

RYLANDS BUILDING

📍 Manchester

Our Specialist Piling team was appointed to provide the foundations required for the conversion of the former Debenhams building into apartments, as well as high-end retail and leisure spaces. The project includes the addition of two extra storeys to the existing structure.

PROJECT BACKGROUND

- Appointed by Domis Construction
- The project involved 240No. 350/406 bored cast-in-place piles up to depths of 17.5m. 9No. dynamic load tests and 3 No. static load tests

CHALLENGE

The project presented several complex logistical and engineering challenges. The Rylands Building's Grade II listed status required compliance with strict preservation guidelines, requiring careful coordination with conservation authorities to protect the building's historical integrity.

The overhead winch had a 4.5-tonne Safe Working Load (SWL), so the rigs had to be dismantled, lowered into the basement, and reassembled.

Working within a restricted 3m headroom, we used 1m auger and casing sections, requiring precise manoeuvring. Tremie grouting was performed on 350mm piles, which contained a reinforcement cage and 57mm central bar to accommodate high tension loads.

Bespoke static load testing equipment had to be specially designed, manufactured, and mobilised to be positioned accurately in the basement. These constraints required innovative solutions, careful planning, and expert execution.

VAN ELLE SOLUTIONS

The project was initially priced based on drilled piles. However, after conducting a trial pile, we determined that switching to cased and augered piles would be more effective for the project's requirements.

Over 12 weeks, we dismantled three rigs, lowered them two stories into the basement with a 4-tonne winch, and reassembled them.

We installed 240No. 350/406mm bored cast-in-place piles to depths of 17.5m, some with rock sockets up to 8.5m deep, before stripping and lifting the rigs out again.

Strata Geotechnics conducted 9No. dynamic and 3No. static load tests, confirming the piles met all performance requirements. Despite logistical and technical challenges, we successfully delivered the project on time and to specification.

AT A GLANCE

Sector: Commercial

Solutions: Restricted Access Piling

Techniques: Bored Cast in Place Piling, Static Load and Dynamic Testing

Client: Domis Construction

Van Elle Division: Specialist Piling and Strata Geotechnics

EQUIPMENT

- Three Hütte 203 Rigs
- Three Grout Pumps
- 350mm Augers and 406mm Casing
- Two Forklifts

