

Reconstruction of Town Quay, Lowestoft

Reconstructing Lowestoft's Town Quay

£3.5m

/ Project value

February 2013

/ The build commenced

December 2014

/ The build was completed

Incorporating our alternative cantilevered solution, we were responsible for the design and reconstruction of the Town Quay in the Suffolk town of Lowestoft. The £3.5m programme, on behalf of Associated British Ports (ABP), comprised of a new quay wall, surfacing and associated features, the removal of scoured material from the river bed and all associated works.

The Brief

As a result of a burst water main and the subsequent structural damage of the quay wall and quayside pavement from scoured fill material, ABP appointed us to design and reconstruct the Lowestoft Town Quay under an ICC contract with ABP amendments.



“We took the lead in design development and our alternative cantilevered design applied on this project is just one example of the technical expertise that we bring to complex maritime projects,”

Thomas Craven
Contracts Director

The challenges

The location of our works at the entrance to Lowestoft Harbour demanded focused stakeholder engagement and robust communication during the design phase through to construction. Therefore, we liaised regularly with the Harbour Master and his deputy to ensure that our operations did not impede the routine operations of the harbour. Similarly, we were also working adjacent to an operational dry dock, which necessitated concentrated planning and management to mitigate any disruption to the facility's business operations.

GRAHAM's solution

Identifying an innovative long-term solution, we proposed an alternative cantilevered design, which featured a combi-piled wall with 1.2mØ tubular piles, the toe level set at 17mOD and precast capping beam at +2.75mOD. Successfully awarded the contract on this basis, we took the lead in design development and formally issued drawings to ABP via our collaborative 4Projects software. Beginning with piling works, the construction phase involved the reconstruction of 202m of the Town Quay wall and the reconstruction of drainage, including outfalls to drains running from the outside of the port estate. Due to the proximity of adjacent buildings and the condition of the remaining existing quay wall, approximately 140m of the new wall was constructed from floating plant equipment with a land-based crawler crane utilised to construct the remaining 60m. Additionally, we completed the reinstatement of the hard standing to the immediate rear of the wall and also made provisions for the existing services and utilities within the quay.

Outputs & Benefits

- / **Access Constraints:** The closest access to the site was routed through the premises of an adjacent business, which was operational 24/7/365
- / **Surveys:** We completed a dilapidation survey of adjacent buildings and a multi-beam hydrographic survey of the river bed to quantify and mark out the area covered by collapsed material
- / **Stakeholder Liaison:** We liaised directly with Essex and Suffolk Water to obtain a connection for the site compound and to approve the new quayside water main that was installed for fire-fighting and to allow the bunkering of water by ships. We also had significant engagement with National Grid Gas to approve our proposed design and construction methodology for works adjacent to and over their equipment
- / **Suitable Material:** We reprocessed suitable material from the collapsed wall and gained approval to use it as fill behind the new wall



For more information on how we're delivering lasting impact:

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