

HISTORIC RESIDENTIAL BUILDING

SUMMARY

A leaking pipe caused the washout of the soils underlying the historic heavyweight building. As the pipeline was being replaced, significant voids and cavities were encountered.

If left untreated, there was a risk of further voiding and structural instability. Voids were identified at ground level (under the garage slab) and also at basement level (under the stone paving slabs and behind the basement walls).

Mainmark was contracted to address weaknesses in the ground. Mainmark's Teretek resin injection methodology was identified as the optimum solution for this project.



OBJECTIVES

Mainmark needed to re-support and void fill the foundation ground using a quick, non-invasive method that would not require demolition or excavation.

It was important that the residents of the property were not disturbed by the works, and that the treatment and application was fast and reliable.

The proposed methodology must have taken account of the cluster of services (power, gas, water & drainage) entering the building within the treatment zone.

PROJECT PROFILE



SOLUTION

In a process similar to keyhole surgery, Mainmark technicians drilled a number of injection points at various depths before injecting the Teretek® expanding polyurethane resin mix through very small injector tubes. Injection took place from within the building, at basement level, and from within the garage, at ground level.

All resin mixing and power generation equipment was contained in our works vehicles, allowing for efficient and tidy site operations. The material expands on delivery to the target depth, strengthening the ground and filling the voids with minimal disruption.

Injection continued until voids were full and structural elements supported as confirmed by recording of a sustained increment of lift along the treatment zone.

The project was successfully completed in just one day.

Mainmark's methods ensured that neither the tenants or owners were inconvenienced and the structure is now fully supported. This has helped to eliminate the risk of future damage.



OUTCOME

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| • Category | Residential |
| • Focus | Historic Residential Building |
| • Location | South West England, UK |
| • Duration/Year | 1 day / May 2017 |
| • Technology | Teretek® |