

Oakapple Lane, Barming

Maidstone, Kent

The presence of possible solution features meant that ground improvement works on a housing site in Kent were not straightforward, especially as the site was already built-up with homes occupied. Keller's compaction grouting technique solved the problem of treating the ground with minimum disruption.



The project

Ground improvement works were required at the Oakapple Lane site to allow the construction of a new housing estate. Site investigation activities discovered a number of possible solution features beneath the site due to the natural ground conditions that required remediating prior to the foundations being laid.

The challenge

The site was accessed through a previously built, occupied housing estate with the challenge being to complete works on time and to budget with minimum disturbance to people's homes. Deliveries were carefully planned to ensure limited impact on the local area and site works were completed during weekday hours.

The solution

Each housing plot was assessed through dynamic probing to determine if it needed treating. Those that were deemed to require ground improvement works were treated with a 3m compaction grouting grid. 2No rigs were used with a rotary percussive drilling system to drill to an average depth of 8m. Grouting was then undertaken in 1m stages by injecting a stiff low slump mortar through the drill casings as they were extracted. 1,096 primary holes were completed with a total treatment area of 9,729m².

Project facts

Owner(s)

Taylor Wimpey

Keller business unit(s)

Keller UK

Main contractor(s)

Taylor Wimpey

Solutions

Bearing capacity / settlement control

Markets

Residential

Techniques

Compaction grouting

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