

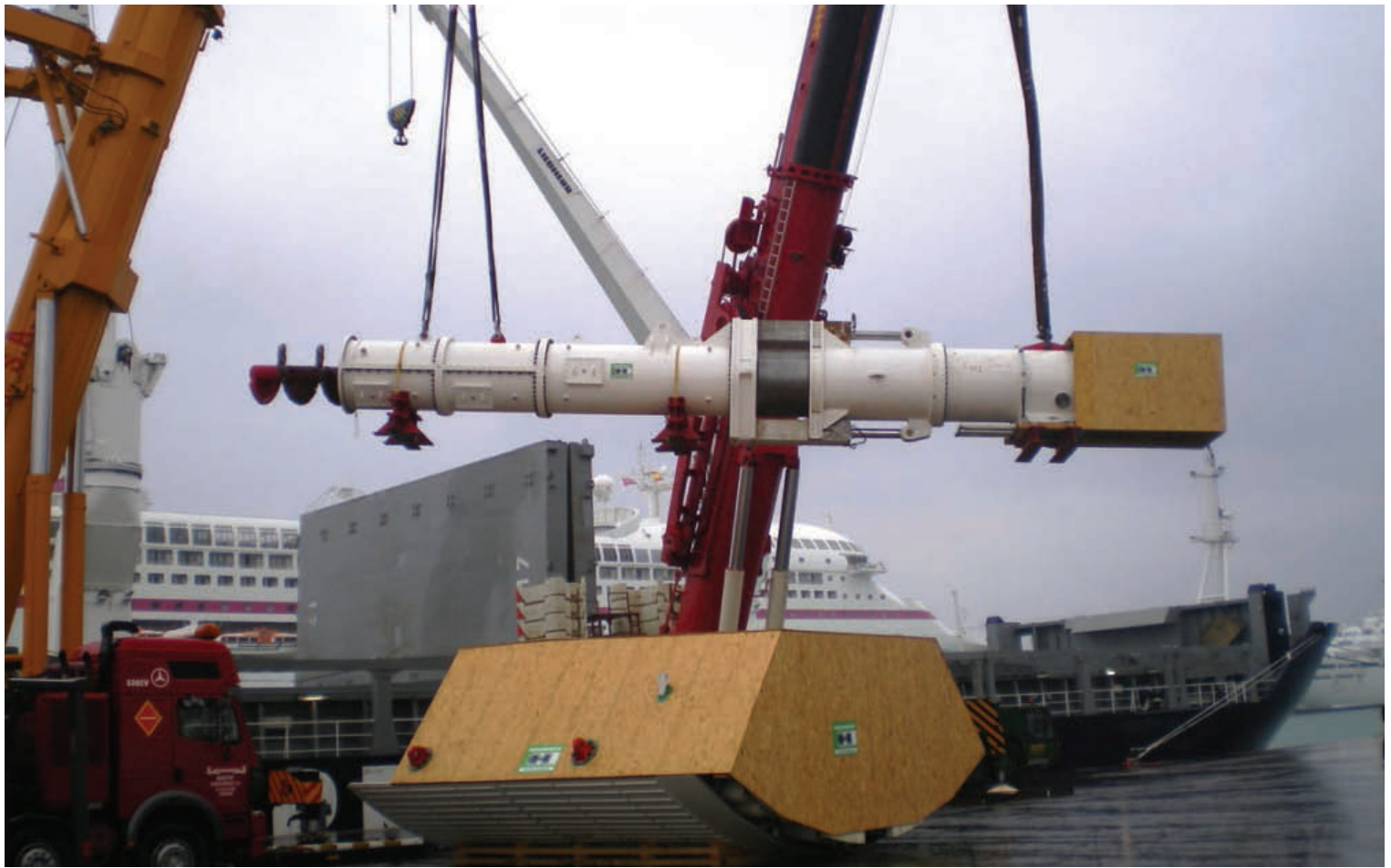


# Tunnel Boring Machine - Barcelona

## Case study

**Project brief:** A Herrenknecht TBM and ancillaries totalling an enormous 6,000m<sup>3</sup> for Barcelona's metro expansion was transported from Germany to Spain using the expertise of project freight management specialists ALS Limited.

The heaviest and one of the highest pieces in the consignment was a shield segment which measured over 7 metres long, 7.5 metres wide, almost 4 metres in height and more than 130 tonnes in weight. In addition a screw conveyor totalling 19 metres in length, 2 metres wide, almost 3 metres high and weighing 84 tonnes was the longest piece transported.



The movement involved local road transportation from Herrenknecht's factory to a German river port and transshipment to a barge using Herrenknecht's preferred local partner and supervised by ALS' project team from Hull, UK & Moerdijk, Netherlands.

At Barcelona port the TBM and ancillary equipment was offloading to waiting vehicles and quayside storage area by shore-based cranes, using registered stevedoring personnel and facilities. ALS supervised reloading to trucks from Barcelona Port and transportation to jobsite.

ALS' project teams in Hull, UK & Moerdijk, Netherlands have been responsible for the whole project, which has involved: undertaking road surveys, arranging permits, removal of street furniture, barge movements, sea freight, handling and craneage.

*"In view of ALS' experience in similar projects for Herrenknecht which includes the Channel Tunnel Rail Link (CTRL) ALS were appointed to manage the complete TBM movement," Jill Peacock said.*