Crendon Industrial Estate

Long Crendon, Bucks, UK

Foundation solutions for a new industrial estate in Buckinghamshire.

•Facilitated shallow simply reinforced spread footings and a ground bearing slab

•Utilised a displacement methodology to minimise spoil

•Maximised the achievable bearing capacity thus reducing foundation sizes

The project

The construction of a 26,700 sq ft Warehouse.

The challenge

Below a thin layer of fill, the site is underlain by c3.0-5.0m of weak Alluvial material which includes some very low strength clay soils. The client required a solution that could control settlements to <25mm and 1:500 whilst at the same time offering sufficient bearing capacity to keep the foundations at a sensible size.

The solution

We initially explored the option of Vibro Stone Columns but this was not suitable due to the very low strength of the soils. We therefore proposed a displacement RI ground improvement solution. Keller selected a 300mm diameter column installed into the top of the River Terrace Deposits (where present) or down to the Kimmeridge Clay Formation. We were able to achieve a bearing capacity of 150kN/m2 for simply reinforced shallow foundations and 43kN/m2 for a ground bearing slab constructed over a 500mm thick load transfer layer. These works were successfully completed in just under 2 weeks.

Project facts

Owner(s)
4th Industrial GP (UK) Ltd

Keller business unit(s)
Keller UK

Main contractor(s)
A Surman Building Contractors Ltd

Solutions
Piling

Markets
Industrial

Techniques
Rigid inclusions

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