

CASE STUDY CS247

PROJECT: Remediation of Soil and Groundwater
Contaminated with Hydrocarbons

CLIENT: International Manufacturing Company, The Netherlands

DURATION: Two years

COST RANGE: £250k to £500k

STATUS: Completed and Validated



WORKS

- Installation of boreholes and barrier trench for the remediation of soil and groundwater.
- Installation of temporary pipework and associated items.
- Design, installation and operation of *ex-situ* and combined *in-situ* remediation system complete with groundwater treatment system.
- Installation of *in-situ* chemical treatment system to address residual contamination in soil and groundwater by direct injection and permeable reactive barrier.

SYNOPSIS

This former industrial manufacturing facility had suffered from extensive surface contamination throughout its history. Organic and inorganic chemicals that had been used in manufacturing processes had spilt and leaked from vessels to enter the underlying soil and groundwater.

The organic contaminants were mainly petroleum range hydrocarbons, lubricants and solvents. The remedial strategy required a variety of technologies comprising soil vapour extraction to remove the volatile compounds, sorption to remove the dissolved organic compounds and chemical oxidation.

Due to the difficult site conditions and close proximity to a water course the boundary of the site could not be treated by the remediation systems used in the main works. The boundary margin was treated chemically by direct injection of oxidising chemicals and by the formation of a permeable reactive barrier to control and treat the residual pollution at this peripheral zone.



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