



SOIL STABILISATION

RESTORATIONS OF SOLID FLOORS
BY MEANS OF **INJECTION OF EXPANSIVE RESIN**

BEFORE AND AFTER

OUR SLAB STABILISATION



Aims of consolidating floors



Sidewalks, porches, patios, swimming pools, and floors inside buildings can suffer from differential settlements over time, resulting in slopes or bulges that can sometimes be dangerous.

SOIL STABILISATION is the **GEOSEC®** solution aimed at consolidating floors and is recommended for interventions aimed at improving or maintaining their load-bearing capacity. In addition, when the structure allows for it, the settled floor can be lifted back to its initial level.

SOIL STABILISATION completely forgoes the need for invasive, lengthy, and complex work; there will be no need for excavations or demolitions, and the work will be carried out fast (even in just a few hours), cleanly and with precision, minimising costs and inconveniences.

Small perforations made in the floor allow resin injections to be carried out, and the lifting of the floor is monitored in real-time using a laser meter.



PHASES OF OPERATION

PRECISE
NON-INVASIVE
CLEAN
AND FAST



1 Identification of settled areas



Precision control

By employing laser measurement technology, our technicians can accurately pinpoint the locations on the settled floor surface where sinking is most severe.

For deep settlements

This process allows them to define the affected area's boundaries and calculate the level difference in comparison to the non-settled regions. In this way, it will be possible to define the exact sequence of injections and the quantity of resin to be injected at each point.



2

Search for any utilities that may interfere



Location of utilities

Before performing initial drilling in the floor for the ensuing insertion of injection tubes, it is important to identify and trace any utilities, piping, and structures that may interfere with the injections. The necessary information can be gathered from property documents (if available), but it is particularly valuable to obtain it through non-destructive testing methods, such as video

inspections, CAT scanning, and radar technology. Before carrying out the drilling, the client must accurately indicate the location of any type of utility that may interfere with the scope of the work, ensuring that no damage is caused by the drilling.*

** Our company can recommend or provide this type of service thanks to our cooperation with specialised companies.*



3 Drilling Operation



Small low-invasive perforations

Once the intervention areas have been defined, and the utilities and piping in the work area have been identified and marked, it will be possible to perform small injection drillings using manual drills and suitable drill bits, preferably along the joints of the floor itself, where possible.

Fast restoration

In this way, the invasiveness of the intervention is minimised, except when it is necessary, due to the nature of the workflow or for safety reasons, to drill through the floor, which can be replaced later by the client.



4 Inject Expanding Resin

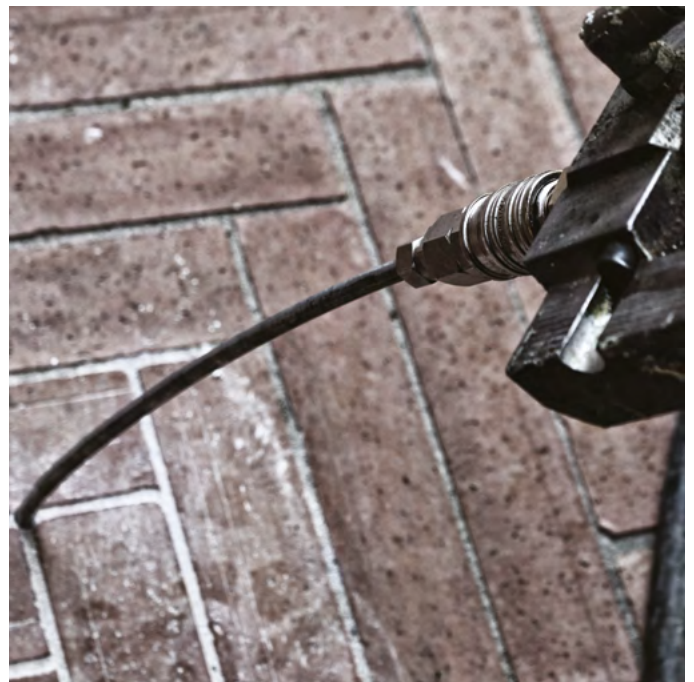


Insertion of tubes

Once the small drillings have been made and the metal tubes through which the resin is injected have been inserted, a fixing coupling will be attached to the injection gun which pushes the resin from the laboratory-truck through hoses.

Live monitoring

Once attached, **GEOSEC®** workers will position the laser sensor in proximity to the injection points to monitor the real-time lifting of the settled surface. In general, the resin is injected just below the settled floor, but, if necessary, it can be injected in depth using the patented **GEOSEC®** system for in-depth interventions.



5 Restoring to initial level



Guaranteed consolidation

If the floor allows for it, a controlled lifting can be achieved, step by step, in order to restore it to its initial level.

This phase is the most delicate part of the intervention, and not all floors can sustain this type of strain.

Controlled lifting

Floor slabs with minimal thickness and rigidity or are severely damaged may not be suitable for lifting. In each project, our technicians will verify whether this result can be achieved to ensure our clients' satisfaction.



WHY CHOOSE GEOSEC?

OUR STRENGTHS



CHOOSE THE ORIGINAL



GEOSEC SOLUTIONS

GEOSEC® has invented the method of ground consolidation and stabilisation by means of 4D tomography control of resistivity and seismics. For over 20 years, **GEOSEC®** has ensured a high level of experience in the sector through thousands of successful interventions. With **GEOSEC®**, you can place your trust in the know-how, technologies, and skills that are unique to the inventor of the method.



CONSOLIDATING WITHOUT CONTAMINATING

GEOSEC® takes care of the environment, and after the intervention is carried out, the soil will not be contaminated. **MAXIMA®** is the resin exclusively produced for **GEOSEC®** by qualified multinationals in the sector.

TECHNICAL ADVANTAGES



No rebuilding of the old floor is required, unless it is severely damaged.

The resin injections are carried out through small holes, allowing the work to be done without clearing the intervention area.

The intervention is very fast. Our teams can consolidate up to 80-100 m² of floor per work shift.

If the settled structure allows for it, re-lifting the floor and restoring its initial level can be fully achieved.

GOOD WORKMANSHIP WARRANTY



GUARANTEED QUALITY

GEOSEC®'s solution is unique and holds prestigious national and international technical certificates. It offers a ten year company guarantee with the possibility of upgrading it to a ten year insurance backed guarantee, thanks to its cooperation with major international insurance companies



WANT TO **KNOW** MORE?

FOR MORE INFORMATION, CONTACT US FOR A NO OBLIGATION CONSULTATION.
OUR ENGINEERS ARE AT YOUR SERVICE THROUGHOUT THE UK.



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