



CLIENT

Lioncourt Homes

LOCATION

Willenhall, West Midlands

SITE AREA

0.95 Hectares

VALUE

£260k

TIMEFRAME

10 weeks

IN SITU SOIL STABILISATION/SOLIDIFICATION AND LNAPL RECOVERY

CHALLENGE

Geostream UK was contracted to remediate the 0.95ha site of a former scrap yard ready for a housing development.

Historical contamination left behind by the scrap yard included:

- Significant hydrocarbon impacted made ground, down to the underlying natural materials.
- Presence of LNAPL and dissolved-phase hydrocarbons in discontinuous shallow perched groundwater on-site.

Geostream UK had to develop a cost-effective solution that met stringent environmental and health & safety standards.

SOLUTION

Geostream UK designed an integrated, in situ treatment solution to deliver a sustainable outcome and eliminate on-site material handling and off-site disposal costs.

This started with in situ stabilisation/solidification (S/S) of TPH-impacted soils to chemically fix the main source of contamination on-site within the unsaturated zone. The S/S mix was designed to provide a suitable development platform whilst being compliant with the use of a vibro stone column foundation solution.

Meanwhile, an LNAPL recovery system was installed to remove significant contaminant mass from perched waters during the excavation works. Strict dissolved phase targets had to be met to enable treated waters to be reused in the S/S treatment works. LNAPL was recovered and blended for use as a secondary fuel.

RESULTS

- Delivered a bespoke remediation solution designed to address hydrocarbon-impacted soils and groundwater to meet stringent remediation targets.
- Remediation works were designed to have no impact on the development programme, with completion on time and to budget.
- Delivered an LABC-approved method compliant with a vibro stone column foundation solution.
- Over 60% of overlying made ground soils were treated by in situ S/S and validated by leachate testing for re-use on site. This reduced processing and potential contaminated soils disposal costs.
- Post-treatment perched water was recycled for use in the S/S treatment process wherever possible.
- Recovered LNAPL was ultimately blended and used as a secondary fuel rather than being disposed of.



SERVICES

- DESIGN & BUILD SERVICES
- PROCESS EQUIPMENT
- CHEMICAL & BIOLOGICAL TECHNOLOGIES
- PHYSICAL REMEDIATION

Your single source provider for remediation technologies

