

**CASE STUDY CS988**

**PROJECT:** *Ex situ* Bioremediation of Soil Contaminated  
by Petroleum Hydrocarbons

**CLIENT:** Civil Engineering Contractor, North West England

**DURATION:** Six Months

**COST RANGE:** £50,000 to £100,000

**STATUS:** Completed and Validated

**WORKS**

- Design of *ex situ* soil remediation scheme involving consulting engineer and client.
- Provision of technical assistance, biological and chemical amendments to the soil.
- Supervision and support in all site works.
- Routine checking, monitoring and chemical analysis to ensure proper biodegradation of hydrocarbon contamination within the soil.
- Validation of remediation works.

**SYNOPSIS**

During redevelopment works, the site of a former service station was found to be contaminated with elevated levels of petroleum hydrocarbons and polycyclic aromatic hydrocarbons. Approximately 5,000m<sup>3</sup> soil contained elevated levels of TPH and PAH in the order of 2,000mg/kg and 310mg/kg, respectively, which required lowering to below 1,000mg/kg and 200mg/kg. TRM designed site specific amendments based on soil samples which were added to the soil in order to enhance the natural propagation of hydrocarbon degrading bacteria.

Degradation was enhanced through the formation of bio-piles, which were managed and monitored regularly by TRM to ensure environmental conditions were optimum for rapid remediation and amendments were added throughout the works as necessary. After 6 months, the works were independently validated and signed off accordingly.



TRM

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