SOIL MIXING APPLICATIONS

- Ground Stabilisation - Load & shear
- Land Remediation – Contaminated ground
- Retaining Walls- Cantilevered, Anchored, High Modulus & Increase Design Life of Existing Retaining Walls
- Flood Protection – Cut-off walls
- Pipe Line Installation and Support – Sewers and services
- Canal Management – Base & walls
- Cofferdam Construction – Base & walls
- Road and railway embankments
- Vibration Dampening – Next to railways and construction works
- Coastal Erosion – Long Shore Drift
- Repairs to Coastal Sheet Pile Walls
- Sea Bed Stabilisation

ADVANTAGES OF SOIL MIXING

- No need to excavate existing material on site
- Minimum spoil removal
- Wider range of soils can be treated compared to other ground remediation solutions
- Existing soil is used as construction material
- No need to bring costly and bulky materials on site
- Environmentally friendly – Reduction of Carbon Footprint
- Cutting edge innovative technology
- With government pressure calling for a reduction in construction excavation waste being sent to landfill. Soil Mixing can help to meet these targets.

FIND OUT MORE

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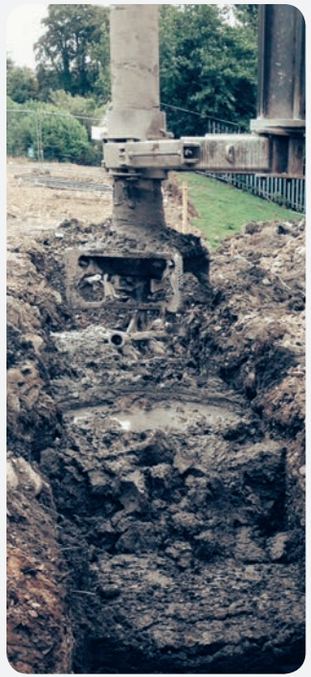

GROUND REMEDIATION USING DEEP SOIL MIXING FOR THE CONSTRUCTION INDUSTRY

DEEP SOIL MIXING LTD

ABOUT US

Deep Soil Mixing Ltd (DSM) is a leading ground engineering contractor whose aim is to expand the use of soil mixing as a ground improvement method in the UK and around the world.

Our directors have broad experience in applying advanced soil stabilisation and deep soil mixing technology in the UK and overseas.

WHAT IS DEEP SOIL MIXING?

Deep soil mixing is a cost effective, environmentally friendly, in situ ground improvement technique that enhances the characteristics of weak soils by mechanically mixing them with a cementitious binder. The action of mixing materials such as cement, fly ash, lime or bentonite with soil causes the properties of the soil to become more like soft rock.

Deep Soil Mixing Ltd (DSM) provides two types of deep soil mixing for geotechnical and environmental applications, including mass mixing, and column mixing. Both systems offer wet and dry soil mixing solutions which enable the additives to be placed as wet slurry or dry powder. Deep Soil Mixing Ltd is able to tackle some of the most difficult soil conditions, ranging from flood plains and soft soils through to contaminated land including landfills.

The deep soil mixing systems offered by Deep Soil Mixing Ltd are more controlled methods of soil mixing and provide a host of advantages over other soil stabilisation methods.

FROM CONCEPT TO VALIDATION

Projects being considered for soil mixing need advanced planning and a step by step approach. It is very important that sufficient time is allocated for design assessments, verification that the required soil properties can be achieved and assurance that appropriate equipment is available to carry out the works.

If the initial desktop study identifies the potential for deep soil mixing, Deep Soil Mixing Ltd (DSM) can help ensure that it is carried out in accordance with the EuroSoilSlab publication, which points out that designing structures through very soft soils requires substantial testing to justify the particular design.

In this way we can provide all or a combination of the following

- Testing of Soil Samples
- Initial Design and Project Assessment
- Appropriate Equipment
- Field Trials
- Construction Methods
- Validation Testing.

Testing of Soil Samples

The testing process gives a clear indication of the extent to which the soil mixing process will improve the site conditions. Samples of typical site soils are taken to the laboratory and mixed with several binder mixes and then tested to show the potential properties of the new soils. We take window samples to the full depth of the treatable soils, in order to get reliable representative samples of the existing site soils. This not only provides good soil samples, but also gives an indication of depth to competent ground.

Initial Design and Project Assessment

Deep Soil Mixing Ltd is able to assess the initial design, based on the seven day test results, with some certainty, enabling various design solutions to be considered and budget pricing for the project to be put in place. We work in partnership with our experienced designers who can, if needed, provide designs and finite assessments for the project. They are also able to offer independent design clarification if warranties are required.

Appropriate Equipment

Our extensive site experience means we are able to advise on the most suitable plant, while we own a wide range of specialist mixing equipment we do have the contacts to source additional plant from several countries within Europe where the process is at a much more advanced stage. This ensures that various options can be considered for each site. We are also able to advise on site set up, logistics, plant mobilisation and operations. Our experience enables us to ensure that the appropriate system is selected to deliver the specification and that it is correctly calibrated prior to commencing the works/trials.

Field Trials

Depending on the size of the project, field trials may not always be practical. Alternatively, they can be crucial in determining the success of the process at an early stage and must therefore be considered. Deep Soil Mixing Ltd agrees the aims and scope of a trial with the client/engineer/contractor, several weeks before the main works are due to commence.

We plan trials so that they address all of the conditions anticipated in the main works, using the same plant selected for the main works. We collect sufficient data to be able to make well informed decisions about the process, ensuring the success of the project.

Construction Methods

Installation for deep soil mixing is generally covered under the 'European Standard EN 14679: Execution of Special Geotechnical Works – Deep Mixing' which provides the basis for the methodology.

Validation Testing

Validation testing must take place during operations and following completion of the works, in order for the designer to provide design warranties. Our extensive experience in maintaining accurate project records ensures that the design team will be satisfied that the works have been constructed to the correct standard. Depending upon the specification, various properties of the modified soil need to be checked, such as:

- Shear strength
- Compression
- Permeability
- Leachate testing
- Binder distribution

With our specialist support, your soil mixing project will run smoothly, provide a dependable and efficient solution, and meet its objectives successfully.