



# New approach jetty at Tower Wharf, Northfleet

## Background

The existing jetty, which was constructed in the 1950's, had come to the end of its design life and needed to be replaced. The site is a multi-purpose facility used by shippers of steel, metals and forest products and it was essential that operations were able to continue uninterrupted at the Main Terminal jetty.

## Main contractor

**MACKLEY**











Significant piles were required and, as they were delivered to the berth by road, they were installed in 2 phases. The first 18m length was driven using an ABI piling rig, with the second 18m length being welded to it insitu. Once rigorous weld testing had taken place the full pile was then driven to its correct depth by a crane and impact hammer.

Precast reinforced concrete cross beams were lifted in to position and then welded to the tube piles. The slabs were lifted into position using a 400 tonnes crane. Reinforcement stitch bars were then installed and insitu concrete poured to form a monolithic jetty.

### How we helped

We manufactured 11 beams which were 9.5 metres long and weighed between 18 and 19 tonnes. In addition we produced 33 concrete slabs which varied in weight between 18 and 28 tonnes and were 5.38 metres long.

The precast reinforced concrete slabs had to be individually manufactured to ensure that the reinforcement interlocked. This was a complex exercise which needed absolute precision to ensure the reinforcement used fit perfectly with the neighbouring slabs. With close collaboration from our design team this was achieved and meant that delays were avoided on site. In total we used 885 tonnes of concrete to manufacture the beams and slabs.



