

# Form RS1 Piped takes, water meter, datalogger installation/commissioning and verification



**Post to:**  
 Otago Regional Council  
 70 Stafford Street  
 Private Bag 1954  
 Dunedin 9054  
 Attn: Environmental Services

**or Email to:**  
 watermetering@orc.govt.nz  
  
 Verification Only  
  
 Installation / Commissioning

Phone: 0800 474 082  
 www.orc.govt.nz

**This form must be completed in full by the equipment installer or verifier and accompanied with photos of the installation.**

Consent number:		
Well number(s):		
Name of consent holder:		
Address of consent holder:		
GPS location of meter (NZTM format):	Easting:	Northing:
GPS location of take (NZTM format):	Easting:	Northing:
Location of take:		

## Water meter details

Make:		Meter size (mm diameter):	
Model:		Pulse output?	Yes No
Serial number:		Volume per pulse:	m <sup>3</sup> /pulse
(Start) meter reading volume:	m <sup>3</sup> (state units if different)	Type of meter (e.g. electromagnetic, mechanical):	
Installer:			

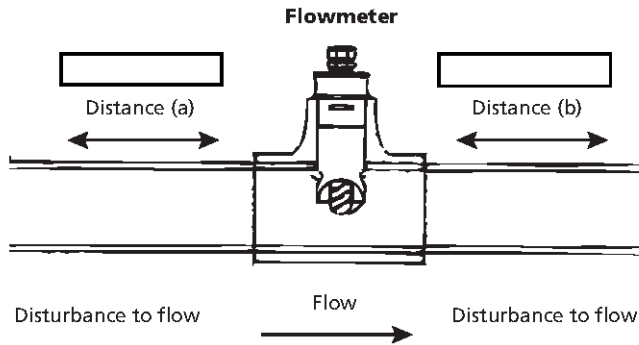
## Datalogger details

Installed?	<input type="radio"/> Yes <input type="radio"/> No	Installer:	
Make:		Model:	
Serial number:		Telemetry installed for consent compliance?	<input type="radio"/> Yes <input type="radio"/> No
Data hosted by:		Telemetered daily to ORC?	<input type="radio"/> Yes <input type="radio"/> No

## Installation details

Pipe internal/external diameter:	mm
Pipe wall thickness:	mm
Pipe material:	[drop down box]
Distance of straight, unobstructed pipe <b>upstream</b> of water meter:	mm (distance (a) in Figure 1)
Distance of straight, unobstructed pipe <b>downstream</b> of water meter:	mm (distance (b) in Figure 1)
Is there a straight unobstructed accessible pipe in the system of at least 15 diameters length to verify the flow with a clamp-on water meter?	<input type="radio"/> Yes <input type="radio"/> No

**Figure 1: Installation diagram** - Please mark any disturbances upstream of the water meter 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 = Reflect or Z = Direct)

**Accuracy details**

Do you have a water meter calibration certificate?	<input type="radio"/> Yes <input type="radio"/> No (If yes, please submit the certificate)
Has the meter been checked against a portable water meter?	<input type="radio"/> Yes <input type="radio"/> No

**Verification details**

Is a clamp-on water meter used for verification?	<input type="radio"/> Yes <input type="radio"/> No If no, describe the method used e.g. reservoir/time calculation, volumetric etc:
Verification flow meter brand and type:	
Last calibration date of the flow meter used for verification:	DD / MM / YYYY

**Calibration certificates must be sent in (once) to the Otago Regional Council, after every required calibration**

**Verification parameters**

Pipe diameter (mm):		Pipe wall thickness (mm):	
Pipe material:	[drop down]	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**

(Select one):

- I/we certify that the above water meter/measuring device has been verified and the measured flow is within 5% of the verification device.
- I/we have found that the installed water meter/measuring device deviates more than 5% from the verified flow.

Recommend remedial action:

If unable to be verified at the time of the installation/commission please advise date this will be completed by:  
DD / MM / YYYY

I/we certify that the above water meter and datalogger have been installed in accordance with Otago Regional Council and Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 requirements and that:

- a water meter calibration certificate from the manufacturer is attached to this form
- a picture or photo of the installation is attached to this form.

Verified by:   
Company:

Signed:   
Date: DD / MM / YYYY

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

