The experience acquired by Soletanche Bachy from more than 150 jet grouting projects employing different systems in a variety of soils throughout the world is an assurance of robust optimised design using this technique.
The jet grouting process consists of breaking up the soil with a high pressure jet in a predrilled borehole and mixing the loosened soil with a self-hardening grout to form columns, panels and other structures in the ground. The choice of the most appropriate system and operating parameters is dictated by:

- the type and geotechnical properties of the soil to be treated,
- the radius of action of the jet needed to achieve the required size of the mixed-in-place structure,
- the desired mechanical post-treatment soil properties,
- the site constraints and its environment.

The design of a jet grouting project involves a number of steps, in which iterations may help optimise the design:

- determination of general geometry and strength of the structure (and permeability if applicable),
- determination of jet details (geometry, arrangement) with reference to geotechnical and hydrogeological characteristics of the ground and jet system performance and limitations,
- performance of trials to check that the proposed method and jet parameters meet the requirements of the design.

The jet system and parameters are selected on the basis of:

- the energy of the jet needed to obtain the desired radius of action with the proposed jet system,
- grout formulation needed to achieve the required strength in the grouted soil.

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The jet grouting method is suitable for all soils (from clay to sand and gravels), capable of producing a wide variety of structures through a combination of columns, panels, half-columns, etc...

The jet grouting process can be applied to anything from major civil engineering works to local underpinning of buildings in confined spaces.
The jet grouting process is extremely versatile.