



GROUND TECHNOLOGY



Phase 3 Remediation

Once the extent of contamination on your site has been identified and quantified through appropriate investigation and risk assessment techniques, remedial treatment may be required to render your site fit for the proposed use.

Should your site pose an unacceptable risk to identified receptors our environmental engineers are able to provide practical and robust solutions for the clean up of soil and/or groundwater contamination problems. Our construction knowledge, capabilities and relationships with experienced remediation contractors enable us to provide you with the most economic and often innovative remedial scheme, designed to suit the needs of your site and end use. We are able to provide you with a full range of services from appraising remedial options to producing and agreeing a detailed strategy to validate the clean up of your site for regulatory sign off.

Remedial Options Appraisal

Following best practise and legislation, our first step in designing and implementing a remedial solution is to assess the technologies and options available. The most appropriate solution should fully take into account all stakeholders, site restrictions, the geological and environmental setting, local community, construction, timescale and regulatory authority requirements. In order to meet these needs, we carry out extensive consultation with regulators, appropriate specialists and stakeholders in order to provide the most sustainable, cost effective and lasting treatment solution.

In addition to our robust systematic approach, we have the experience and technical knowledge to design the most effective and economic solution to address all the specific pollutant linkages identified on your site.



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By working closely with specialist remediation contractors and using other in-house resources, we are able to appraise, design and employ the following process and technology based treatment systems:

- Excavation/Screening/Segregation
- Bioremediation – In-situ and Ex-situ
- Hotspot Removal and Off-site Disposal
- Pump and Treat
- Soil Vapour Extraction
- Semi Permeable Reactive Barriers
- Impermeable Barriers and Cut Off Walls
- Solidification/Stabilisation
- Air Sparging
- Soils Washing
- Underground Storage Tank Decommissioning
- Free Product Recovery
- Chemical Oxidation
- Multiphase Extraction
- Dual Phase Extraction

For more complex contamination problems, we also carry out treatability studies and remediation trials as part of the options appraisal process.

Remedial Strategy and Method Statement

Once we have identified and agreed the best remedial option for your site, we produce and document the remediation strategy in the form of a site specific Remediation Method Statement (RMS). The RMS describes and outlines the processes and technologies to be employed, contaminant concentration targets to be achieved, how the clean up operation will be validated and any future monitoring requirements. Other issues such as health and safety and environmental impacts associated with the works are also considered and any relevant controls outlined and documented. On completion, we submit the detailed RMS to the appropriate regulatory authorities for approval prior to any works being undertaken.



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Regulatory Liaison and Approval

Our strategy places great emphasis on the need to consult with the regulators from the earliest possible stage in the remediation appraisal and design. By discussing our initial investigation strategy for phase 2 with the regulators during the options appraisal process, the decision makers are kept fully informed at all times. This makes sure that the site can be effectively treated and validated in the shortest possible timescales.

Remediation Management and Engineering Supervision

Our capabilities include the management and supervision of remediation schemes. We are able to liaise with and select the most economic specialist remediation contractors. We can also provide engineering supervision and monitoring of the works, enabling us to ensure the scheme on your site is carried out effectively. In addition, a watching brief ensures that we are able to collate and document the necessary information for validation reporting, allowing subsequent approval and signoff by the regulators.

Remediation Validation

Our specialist environmental engineers can also undertake remediation validation services after the remedial works. This includes post construction certification and reporting of the remedial treatment to ensure approval and sign off by the regulatory authorities.