



## Thermal Desorption

### The Issue

The 100 acre site was located in a quiet and beautiful Kent countryside area, bordered by 2 main watercourses, both of which are used for leisure activities and have caused substantial flooding to the area in the recent past. Pesticides had been manufactured by a number of different companies on 40 acres of the site for the past 100 years and during this period large areas had been contaminated due to the accepted practices of times gone by or leakage from drainage systems.

The present owner wished to close the site and sought to ensure that the site was regenerated and brought back into the redevelopment cycle.

### The Objective

Decontaminate and regenerate the site to allow it to be brought back into a range of uses.

Ensure that the integrity of the watercourses and surrounding countryside are maintained throughout the regeneration timeframe.

Work with all regulatory bodies and the local community to ensure a fully acceptable outcome with the least disruption possible to the surrounding environment and population.

# The EDSR Solution

EDSR searched across the world to find the technologies, which would decontaminate the site and help us deliver the project objectives.

EDSR developed a strategy that was approved by the Regulatory Bodies and enabled comprehensive on-site treatment. This technology, on this scale, was entirely new to the UK, but had been extensively used with success in the USA and parts of Europe.

This new technology '*Thermal Desorption*' allowed on-site decontamination of the soil, by heating it to a temperature which vapourises the chemicals into the gaseous phase. Subsequently this gas stream is heated to an even higher temperature which destroys the contaminants. The gaseous stream is then neutralised through a scrubber unit before discharge to atmosphere as steam. The emissions are not harmful to human health and limits are controlled by licence conditions set by the Environment Agency.

Thermal Desorption is a proven sustainable technology and has a firmly defined outcome across a wide range of contaminants. This is an appropriate solution for complex sites where contaminants are not readily treated such as agrochemicals, gasworks waste, complex industrial chemicals and a wide range of other organic compounds.

This technology allows soils to be cleaned on site and minimizes lorry movements thereby saving fuel and exhaust emissions. This regeneration strategy obviated 30000 lorry movements through this beautiful area of Kent, which would otherwise have been necessary to take the soils to landfill and import clean replacement materials.

The sterilised soil from the thermal process is re-hydrated, chemically tested to ensure compliance with remediation limits and returned to the formation.

This technology removes the risks and unknowns associated with other remedial techniques, providing a quantifiable solution which is especially economic on larger regeneration sites.



## For more information please contact:

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