GeoStream UK
SOLUTIONS & TECHNOLOGIES FOR THE ENVIRONMENT

LOCATION
Teesside, England

CLIENT
Eco2 & Glenmont Partners

VALUE
£250k

CAPACITY
Liquid: 55m³/day

IN-SITU PUMP AND TREAT AND CHEMOX ENHANCED BIOREMEDIATION

CHALLENGE

TerraConsult Ltd had carried out a site investigation, risk assessment, options appraisal and remediation strategy. The site was heavily contaminated with a range of hydrocarbons and solvents, including the presence of free product, requiring the application of both process-based and chemical solutions.

The identified free product required the use of a pump and treat system to deal with the gross contamination. However, due to the anticipated timescales and ongoing costs associated with the continued use of pump and treat to remediate the remaining dissolved phase hydrocarbons, a second stage of chemical oxidation remediation using one of our exclusive products was designed and implemented. This allowed for a shortened site programme of only 14 weeks.

GeoStream designed, supplied, installed and commissioned a pump & treat system for initial free product removal followed by ChemOx/enhanced in-situ bioremediation using OxygenBiochem (OBC)™. The remediation was carried out at the same time as construction works on a renewable energy power station.

APPROACH

- GeoStream UK installed pneumatic geopumps in 19 extraction wells. All pumps were timer controlled to allow phased pumping from different locations. The treatment plant comprised an Oil Water Separator and two GAC filters to remove dissolved phase hydrocarbons
- There were extensive above-ground pipe systems, designed to facilitate reorientation in order to enable both large-scale construction work and the remediation to be carried out at the same time
- Finalised treatment with two rounds of ChemOX/enhanced bioremediation using GeoStream's exclusive product OxygenBiochem (OBC)™ injected into the groundwater via existing injection wells
- All systems were monitored, operated and optimised by GeoStream UK personnel throughout
- Conducted routine site monitoring, service and inspection visits during the remediation period. Security of the treatment compound was monitored remotely throughout the project using remote CCTV
- TerraConsult carried out extensive groundwater sampling and testing to monitor the progress of the remediation and to verify all stages of the works

RESULTS

Heavy earthworks were able to proceed unhindered, due to strategic siting of wells and routing of pipework

Background contamination levels reduced by 91% in just 14 weeks, with the combination of pump and treat followed by chemical injection shortening the remediation programme

All remediation was complete before earthworks had been finalised

SERVICES

- **Design & build services**
- **Process equipment**
- **Chemical & biological technologies**
- **Physical remediation**

Your single source provider for remediation technologies

www.remediation.com
Wolverhampton | Manchester | London | Dublin
info@remediation.com | Tel: 0161 928 7740

GeoStream UK is a McAuliffe Group company

McAULIFFE The brownfield experts