

Hotspot Treatment of Petroleum Hydrocarbons – North West, UK

Phased Treatment Allows Main Contractor to Keep Programme on Track



Summary

A former industrial site in the north of the UK was undergoing redevelopment to build a large supermarket. RegenesiS was employed to undertake treatment of an isolated petroleum hydrocarbon hotspot and treatment of the base of 2 excavations following removal of underground storage tanks. The treatment was carried out in three stages, whilst allowing the Main Contractor to continue with ground re-profiling and piling works. RegenesiS also carried out monitoring well installation works at the site.

Treatment

The hotspot of petroleum contamination containing high concentrations of TPH was treated with 3 rounds of RegenOx, applied by direct push injection, to provide rapid in situ chemical oxidation. During the final round ORC Advanced was also applied to provide a controlled release of dissolved oxygen and enhanced aerobic biological degradation of the residual dissolved phase contamination for a period of up to 12 months. ORC Advanced Pellets were also applied directly into the 2 excavations to provide in-situ enhanced aerobic degradation of any residual contamination.

What's Special?

- The in situ nature of the treatment and the application using direct push injection avoided the requirement for remediation infrastructure at the site. This allowed the Main Contractor to continue with their enabling works, with no effect on project programme
- RegenOx used to rapidly reduce high concentrations of TPH
- ORC Advanced added to the final application in order to provide up to 12 months enhanced aerobic biological degradation of the residual dissolved phase contamination from a single injection.

Remediation Details

Site Type:

Former Industrial Site; Redevelopment into Supermarket

Remediation Driver:

Regulatory

Remediation Approach:

In Situ Chemical Oxidation and Aerobic Bioremediation

Remediation Technologies:

RegenOx[®] and ORC Advanced[®]

Geology

	Bedrock
X	Gravel (bands)
	Sand
	Silt
X	Clay

Medium

X	Groundwater
	Saturated Soil
	Vadose Zone

COC

X	Petro HCs
	Petro LNAPL
	Chlorinated VOCs
	Metals

COC Concentration Levels:

Free Product

Treatment Depth:

4 to 5.5 m BGL

Treatment Area: 500 m²

Injection points: 10

Remediation Cost: £45,000