olympic park soils stabilisation

Contract in brief

Location:
Olympic Park, Stratford, London

Client:
Olympic Delivery Authority

Managing Consultant:
CLM

HBR Role:
Tier II Specialist Remediation Contractor

Contract Value:
£0.4M

Contract Start:
April 2008

Contract Period:
25 weeks

Project Summary:

Following HBR's commencement of treatment operations using two washing plants, we were instructed to mobilise and erect one of our automated batch mixing plants, for use in the chemical stabilisation of a problematic hotspot of contamination unsuitable to other treatment techniques.

The period of plant installation and commissioning was used to perform and validate the optimisation of the stabilisation recipe design for the materials in question. This was carried out on-site by HBR remediation engineers within our mobile laboratory. The chief contaminants of concern were leachable concentrations of Arsenic, Mercury, Selenium, Cadmium and Lead. An additional focus of the design centred on the simultaneous improvement of the material's geotechnical properties.

Independent review and analysis of the treatability study work, showed minimum reductions in leachate concentrations for all contaminants of over 80%, well above those needed to reach the chemical re-use acceptance criteria. This allowed design acceptance by the managing consultant and Regulator. The finalised treatment design consisted of a single powder reagent in combination with two liquid additives.

Feedstock materials were thus brought to the treatment centre, quarantined and tracked using the site-wide materials management system.

The on-board Programmable Logic Controller (PLC) of the batch mixer was uploaded with the designed recipe and set to work, initiating an automated batch processing sequence with an averaged production of 500 tonnes/day.

Records were logged by the PLC for each batch (approx 3m^{3}of soil), showing percentage of each additive and mix time. All such QA/QC procedures were monitored by the single process operator, with treated materials stockpiled for independent validation.

All processed volumes achieved compliance against chemical leachate and geotechnical criteria allowing re-use on-site. In total some 30,000 tonnes of material was processed and incorporated back into the earthworks design.