

New berths at the Point, Durban, South Africa

Already one of the busiest ports in South Africa, Durban saw an increase in activity around the millennium. The National Ports Authority initiated a project to expand port capacity to include berthing and handling of cargo vessels with a draught of up to 15 metres.

Part of the project was the construction of a 1,200-metre-long quay wall in the port of Durban, which contract was awarded to a joint venture of BAM International together with South African contractors Grinaker-LTA and BCW.



Location Port of Durban, South Africa

Client National Ports Authority of South Africa

Contractor Grinaker-LTA/BAM International/BCW joint venture

Contract period February 2002 – April 2004

Contract sum €33 million

*'A challenging marine project and
a technical and commercial
asset to the port of Durban.'*

Scope of work

The quay wall design included 52 prefab concrete caissons, which were placed on a stone foundation bed and connected by a concrete capping beam. The caissons were fabricated with a slip form system in an on-land prefab yard, approximately six kilometres from the building site.

Caissons

At the prefab site, the caissons (length 24 metres, width 17 metres, height 19 metres and a total weight of 3,000 ton each) were transported on land by a hydraulic skid system and lowered into the water with strand jacks (a synchrolift system). Once lowered into the water, the caissons were towed through the Durban shipping channel by means of a tugboat, to be delivered at their final position at the Point.

Reclamation



Prefab yard launch area



View of finished quay wall



Land reclamation

Behind the new quay wall a total reclamation area of 240,000 square metres had to be filled. A large hopper dredger was deployed here to deposit some three million cubic metres of sand. The sand was obtained from a pit near the Indian Ocean, close to the port entrance.

Prefab yard caissons



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