



PROJECT

Poole Twin Sails Bridge

CLIENT

Borough Council of Poole

MAIN CONTRACTOR

Hochtief



Twin Sails Bridge is an iconic steel bascule road bridge that spans a navigation channel linking Holes bay with Poole Harbour in the UK. This landmark structure is the first bridge of its type to be built in the world.

Requirement

The Twin Sails Bridge provides a second crossing of the Poole harbour and opens up a large brown-field site for re-development.

The bridge has two fixed approach spans at each side and a central lifting span consisting of two triangular shaped deck units which when lifted symbolise the sails of a yacht, reflecting the town's maritime heritage.

Project scope

Cleveland Bridge was responsible for the fabrication, supply, erection and painting of the 800 tonne bridge structure. The machining work was carried out by Davy Markham. Barges supplied by Hochtief.

Solution

The bridge deck components were fabricated and machined offsite before being transported and finally assembled adjacent to the job site.

The bridge deck is around 1m deep x 18m wide x 127m long. There are two approach spans of 36m and 21m at each side and a central lifting span at 13m long.

Self propelled modular transporters (SPMT's) were used to move the assembled sections onto a barge which was then positioned to allow each section to be jacked up and fixed into its final position. The outer approach span sections weighed

178 tonnes and 97 tonnes each with the two central triangular sections weights at 100 tonnes each. In order to maintain a shipping channel, the western approach and central lifting spans were installed first, leaving the eastern channel open to shipping.

Once the lifting spans were commissioned and open the eastern approach spans were erected to complete the bridge deck.

Outcomes

Cleveland Bridge won the 2013 Structural Steel Design Award for the Twin Sails Bridge Project. judges commended the high standard of structural and architectural design attainable in the use of steel and its potential in terms of efficiency, cost effectiveness, aesthetics and innovation.



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