

Budget Hotel Chain – Remediation Scheme

Former Use: Gasworks
Client: Tiger Developments
Value: £430,000
Location: Layerthorpe, York

This former gasworks site was the location for two historical gasholders leaving a legacy of both soil and groundwater contamination. The site was adjacent to the River Foss that, although canalised in the location, was at risk of significant impact from the site.

As part of the remediation and enabling works the groundwater, which was found to be in a shallow and deep aquifer and heavily impacted with hydrocarbons from the site legacy, was treated by direct injection of Peroxide. Although there were two aquifers the head and phreatic surface were both found to be at approximately 9m depth.

Work included:

- Maintaining of three monitoring wells across the injection area all with dual monitoring pipes for both aquifers;
- Installation of a grid of injection wells across the impacted zone based on a 15m grid, each location pressure grouted in by tremi to avoid daylighting;
- Direct injection of peroxide into the groundwater using one of Provectus own in-house bespoke portable injection rooms;
- Ongoing monitoring of the three well across the injection area and other wells across the site wide area to monitor the ongoing performance of the injection works;



The injection works were in conjunction with a range of treatments undertaken on the same site at the same time including the following:

- Ex-situ biological treatment of impacted soils and removal of grossly impacted soils.
- Re-profiling of site to facilitate ongoing development to a hotel with associated drive through restaurant;
- Removal of a gasholder base including heavy gauge steel trough perimeter;
- Ex-situ chemical treatment and re-use of impacted soils below the steel trough;
- Treatment and removal of Japanese Knotweed impacted soils on the site boundary and adjacent to the river;
- Long term monitoring of the treated groundwater and decommissioning of all wells to EA specification once criteria targets had been met.

All work was completed within tight time constraints to enable the site to be redeveloped for a budget hotel chain and a fast food outlet.