

Soil Mix Remediation Technology (SMiRT)



SMiRT (Soil Mix Remediation Technology), the largest Technology Strategy Board-funded project on Contaminated Land Remediation Technologies, was launched in October 2007.

SMiRT is a £1.24M, three-year project led by the contractor Bachy Soletanche and involves Cambridge University, three engineering consultancies (Arcadis Geraghty & Miller, Arup and Merebrook Science & Environment), three trade associations (British Urban Regeneration Association, British Cement Association and the UK Quality Ash Association) and four materials Suppliers (Amcol Minerals Europe, Richard Baker Harrison, Kentish Minerals and Civil & Marine Holdings).



Project SMiRT aims to achieve significant technical advancement and cost-savings by developing an innovative single Soil Mix Technology (SMT) system for integrated remediation and ground improvement, with simultaneous delivery of wet and dry additives, and with an advanced quality assurance system.

Soil Mix Technology involves the use of a range of different mixing tools and additives to construct permeable, reactive in-ground barriers, low-permeability containment walls, hot-spot soil treatment by stabilization and/or solidification, and for the improvement of soft soils. A range of soil mix technology equipment has been developed by Bachy



(Top) Trenchmix tool in operation
(Above) Trenchmix wall excavated for inspection

Soletanche. SMiRT will employ the Trenchmix System, shown together with the resulting treated ground in the illustration.

The project involves extensive laboratory treatability studies in which a wide range of conventional and novel binders and additives will be tested together with a range of soils and contaminants. In parallel, the novel equipment will be designed and manufactured. Extensive field trials will then follow, scheduled for the first half of 2009. Extensive in-situ testing, sampling and groundwater monitoring will then be carried out together with extensive laboratory testing of the site samples and assessment of the field measurements.

As a major step towards increased understanding and uptake of SMT in the UK, the project will also involve consultation meetings with a wide range of stakeholders and a major dissemination programme through CL:AIRE (Contaminated Land: Applications in Real Environments).

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