortages;
- (iii) A template to be used as the basis for individual Farm Management Plans. That template shall have the following objectives:
 - To achieve technically efficient use of water, minimising runoff and drainage;
 - To minimise contamination of groundwater and surface water, particularly in terms of faecal contamination, nitrogen and phosphorus;
 - To minimise nutrient losses to water while managing soil fertility to optimise pasture and crop productivity;
 - To minimise adverse effects on groundwater and surface water levels;
 - Soil in good physical condition;
 - To minimise adverse effects on water bodies and riparian areas through healthy riparian margins;
 - To safeguard significant indigenous biodiversity and ecosystem values within the Scheme area;
 - To provide information to the consent holder including land use, area irrigated, stock numbers, and fertiliser use.
 - Procedures to ensure the preparation, implementation, regular review, updating and obtaining of consent holder approval for Individual Farm Management Plans for all properties receiving water in terms of this consent.

Fencing

8.

Within the irrigated area:

- (a) Permanent fencing shall be erected at a minimum setback distance of 12 metres from the edge of any natural, permanently flowing, surface water feature.
- (b) Where practicable, riparian planting shall be carried out within fenced areas.
- (c) Temporary fencing will be erected when stock are grazing areas of the property where there is access to other waterways, excluded from condition 8(a) above.
- (d) All fencing will be maintained in a good state of repair.

Water Supply Agreement

9.

- (a) A water supply agreement between the scheme and owners of properties where water is to be used ('water user') shall be entered into and shall include terms which will achieve the following outcomes:
 - i. That no water from the Maerewhenua District Water Resources Co Ltd Spray Scheme shall be provided by the consent holder to any property unless a Farm Management Plan has been prepared for the water user in accordance with the Template and has been approved by the consent holder;
 - ii. A requirement for an audit to be undertaken by an appropriately qualified person to determine compliance by each water user with the provisions of their Farm Management Plan. The audit shall take place each year for the first 3 years after taking of water commences under this consent and thereafter at least once every 5 years. A copy of the audit shall be provided to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.
 - iii. Provision for access on to the property by the Scheme Manager or their nominated representative, in order to undertake such an audit and/or to undertake spot checks of compliance with the implementation requirements of the Farm Management Plan and/or to undertake environmental monitoring in accordance with the requirements of the resource consent for the Scheme;

- iv. A provision that all new irrigation infrastructures shall be designed and accredited by a qualified professional, and installed in accordance with the accredited design. The design shall take into account the specific requirements of the property's soil types.
- v. A provision that if the water user is taking water using existing irrigation infrastructure they shall obtain an evaluation report prepared by a certified irrigation evaluator. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation 2005. This report shall be obtained within 3 months after water is first delivered to the property. Any recommendations identified in the report shall implement within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council: attention the Compliance and Enforcement Manager.
- vi. A provision enabling the consent holder to either not initially supply or once supply has commenced, to restrict or cease the supply of water to a property in the circumstances where there is non-compliance with either the objectives of the Template or the Farm Management Plan.
- vii. The annual volume of water provided to each property by the consent holder shall not exceed the volume identified in the Farm Management Plan for that property.
- viii. Any change of party to a Water Supply Agreement under these conditions shall be notified to the Canterbury Regional Council.

19. Saltwater intrusion

- a. A sample of water shall be taken from bore <bore no>, in accordance with the following schedule: (a) During the first two years after the first exercise of this consent, once every month during the period commencing the last week in September and ending the last week in April, and (b) All samples shall be analysed for conductivity. (c) The laboratory carrying out the analyses shall be accredited to a NZS/ISO/IEC Guide 17025 or equivalent defined by an accreditation body recognized as operating to ISO/IEC Guide 58 for those analyses. (d) The results of each analysis, and the date and time of sampling, along with the date and time the sample is sent to the laboratory, shall be provided to the Canterbury Regional Council within 10 working days of the receipt of the analytical result from the laboratory.
- b. Whenever analysis of any sample of water taken from bore <bore no> indicates conductivity exceeding 100 millisiemens per metre, the taking of water in terms of this consent from the bore shall cease, and shall not recommence until analysis of a sample of water taken from the bore indicates conductivity is less than 100 millisiemens per metre.

20. Review

The Canterbury Regional Council may, once per year, on any of the last [number of days-default=5] working days of [month1] [or month2], 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.

21. Lapsing Date

The lapsing date for the purposes of section 125 shall be <between 5 years and 5 years three months, date set for each quarter>.

22. Non-concurrent use

This consent shall not be exercised concurrently with consent CRC<XYZXYZ> or any subsequent replacement consent.

23. Hakataramea River A permit minimum flow

Minimum flow: 500 litres per second, cease abstraction
1500 litres per second, reduce abstraction by 50%
Site: SH82

24. Hakataramea River harvesting minimum flow

Minimum flow: 4, 500 litres per second
Site: SH82

25. Grampians Stream minimum flow

Minimum flow: 57 litres per second
Site: Immediately downstream of the diversion

26. McKays Stream minimum flow

Minimum flow: 77 litres per second
Site: Hakataramea Valley Road
Minimum flow: 137 litres per second
Site: Immediately downstream of the intake.

27. Otekaieke River minimum flow

Minimum flow: 200 litres per second
Site: Weir Recorder site
Grid Reference: I41: 143-880

28. Kurow River minimum flow

Minimum flow: 165 litres per second
Site: Curries, 500 metres upstream of the intake
Grid reference: I40: 076-993

29. Waitaki River minimum flow

A. The minimum flow from Dam to Sea is 100 cumecs

This condition would only apply if agreement with holder of the Waitaki Dam consent is reached to the effect that the Dam consent holder will ensure that the following condition not activated.

Minimum Flow Condition:

If the holder of the Waitaki Dam consents provides notice to the Canterbury Regional Council that the mean flow in the Waitaki River as measured at the Kurow Recorder in the next 24 hour period is estimated to be less than 170 cumecs (and taking of water has not commenced under the HDI consents) or 190 cumecs (and taking of water has commenced under the HDI consent) the taking of water under this permit shall cease at the start of that period.

For the purpose of this condition:

- i. Actual demand means the peak rate of taking required and notified to the consent holder of the Waitaki Dam at least 14 days in advance.*
- ii. Flows shall be estimated at the Kurow Recorder (Kurow Recorder flow map ref: 140:079-088) by the Canterbury Regional Council and expressed in cubic metres per second.*
- iii. Each 24 hour period shall start 12.00am and finish 11.59pm.*
- iv. The flow in the Waitaki River at the Kurow Recorder shall include any flow taken from the Waitaki catchment upstream of the Kurow Gauge and returned downstream of the Kurow Recorder but upstream of the Hunter Downs Irrigation Scheme point of take.*

This condition incorporates by reference an agreement between the holder of the Waitaki Dam consents [CRC references], the signatories to the 1990 Access Agreement and MRNAG dated (date).

The minimum flow condition shall not apply upon commissioning of the North Bank Tunnel Concept [CRC references] and the diversion of flows through the tunnel.

B. The minimum flow in the River is the NBTC variable minimum flow between the Dam and Black Point

Minimum flow condition:

Whenever the mean flow in the Waitaki River in the preceding 72 hour period falls below the minimum flow rates in Table 1 the taking of water from the Waitaki River shall cease.

Table 1

Month of year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum River Flow (m ³ /s)	140	150	145	125	120	110	110	110	120	125	130	140

This condition shall not apply if the consent holder of the Waitaki Dam consents provides notice to the Canterbury Regional Council that the mean flow in the Waitaki River in the next 24 hour period is estimated to be equal to or exceed the flows in Table 1.

For the purpose of this condition:

- i. Flows shall be estimated at the Kurow Recorder (Kurow Recorder flow map ref: 140:079-088) by the Canterbury Regional Council and expressed in cubic metres per second.
- ii. Each 24 hour period shall start 12.00am and finish 11.59pm.
- iii. The flow in the Waitaki River at the Kurow Recorder shall include any flow taken from the Waitaki catchment upstream of the Kurow recorder and returned downstream of the Kurow Recorder but upstream of the Hunter Downs Irrigation Scheme point of take.

The minimum flow condition shall not apply upon commissioning of the North Bank Tunnel Concept [CRC references] and the diversion of flows through the tunnel.