



# In-Situ Aerobic Degradation

Terra Vac (UK) Ltd and Cox Homes

Terra Vac (UK) Ltd was asked by Cox Homes, independent homebuilding company, to investigate the site of one of their new residential developments, in the West Midlands.

Cox Homes, an independent West Midlands construction company, leads in the construction of traditional family homes using the latest in energy efficient, low maintenance materials and is backed by the National House Building Council Buildmark scheme as an assurance of quality.

Terra Vac initially undertook an investigation for Cox Homes on the former petrol retail site in the West Midlands. During subsequent decommissioning, the underground fuel storage tanks were damaged by a third party during removal, adding significantly to the historic soil and groundwater contamination. The presence, less than 150m away, of an ecologically sensitive site of special scientific interest (SSSI) resulted in particularly stringent clean-up criteria in order to ensure its long term protection.

Due to redevelopment timeframes and the need to protect the SSSI, an amount of heavily contaminated soil had to be removed quickly. The remaining shallow contaminated soil was land farmed on site.

In order to treat contaminated groundwater, Terra Vac utilised in-situ bioremediation techniques. A series of strategically designed injection points were drilled across the identified impacted area, into which an Oxygen Release Compound (ORC) was injected. This slow release of oxygen molecules enhanced biological activity and allowed the beneficial bacteria to multiply. This in turn accelerated the degradation of hydrocarbons.

In implementing this Bio Augmentation process, Cox Homes was able to continue development of the site during the remediation programme, avoiding any delays to the critical timings of the project.

The validation monitoring process took a total of twelve months, in which time Terra Vac successfully remediated an area of 1,000m<sup>2</sup> and to depths of 6 metres, on time and in budget.



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## Contaminated Land and Groundwater Remediation