

TPA paves the way for bridge lift

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A temporary aluminium roadway from access specialist TPA Portable Roadways has helped contractors using one of the world's largest telescopic mobile cranes to replace a railway bridge.

The 1,200 tonne capacity Liebherr telescopic mobile crane was supplied by heavy lift specialist Mammoet UK to help main contractor May Gurney remove a life-expired concrete and cast-iron footbridge over the busy East Coast Mainline at Newton Hall, Durham.

During a 6-hour possession on the night of 27-28th March, the crane removed the old bridge and lifted a new steel bridge into place on the prepared abutments.

Despite the fact that neither the old bridge nor the new one weighed more than 20 tonnes, the lift required a massively powerful crane capable of lifting substantial loads at a great distance.

The bridge spans the railway at a location off Canterbury Road, Newton Hall, with a nature reserve on one side of the track and a housing estate on the other. The nearest location available for erecting a crane is an amenity space which adjoins the main road and narrows to a footpath between the track and the houses about 60 m from eastern abutment.

This required a crane capable of lifting the 20 tonne bridges at a radius of 82 m from its slewing bearing.

With a main boom weighing 105 tonnes, a 100 tonne chassis and over 200 tonnes of counterweight (not to mention the weight of the additional 78 m luffing fly-jib and the bridge itself), the big crane weighs far in excess of 400 tonnes when rigged.

To prevent this enormous load sinking into the grassy field, Mammoet hired TPA's universal Traxpanel aluminium roadway system to spread the load and provide a safe, stable platform for the lift.

Not only the crane, but also the fleet of ancillary vehicles required to transport its components to site, had to travel through the housing estate and onto the playing field where the crane was rigged and the lifts carried out.

A total of 175m of Traxpanel roadway was laid to ensure safe access from Canterbury Road.

"TPA is one of our regular suppliers, and as always they gave us a first class service on this job" comments Mammoet sales manager Richard Craven. "They did everything we asked of them and really helped the job go smoothly" he adds.

"Now that Network Rail and its contractor May Gurney have seen what we can do with this crane, we're hoping there'll be more work for it in the rail sector."

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