

Next Distribution Centre, Doncaster

Driving of precast piles and steel piles for Next's new distribution centre.



AARSLEFF

Major retailer Next has warehousing facilities in Doncaster and the Company needed extra warehousing space to operate as its national distribution centre. The construction, a single storey (625,000 ft.) warehouse facility with adjoining three storey office, includes a link bridge connecting the new building to the existing Next Warehouse to the North.

Aarsleff Ground Engineering was awarded the contract by Main Contractor Bowmer & Kirkland, to install circa 9700 steel tube and precast concrete piles together with 10no. Static Load Tests +2% Dynamic Load Testing cross correlated to ensure reliability in design.

The project presented a number of geological challenges – the site investigation originally suggested pile lengths up to 17m. However, in reality piles were driven to a maximum of 12m, with an average length of 8-9m across the site. This difference was successfully managed within the project's testing regime by testing the piles that were driven to different lengths, whilst maintaining the project's checking 'set' criteria.

Notwithstanding the challenging ground conditions, there were also a number of time constraints; the original target programme was for 21 weeks, but the clients programme was 17 weeks.

The solution was for Aarsleff to mobilise some of its vast plant resource including crawler crane, telehandler, and additional piling rigs. In addition, Aarsleff also added weekend working – not charged to client – in order to complete the programme more quickly. In fact, Aarsleff's proactive approach delivered the works in just 18 weeks. The site area was also considerable presenting a large area of working platform to prepare. Aarsleff was keen to assist in reducing costs to the client by agreeing a maximum bearing pressure for the rigs used on the project.

A works manager, Dave Edwards was appointed by Aarsleff to oversee the project, a move viewed as very successful by both Aarsleff and the client. Free trial of enlarged pile heads was also provided by Aarsleff, and although this was not taken up by the client the offer was appreciated and reinforced the excellent working relationship critical to the project's success.

Successful project delivery was also facilitated by the support of key supply chain partners Dewey Solutions Limited, who was involved from initial scope discussions to the completion of works. The quick start-up of the project and tight schedule demanded a nimble and pro-active plan to implement a resource support strategy and Dewey managed to succeed and deliver this service to Aarsleff. This is one of the first times Aarsleff have used this approach to engineering and resource solutions to support a major project delivery.



Aarsleff has the capability of offering a fully resourced team of engineers, supervisors and skilled operatives into the construction market to service the delivery of major projects with the support of key supply chain partners.

Project Manager for Bowmer & Kirkland, Ben Howard, said: "It was encouraging to see how Aarsleff approached this project from the offset. Their team's proactive mind-set of realising the importance of pre-start planning and upfront technical advice was second to none. This positive approach was carried through to the site team's attitude in dealing with the daily challenges of on-site activities throughout the project until completion.

Some 10,000 piles overall, driven within a very tight programme, all without any fuss or complications.

Aarsleff's approach to Health & Safety is impeccable. Using fully serviced, modern machinery and up-to-date working practices, ensured this was one less challenge to overcome. We look forward to working with the Aarsleff team again."

Scope of Works

Circa 9700 steel tube and precast concrete piles;
4-12m lengths
10 No. Static Load Tests + 2% Dynamic Load testing cross correlated to ensure reliability in design.

Client

Bowmer & Kirkland

Equipment

4 rigs, plus 1 additional for a short period on-site

Construction period

February 2015

Aarsleff Ground Engineering Ltd, is the UK trading arm of Danish contracting giant Per Aarsleff A/S, and is one of the UK's leading piling and geotechnical design and installation specialist contractors; actively promoting early consultation to ensure each scheme can be Value Engineered to give clients the best service, quality design, safety and value. Aarsleff's strategy and philosophy of investment into the future has resulted in its wholly owned subsidiary Centrum Pile Ltd having the most advanced precast pile production facilities in the UK, producing segmentally jointed precast concrete piles to BS En12794 to Class 1A.

Contact

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