



# Electric Resistive Heating

Terra Vac (UK) Ltd and Taylor Wimpey

Terra Vac (UK) Ltd was asked by Taylor Wimpey, Britains largest housebuilder, to propose a solution to the contamination discovered on a five acre residential development in South Yorkshire.

Taylor Wimpey plc has operations in the UK, North America, Gibraltar and Spain. Recognising the importance of sustainable development, Taylor Wimpey aim to improve the sustainability of everything they build. They manage environmental issues in a proactive and balanced way, aiming to re-use as much building land for their new developments as possible.

On the development in which Terra Vac was asked to become involved, the land had previously been home to a tool manufacturing company. The use of Chlorinated Hydrocarbons had been an integral part of the tool manufacturing process during the factory's fifty year life. A site investigation revealed that, over a period of time, these contaminants had leaked beneath the factory, leaving a contaminated soil volume of 3500m<sup>3</sup> and causing a potential future risk to human health, if left untreated.

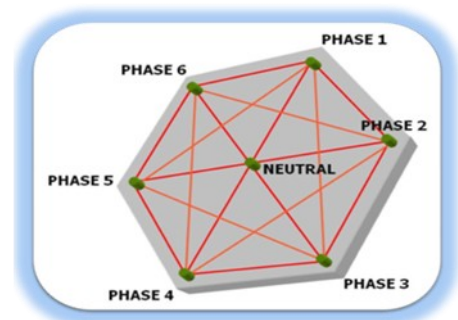
Terra Vac evaluated all viable options, taking into consideration multiple factors and proposed treating the contamination with Electric Resistive Heating Technology.

Using this technique, high voltage electric power, which has been split into six phases, is introduced into the subsurface via electrodes.

The subsoils are heated due to their electrical resistance which in turn boils groundwater, causing contaminants to vaporise and be removed using conventional vapour extraction techniques for subsequent treatment at surface. This is the first time the technique has been used in the UK.

Electric Resistive Heating is particularly effective in difficult, more cohesive soils. On this project, where there were tight time restrictions, this rapid and thorough technique was considered the ideal solution.

A resounding success, Terra Vac exceeded the Environment Agency's clean up criteria. The site was remediated ahead of programme, within budget, with minimal risk or disruption to local residents and allowed the client to commence site works three months ahead of schedule.



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## Contaminated Land and Groundwater Remediation