

Solent University, Southampton

Driving of sheet piles for brand new university sports building



AARSLEFF

Aarsleff Ground Engineering were awarded the sheet piling contract by Morgan Sindall Construction to facilitate a brand-new sports building at Solent University's city centre campus in Southampton. Facilities in the building will include two sports halls, three fitness studios, a health and wellbeing gym, a strength and conditioning gym and high-quality teaching facilities.

Aarsleff installed 76 No 700mm Arcelor steel sheet piles of 12.5m length and 1 No. single box pile of 15m length to form the cantilever retaining wall, designed by Arup Design. Box type sections are made up of two U type sections, simply welded together into a box shape. Aarsleff supplied, handled, pitched and drove the sheet piles with vibratory installation techniques complete with pre-augering as required. 110T of steel made up the sheet piled wall, built for supporting the adjacent backfill.

As part of Arup's design, Aarsleff were required to carry out a stringent testing regime, comprising 3 sets of Dynamic Tests, and another 3 tests 7 days after project completion to prove the design and settlement criteria. The overall purpose of dynamic pile testing is to determine the response of the sheet pile to dynamic loading and to assess the efficiency of transfer of energy to the pile head from the hammer blow.

The project was completed well ahead of time, concluding 2 days before original target date. The first students will make use of the building during summer 2019.

Scope of Works

76 No. Steel Sheet Piles
1 No. Box Pile
Pre-augering

Equipment

50T mobile crane
ABI Leader Rig with 925kN
high frequency hammer

Client

Solent University

Construction period

17th October 2017 - 2nd
November (returned 7 days
later for testing)

Contractor

Morgan Sindall Construction

Contact

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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.