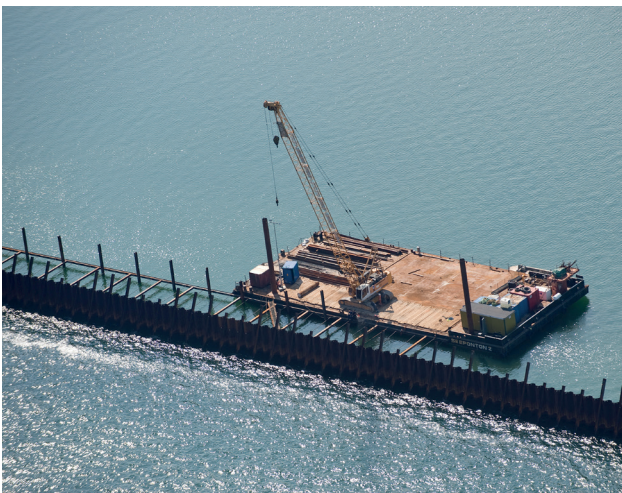


Køge Soil Deposit

Sheet pile wall



AARSLEFF

In 2007, Køge Soil Deposit / Køge Municipality and Aarsleff entered into a partnering agreement about construction and operation of a 40-hectare soil deposit east of Køge Harbour. The project consists of many individual contracts and runs until 2017.

One specific contract was construction of outer perimeter walls. The outer perimeter of the soil deposit was constructed as a 1200-metre sheet piled cofferdam and a 500-metre cut-off wall. In order to contain the 4 million tons of contaminated soil and to protect the environment, the sheet piles were fitted with interlock sealing and driven deep into the seabed clay. The 13-metre-wide cofferdam was filled with 130,000 cubic metres of reclaimed sand that was pumped in from dredging vessels. On completion of a surrounding breakwater, the cofferdam will serve as a new 1200-metre quay for the 40-hectare landfill.

Driving of sheet piles

All sheet piles were installed with two Aarsleff piling rigs from jack-up and floating pontoons. The outer wall was installed first along with the temporary scaffolding to support the structures in the rough seas. Before installing the inner wall with the interlock sealing, the anchors and waling were installed from a pontoon-mounted crawler crane. The anchors were supported by the temporary piles so that the inner waling could be used as piling-guide for the inner wall. Due to the interlock sealing swelling, the sheet piles were

installed by means of the pitch and drive method. All steel materials were delivered by rail and truck to our working area in Køge Harbour. The working area had storage capacity, tower crane and mooring quay for the transport barges.

Backfilling and completion

The backfilling of the cofferdam took place along with the sheet piling. The sand was pumped into the cofferdam approximately 200 metres behind the piling pontoons and levelled with a traxcavator.

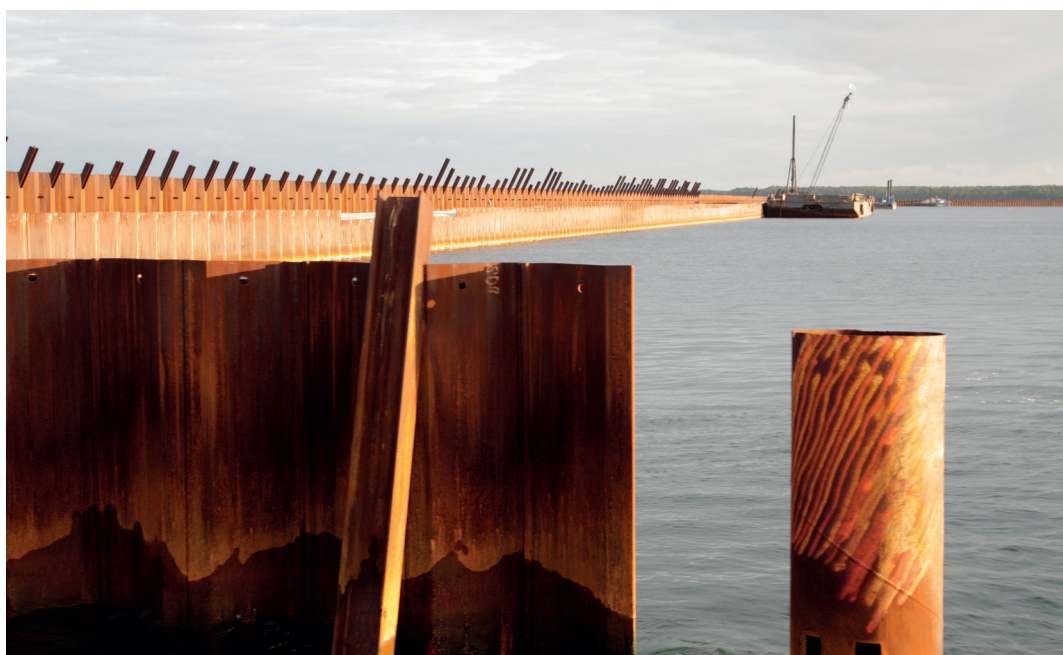
The sand was finally paved with asphalt and made ready for the trucks to fill the soil deposit. The temporary scaffolding was extracted with a vibratory pile driver and reused.

Logistics

Making the site run with no idle time required tight control with just-in-time deliveries, loading and unloading of barges and trains as well as reuse of temporary structures. Weather forecasts and tidal water were monitored closely to ensure the safety of our crews and the stability of the structures.



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Data

- 1200 m double-wall sealed cofferdam
- 500 m sealed cut-off-wall
- 4900 tons of sheet piles
- 600 tie rods DN 57.5
- 1000 tons of temporary steel
- 130,000 m³ of reclaimed sand
- Water depth of 6 m.

Client

Køge Soil Deposit/Køge Municipality

Contract period

November 2007-January 2009

Construction period

December 2007-October 2008

The piling was completed ahead of schedule.

Contract value

DKK 120 million

Aarsleff's Piling division is one of Europe's leading piling contractors, and we undertake a wide variety of piling, drilling and foundation projects in Denmark and abroad. We have offices in Poland, Sweden, Germany and the UK.

Our fleet covers fully hydraulic piling and drilling rigs as well as cranes and vibrators.

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01.02.17-R29UK-rev2