

# Southend on Sea, Beach Access

Driving of greenheart timber piles to improve beach access.



**AARSLEFF**

Southend-on-Sea, famous for its 2158 metre (1.341 miles) pier that strides out into the Thames Estuary, attracts an enormous number of visitors each year and its beaches are just as popular, noted for being some of the cleanest in the UK. Improving access to the beaches remains high on the priority list for Southend Council, who commissioned new timber steps and a ramp designed to make the beach accessible to disabled users to be built from the Western Esplanade to the beach itself.

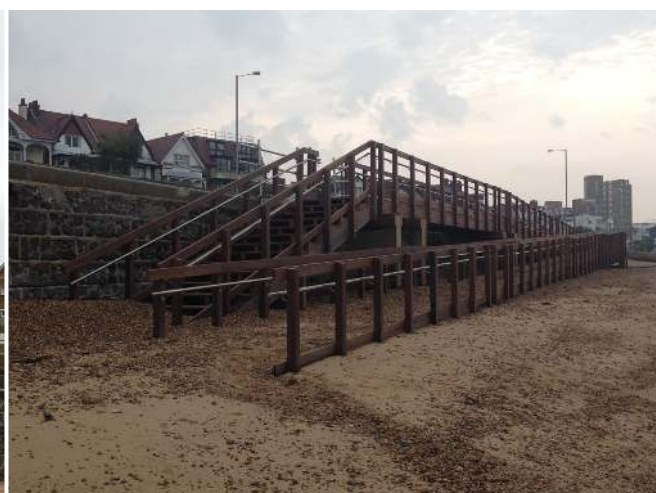
Having been awarded the contract to construct the access ramp and steps as part of its on-going Sea Defence and Foreshore Maintenance Framework with Southend Borough Council, main contractor VolkerFitzpatrick brought specialist piling contractor Aarsleff in to undertake the piling element of the project. Aarsleff, having worked on previous phases of this project and with extensive experience of working on coastal protection and enhancement schemes, was able to put its wealth of knowledge to good use in this challenging tidal environment.

Aarsleff have also worked previously with VolkerFitzpatrick on contracts in Southend, including the installation of new groyne piles, in which working alongside the main contractor, the obstacle of steep inclines on the beach material were overcome by stepping the piling mat to ensure the rig could still operate at a safe level.

This time around, using a Banut 700 piling rig, Aarsleff was required to drive to depths of between 7m and 12m into the underlying clay, 18no 300mm x 300mm reclaimed greenheart timber piles onto which the access ramp and steps would be built. With the Spring Tide providing a tidal window of just 6 working hours per day, advance planning of the works was critical to ensure Aarsleff were able to complete the project without incurring any costly delays.

Health, Safety and Environmental considerations were also paramount; Panolin Bio-Degradable hydraulic oil was used, so if the worst was to occur, the impact on the environment would be minimal. Working against the tides on a wooden piling platform meant that the rig had to be moved in and out according to the tidal schedule and at all times there had to be an escape route in place to manoeuvre the rig to safety when the tide came in.

Speaking about the project John Gallagher, Site Manager VolkerFitzpatrick said, "We engaged Jon Harris of Aarsleff three months prior to works commencing, as with previous contracts, we have found his depth of knowledge in tidal conditions a great advantage in planning piling and new structure projects. The team placed on these works were a credit to Aarsleff, as their priority was Health, Safety and Quality throughout."



Jon Harris, Project Manager for Aarsleff said, "It was a challenging project, with considerable planning required well in advance of works starting. Having to work around a tidal schedule reduces the working window, but also raises issues of health and safety that must be factored in with risks minimised as much as possible."

Piling works took 3.5 days to complete, saving 1.5 days from the planned programme further highlighting Aarsleff's continuing strength in planning and executing piling in coastal conditions.

#### Scope of Works

18 No. 300mm square section  
Greenheart timber piles

#### Client

Southend-on-Sea Council

#### Contractor

VolkerFitzpatrick

#### Equipment

Banut 700

#### Construction period

June 2014

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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