

**Railway logistics take timing and teamwork. Recently, we've been working in close collaboration with Network Rail, our client Volker Laser and, the EWR Alliance, to remove several complex, 60-year old Viaduct top sections and support piers from the Bletchley Flyover.**

We used our LG 1750 lattice boom crane to remove the first three spans, with each lift taking place while West Coast Main Line railway lines were closed: this made sure the critical primary UK transport artery would not be adversely affected. Detailed planning and safe execution were always going to be required for these complex lifts and then Covid-19 arrived to add to the complications. To achieve 100% lift success, on time, safely, to budget and with no Health and Safety incidents is testament to all the contracting parties.

### ADDING VALUE OVER THE LONG-TERM

Originally constructed in 1959, the Bletchley Flyover was built to let trains run from west to east over at the West Coast mainline. Now, the flyover needs to be upgraded to carry modern trains on the new East West Rail line connecting Oxford to Cambridge. Phase One of the project, connecting Oxford to Bicester was completed in December 2016. The East West Rail Alliance is now delivering Phase Two, connecting Bicester to Milton Keynes via Bletchley.

When completed, this will allow two trains per hour to operate between Oxford and Milton Keynes (north of



Bletchley on the West Coast Main Line), plus hourly services from Oxford to Bedford, and Aylesbury to Milton Keynes.

Phase three involves the construction of a brand new line from Bedford to Cambridge.

Whenever we can, we get involved in a plan like this from the outset. Working this way with our clients means we can advise on efficiencies up-front, learn as much as we can en route, and use those learnings to add incremental value in the latter stages of the project.




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## CONFIGURATIONS FOR HEAVY-LIFT RAIL LOGISTICS

Most of our work on this project has involved using our LG 1750 lattice boom crane in two arrangements – both of which we test before going to site.

You can see a pass across our test configuration in [this short video](#) .

The work on the viaduct all took place in close vicinity to the West Coast Main Line. The first configuration used a 49 metre main boom, with 200 tons of superlift counterweight for the pieces lifted during the scheduled rail possession – the period when the EWR Alliance take responsibility for - and close down - that section of the line. Then, in a second position, we used 250 tons of superlift counterweight with a 35 metre main boom.

Each piece was successfully removed and loaded onto one of three 12 axle self-propelled modular transporters (SPMTs), which were used to transport the removed sections of the flyover to a lay down area. SPMTs give us the capability and manoeuvrability we need on a complex site. Once the SPMTs had been manoeuvred into position, each piece was lowered to the ground via our gantry lift system – and then safely onto the ground, and broken down into manageable pieces by the demolition contractor.

## WORKING SAFELY, ADDING VALUE TO EVERY PROJECT

By being involved in every aspect of the ‘to-site’, ‘on-site’, and ‘from-site’ planning from the outset, we can deliver a plan that uses the combined capabilities of our Heavy Lift division’s heavy cranes, SPMTs and gantry lift systems.

What’s more, this approach has meant that we’ve been able to make provisions that handle COVID-19 concerns successfully, despite the rigorous hands-on demands of rigging one of the UK’s largest mobile cranes, a number of SPMTs and a gantry lift system. Our team ran detailed risk assessments, and maintained detailed information plans throughout, and carried out dynamic risk assessments at the start of each activity.

Working this way means we’ve been able to minimise the number of personnel needed at a time when social distancing is still a key control measure. Getting our multi-disciplined staff to run crossover roles between each activity has ensured the section removals were completed ahead of schedule, prioritising safety throughout in a conscious manner. It’s the Osprey Way of Working, in action.

