

ABI Equipment Limited

Piling Equipment Specialists

Sales - Hire - Parts and Service - Project Support



ABI Equipment Limited was asked to supply specialist piling equipment consisting of a Delmag RH18/ 200 drilling rig complete with rotary head and kelly bars by piling contractor P J Edwards Co Ltd.

The RH18/200 included a number of special innovative features that were especially beneficial on the contract. These included the ability to load and unload itself from the low loader by remote control and to rig itself and not need assistance from another machine. The rig was also able to operate the kelly winch pull with the crowd winch pull together to increase greatly the casing extractor force. In addition, the rig was very compact, having a small operating footprint, which was particularly useful in the confined space on site. Another advanced feature of the RH18/200 was that the engine emission complied with 'Tier 4 Final', which will be a compulsory requirement for all site machines within the LEZ from 2020.

The piling works were part of the foundations for a new bridge which was to form part of the A6 Manchester Airport Relief Road. The working area was a very confined space adjacent to a live railway line and close to an existing road bridge. Access was provided by removing a section of wall adjacent to the existing bridge and building a temporary ramp to enable the rig to travel down the ramp and work alongside the railway line.



A6 Manchester Airport Relief Road

Main Contractor: Carillion and Morgan Sindall JV

Client: Stockport Council

Piling Contractor: P J Edwards Company Limited

Piling Equipment supplier: ABI Equipment Limited



ABI Equipment Limited

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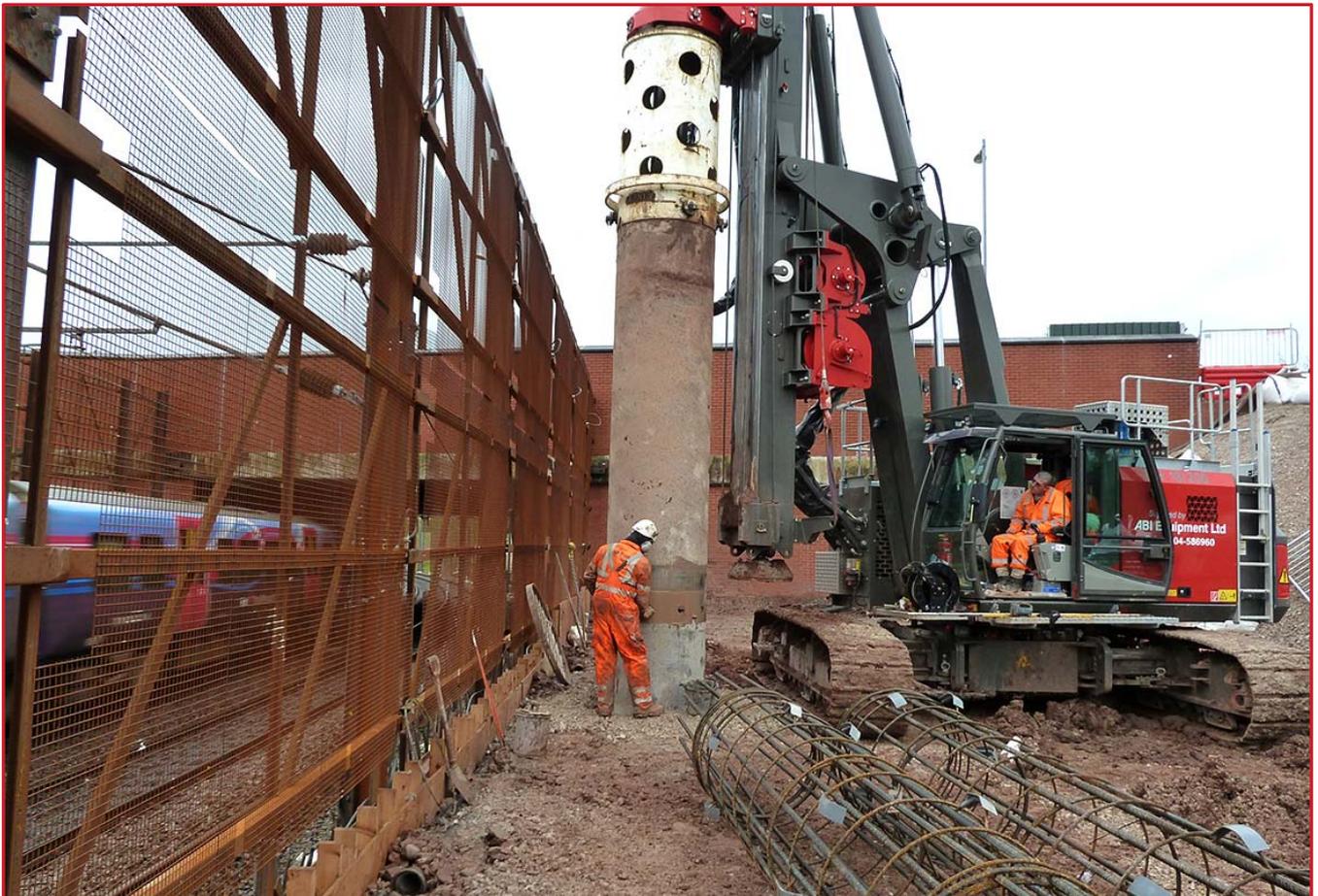
Large Diameter rotary bored piling

The total number of piles consisted of 27No piles, 15No on one side and 12No on the other. The piles were installed using segmental casing and rotary bored piling techniques. The segmental casings were OD1000mm by 9.5m deep. Two sections were needed. The pile diameter was OD900mm and the pile lengths varied between 18.5m and 19.5m.

The ground conditions consisted of sands and gravels for the first 5.5m, followed by clay for the next 10m finishing with mudstone for the final

2.5m to 4.5m. It was necessary for the piles to penetrate into the mudstone by at least 2.5m.

“The Delmag RH18/200 performed admirably” said P J Edwards contracts manager Stuart Watkinson. “I was very impressed with the rig. It was an extremely powerful and compact drilling rig with a number of advanced features which were particularly useful for us in the limited space we had available, surrounded as we were by two railway lines and an existing road bridge”.



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