Teretek® Re-levels and Supports Home Built on Sloping, Unstable Soil

PROJECT PROFILE
2017-53UK

mainmark

INDUSTRY
Residential

STRUCTURE
Two-storey house

PROBLEM
Weak soil and subsidence

LOCATION
Newton Abbot, UK

DURATION / YEAR
3 days / 2017

TECHNOLOGY
Teretek®

BUSINESS UNIT
Mainmark UK

Summary

Newton Abbot is a market town on the River Teign in Devon, England. The area is characterised by very shallow and well-drained loamy soils over limestone, often on steep slopes.

When a local investor purchased a two-storey home with the intention to renovate, the property was identified as experiencing severe subsidence. It had been constructed on a sloping site and the reclaimed 'made' ground had caused the home's foundations to shift, most likely due to inadequate fill material or poor compaction.

The structure stood on 1.5m deep strip footings and a suspended, reinforced concrete floor slab. Half of the home had subsided approximately 40mm, causing the wall of the house to separate from the foundation by approximately 20mm. Large cracks also began to form in the walls.

The homeowner contracted Mainmark to help fix the issue by lifting the property back to level.

Objectives

Mainmark was required to lift the home's foundation by up to 43mm and the house by 20mm, returning it to its original level and reconnecting the wall with the foundation.

The project was to be completed within three days, without causing disruption to other trades carrying out ongoing renovation works on site.

Access to the neighbouring property, via a narrow, shared driveway, needed to be maintained throughout the process.

Solution

Mainmark recommended Teretek®, its proprietary engineered resin injection solution, due to its ability to raise and re-level the structure in a prompt, non-invasive fashion so as to allow other trades to work around the methodology. This non-invasive, environmentally-inert solution successfully returned the house to level and closed the cracks.

Teretek's unique formulation is fast-acting and costs a fraction of traditional underpinning and ground engineering methods. Mainmark was able to apply Teretek® while other renovation work was being completed, which was a great outcome for the homeowner who was able to maintain his schedule of works.

Wall crack before and after Teretek® engineered resin being injected