ABB managed the remediation of a former Petrol Filling Station (PFS) situated above a sensitive principal chalk aquifer.

The site was closed due to a Compulsory Purchase Order (CPO) associated with a road widening scheme. Following site demolition, an environmental site investigation revealed hydrocarbon contamination in the chalk aquifer.

A remedial solution therefore needed to be implemented at the site to address the identified impacts and associated potential environmental liabilities. Whilst being undertaken as voluntary remediation work, given the environmental sensitivity of the site, the client required that the remedial solution be agreed with the regulator.

The remediation was challenging due to the depth of impacts, sensitive nature of the underlying aquifer and commercial drivers.

In terms of the remediation solution, the client required safe implementation, certainty of cost and programme, agreement with the regulator and assurance that long term liabilities associated with any residual impacts following active remediation were addressed.

ABB provided the necessary proven experience and highly skilled multi-disciplinary team to deliver the client’s requirements on this high profile and challenging site.

Solution

ABB was appointed as the managing contractor and CDM coordinator for the demolition, investigation and remediation of the PFS. For the remediation element of the work ABB carried out the following:

- Liaison with the regulator to agree the remedial strategy and ongoing consultation through the remediation process
- Preparation of a select list of remedial contractors through a pre-qualification process
- Procurement of tenders for the remedial works including:
  - Preparation of tender health and safety documentation
  - Preparation of the technical scope of work
  - Preparation of the commercial aspects of the tender
  - Technical and commercial evaluation of tender submissions
  - Management of tender queries and meetings with remedial contractors
  - Recommendation to client for preferred remedial contractor
  - Negotiations with preferred contractor
- Tenders were procured on the basis of an all risk lump sum fixed price to provide the client with certainty of cost and limited risk
- Management of the delivery to project completion

Above: Drilling and well installation.
The implemented remedial solution comprised a 12 month active remediation programme with remediation to agreed remedial criteria augmented by a monitored natural attenuation (MNA) programme. Active remediation comprised:

- Engineered capping layer across main source area at 2.5mbgl
- Soil Vapour Extraction (SVE) in unsaturated zone (with SVE enhancing biodegradable)
- Vacuum Enhanced Pumping (VEP) of groundwater (including LNAPL treatment) and chemical oxidation

ABB managed the implementation, operation and decommissioning of the active remedial solution. This included stewardship of health and safety, pre-commisioning checks of the remedial system, field audits, review of remediation progress through regular stewardship meetings with the contractor and technical review of remediation progress reports.

The active remediation phase has successfully been completed with remediation criteria met within the stipulated time frame.

ABB continues to manage the remediation validation and MNA programme which are ongoing.

Benefits
- £0.5 million cost saving through competitive tendering
- Certainty of fixed cost for completion of remediation using ABB’s payment milestone process
- Limited remediation and contract risk exposure for client
- Full remediation and validation work package provided to address environmental liabilities associated with the site and comply with regulator requirements
- Site delivered for divestment on programme and to budget
- A clean break
- Full range of safety led integrated managing contractor and CDM coordinator services