

Client



Main Contractor



Environmental Consultants



Site Background & History

The Little Heath Works (Acordis Acetate Courtaulds factory) was opened in 1926. The works were subsequently closed in 2007 and underwent demolition to slab level in 2010.

The 40-acre site in Coventry has been granted permission by Coventry City Council for the development of 344 new homes, with ten acres given over to a detailed commercial scheme. Persimmon Homes were developing the residential element.

Envirotrat was previously involved in the remediation element of the commercial scheme (Lex Autolease).

Previous site investigations by both WSP and latterly ASL indicated a number of the areas of the site as being potential sources of contamination (both soil and groundwater),

reflecting the historical manufacturing activities undertaken on the site as a whole.

Table 1 below indicates area of the site ('hotspots') where contamination levels exceeded the agreed remediation target criteria for the site.

Table 1 – Identified 'hotspots'.

Exploratory Location	Depth (m bgl)	Phase	Determinant	Concentration (mg/kg)
TP-C-4	1.5	2	TPH	12000
PCR-C-01	0.2	2	C10-C20	92
SA-B-3	0.4	4	TPH	3500
PCR-A-03	0.3	5	TPH	5700
WS902	0.5	5	TPH	3000
A8	0.8 & 1.6	7	TPH	7000 & 6300
A12	2.1	7	TPH	14479
WS1308B	1.5-1.7	7	Tributyl Tin	38

The extent of the development is shown in Figure 1 below.

Figure 1 – Development Site (including previously developed Lex Autolease).



Cuddy Group (the Main Contractor) commissioned Envirotrat to formulate a remediation strategy to address the identified 'hotspot' contamination areas and address a number of planning conditions relating to remediation, contamination and the site's former usage.

The proposed remediation strategy was designed to address the requirements of the regulatory bodies in relation to the protection of human health and controlled waters and to address the statutory planning conditions relating to contaminated land. The remediation strategy comprised of E-Clay Stabilisation of the source contamination (soil and associated groundwater) together with a 'watching brief' during the enabling works for identifying, addressing and validating further contamination. This latter point to address a number of planning conditions stipulated by the Coventry City Council.

Methodology

'Hotspot' Treatment.

Previously identified contamination 'hotspots' were excavated and resultant excavations delineated by Envirotreat.

Figure 2 – Excavation of previously identified contamination 'hotspots'.



Stockpiled soils were treated using a suitable E-Clay formulation specific to the the respective contamination within the soils.

The E-Clay formulation was produced in slurry form for use in the *ex-situ* treatment process.

Figure 3 – Ex-situ E-Clay treatment of the soils.



These works were undertaken in September of 2014. In total as estimated 1,250m³ of soils were treated.

Between October 2014 and March 2015, Envirotreat regularly attended site at key stages of the enabling works to assess the underlying ground for further potential contamination.

Figure 3 – Assessment of formation level for evidence of contamination.



A crucial element of these works was the assessment of excavated soils generated as part of the cut & fill and enabling works for suitability for reuse on site or placement in the proposed burrow pit in the North East of the site.

Asbestos contamination was considered a major concern both during and post development. Envirotreat conducted a regular assessment for asbestos within the soils during the enabling works, conducting both visual onsite evaluation and analytical testing. During development of those areas where asbestos had previously been recorded Reassurance Air Monitoring was undertaken.

Figure 4 – Burrow pit preparation.



Validation

In addition to the onsite assessment of soils side and base samples were collected and submitted to I2 Analytical Laboratories for

appropriate analysis – this was to demonstrate the satisfactory delineation of the source contamination in accordance with the agreed remediation criteria.

Samples of each treated batch treated were collected - composite samples were prepared for analysis purposes. These were submitted to I2 Analytical Laboratories for analysis to confirm compliance with the agreed total and leachate remediation target criteria developed by the ASL. All tested samples were shown to be compliant with the remediation target criteria. The treated material was therefore considered suitable for reuse onsite.

Conclusions

Envirotreat was able to demonstrate through a comprehensive Validation Report that the remediation strategy had been successfully implemented. The prime drivers for the remediation works were the protection of human health and controlled waters. Furthermore, Envirotreat demonstrated that materials had been managed in accordance with the agreed Remediation Strategy / Method Statement and Material Management Plan.