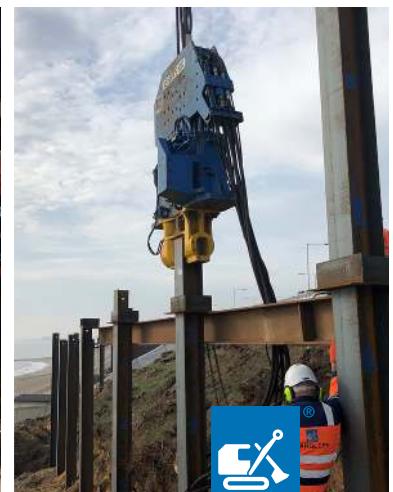


# Kings Parade, Clacton-on-Sea

Installing a sheet piled & king post wall for a coastal stabilisation scheme



**AARSLEFF**

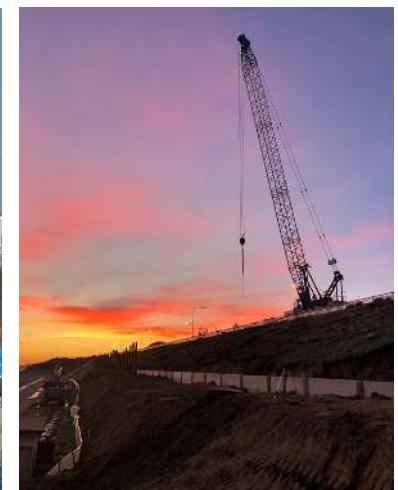
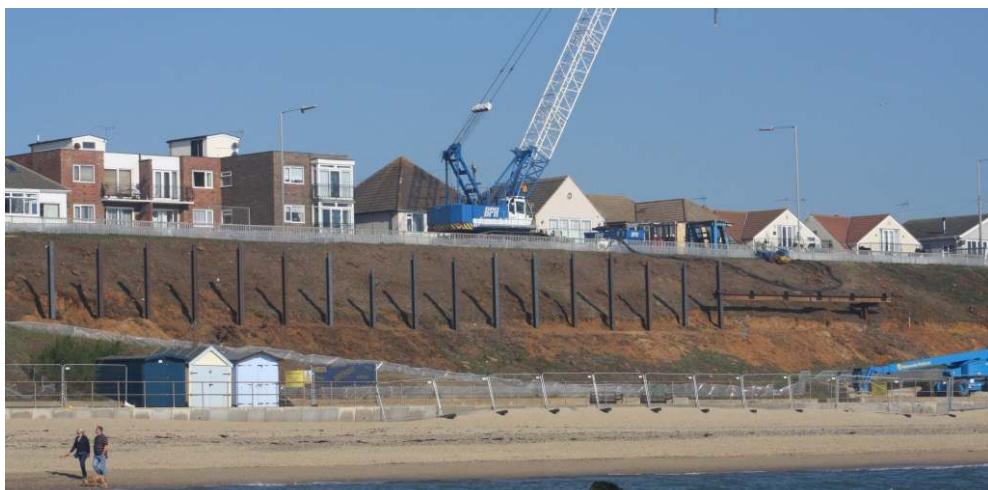
Aarsleff Ground Engineering installed both king post piles (also known as 'Berlin Walls' or 'Soldier Walls') and sheet piled walls for a coastal slope stabilisation project in Clacton-on-Sea in the UK.

The overall project will see a stretch of the cliffs between Gunfleet Sailing Club and the Flags Café stabilised, which will both protect them from future collapse and allow better access to the beach from the seafront road, particularly for wheelchair users and those with mobility challenges. Tendring Council awarded the £3.9 million contract to Jackson Civil Engineering to construct a 430-metre defence and access ramp along the 60km seafront of Clacton and Holland-on-Sea located on the Essex coastline.

Aarsleff Ground Engineering were called upon to install both a king post and a sheet piled wall along Kings Parade. Specifically, Aarsleff installed 2037m<sup>2</sup> of ZZ28-700 sheet piles and 81No. 8m long 254 X 254 X 89kg steel UC Beams with 3000 X 1200 X 140mm thick pre-stressed precast concrete interlocking panels to form the wall. Utilising an 80T crawler Crane with a high frequency vibratory hammer operating from the top

of the bank for conventional driving, the sheet piles were driven initially with an ABI rig and vibrator and left to a level approximately 2m above existing ground level as were the king posts. Installation completed conventionally using an 80T Crawler Crane and a 15HFV vibratory hammer, driving to a level approximately 100mm below the proposed ground level.

Aarsleff Ground Engineering were one of the few specialist ground engineering contractors who were able to offer the client both the sheet piling and king post wall together under one subcontract. We spent a great deal of time looking closely at this scheme, working out how they could provide the best value engineered solution for client Jackson Civil Engineering, and their client too. Aarsleff's suggestion to use prestressed rather than reinforced precast concrete panels resulted in a high strength/size ratio, ensuring that units were lighter and thinner and provide more tolerance than reinforced precast alternatives. In the end, Aarsleff proposed a more streamlined and efficient construction practise, and demonstrated this on site to a new client.



Senior Technical Estimator Ashley Carter said: "Due to the site's proximity to residents of the town, our client wanted a very rapid installation and furthermore, they really didn't want to split it into two separate contracts. That's why we scored so highly in the bidding, because we had two sets of resources that could work concurrently on the job. The site was also based very close to the client's headquarters, meaning that regular visits from their management team to assess the quality, health and safety of the project was expected and was subsequently factored in when choosing us as their subcontractor."

**Scope of Works**

2037m<sup>2</sup> of ZZ28-700 sheet piles  
81 No. 8m long steel king posts  
3000x1200x140mm concrete interlocking panels

**Client**

Tendring District Council

**Contractor**

Jackson Civil Engineering

**Equipment**

80t crawler Crane  
& high frequency vibratory hammer

**Construction period**

9th October 2018 - January 2019

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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