

Project Profile

Hills Industries Site Remediation and Soil Treatment



Client	Colonial First State
Location	Edwardstown, South Australia
Duration	12 Weeks, May 2011 - July 2011
Contract	Site Remediation and Soil Treatment using Oxidation and Chemical Fixation
Cost	\$1.5 Million

Project Overview

Removal and treatment of contaminated soil, and mitigation of on-going groundwater contamination.

With a history of farming landuse prior to its development for commercial and industrial purposes, the Hills Industries manufacturing plant required detailed remediation works to mitigate the risk of on-going groundwater contamination and to allow for future development.

The site presented several areas of contamination resulting from industrial chemical spillages, concrete pits, steel baths, waste acid pits, underground fuel storage tanks and underground tunnels, which required removal.

The complex excavation process demanded thorough planning, with a layer of clean material covering the contaminated soil. The remediation goal for the largest contaminated area was to remove 4,000 tonnes of solvent impacted soil.

The scope of works included the excavation of 2,000 tonnes of solvent impacted material and transportation of the material to an offsite treatment facility. Treatment of the highly contaminated material was undertaken utilising the Komatsu BZ210-1 Reterra soil conditioning machine.

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The project team utilised a McMahon Services designed and developed Materials Waste Tracking System to track all material from excavation, stockpiling and then to backfill/disposal for every bucket of soil, resulting in accurate soil management and the elimination of cross contamination, ultimately minimising expensive disposal costs.

Real-time odour monitoring was also critical for the project, to ensure surrounding properties and the local community was not affected. The highly odorous material on site called for specialist PPE and respiratory filters and monitoring conducted not only next to excavation operations, but also at the boundary of the site.

As part of the extensive pre-planning process, McMahon Services engaged with and notified local businesses to switch off all air conditioning systems during particular stages of the project to reduce inhalation of the odours and potential dust.

Dust monitoring was also undertaken using two Dust Trak monitors to monitor dust generation during site works on a daily basis, taking a reading every 15 minutes upwind and downwind of the major work area of the day. Dust management was performed with water hoses used throughout the duration of the excavation process and tarps used to cover all trucks transporting material to and from the site.

In terms of the contaminated soil treatment, over 4,000 tonnes of solvent contaminated soil was treated using an oxidation process through the Reterra Soil Conditioner. In addition, heavy metal contaminated soil was treated using a chemical fixation process, where the Reterra was instrumental in ensuring a successful outcome was achieved.

