Remediation

Commercial redevelopment of a former service station – Whitstable, Kent.

The Former Chestfield Service Station occupies an area of approximately 1000 m^2 located within a small commercial site near Whitstable in Kent. The site was used as a petrol station between 1958 and 1996, subsequent to which the main buildings on site were demolished and the underground fuel storage tanks (USTs) sealed or decommissioned.

Ecologia won the contract to operate as the Principal Contractor and remediate the site to an appropriate standard to enable construction of a new fast food retail outlet. Works were to include removal of the remaining underground fuel storage tanks on site and treatment of the soils to a suitable criteria deemed protective of human health.

Previous site investigation works and a risk assessment for the site had previously been completed by a separate consultancy in 2008. However, following our own site investigation and soil sampling, Ecologia proposed to undertake remediation works on the site by adapting the existing methodology and further refining the quantitative risk assessment in order to comply with current best practice guidelines. This provided our client with a significantly reduced remediation cost and timescale. Ecologia's methodology also included the implementation of a Materials Management Plan (MMP). The site was included as a 'cluster' site under a wider hub and cluster scheme thus reducing the quantities of material requiring off site disposal.

Breaking up the concrete hard standing across site.

Ecologia's first task on site comprised breaking out and removal of the concrete hard standing cover allowing access to the underlying soils. Following removal of the overlying concrete, petroleum and diesel contamination was encountered in the soils surrounding the UST area. A bunded area was created on site and hydrocarbon impacted soils were excavated and transferred to this area for stockpiling and treatment with an oxygen release compound. The USTs were removed from site for suitable recycling.

Ecologia on site at The Former Chestfield Service Station.

Targeted soil sampling was undertaken in the excavated area. Subsequent to treatment with the oxygen release compound and a suitable curing period, composite samples were obtained from the oil impacted stockpiled soils for analysis against a hydrocarbon suite, as per the requirements of the site specific QRA. The soil target values used were derived using the most recent Contaminated Land Assessment CLEA guidelines, and were deemed protective of human health. Results of the soils analysis demonstrated that all hydrocarbon impacted soils had been removed from the tank farm area. The analysis also showed that the stockpiled impacted soils had been successfully treated with oxygen release compounds and these were deemed suitable for re-use on site to backfill excavated areas.

Former Chestfield Service Station upon completion of remedial works

Remaining soils across the site were sampled according to a grid based methodology and analysed against the Waste Acceptance Criteria (WAC) and the hydrocarbon suite. The soil surface levels across the site were then reduced, with excess material stockpiled according to the Client's specification to allow for building the foundations of the new development. Excess stockpiled soils were disposed off of site as inert waste.

Four boreholes were also drilled and installed as monitoring wells to facilitate groundwater monitoring to assess potential offsite migration of contaminants. No contaminants were encountered in groundwater samples. A validation remediation report was compiled by Ecologia following completion of the work on site, which included details of the materials stockpiles register and all laboratory soil analysis. The reports were submitted to the Local Authority and Environment Agency for their review and comment to complete the project. Favourable replies were received by both regulatory authorities, allowing the Client to progress with the second build phase of the works. The Project was brought in on time by Ecologia within the terms of our fixed price contract.

Ecologia
experts on the ground