

## Skelton Gate

Leeds

The innovative use of Dynamic Compaction allowed the construction of a proposed new housing development upon up to 40m of colliery spoil.



### The project

Hall Construction were carrying out site preparation to an area of 102,533m<sup>2</sup> on the second phase at Skelton Gate to allow the construction of a new housing development. This included the construction of new roads and a bridge over the existing stream.

### The challenge

The site is underlain by up to 40m of colliery spoil containing a high proportion of cobbles and boulders which would be impenetrable by standard piling methods.

## The solution

Dynamic Compaction was carried out using a 12 tonne weight dropped from heights of 10-12m to provide an allowable bearing pressure of 80kN/m<sup>2</sup>. This innovative technique allowed for a treatment depth up to 8m. Hall Construction then carried out earthworks, placing engineered fill above the dynamic compaction works, therefore leading to a thickness of around 12-14m of improved ground. Raft foundations were then used to support houses. Gabion Walls were also installed by Phi Group to support the new access road to the site.

## Project facts

### Owner(s)

N/A

### Keller business unit(s)

Keller UK  
Phi Group

### Main contractor(s)

Hall Construction

### Solutions

Bearing capacity / settlement control

### Markets

Residential

### Techniques

Dynamic compaction

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