Telluric
Land Remediation Ltd

Case Study: E767

Project: ***In-situ*** **Groundwater Bioremediation on a Commercial Development Site**

Client: **Commercial Developer**

Location: **Surrey**

Duration: **12 months**

Works

- Remediation options appraisal
- Design of treatment regime
- Injection of hydrogen release substrate over a vertical depth interval of 1.5 – 5.5m below ground level
- *In-situ* monitoring and groundwater sampling for a period of 12 months
- Liaison with the Environment Agency and Local Authority
- Treatment validation

Synopsis

This commercial development site was heavily contaminated with chlorinated solvents, mainly trichloroethene (TCE), as a result of a previous site use. A groundwater risk assessment, carried out by the Client's environmental consultant, concluded that there was a significant risk to a nearby river from the levels of solvent contamination identified in the groundwater.

In-situ anaerobic bioremediation was considered to be the best solution in terms of cost effectiveness and minimum disruption to site redevelopment. Injections of a hydrogen release bioremediation substrate were carried out on a 3m grid using a small tracked drilling rig.

Groundwater monitoring showed strongly anaerobic conditions becoming apparent four weeks after injection resulting in a sharp initial reduction in TCE and sequential appearance and disappearance of daughter products including dichloroethene (DCE) and vinyl chloride, as anticipated.

The remediation method selected meant that the Client was able to proceed with site redevelopment without any delays. The site specific remediation targets, previously agreed with the Environment Agency, were reached within 12 months during which time the commercial redevelopment was completed.

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