



Key achievements

- High accuracy monitoring of critical pile installation
- Close cooperation between divisions to achieve demanding specification

The Project

A major redevelopment of a central London property, involving significant works undertaken on the interior and basement of the building

A relatively rare example of an indoor piling project, Keller were installing a single pile into the ground below the basement. The pile will support the base of a new lift to be installed into the property as part of the redevelopment.

The Challenge

An indoor site made careful control of the piling process the highest priority. The specification required a high degree of accuracy for the pile installation. At 600mm in diameter and a 25-metre depth, maintaining verticality of the pile was a key priority.

The Solution

GEO-Instruments' specialist site engineering team worked with Keller throughout the process, using engineering surveying and borehole surveying techniques to ensure the pile stayed within tolerance.

Engineers employed drilling rig control monitoring and carried out regular borehole surveys during the drilling process in order to closely monitor vertical accuracy.

Control points were established on the drilling rig and continuously monitored using a Leica ICR70 Robotic Total Station throughout the course of drilling. This allowed the team to detect and correct any deviations caused by rig movements, ensuring the rig remained in the correct position.

In addition to the targets on the rig, real-time checks of the auger alignment were made throughout the drilling process. Measurements were taken reflectorlessly using the Total Station.

Application

Pile Installation

Technique

Manual 3D Surveys
Borehole Surveying

Market

Buildings

Client

Private developer

Project Duration

<1 Month

Instrumentation

Leica ICR70
DeviGyro

Keller companies

GEO-Instruments
Keller UK

