

Dwarf House, Belgravia, London

Our Services

- Site Investigation
- Prediction of Ground Movements
- Geotechnical Advice
- Foundation Design
- Monitoring of Movements



Deep Basement Geotechnics on a Confined Site

Laing-O'Rourke sought advice from **CGL** to meet the challenge of providing an 8.5m deep basement for a new residential property in a very confined site located directly adjacent to prestigious residences.

The top of the London Clay varied in elevation by up to 3m across the 15m x 25m site. Of principal concern was the likely performance of the composite wall system supporting the party walls, with little tolerance for movement.

It was essential that any movements that developed during construction did not lead to damage of the adjoining properties.

To ensure that the risk of damaging movement of was minimised, an assessment of each of the potential movement mechanisms was made.

The innovative solution involved the installation of a curtain of mini-piles onto which a series of reinforced concrete facing panels were cast and excavated in narrow slots based on established underpinning techniques.

The success of the project depended upon careful co-ordination with the ultimate client, Omniway Properties, contractor, structural engineer as well as the party wall engineers appointed by the neighbouring property owners.

Client: Omniway Properties
Contractor: Laing-O'Rourke