SITE REPORT

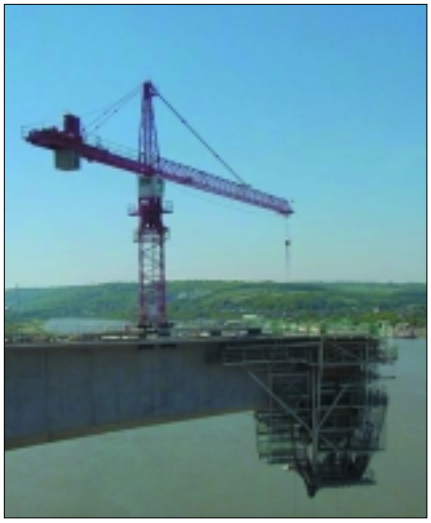
The cranes are coming off the Channel Tunnel Rail Link project at the Medway crossing in Rochester. *Cranes & Access* reports from a prestige project.

Med Cros

The last cranes should be off the Medway crossing project in October. This marks the end of an impressive project that has used some novel technology to provide lifting systems to the entire project, principally from two static and two travelling tower cranes.

Close proximity

The project is running alongside another Medway crossing, for road traffic, and so there have sometimes been as many as 11 cranes working in close proximity to each other. The principal lifting devices on the high speed rail crossing, part of the link that is finally being built between the Channel Tunnel and London, have been four tower cranes supplied by Kier Plant in conjunction with Arcomet of Belgium. Kier and Arcomet have a close working partnership under which Kier can call on the more than 600 tower cranes that Arcomet has in its fleet. Arcomet owns one of the largest fleets of tower cranes in Europe and also manufactures its own range of self-erecting tower cranes. It is run by Leo and Dirk Theyskens.



Alan Arnaud, managing director of Kier Plant, says his company now runs one of the most comprehensive fleets of plant in the UK. This includes its own crawler and tower cranes. There are about 60 Kier/Arcomet tower cranes in the UK at the moment of which about 30 are owned by Kier.

Crawler cranes on the project have been supplied by Miller.

The Project

The new Medway rail crossing is being constructed by the Eurolink joint venture which is made up of Miller, Dumez/GTM and Beton und Monierbau. The completed viaduct will consist of two launched bridges that are 347 metres and 544 metres long and which are being constructed on the East and West banks of the

The cranes

Jetty (travelling) cranes:
Liebherr 290 HC
60 metre radius jib
Height under hook: 54.4 metres
Rail mounted on 6 metre x 6 metre travel bases

Deck (fixed) cranes:
Liebherr 290 HC
43.3 metre radius jib
Height under hook: 12 metres
Mounted on steel base fastened to bridge deck

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river. Linking the two push launched bridges will be a balanced cantilever bridge.

Two rail mounted Liebherr 290 HC tower cranes were erected on temporary 80 metre long jetties alongside the permanent bridge and two more Liebherr 290 HCs were mounted on the bridge itself. These stood on steel bases that were specially designed and fabricated by Arcomet and Kier to spread the load through the bridge. The bridge mounted cranes were assembled by the rail mounted jetty cranes. These will also be used to dismantle the bridge mounted cranes.

Safety first

A feature of the project is the number of other tower cranes working on the adjacent road bridge that is being built at the same time. This has led to the installation of Smie anti-collision units on one of the Kier/Arcomet cranes and one of the neighbouring cranes. A French engineer working on the project noted with interest during *Cranes & Access's* visit that on a similar project in France it would have been compulsory to install anti-collision units on all the cranes. Other differences he noticed were the use of flags to measure working radius on the crane jibs, as opposed to a digital load monitor in France, but a generally higher emphasis on safety regulations and "safe behaviour" in the UK.

That emphasis on safety is also shown by the different approach to windy conditions. In France all lifting operations are stopped if wind speeds exceed 72 kilometres per hour whereas on this project all lifting work stopped if wind speeds reached 65 kilometres per hour.

Travelling cranes

An unusual aspect of the project has been the use of cranes that travel on rails. These have been used to travel loads 80 metres out from the shore. Maximum load on the cranes, which are fitted with standard counterweight, was 11.8 tonnes. The cranes are mounted on standard cruciform bases mounted on bogies and are travelled from the cab. When travelling, loads are carried just 1 metre above ground and special safety precautions are taken – "it does take a really good operator to do that and not all were happy to do it" commented one senior manager. ■