

# Design Focused Remediation of a Defence Manufacturing Site, UK

## Voluntary Treatment of Chlorinated Solvents



### Remediation Details

**Site Type:**

Defence /Manufacturing

**Project Driver:**

Voluntary, Redevelopment

**Remediation Approach:**

Enhanced Reductive Dechlorination

**Technologies:**

3-D Microemulsion® and HRC Primer®

### Summary

- Remediation of the chlorinated ethenes impacted groundwater through the combined use of 3-D Microemulsion® (3DMe) and HRC Primer®
- Challenging fine sand aquifer with high groundwater pressure
- Treatment tailored to target high concentration source and wider plume area
- Regenesi s Remediation Services (RRS) carried out full design and application service at a fixed cost

### Design & Application

The combined approach of 3DMe and HRC Primer utilises the best features of Regenesi s suite of technologies for enhanced reductive dechlorination. HRC Primer penetrates the formation quickly and with its short hydrogen release profile rapidly exhausts competing electron acceptors and promotes strong anaerobic groundwater conditions. 3DMe, with its three stage electron donor profile, provides a controlled release of hydrogen for up to 5 years. In addition, the self-distributing nature of 3DMe is perfectly suited to a permeable formation to allow wider injection spacing and corresponding lower injection costs.

### What's Special?

- Delineation of the source and wider plume allowed focussed contaminant treatment
- The injection works, completed by Regenesi s between the demolition and construction phases, minimised impact on the site redevelopment programme

### Geology

	Bedrock
	Gravel
X	Sand
	Silt
	Clay

### Medium

X	Groundwater
	Saturated Soil
	Vadose Zone

### COC

	Petro HCs
	Petro LNAPL
X	Chlorinated VOCs

**COC Concentration Levels:**

TCE 89,500 µg/L

**Treatment Level:**

2 m - 8 m BGL

**Volume Treated:**

2 areas totaling 1,600 m<sup>2</sup>

**Injection Points: 70**