

# 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-bounce 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 m<sup>2</sup>

#### Project Length:

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