

# GALLEYWOOD CARE HOME

Galleywood Road, Chelmsford

## The project

The construction of a three-storey, 60-bed care home.

## The challenge

The site was found to be underlain by some low-strength fill materials and the highly weathered Lowestoft Formation. Due to the combination of these weak soils and the proposed loadings, which included about 1.5m of upfilling, a Vibro Stone Column solution could not be used for this project. The proposed solution needed to limit settlements to <25mm and 1:500 whilst offering a sufficient bearing capacity to keep the foundation widths at a sensible size.

## The solution

A displacement Rigid Inclusion ground improvement solution was adopted below the foundations. Keller selected a 300mm diameter column installed into the top of the unweathered Lowestoft Deposits, so as to provide a bearing capacity of 150kN/m<sup>2</sup> for simply reinforced shallow foundations. All of the columns were successfully installed in just over a week, allowing the contractor to follow on quickly with the foundation installation works.

## Key achievements

- Facilitated shallow simply reinforced spread footings.
- Utilised a smaller low headroom rig to minimise temporary work requirements.
- Offered a low vibration methodology in a residential area.

## Project information

### Application

Bearing Capacity/  
Settlement Control

### Technique

Rigid Inclusions

### Sector

Health

### Client

Stompco Ltd

### Main contractor

Horizon Construction Ltd

### Contract value

£65,000

### Keller companies

Keller UK

### Contact

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