

# Groundwater Monitoring Bore Drilling Project: Gunnedah to Spring Ridge

May 2014

## Increasing the spatial coverage of NSW Office of Water's groundwater monitoring bore network

The NSW Office of Water is responsible for the management of groundwater resources in NSW, with over 3,000 monitoring bores already in operation throughout the state to monitor the level and quality of groundwater.

An important natural resource in NSW, groundwater is a source of drinking water for many rural towns and is used for industrial needs such as mining. It also supports the domestic and stock requirements of farms or remote households and communities, as well as being used for irrigation.

Of all water use in NSW, 11 per cent is sourced from groundwater. Groundwater level data from over 300 of the Office of Water's monitoring bore sites is available on the real time data site - [www.water.nsw.gov.au/Realtime-reports/groundwater/default.aspx](http://www.water.nsw.gov.au/Realtime-reports/groundwater/default.aspx)

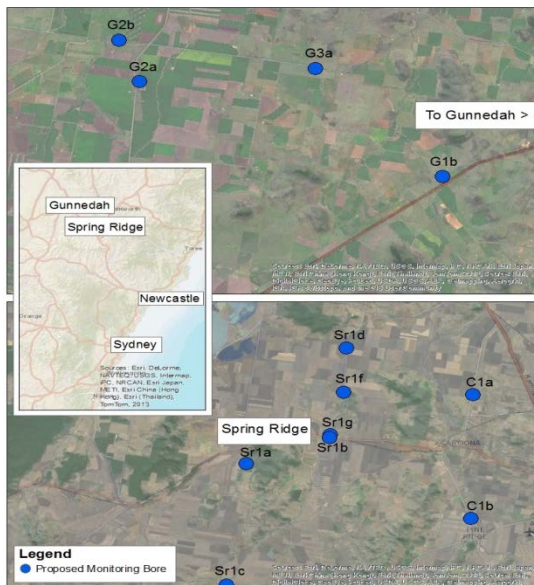
## What's happening and when?

The Office of Water is increasing the spatial coverage of our monitoring bore network through the drilling of new groundwater bores in key areas of NSW between August 2013 and August 2014. The three areas of construction are:

- Broke-Bulga
- Merriwa
- Gunnedah to Spring Ridge.

This fact sheet covers the Gunnedah to Spring Ridge area of operation. The Gunnedah to Spring Ridge drilling program aims to construct monitoring bores in aquifers and coal seams, at depths ranging between 100 and 300 metres.

Figure 1: Location of proposed monitoring bores in Gunnedah to Spring Ridge program



## Why is this being carried out?

NSW is currently experiencing growth in mining projects, in particular coal seam gas and large coal mining developments. It is therefore important to gather baseline information on groundwater levels and water quality throughout NSW.

By increasing the spatial coverage of the Office of Water's groundwater monitoring bore network in the vicinity of some of NSW's coal basins, namely Sydney/Gunnedah, it will improve our understanding of the hydrogeologic environment. Over the long-term, information from monitoring bores can be used to more effectively manage the state's groundwater resources.

## What is the environmental assessment process?

The potential environmental impacts associated with the monitoring well drilling program are being assessed via three Review of Environmental Factors (REF) - one for each of the project areas - to fulfill the Office of Water's obligations as a Determining Authority under Part 5 of the Environmental Planning and Assessment Act 1979.

Each REF addresses matters for consideration listed under Clause 228 of the *NSW Environmental Planning and Assessment Regulation 2000* and provides an assessment of environmental impacts and suggested mitigation measures to minimise impacts during construction and operation of the bores. The three REF's will be available on the Office of Water's website once completed.

## What will happen?

The process of drilling the bores may take between two to three weeks, depending on the ground conditions encountered at each site. The work will be carried out each day of the week from Monday to Sunday from 7am to 7pm and will be supervised by the the Office of Water's drilling unit.

The installation of the groundwater bores involves a process known as 'rotary mud drilling'. The footprint of the site will be restricted to a temporary 70 m x 35 m area, within which all equipment will be located during bore installation. The drill site will include equipment such as:

- drilling rig
- portable site office
- portable toilet
- three 10 m long portable water tanks of 15,000 litre capacity
- rubbish skip.

Figure 2: A drill rig similar to this will be used to install the monitoring bores



## What can I expect during the monitoring bore installation?

During the monitoring bore installation process, residents may hear the drill rig. Mitigation measures to minimise noise are outlined in the 'Gunnedah to Spring Ridge Review of Environmental Factors'. Residents may also see the drill rig and associated equipment at each site.

Drill support trucks, service vehicles and other smaller support vehicles can be expected in the area. Dedicated parking areas will be established at each site for all vehicles. Temporary signage will be erected to alert traffic that trucks are entering and crossing.

## What will the monitoring bore look like?

Once the bores have been installed, there will be permanent fixtures at each site to allow for ongoing data collection. The permanent fixtures will be located within a five square metre footprint.

Figure 3: Example of the above ground features permanently installed at each site



## Who can I contact for more information?

For further information regarding the groundwater monitoring bore drilling program, please call **1800 353 104**.

[www.water.nsw.gov.au](http://www.water.nsw.gov.au)

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