

FORMER WASTE CONTROL SITE - BELLEVUE

Groundwater monitoring

Extensive monitoring has been carried out at the former Waste Control site in Bellevue to:

- assess the extent and down-gradient movement of two groundwater plumes; and
- protect human health and the environment.

More than 60 wells have been installed in the area since the 2001 fire. These are located on the site and across neighbouring properties as shown on Figure 1.

The wells are installed at various depths to allow monitoring of different aquifer units including the Guildford and Leederville Formations. Figure 2 shows these units and part of the groundwater monitoring network in cross-section.

Monitoring is also occurring at the Helena River, both in the river itself and the floodplain or "damplands".

- A plume of mixed hydrocarbons and chlorinated organics originates from beneath the site. Groundwater concentrations above the risk based criteria (RBC) extend approximately 150 metres south west in the direction of groundwater flow (shown in light red on Figure 1).
- A plume of trichloroethene (TCE) originates from near the east end of Stanley Street and extends approximately 80 metres south-southeast to the base of the escarpment in the damplands (shown in light yellow on Figure 1). Groundwater concentrations above the RBC do not extend very far beyond the base of the escarpment.

When is monitoring carried out?

- Annual monitoring is conducted in March/April when groundwater levels are at their lowest (the end of summer). The most recent full round of monitoring was in March/April 2009.
- Additional monitoring is carried out when new wells are installed.

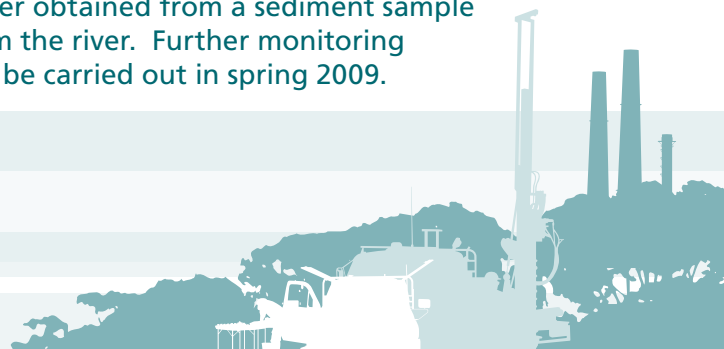
What is being monitored?

- General water quality parameters (including pH and dissolved oxygen levels)
- A wide range of chemicals that are known to have been present at the site. The full list of contaminants can be found in the monitoring reports.
<http://www.dec.wa.gov.au/news/community-updates/former-waste-control-site-at-bellevue.html>

Most recent monitoring results

The April 2009 monitoring data indicate that the leading edge of the TCE plume is moving towards the Helena River. Low levels of chlorinated solvents were detected in wells closer to the Helena River than previously recorded. In addition, trace (i.e. very low) levels of TCE and a related breakdown product were detected for the first time in pools of standing water in the mostly dry Helena River bed. The levels detected are significantly below the levels of concern for aquatic ecosystems or recreational use of the river.

Re-sampling in June 2009 did not detect chlorinated solvents in the Helena River surface water samples, however, a trace of TCE was found at one location in water obtained from a sediment sample from the river. Further monitoring will be carried out in spring 2009.



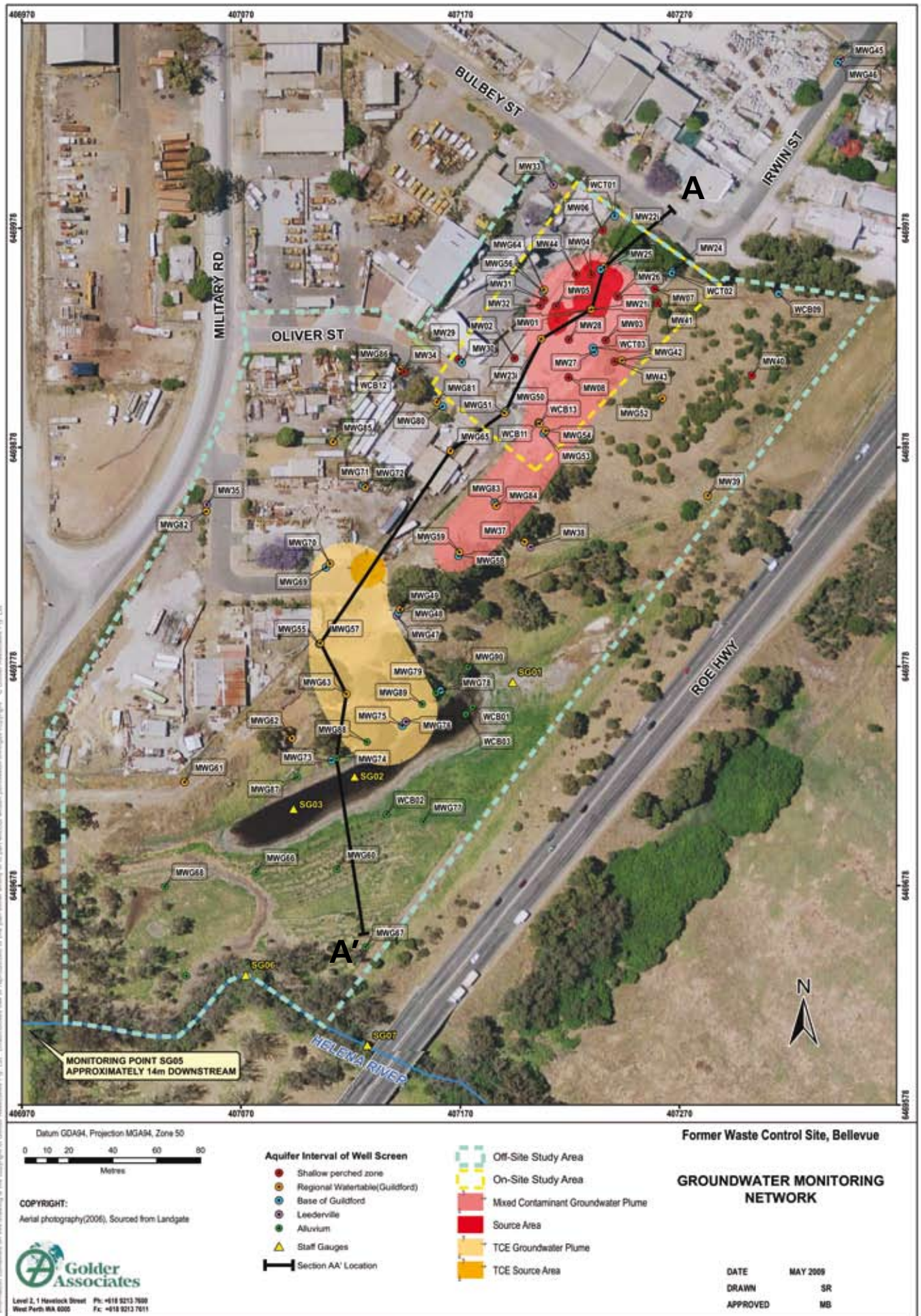


Figure 1 Monitoring network and location of groundwater contamination plumes.

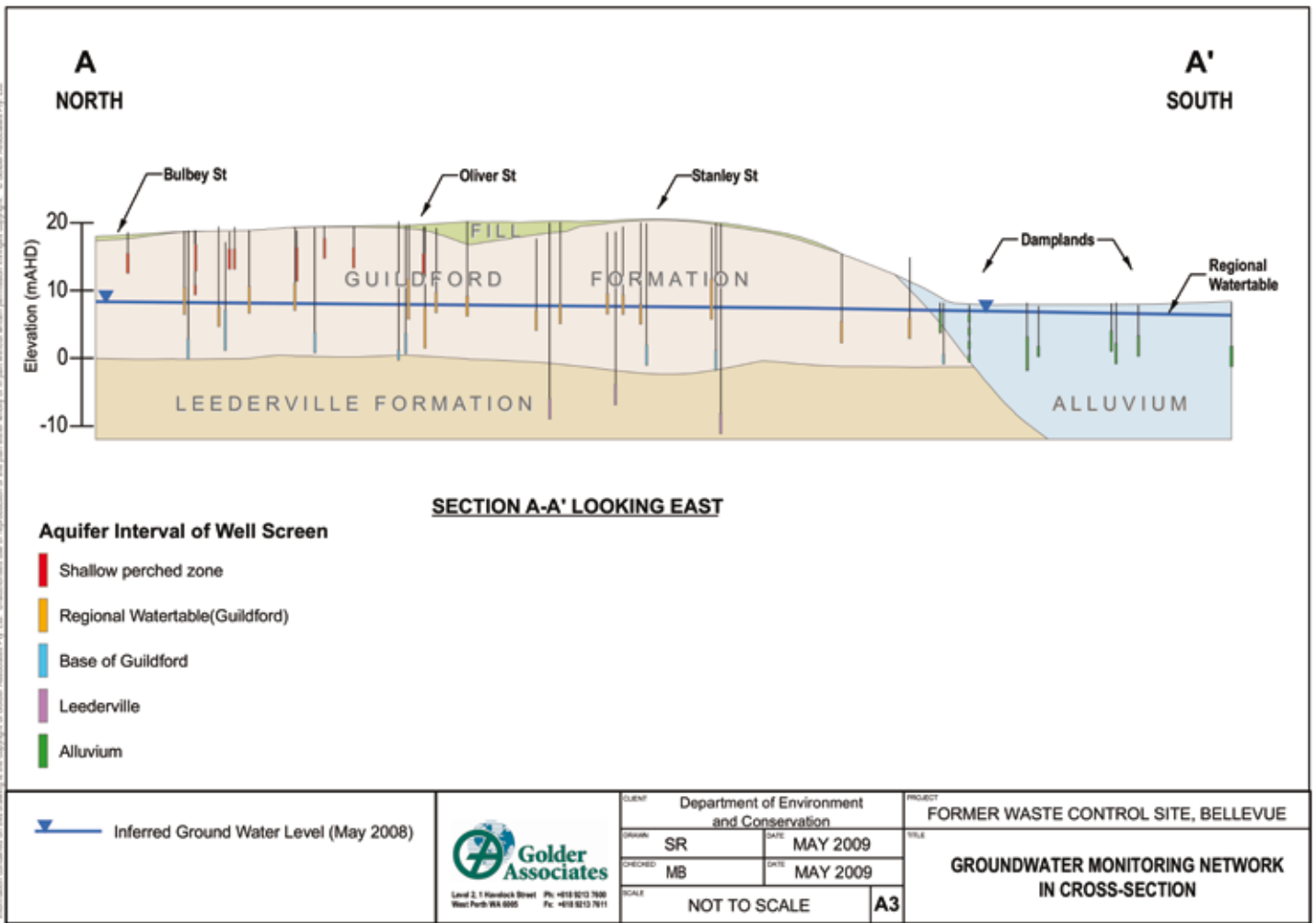


Figure 2 Aquifer cross-section showing aquifer interval being monitored.

Where to now?

Work is well advanced on developing a clean up strategy for the site and the offsite contamination. Part of this strategy is to install two permeable reactive barriers to treat the contaminated groundwater before it reaches the Helena River at levels that would pose a risk to either the aquatic ecosystem in the river or recreational users of the river or damplands.

More information on the Bellevue clean up

Visit DEC's webpage <http://www.dec.wa.gov.au/bellevue> for more information on the clean up of the former Waste Control Site at Bellevue.

Contaminated sites in Western Australia

DEC has published a series of fact sheets and administrative and technical guidelines to assist with the assessment, management and remediation of contaminated sites. These are available at: <http://www.dec.wa.gov.au/contaminatedsites>

More information is available by mail from the address below or by calling the Contaminated Sites Branch on 1300 762 982.

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