Complex soil and groundwater remediation on a former coated fabrics factory site

Greater Manchester

Site area: **2.1ha**
Timeframe: **12 months (6 months onsite)**

Challenge

This former coated fabrics factory site had been derelict for over 10 years, following multiple failed attempts at remediation.

Our client saw an opportunity to create a new community of 168 new homes, but first they needed to tackle:

- Demolition of six dilapidated buildings, impacted by asbestos
- Underground hardstandings and structures, including concrete slabs, USTs, and trade effluent pipework
- Soils impacted by hydrocarbons and chlorinated solvents
- Impacted shallow groundwater plume, where LNAPL aromatic compounds and DNAPL Phthalate had emulsified

A robust approach to soil and groundwater remediation would be required to gain regulatory approval and allow the project to go ahead.

Solution

Early involvement

We worked closely with the client consultant to establish solid remedial options, giving the regulator confidence that contamination reduction targets could be achieved.

By engaging with the regulator early, we were able to discharge the planning conditions for the client.

Demolition and enabling

Our team carried out phased demolition of buildings on the site. We completed both Licensed and Notifiable Non-Licensed work to remove asbestos.

We broke out concrete hardstandings and removed underground structures using our 3DMC plant to record turnover depths in real-time,

Excavated materials were compacted to an “end product” performance specification, with in-situ densities in excess of 95% of the maximum dry density to enable a Vibro-Stone Column foundation solution.

Soil and groundwater remediation

We carried out a 20-week programme of soil and groundwater treatment using our UK-exclusive technologies.

Our team designed and built a bespoke groundwater treatment system, which extracted impacted groundwater from sumps. In-situ Chemical Oxidation, using Oxygen BioChem (OBC), was used to treat residual impacted groundwater, while impacted soils were treated by bioremediation.

RESULTS

- Unlocked a derelict site for development
- Released the site in phases so construction could begin early
- Completed project on time and on budget
- Recompacted soils to an end product compaction