

Case Study

Contaminated Soil Removal at Rail Depot

Client

Hochtief UK Construction Ltd.

Remediation Value

£1,500,000

Site

34,000m² site, adjacent to the river, with a future commercial land use. Historically the site was used as a railway depot and railway goods depot. The surrounding land has been used for industrial and railway related purposes.

Contaminants

Heavy oils, hydrocarbons and asbestos.

Remediation Methods

Pre-excavation delineation of contamination hotspots and pre-classification of waste streams.

Hand-picking of asbestos.

Off-site disposal of visible asbestos, hazardous and non-hazardous soils to UKRL's soil treatment facility, and subsequent re-use of treated stone onsite.

Removal of below ground obstructions.

Screening of soils to segregate clean stone to be re-used on site as part of the piling mat.

Crushing of concrete to specification for site re-use.

Reduce level dig to design levels; placement of pile mat to level.

Working to geotechnical specification.

Challenges

- Working immediately adjacent to live railway.
- Unexpected contamination encountered at depth.
- Deep buried obstructions, not previously surveyed.
- Requirement to remove all abnormals to enable a driven pile foundation solution.
- Segregation of all materials due to chemical and geotechnical properties.

Approach

- Detailed site investigation involving trial pitting using a 10m x 10m grid system to delineate contamination and identify underground obstructions.
- Ex situ bioremediation of hydrocarbon impacted soil at UKRL's soil treatment facility.
- Segregation and hand-picking of visibly asbestos contaminated material to enable site reuse.
- Full excavation of contaminated soils and validation of excavations.
- Excavation of sumps to enable free-product recovery.
- Installation of impermeable membrane to prevent migration of contamination into site from an off-site source.

Screening of soils to segregate stone for re-use



Evidence of free product on groundwater



Hydrocarbon impacted soils awaiting excavation

