

## Whitby Maritime Hub

Whitby

Keller were contracted by Willmott Dixon Construction Limited to install Rigid Inclusions on their project at Whitby maritime Hub. Keller were able to provide a solution that enabled the use of shallow simply reinforced footings and was also low vibration as work was taking place near existing services and retaining structures.



### The project

The construction of a new Maritime Training Hub in Whitby.

### The challenge

The soils comprised up to 4.5m of contaminated and coarse fill underlain by a succession of weak Alluvial soil interspersed with peat bands to around 12.0m depth. The site was also impacted by a shallow tidally influenced groundwater table and was sensitive to vibration. The Engineers were keen to adopt a solution that would avoid vibration with reduced spoil and carbon. The works also had to be undertaken within tidally influenced conditions.

## The solution

Keller were engaged at a very early stage, and we proposed a displacement RI solution instead of piling. The solution provided enhanced stiffness to facilitate shallow foundations designed for a bearing capacity of 200kN/m<sup>2</sup>. Each column was reinforced with a single bar due to the tidal conditions. The RIs were successfully installed in just a few days, allowing the Contractor to follow on quickly with the foundation installation works

## Project facts

### Owner(s)

North Yorkshire Council

### Keller business unit(s)

Keller UK

### Main contractor(s)

Willmott Dixon Construction Ltd

### Solutions

Bearing capacity / settlement control

### Markets

Institutional/public

### Techniques

Rigid inclusions

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