
RESOURCE CONSENT CRC151200

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO: Central Plains Water Trust
A WATER PERMIT: Take and use water.
TRANSFER DATE: 29 Jul 2014
EXPIRY DATE: 23 Dec 2028
LOCATION: North Rakaia Road, RAKAIA

SUBJECT TO THE FOLLOWING CONDITIONS:

- 1 The rate at which water is taken shall not exceed 450 litres per second, with a maximum volume not exceeding 41,500 cubic metres in any 30 consecutive day period.
- 2 Whenever the mean flow (expressed in cubic metres per second) in the Rakaia River, as estimated by the Canterbury Regional Council from measurements at either the gorge recorder site (map reference K35:015-424) or the recorder site maintained by the National Institute of Water and Atmospheric Research Ltd at Fighting Hill (map reference K35:997-437), for the 24 hour period ending at noon on any one day falls below the following flows, there shall be no taking of water in terms of this permit during the next succeeding day.

Month	Flow
JAN	146
FEB	130
MAR	127
APR	119
MAY	117
JUN	118
JUL	113
AUG	114
SEP	112
OCT	128
NOV	151
DEC	161

- 3 Whenever the mean flow (expressed in cubic metres per second) in the Rakaia River, as estimated by the Canterbury Regional Council from measurements at either the gorge recorder site (map reference K35:015-424) or the recorder site maintained by the National Institute of Water and Atmospheric Research Ltd at Fighting Hill (map reference K35:997-437), for the 24 hour period ending at noon on any one day falls below the flows shown on the vertical axis of the annexed graph, then the rates of abstraction permitted in terms of this permit for the next succeeding day shall not exceed those shown as corresponding in the horizontal axis of the annexed graph.
- 4 Notwithstanding conditions 2. and 3., Stored Water (as defined in the amended National

Water Conservation (Rakaia River) Order 1988) may be taken or diverted provided that:

- a. The consent holder is listed on the Register (as defined in the amended National Water Conservation (Rakaia River) Order 1988).
- b. The consent holder complies with any conditions imposed as a condition to being listed on the Register.
- c. No Stored Water shall be taken, unless the consent holder has requested the release of Stored Water and the holder of the resource consents for the Coleridge Hydroelectric Power Station has subsequently released that Stored Water.
- d. The total taking or diversion of Stored Water does not exceed the maximum abstraction rate for that consent holder recorded on the Register.
- e. The total abstraction of water (including Stored Water) does not exceed that set out in condition 1..

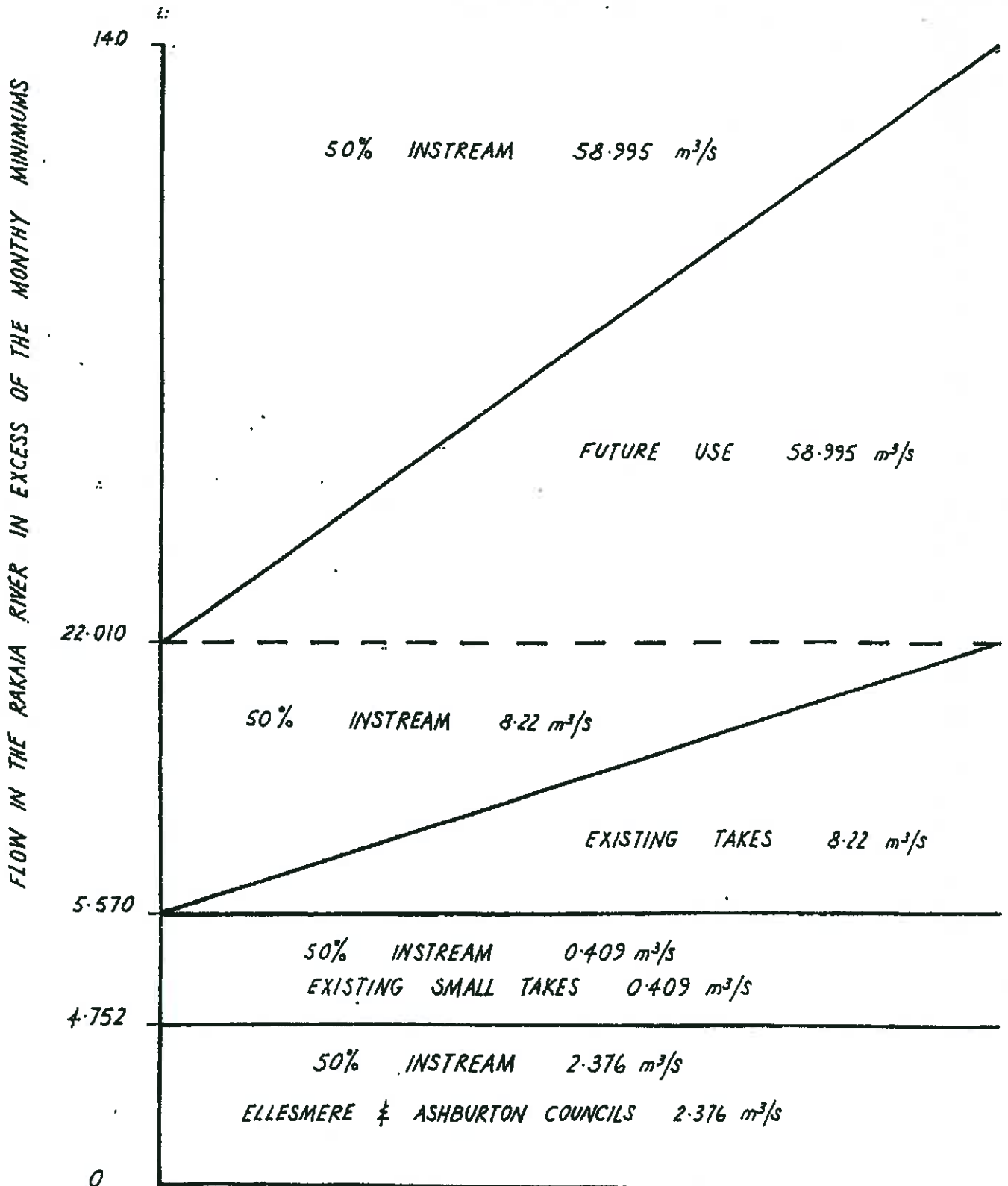
- 5 A fish screen shall be operated and maintained on the race intake to ensure that fish are prevented from passing into the intake at all times.
- 6 The hours and rate at which water is taken shall be measured and recorded daily in a log kept for that purpose, and a copy of the record submitted to the Canterbury Regional Council before the 31 January each year for the previous period August-September inclusive and before 31 May each year for the previous period January to April inclusive.
- 7 The Canterbury Regional Council may annually, on the last working day of November each year, serve notice of its intention to review the conditions of this consent for the purpose of complying with the requirements of a regional plan.
- 8 Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 of the Act.

Issued at Christchurch on 14 August 2014

Canterbury Regional Council

Water Allocation
from the Rakaia
River

GRAPHICAL CHART SHOWING
WATER ALLOCATION FOR THE RAKAIA
RIVER



Flowmeter, Datalogger Installation and Commissioning

TO: Environment Canterbury
C/o Water Metering Team
4 McNally Street
PO Box 419
Ashburton 7700

Ph: 03 308 7682
Fax: 03 365 3194
Email: water.metering@ecan.govt.nz

Consent Holder: _____
Consent number: CRC _____ Well/SWAP number(s): _____
Installation date: _____

Flowmeter details:

Make: _____ Meter size: _____ (mm diameter)
Model: _____ Pulse output: Yes / No
Serial number: _____ Volume per Pulse _____ m³/puls
(Start) Meter Reading Volume: _____ m³ (state units if different)

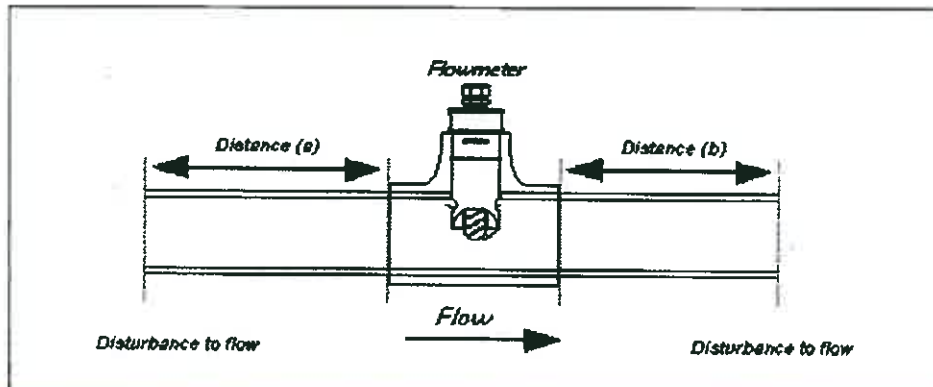
Datalogger details: Installed Yes / No

Make: _____
Model: _____ Serial number: _____
Telemetry installed for compliance: Yes/No Data hosted by: _____

Installation details:

Pipe internal/external diameter: _____ mm Pipe Wall Thickness _____ mm
Pipe material: *Ductile Iron, Mild Steel, PVC, Polyethelene, Aluminium, other* : _____ (circle)
Distance of straight, unobstructed pipe **upstream** of flowmeter (distance (a) in Figure 1): _____ mm
Distance of straight, unobstructed pipe **downstream** of flowmeter (distance (b) in Figure 1): _____ mm
Is there a straight unobstructed accessible pipe in the system of at least 15 diameters length to verify the flow with a clamp-on flow meter? YES / NO Location in system: _____

Figure 1: Installation diagram - Please mark any disturbances upstream of the flowmeter e.g. pipe size reduction, gate valves, pipe bends. Refer to Figure 2 for an example of a good installation.



Insertion meters only:

Insertion depth: _____ K-factor: _____

Ultrasonic meters only:

Transducer size: _____ Transducer spacing: _____

Transducer mounting: V or Z (Please circle, V = Reflect, Z = Direct)

Accuracy details:

Do you have a WET calibration certificate? **Yes / No** (If yes, then please submit the certificate.)

Has the meter been checked against a portable flowmeter? **Yes / No** (If yes please fill in water meter verification form)

Certification:

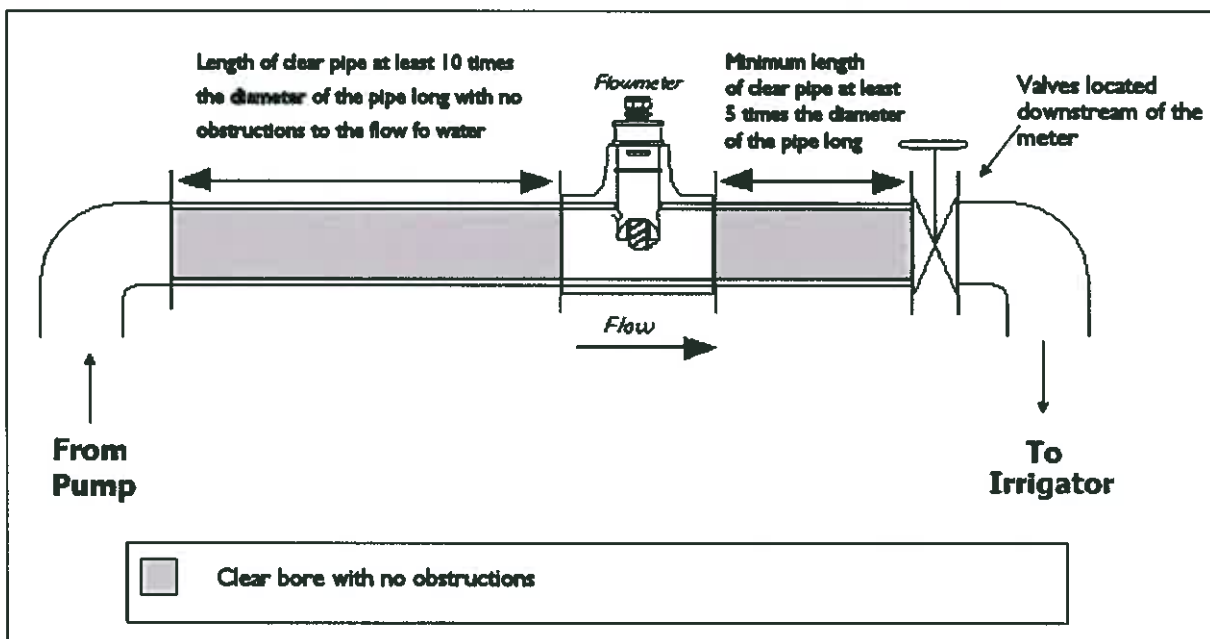
I/we certify that the above flowmeter and datalogger have been installed in accordance with Environment Canterbury's requirements.

- That a wet calibration certificate from the manufacturer is attached to this form
- That a water meter verification form is attached to this form.
- That a picture of the installation is attached to this form.

Installed by: _____ Signed: (by installer) _____

Company: _____ Date: _____

Figure 2: An example of an Ideal installation of a flowmeter, including obstructions in pipework.



Flowmeter/Water Measuring Device Verification Form

TO: Environment Canterbury
 C/o Water Metering Team
 4 McNally Street
 PO Box 419
 Ashburton 7740

Ph: 03 308 7682
 Fax: 03 365 3194
 Email: water.metering@ecan.govt.nz

Well/SWAP number(s): _____

Consent Holder: _____

Verification date: _____

Flowmeter/Water Measuring Device details: *(if not already provided on installation and commissioning form)*

Make: _____ Meter size: _____ (mm diameter)
 Model: _____ Pulse output: **Yes / No**
 Serial number: _____ Volume per Pulse _____ m³/puls
 Meter Reading Volume: _____ m³ *(state units if different)*

Insertion meters only:

Encountered K-factor in the flow meter : _____ Correct_Yes/No

Ultrasonic meters only:

Transducer size encountered _____ Transducer spacing: _____
 Transducer mounting: _____ V or Z (Please circle, V = Reflect, Z = Direct) Correct_Yes/No

Verification details:

Is a clamp-on water meter used for verification: **Yes/No** *(if no describe the method used) e.g. reservoir/time calculation, volumetric etc)*

Verification flow meter brand and type: _____

Verification flow meter serial number: _____

Last calibration date of the flow meter used for verification: _____

(Calibration certificates needs to be send in (once) after every (yearly) calibration to ECan)

Verification parameters:

Used parameters for verification: Pipe diameter: _____ mm Pipe Wall Thickness _____ mm

Pipe material: **Ductile Iron, Mild Steel, PVC, Polyethelene, Aluminium, circle or other** : _____

Location in system where the clamp-on was attached: _____

Measured flows:

Undertake three separate observations and record and average the results in the table below.

Verification flows should be taken at or around the consented flow rate and/or the flow rate the well is usually pumped at.

If flows don't verify within 5% a second clamp-on location can/should be attempted.

	Location 1 Observation 1	Location 1 Observation 2	Location 1 Observation 3	Location 2 Observation 1	Location 2 Observation 2	Location 2 Observation 3	Average
installed meter flow: L/s							
verification flow meter: L/s							
% Difference							

Certification:

I/we certify that the above flowmeter/water measuring device has been verified and the measured flow is within 5% of the verification meter.

OR (circle one)

I/we have found that the installed flowmeter/water measuring device deviates more than 5% above/below the verified flow.

Recommend remedial action: _____

Verified by: _____ Signed: (by verifier) _____

Verifiers Certificate No *: _____

Company: _____ Date: _____

* Each verifier will be registered by the manufacturer/supplier on having attended a verifier course for their equipment. ECan will keep a list of the approved verifiers and certificate numbers.