

PetroCleanze Increases Efficacy of Pump and Treat System – Reading, UK

Treatment of LNAPL and Smear Zone in Bedrock



Summary

A former petrol filling station was being remediated to allow development of a supermarket. As part of the works, a pump and treat system (P&T) was installed to recover LNAPL and groundwater impacted with dissolved phase contamination. In order to increase the efficiency of the system, Regenesis was retained to apply PetroCleanze into the subsurface via fixed injection points.

Treatment

PetroCleanze was applied to the chalk aquifer, targeting a wide smear zone above and below the present groundwater level. The existing abstraction system was used to draw the application across the target area to provide the maximum coverage.

PetroCleanze temporarily provides a strong desorptive effect, drive adsorbed contamination into the groundwater where it can be removed. It allows the abstraction system to remove a greater proportion of free and dissolved phase contamination from the subsurface. This has the effect of shortening the operational time of the P&T system and reduced re-bound effects due to on-going desorption from the smear zone.

What's Special?

- Increased efficiency of the P&T system
- Targeted in situ treatment of the smear zone reduced P&T costs onsite
- Reduction in adsorbed, free and dissolved phase contamination, decreasing the likelihood of rebound following switch off of the P&T system.

Remediation Details

Site Type:

Former Petrol Filling Station

Project Driver:

Site Redevelopment

Remediation Approach:

LNAPL Removal via Pump & Treat, Augmented with PetroCleanze

Technologies:

PetroCleanze®

Geology

X	Bedrock (Chalk)
	Gravel
	Sand
	Silt
	Clay

Medium

X	Groundwater
X	Saturated Soil
X	Vadose Zone

COC

X	Petro HCs
	Petro LNAPL
	Chlorinated VOCs
	Metals

COC Concentration Levels:

LNAPL

Treatment Level: 12 - 15 m BGL

Treatment Area: 1,600 m²

Project Length:

P&T system operated for 4 months, with 3 PetroCleanze applications completed