

## PORT OF LOWESTOFT

### NEW FACILITY TO SERVE OFFSHORE WIND FARMS

The offshore wind farm sector continued to see strong growth in 2011, with the relatively shallow North Sea seen as a prime area for development. One result of the inflows of investment taking place was that Walcon won two contracts that year on the east coast of England to design and build berthing facilities for vessels servicing the wind farms. These are located at Wells-next-the-sea and Lowestoft.



The facility at Lowestoft was ordered by ABP Ipswich, part of the UK's largest owner and operator of commercial ports. Lowestoft is the UK's most easterly port and an important hub for the offshore services sector. The location of the wind farm berthing facility is within an existing internal harbour protected by encircling breakwaters with access via a relatively narrow entrance (see circled area on picture above).

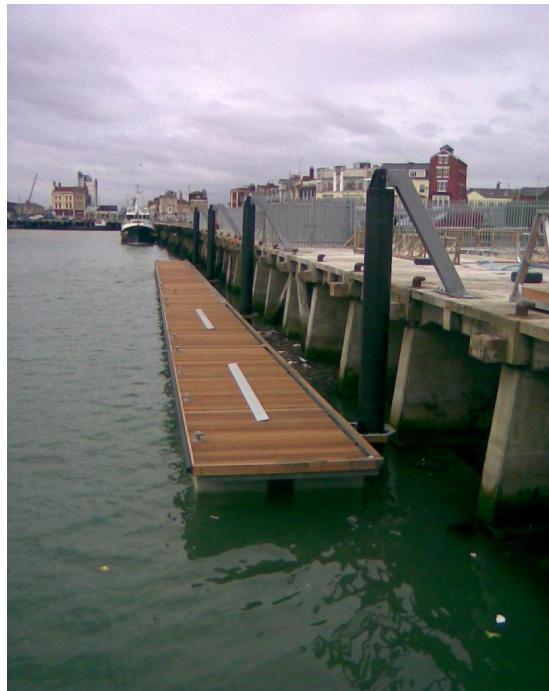
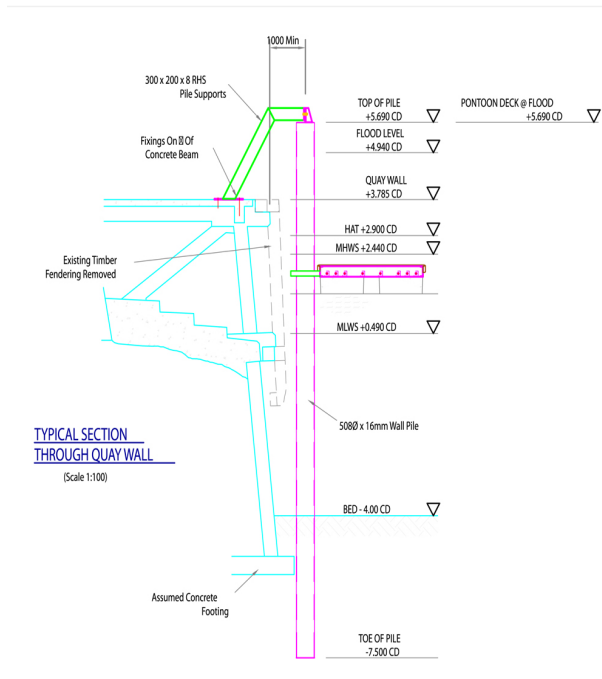
The installation took place in two phases and is made up of 11 pontoons and a single bridge measuring 126.5 metres in total length. These

have been constructed in the expectation of continuous commercial use and so Walcon specified its Walcon 21 pontoon model which uses an all-welded mild steel structure for extra strength together with long lasting expanded polystyrene floats encased in fibre concrete.

For this project extra bracing was also added to the pontoon steelwork to cope with the higher levels of stress associated with the berthing of workboats, along with extra thick hardwood deck boards to manage the increased loads.

Installing the berthing facility in an existing harbour did present some challenges when it came to driving the piles into the seabed alongside the harbour wall. Eight, 13-metre piles were toed into the seabed to secure the eleven pontoons, but the composition of the bottom was such that in order to give them the necessary rigidity Walcon designed and made additional steel supports - see diagram right and pictures below. These were fixed to the tops of the piles and then bolted to the quay wall.

The result is a rock solid structure that ensures that the piles remain firmly in place, and constitutes an excellent solution for locations where obstructions in the seabed may prevent piles from being driven in as deep as would normally be required.



The wind farm facility was completed in the summer of 2011 and has proved to be a valuable addition to the harbour facilities at Lowestoft. For Walcon Marine it has demonstrated that the company has the products and experience to design and supply berthing facilities for high usage, commercial work environments as well those for the leisure sector, and once again illustrates Walcon's ability to devise solutions for unusual or awkward sites.