## CASE STUDY CS699

PROJECT: Remediation of Groundwater Contaminated by Diesel Fuel

## CLIENT: Confidential

DURATION: Ongoing (10 Years currently)
COST RANGE: $£ 1,300,000$ to $£ 1,500,00$ (currently)
STATUS: Commissioned and on-going


## WORKS

- Design of remediation equipment based upon pilot study trials.
- Installation of a number of boreholes to 40 metre depth, permanent buried pipework and permanent reinstatement.
- Installation and operation of an automated (with remote web access), programmable pumping regime (up to $125 \mathrm{~m}^{3} / \mathrm{hr}$ ) system with treatment to soak-away.
- Commissioning, optimisation, monitoring and operation of the remediation scheme.
- Operational up-time guarantee of the works to meet stringent client requirements.


## SYNOPSIS

The site is situated in an area of high environmental sensitivity on the boundary of an outer source protection zone. Large seasonal groundwater fluctuations are encountered in boreholes, with the water table falling on average around 10 cm daily during summer and autumn. The remedial objectives are the removal of recoverable NAPL mass from the aquifer to reduce risk of future migration, and monitoring of the aquifer groundwater to demonstrate that risks to
 receptors are stable or reducing.

NAPL is recovered from abstraction wells using a technique of groundwater pumping to lower the head in the aquifer together with total fluids pumping using top filling pneumatic pumps. A relatively low vacuum to the well head enhanced NAPL recovery during the pilot test and was incorporated in the full scale design.

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TRM
Email: mail@trm-Itd.com www.trm-Itd.com
Head Office: 11 Merlin Way, Quarry Hill Industrial Park, Ilkeston, Derbyshire DE7 4RA Tel: 44 (0) 1159327222
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