

Erith Distribution Warehouse

London

Keller came up with a combined driven cast insitu and precast pile solution to provide the foundation for a new high bay storage facility in Erith, South East London.



The project

Keller installed around 9000 Precast and Driven cast In-situ (DCIS) piles to provide the foundations. All the DCIS piles were constructed with enlarged 900mm diameter heads. Enlarged pile heads were constructed monolithically on the floor slab piles. This in turn minimised pile breakdown and provided a sustainability benefit to the project by removing waste disposal of discarded pile heads from the scheme.

There were also programme benefits as the pile head was formed to underside of floor slab level meaning ongoing construction activities could continue without disruption. Tight tolerances of +/-50mm were achieved on the head construction.

The challenge

A tight 15-week programme which meant that Keller had to supply five rigs to site carrying out two different piling techniques. There was also the issue of work sequencing to keep two different types of rigs supplied and operational.

The solution

A Driven cast in-situ and Precast pile solution was proposed by Keller for this site. A total of 8777 No piles were installed with 6051 No 900mm diameter enlarged heads also completed for the piles supporting the floor slab.

The combined DCIS and precast solution allowed the advantages of both techniques to be maximised to the benefit of the project. Precast piles were used for the building frame pile caps which allowed virtually immediate follow on with pile cap construction. DCIS piles were installed to support the floor slab were then installed behind the perimeter piles. A robust QA process was implemented by Keller for these works which included the completion of 20 No static load tests and 54 No dynamic tests.

Project facts

Owner(s)

Ocado

Keller business unit(s)

Keller UK

Main contractor(s)

McLaren Construction

Solutions

Piling

Markets

Commercial

Techniques

Driven cast in-situ piles

Email address

rob.madill@keller.com

Phone number

02476 511266