Remediation

Air Sparging – West London

Following a loss of a significant quantity of kerosene from an above ground storage tank in West London, Ecologia were initially contracted to remove free phase oils form the surface of the groundwater. This work was undertaken by Ecologia within 4 months of instruction.

Following the removal of the free phase oils the Environment Agency requested that a quantitative risk assessment be used to determine remediation targets for the dissolved phase hydrocarbons in the groundwater. The QRA determined that further remediation works were required and Ecologia proposed the sue of air sparging to provide oxygen for in-situ remediation while at the same time facilitating the desorption of oil into the dissolved phase and thereby making it bioavailable.

A total of 12 sparging wells were installed into the remediation area which covered approximately 800 sq metres. The wells were drilled to 4 metres below the water table using Ecologia's own drilling equipment. The air feed lines were cut into the concrete hardstanding, allowing normal business to continue unhindered.

The Sparging equipment was designed and manufactured by Ecologia in Sittingbourne. The equipment was telemetrically controlled and allowed automated monitoring of the dissolved oxygen concentration in the groundwater. The inclusion of genuine two way telemetry allowed Ecologia to greatly reduce the quantity of site visits required.

The sparging system created oxic conditions and increased the Redox potential to over 50 within three weeks. The oxic conditions were maintained over 12 months until the remediation target was achieved. The project was extended by 4 months but Ecologia did not present further charges to the client as the project was organised using a fixed price contract.

Installation of the Sparging wells

Sparging wells during installation works

Ecologia
experts on the ground