Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Emergency replacement bores

Domestic and stock water bores

Guidelines September 2010

If your domestic or stock water bore was damaged in the recent earthquakes, we understand that drilling a replacement bore to access water may be one of your top priorities.

If you do need to drill a replacement bore, please make sure that your new bore is at least:

- **50 metres** from neighbouring bores
- **50 metres** from springs, wetlands, streams and/or rivers
- **50 metres** from septic tanks and wastewater discharges
- **100 metres** from community water supplies

The location and depth of your new bore is important information for us at Environment Canterbury.

If a new bore has been drilled please send us this information by filling in the Bore Completion Report (overleaf) and attaching a Drillers log.

It is important that you adhere to the usual restrictions and conditions that we require for the installation of the new bore, as below:

Only one aquifer or water-permeable zone should be accessed by your bore.
The annulus of the bore shall be sealed with bentonite or concrete grout one metre below ground level or to above the screen, whichever is the lesser. This is to prevent movement of fluid down the sides of the casing into the screened collection layer.
The top of the bore shall be covered or capped to prevent contaminants entering the bore and underlying groundwater.
A concrete pad must be constructed around the bore head at the ground surface or at the pumphouse floor level. This is to prevent leakage of groundwater, any movement of the casing, and any material or surface water entering the bore or annulus.
The concrete pad should be at least 0.3 metres in radius and 0.1 metres thick, and should slope away from the bore.
To enable the measurement of water quality, a tap should be fitted on the outlet side of the bore discharge main.
A device should be installed in the bore to allow water measurements to be taken (see methods).

Methods to measure water levels

a) Where there is sufficient space for a water level probe between the riser and the well casing and the lowest pumped water level is less than 10 metres below ground level, install a standard 15, 20 or 25 millimetre socket and screw-in bung on top of the bore to enable water level measurements to be taken using a water level probe.

(b) When there is insufficient space for a water level probe between the riser and the well casing, connect a socket and bung of 25 millimetres to a 20 millimetre diameter pipe down the well so a water level probe can be inserted without being caught in cables or between the flanges of the riser pipe and casing. The pipe should extend to within two metres of the top of the pump. Then take water level measurements using the water level probe.

(c) If (a) or (b) cannot be carried out, install a small pressure tube of not less than five millimetres down the well to allow a pressure gauge to be used for a water level depth measurement. The depth at which the end of the pressure tube is installed should be measured from the top of the casing to an accuracy of 5 cm and the pressure gauge dial shall be accurate to the nearest 10 cm. After lifting and replacing the submersible pumps the pressure tube shall be replaced at the same depth or the difference shall be recorded in a note book kept for that purpose.

Please contact us if you have any queries on:
0800 EC INFO (0800 324 636) or email ecinfo@ecan.govt.nz

Bore Completion Report

Please answer ALL questions below

A. Bore details

Bore owner :

Address :
(of bore location)

Driller :

For office use only

File number:

B. LOCATION of bore

The actual location of your bore is important as it establishes a point on the map from which all future measurements are made.

Please supply a NZ grid reference to 10m accuracy taken with a (handheld) GPS system.

Map Reference: _ _ _: _ _ _ _ - _ _ _ _

OR

Easting: 2 _ _ _ _ _ _

Northing: 5 _ _ _ _ _ _

C. Koiwi Tangata

Were any Koiwi Tangata (human bones) or taonga (treasured artefacts) disturbed during drilling? Yes No

If Yes, were the runanga contacted? Yes No

D. Bore Head

Sealing, capping, labelling and water level measurement access

Have you sealed around the bore head at ground level?
Yes No Will Be

What is the sealing material?
(e.g. concrete, bentonite)
Yes No Will Be

Has the bore been capped?
Yes No Will Be

Has a water level measurement access device been installed?
Yes No Will Be

Has a tap been fitted on the outlet side of the bore discharge main?
Yes No Will Be

E. Decommissioned Bores *(For Damaged Bores)*

Bore number .....
has been decommissioned.

Has the bore been backfilled? Yes No Will Be

What was used to backfill the bore?
(e.g. concrete grout, sand, clay or cuttings)

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If the bore has not been backfilled has it be permanently capped?
Yes No Will Be

Has the bore been sealed at the surface?
Yes No Will Be

Comments: .....
.....

F. All sections above have been answered and all the necessary attachments have been enclosed.

Signed: ..... Date:.....

NOTES TO CONSENT HOLDERS

1. If you require more forms or assistance, please contact Customer Services at Environment Canterbury, 0800 EC INFO (0800 32 4636).
2. All relevant sections must be completed.
3. Please ensure the driller fills out a Driller's Log and attach to this form. If you do not have a driller's log, please answer all questions in the Bore Installation Report – even if this means writing down 'don't know' or 'not applicable'.

The information you provide is official information. It will be used together with other official information to assist in the management of the region's natural and physical resources. Access to information held by Environment Canterbury is administrated in accordance with the Local Government Official Information and Meetings Act 1987, and the Privacy Act, 1993.

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Kaunihera Taiao ki Waitaha

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