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CASE STUDY

REMEDIATION OF CHROMIUM COPR CONTAMINATION

PROJECT: M74 EXTENSION, GLASGOW

PROJECT VALUE: £1,400,000

PROJECT TIMESCALES: 8 MONTHS

DATE AWARDED: MAY 2009

CHALLENGE:

ERS was appointed to stabilise soils contaminated with Chromium Ore Processing Residue (COPR) which was otherwise destined for landfill. Working in conjunction with the Client and SEPA, a stabilisation strategy was agreed to reduce the soil leachability to agreed levels and reduce the project's Embankment Material Deficit.

SOLUTION:

ERS completed treatability trials in the company's Bishopbriggs laboratory to define a proprietary mixture of stabilising agents including lime and PFA which would stabilise soils to reduce the leachability of chromium and other contaminants to acceptable levels. Targets were also set and achieved for geotechnical properties to permit suitable soils to be re-used as a construction material.

ERS then negotiated an on-site soil treatment centre with SEPA and mobilised the company's bespoke soil stabilisation equipment to treat all contaminated soil arisings. ERS also developed an on-site testing regime to permit immediate validation and re-use without the wait for external laboratories.

The soil treatment centre was fenced off and access to the work area was through a decontamination unit. All personnel accessing the site had to wear the specified PPE. Extensive dust monitoring exercises were carried out throughout the project, ensuring that environmental receptors were not harmed, including personal and boundary monitoring.

OUTCOMES:

- 100,000 tonnes of material stabilised
- Leachability targets exceeded
- Treated material re-used on site as fill material for embankments
- Treatment method saved client £4,000,000