

APPLICANT: WAITAKI ORCHARDS LIMITED

CRC061399 – To take and use water from a spring fed pond at a rate of 98 litres per second for the frost fighting purposes and the irrigation of 7.6 hectares of horticulture.

[] Location of take – surface water

Water may only be taken from a spring-fed pond, at or about map reference I40:126-017.

[] Rate of take and annual volume.

- (a) Water may be taken for irrigation at a rate not exceeding 98 litres per second, with a volume not exceeding 2,117 cubic metres in any period of seven consecutive days, and 41,800 cubic metres between 1st July and the following 30th June.
- (b) Water may be taken for frost fighting at a rate not exceeding 98 litres per second, with a volume not exceeding 4233.6 cubic metres per day, and 63,504 cubic metres between 1st July and the following 30th June.

[] Waitaki River minimum flow

Whenever the mean flow in the Waitaki River in the preceding 72 hour period falls below 150 cumecs the taking of water from the Waitaki River shall cease.

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 **not** include any flow taken from the Waitaki catchment upstream of the Kurow recorder and returned downstream of the Kurow Recorder but upstream of the Black Point.

The minimum flow condition shall not apply upon commissioning of the North Bank Tunnel Concept CRC071903, 071139, 071096 & 071878].

PROVIDED THAT whenever the Canterbury Regional Council, in consultation with a Water Users Committee representing, but not limited to, surface water and hydraulically connected groundwater users on the main-stem of the Lower Waitaki, has determined upon a water sharing regime which limits the total daily abstraction

from the resource then the taking of water in accordance with that determination shall be deemed to be in compliance with condition [] of this consent.

[] Land use and area to be irrigated

The water taken in condition () of this consent shall only be used for irrigation of horticulture crops and for frost fighting of those crops, as described in the application, on the area of land shown in attached plan "Waitaki Orchards Limited – Area of Irrigation & frost fighting and point of take".

[] 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 in general accordance with Fish Screening: good practice guidelines for Canterbury, NIWZ Client Report : CHC2007. 092, October 2007 and will 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.

[] 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 ().
- (b) Clause (a) shall not apply where an electromagnetic water meter is installed pursuant to Condition () and certification of this is provided pursuant to Condition ().

[] Flow meter – pumped.

- (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 $\pm 5\%$.

[] 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.

[] 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.

[] 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.

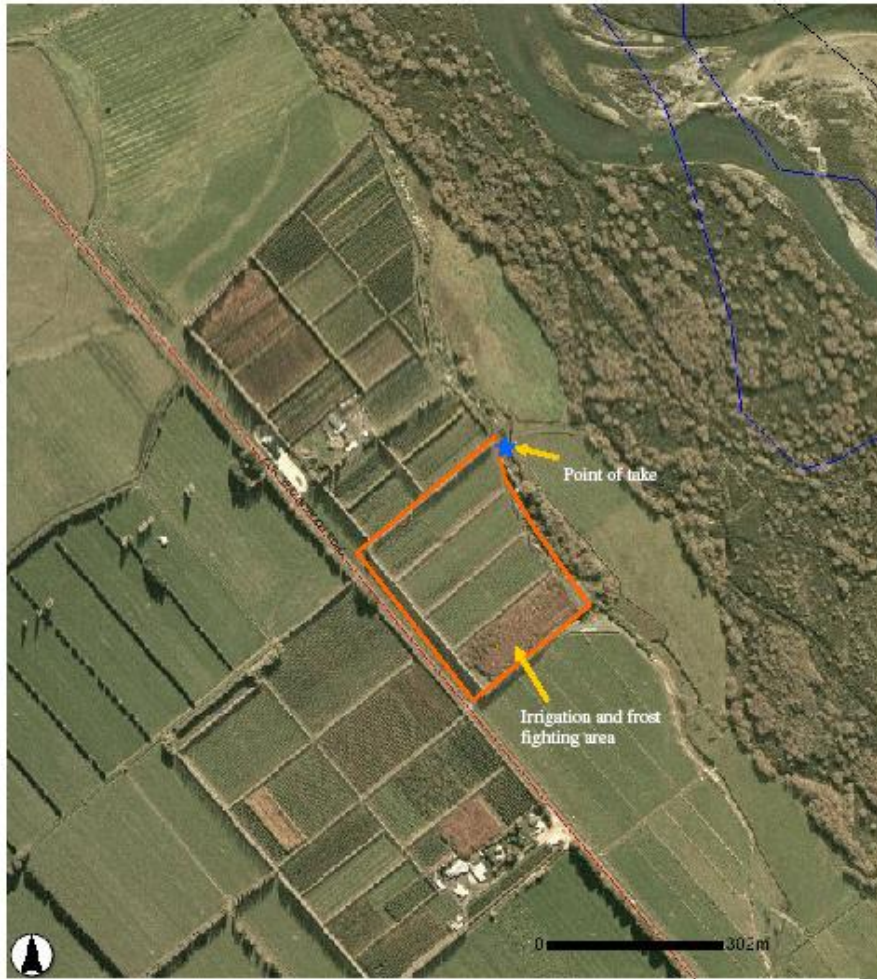
[] Review.

The Canterbury Regional Council may, once per year, on any of the last 5 working days of June 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.

[] 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.

[] A 35 year duration is sought.



Waitaki Orchards Limited
*Area of irrigation & frost fighting
and point of take*
