

Case Study

Remediation of a Former Paper Mill

Client

Linden Homes

Remediation Value

£850,000

Site

14,000m² site, with river frontage, on the outskirts of Bristol, undergoing redevelopment for 140 houses.

A paper mill, foundry and workshops had operated on the site for over 150 years.

Contaminants

Heavy oils, hydrocarbon-impacted soil, asbestos, organic paper mulch.

Remediation Methods

Removal of heavy oils.

Bioremediation of hydrocarbon-impacted soils.

Stabilisation/solidification of hydrocarbon sludge.

Asbestos remediation.

Removal of deep obstructions.

Reinstatement to geotechnical specifications.

Challenges

- Construction already underway during remediation.
- Archaeological investigations were ongoing during the remediation phase.
- Existing residential properties within 20m of the site.

- Deep buried obstructions, including a contaminated tunnel system, not previously surveyed.
- Requirement to remove all abnormals to enable a driven pile foundation solution.
- Reuse of all materials was the preferred strategy.
- Demanding geotechnical spec. for reinstatement.

Approach

- Detailed contaminant and geophysical survey of site.
- Ex situ bioremediation of hydrocarbon impacted soil.
- Segregation and hand-picking of visibly asbestos contaminated material to enable site reuse.
- Identification of buried voids and removal of hydrocarbon free product.
- Removal of obstructions, including a 100m tunnel to 5m deep, 25 concrete tanks and deep foundations.
- Dewatering and stabilisation/solidification of oil contaminated organic sludge to meet site environmental and geotechnical specifications.
- Backfilling treated soils in benched layers to meet geotechnical and environmental specifications.
- Working in conjunction with ground workers and piling contractors to meet a tight deadline.
- UK Remediation was the principal contractor for much of the project.

Flocculant addition to hydrocarbon impacted organic sludge to dewater for handling before further ex-situ treatment.



Removal of contaminated tunnel system prior to benching and reinstatement with remediated materials.



Hydrocarbon impacted organic sludge (left) was first dewatered in situ and then remediated using a stabilisation/solidification process.

