



Ground Remediation Systems Limited

Reference - Explosion Proof
High Vacuum Dual-Phase
Extraction System, Catalytic
Oxidiser & Air Stripper

Soil and Groundwater Remediation

Water Treatment

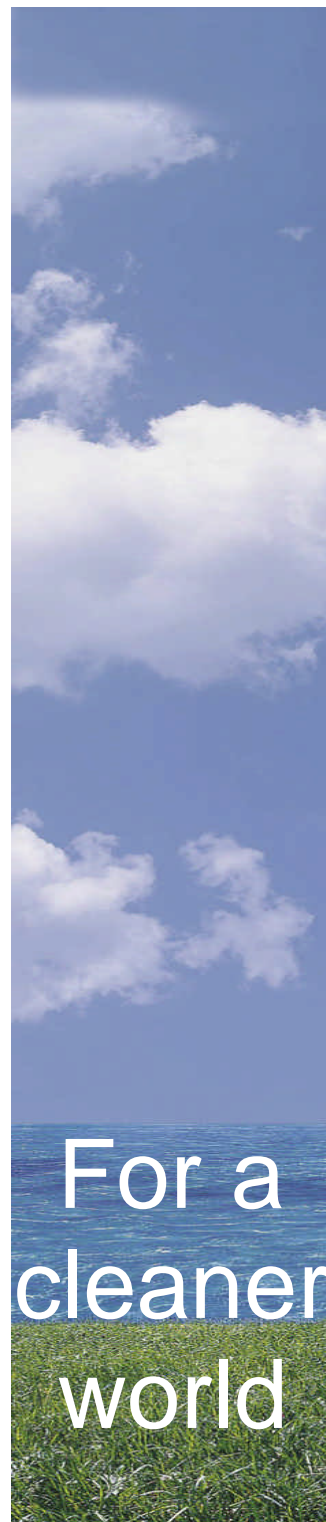
Vapour Treatment

Design & Supply

Installation & Commissioning

Operation and Control

Project Management





Reference - Explosion Proof High Vacuum Dual-Phase Extraction



Task	Remediation of shallow infill soils
Contaminants	Benzene & H ₂ SO ₄
Location	LPG Terminal, Stoke on Trent, UK
Client	Major Petrochemical
Period of Operation	2000 to 2002
Technical Process	EX Rated High Vacuum Dual-Phase Extraction system, pH neutralisation, Air Stripping and Catalytic Oxidation
Rate	1000 m ³ /hr

Project Description

This is an integrated explosion proof system for the simultaneous extraction of soil vapour and groundwater at potentially explosive concentrations. With a pH of 1 to 2, the groundwater was extremely aggressive and required neutralisation.

The system included a double header system (high vacuum and low vacuum) enabling simultaneous extraction from small diameter dual-phase extraction lances and larger SVE connections to the same well using separate pipe networks. This is especially helpful for more permeable soils (see Vacuum Extraction Technical sheet).

After pH neutralisation, the abstracted groundwater was treated with an air stripper. The off-gas from the stripper and the soil vapour were treated with the GRS "Moducat" Catalytic Oxidiser.

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