

## **Saltbox - Rigid Inclusions and Vibro Stone Columns**

Bognor Regis, West Sussex

- Achieved high capacities and tight settlement control
- Facilitated the adoption of simple spread footings and ground bearing slabs
- Achieved rapid installation – foundation works following immediately behind
- Reduced the carbon impact by offering a combination of solutions



### **The project**

The construction of a 204,993 sq ft industrial space at the gateway to Bognor Enterprise Park, a 70 hectare government backed development.

### **The challenge**

The units were being constructed over 4.0-5.0m of low strength clay and chalk deposits. The main challenge was to provide a ground improvement solution which could limit settlements to <25mm under a combination of relatively high slab loadings and localised upfilling.

## The solution

Keller offered a combination of Ris and VSCs for a selection of units. The VSCs were proposed as an alternative to Ris for the smaller and more lightly loaded units with Ris being adopted elsewhere. The Ris were installed using fully displacement methods and designed for a bearing capacity of 200kN/m<sup>2</sup>. The VSCs were designed for 150kN/m<sup>2</sup>. The Keller proposal offered a nett 100t CO<sub>2</sub>e saving over the original design scheme.

## Project facts

### Owner(s)

Kier Logistics (Bognor) Ltd

### Keller business unit(s)

Keller UK

### Main contractor(s)

Mildren Construction Ltd

### Solutions

Bearing capacity / settlement control

### Markets

Commercial

### Techniques

Rigid inclusions

Vibro stone columns

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