

# Lidl, Avonmouth

Driving of precast and steel piles for new distribution centre.



**AARSLEFF**

The Avonmouth Severnside Enterprise Area, which is sandwiched between the north bank of the mouth of the river Avon within the Severn Estuary and the M49, is expected to attract new economic activity in diverse sectors, including energy generation, waste management, manufacturing and warehousing and distribution, the latter of which is evident with supermarket giant Lidl UK.

Lidl UK purchased 13.36ha of land at the Central Park site on the Enterprise zone (which is owned by Delta Properties) for the construction of its new 180,000m<sup>2</sup> regional distribution centre in its bid to service the supermarket's expanding operations in the South West.

Director Paul Hobbs explains, "This activity is unprecedented in the region and puts Central Park on the map as one of the UK's most successful distribution parks". Lidl UK awarded the design and build contract to TSL Projects, who then awarded Aarsleff with the foundations for the large concrete slab and column bases.

Aarsleff installed approximately 9,500no 250mm<sup>2</sup> precast piles driven between 14 and 20m-deep across the site over a 12 week period - the piles, the majority of which have been supplied by Centrum Pile - Aarsleff's in-house manufacturer of continuously reinforced, precast concrete piles, which are cast in standard square sections from 200mm to 400mm and from 4m in length, increasing in 1m increments to standard lengths of up to 14m.

Approximately, a further 300no 273mm diameter by 18-23m deep tubular steel piles were also driven, to complement the overall foundation works, including the test piles.

Aarsleff ran with two Junttan PMx22 rigs, a Junttan PM20 HLC, two Junttan PMx20's and a Banut 800. Each rig is driving between 25 and 40no piles per shift, circa 1,000no per week.

Due to the poor ground conditions made up of soft clay, there was no scope for traditional foundations, meaning that Aarsleff Ground Engineering also had to provide piles for the slab. Aarsleff gave the designer the capacity per pile which allowed them to calculate the number and spacing of piles beneath the slab as the slab design and its thickness was not part of our scope of works.

The sheer scale of the Lidl building (600,000 square foot warehouse) and its roof stanchions obviously having a larger load, consequently required more foundation support from Aarsleff. The level of depth that we drive to is based simply on site investigation and design, and on ground like soft clay with poor bearing capacity, the simplest solution is to drive down to found on bedrock.



**Scope of Works**

9,500 No. 250mm<sup>2</sup> precast piles  
 300 No. 273mm dia steel tube piles + Pile column bases

**Contractor**

TSL Projects

**Equipment**

Two Junttan PMx22  
 One Junttan PM20 HLC  
 Two Junttan PM20  
 Banut 800

**Construction period**

8th May 2017 - 25th August 2017

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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