

Case Study

Pidgeon Close Site Remediation, QLD

Green File

Environmental monitoring was conducted in and around the excavation each morning prior to start-up of excavation activities and throughout the course of site activities.

Wherever possible, recyclable and or reusable materials were segregated from the demolition for possible reuse off site.



Location

Brisbane, QLD

Client

Energex

Value

AUD\$ 10 Million

Duration

February – December 2006

Contract Type

Schedule of Rates

Referee

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Thiess Services was contracted to perform the remediation operations on a 1.245 hectare parcel of land at Brisbane's West End district. Due to the long history and extensive use of manufactured gas, the existence of a gas manufacturing industry in Australia has resulted in a significant number of contaminated sites, of which West End is a typical example.

The primary objective of the project was to excavate out to the set depth (as approved by Energex) and remove contaminant concentrations at the site and send to Swanbank Waste Management Facility for treatment.

Given the former location of infrastructure such as tar pits, storage tanks, retorts, coal and oxide storage on adjacent sites, it is more than likely these sites (particularly the Pidgeons site to the north-west) it had similar contamination issues as the Pidgeon Close Remediation site.

Surrounding sites had very similar groundwater and geological regimes, with sites closer to the Brisbane River having deeper soil profiles (greater depth to bedrock) and thus greater potential for deep contaminant migration. In addition these site where closer to the nearest sensitive groundwater receptor, the Brisbane River

Innovations

Environmental monitoring was conducted prior to entry, and on a regular basis if required. Ventilation systems were established as required in order to maintain the adequate supply of oxygen and to reduce vapour concentrations to a safe level.

The objective of environmental controls was to capture contaminated materials, detritus, rubbish, soil, concrete, solid garbage or waste from the demolition works and prevent them from contaminating areas of the site and entering the stormwater system and minimising fugitive dust emissions.



Challenges/ Unusual Features

The remediation works conducted at Pidgeon Close Remediation included:

- Telstra & Energex service relocation;
- Waste water storage pond construction;
- Sheet pile wall installed on Beesley Street;
- Tent structure erected on the south-western side of site;
- Temporary road installed after remediation of Zone H on the northern side of the site;
- Demolition and removal of in-ground structures, concrete slabs, surface paving, foundations, pipelines and redundant services;
- The excavation, and off-site disposal of low impacted and high impacted materials;
- The excavation and off-site disposal of non-impacted materials;
- As required the treatment, disposal and recycling of contaminated water encountered during the course of the works;
- The regrading of the site with clean materials won from the excavation works and suitable material obtained from off-site sources as/if required;
- Remediation of groundwater if required; and
- Restoration of road access to Pidgeon Close and Beesley Street's.



Quantities

A project objective is to minimise the impact of contaminated soils on clean soils, to do this the following program was put in place:

- Ensure contaminated plant is decontaminated prior to commencing work with clean soils.
- Contaminated plant is to operate only over contaminated areas or along designated haul routes.
- Construct adequate bunds around any fuel or oil stores.



OHSE

Confined spaces where ventilated with a fan(s) prior to, and during, entry to maintain flammable vapour concentrations below acceptable levels and oxygen at the required level, all fans and associated equipments where explosion proof.

Entry into confined spaces was conducted in strict accordance with Australian Standard 2865-1986 Safe Working in a Confined Space and TS-OHS-WI03 Entry and Work in Confined Spaces.

In addition, Thiess Services arranged via subscription services and the Internet for automatic advice/updates on new or amended environmental, health and safety legislation or regulations.

Community Engagement

All care was taken not to put at risk the health of site users and local receptors, and which did not cause any unacceptable impact on local environment.

As many of these gas work sites were located in inner city areas, as is the case with West End, there is considerable pressure to make these sites available for redevelopment.