

Project Data

Region: West Bromwich, UK

Client: MarCity Developments

Involved Units: Bilfinger Berger Environmental Ltd
Bilfinger Berger Entsorgung GmbH

Execution Time: January 2008—September 2008

Contract Value: 1,6 Mio £

Work Performed

Remediation of 33,500t of highly contaminated soil on a former tar processing plant by means of mobile thermal.

- Use of recycled fuel oil as primary energy source and
- limited space availability



Thermal Treatment of PAH Contaminated Soil West Bromwich, UK

Remediation of Contaminated Sites and Landfill Engineering

WASTE DISPOSAL SERVICES

The leading UK house builder Mar City Developments limited contracted Bilfinger berger Environmental to treat 33,500 t of Poly Aromatic Hydrocarbon contaminated soils at a former tar works industrial site in the West Midlands.

Described by English Partnerships as “on the edge of developability”, the site boasted high levels of contamination as a result of its former use. The former WH Keys site is now seen as an exemplar remediation project utilising the latest remediation technology to clean up the former bitumen and chemical production plant.

Due to the restricted space available for the mobile thermal desorption plant, set up and treatment had to be organised to a very high level of efficiency and modifications to the plant layout had to be carried out in order to accommodate the mobile thermal desorption unit.

An effective dust suppression system and noise minimisation measures were installed to keep the impact on the surrounding environment to a minimum.

Special attention was given to sustainability by using recycled fuel oil as primary source of energy for the thermal process.

The off-gas treatment unit including two wet scrubbers and two activated carbon vessels enabled the treatment process to meet the stringent emission limits of the EU Waste Incineration Directive, which were continuously monitored with modern technology using multi-component analyser and Photo-Ionisation detector.

Due to the low impact on the environment, the development process could continue alongside the remediation of excavated soils.

The thermal treatment of the soil reduced the total contamination to the required concentrations and no material failed the target limits for the contaminants of concern. The geotechnical properties of the treated material were of such a high standard that they could be backfilled directly after confirmatory analysis of the material met the approval of the consulting engineer.

The success of this project demonstrated yet again that thermal desorption is the optimum technology for material containing substances recalcitrant to other remediation techniques and for achieving very high treatment standards.



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