

Harwell

Site Area:	1 Hectare
Former Use:	Waste Disposal Area
Client:	RSRL (formerly UKAEA)
Value:	£2,450,000

Provectus have pioneered the first application of in-situ thermally enhanced soil vapour extraction in the UK.

The Western Storage Area (WSA) at Harwell Laboratory was originally a series of open pits excavated into the Chalk and used for the disposal of various chemical and laboratory wastes for the last quarter of the 20th Century. These included TCE, PCE, VC, BTEX, DCA and DCE.

Provectus installed a treatment train on a series of disposal pits each budget year to coincide with the Clients budgetary constraints. Over this period of time targeted treatment utilising a combination of in situ thermal desorption (ISTD) and soil vapour extraction (SVE).

By applying heat to the Chalk underlying the source area Provectus have removed all solvent contamination (TCE, PCE, VC, BTEX, DCA, DCE etc) from the rock matrix.

The following works were undertaken:

- Installation of heater wells and SVE abstraction wells at depths of between 6 and 18m below ground level;
- Heater wells containing electrically powered heating element and, via conductive heating, a rise in target zone heating approaching 100°C;
- contaminants were effectively boiled off into the vapour phase and vapours collected continuously using centrally located SVE abstraction wells;
- and off gas treated by GAC prior to discharge to atmosphere.



This technology has added benefit over conventional SVE in that it ensures complete removal of contamination from the source area and in so doing is an integral part of ensuring the groundwater treatment system at the site will be effective in the future