INDURENT PARK

Clanville Way, Chippenham

The project

Bowmer and Kirkland secured the project to construct four industrial units. Two of the units were underlain by engineered upfill placed by Winvic in 2020 to achieve an external yard specification. To improve the bearing capacity and settlement performance of the made ground, Vibro stone columns with assisted pre-boring were installed.

The challenge

Five zone tests were specified by Stantec to validate the floor slab settlement over a large area.

The solution

A total of 1,132 Vibro Stone Columns were installed with assisted pre-boring to achieve 125kN/m2 for the building foundations and 50kN/m2 for the floor slabs of Units 4A and C. Plate load testing, dummy footing testing and five large scale zone tests were carried out to validate the Vibro Stone Column performance. The zone tests were 3m x 3m on cast concrete slabs and loaded to one-and-a-half times working load. Settlements were then monitored and modelled against the design calculations to validate the works.

Key achievements

- The use of Vibro stone columns to improve the bearing capacity and settlement performance of the engineered made ground and underlying natural soils
- Large scale zone testing to validate the Vibro works as specified by Stantec

Project information

Application
Bearing Capacity/ settlement control

Technique
Vibro Stone Columns with zone testing validation

Sector
Commercial

Client
Indurent

Main contractor
Bowmer and Kirkland

Contract value
£150,000

Keller companies
Keller UK

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