

UK Case Study – Castlegate, Caerphilly Residential Development

The proposed development occupied an area of approximately 6 Ha and included a residential development of short terraces and semi-detached houses.



Materials Description

Site investigation information indicated that the site was underlain by 2 types of Made Ground. To a depth verified of about 2.5 to 3 mbgl a sandy gravelly CLAY was found below which pulverised Fuel Ash was found to 13.3 mbgl. This in turn was found to overly Glacial Deposits. Groundwater was not encountered in the boreholes put down during the site investigation.

Verification Testing

The verification testing for this site included a suite of SCPT testing and Zone Load testing.



127 SCPT tests were performed on site which confirmed uniformity of the treated PFA at the site. The testing also confirmed an Increase in Cone Resistance to **around 4m bgl**.

Ground Bearing Capacity Maps

Landpac CIR measurement highlighted the area of the site that could not be treated with HEIC.

Further treatment with HEIC of the other areas led to improved bearing capacities and homogenization of the in-situ materials

Drawing 1: CIR map at zero coverages

