



# LON1-EAST, ROMFORD EXPANSION PROJECT

📍 Romford, East London

Our ScrewFast division achieved a significant milestone with their successful completion of the largest indoor helical piling project in the UK, on behalf of TClarke. This project was part of the Green Mountain expansion at LON1-East in Romford.

## PROJECT BACKGROUND

- Appointed by TClarke who acted as Principal Contractor on the project.
- The Green Mountain expansion project required innovative engineering solutions to support the infrastructure of two expansive data centre buildings.
- Building upon the success of previous helical piling efforts in the original building, the client recognised the advantages of using helical piles, particularly for their ability to minimise disruption.

## CHALLENGE

The project presented several challenges, primarily that of working within a live data centre environment. Minimising disruption was critical, with a focus on avoiding significant wet works and vibration disturbances to maintain the operational integrity of the data centre.

Equipment manoeuvrability was challenging due to strict height and weight restrictions, necessitating precision in the movement and operation of heavy machinery.

Additionally, the helical piles had to be engineered to withstand substantial compression loads up to 500kN. The installation required the piles to reach depths between 10 to 13 meters, with site-specific soil conditions needing thorough assessment and adaptability.

## SOLUTION

Preliminary pile testing was conducted to confirm pile capacity in the specific soil conditions of the site, enabling the team to adapt design parameters effectively and generate efficiencies.

The installation of 301 helical piles, with a diameter of 273mm and a wall thickness of 10mm, was carried out to meet the project's load requirements and achieve the necessary depth and stability.

Specialised equipment, including two 35-tonne excavators and two 250 kNm torque heads was employed for the installation due to their ability to operate within the site's restrictions.

Careful planning and execution ensured precise manoeuvring of the equipment to prevent operational disruptions within the live data centre environment.

## AT A GLANCE

**Sector:** Data Centre

**Solutions:** Restricted Access and Specialist Piling

**Techniques:** Helical Piling

**Client:** TClarke

**Van Elle Division:** Specialist Piling (ScrewFast)

## EQUIPMENT

- Two 35-tonne excavators and two 250 kNm torque heads.

