

Safe and Simple Excavation Application Provides Long-Term Treatment, UK In Situ Treatment of Residual TPH Contamination Following Tank Removal



Summary

During the demolition and redevelopment of a former petrol filling station, an underground storage tank was removed. The tank had been used for the storage of diesel and had leaked into the surrounding soils and groundwater. The impacted soils were excavated and removed to a waste management facility. The groundwater within the excavation was impacted with dissolved phase hydrocarbons and required further treatment.

Regenesi provided the remediation contractor with a remedial design for the application of ORC Advanced Pellets to treat the residual contamination within the groundwater in and around the open excavation.

Treatment

ORC Advanced Pellets were applied into the groundwater, in the base of the excavation. This was completed by placing them in an excavator bucket and spreading evenly across the area. By using the pelletised version of ORC Advanced, there was no need for mixing or application using pumps and the potential for dust creation was minimised.

The pellets take only minutes to apply and yet provide a controlled release of oxygen into the groundwater for a period of 9-12 months from a single application. The ORC Advanced stimulates the growth of an aerobic biomass which accelerates the biological degradation of dissolved phase hydrocarbon contamination.

What's Special?

- The use of ORC Advanced Pellets meant that the contractor could backfill the excavation and continue the build programme with minimal disruption
- The remediation then continued in situ with no need for physical plant taking up valuable space or requiring maintenance.
- ORC Advanced Pellets provide an effective long-term treatment of residual dissolved phase contamination though a very easy, safe and rapid application process.

Remediation Details

Site Type:

Petrol Filling Station

Project Driver:

Site Redevelopment

Remediation Approach:

Enhanced Aerobic Biodegradation, Excavation application

Technologies:

ORC- Advanced® Pellets

Geology

	Bedrock
	Gravel
X	(Silty) Sand
	Silt
	Clay

Medium

X	Groundwater
	Saturated Soil
	Vadose Zone

COC

X	Petro HCs
	Petro LNAPL
	Chlorinated VOCs
	Metals

COC Concentration Levels:

< 10 mg/L

Treatment Depth:

3 m BGL

Treatment Area (m²):

300 m²

Remediation Cost:

£13,000