

HS2 celebrates UK's heaviest bridge drive near Lichfield

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HS2 has successfully carried out the UK's heaviest drive to install an intersection bridge structure beneath the West Coast Main Line at Fulfen Wood near Lichfield.

The 56 metre long and 19 metre wide structure will allow Britain's new high-speed railway to pass beneath the busy existing railway line, on its route going north of Birmingham Curzon Street Station up to Crewe.

The giant 6,200-tonne concrete structure, which was built adjacent to the WCML over the last six months, was slowly manoeuvred into place on self-propelled modular transporters. Specially designed for very heavy lifting, the 840-wheeled transporter with four carrier beams was controlled by a remote steering system.

Over 61,000 cubic metres of earth have already been removed and the bridge structure has taken six months to build at the side of the existing railway. Over the two days before the move, the team removed the railway track and excavated over 15,000 cubic metres of material to create the space for the structure to be moved into.

The operation follows other important milestones in the West Midlands including the completion of the one-mile twin-bore tunnel under Long Itchington Wood and the start of production of 3,000 viaduct segments at an outdoor factory in Warwickshire.

Caroline Warrington, Senior Project Manager at HS2 Ltd said: “This huge feat of engineering – the UK’s heaviest single span bridge drive – is our latest big milestone as we approach peak construction on Phase One of HS2. We’re making fantastic progress on this section of the route, with over 9,000 people working on the project in the Midlands and over 29,500 on the whole project, providing a vital boost for British businesses and jobs.”

Around 300 people working for HS2’s civils contractor Balfour Beatty VINCI have delivered the work, and a team of 200 people are working 24/7 this week to move the bridge, backfill around it and put the railway back in place ready to re-open next week.

Chloe Foster-Chambers, Section Engineer for Balfour Beatty VINCI has been working with a team of 200 people carrying out the operation. She said: “As an engineer, big feats of engineering like this bridge drive make HS2 such a fantastic project to work on. It’s been a real team effort over the last two years, and seeing the operation successfully completed felt like a great achievement for everyone involved.”

The operation happened during a nine day closure of the railway between Stafford and Rugby while Network Rail carry out upgrades as part of a multimillion pound investment to improve future journeys on this important stretch of the West Coast main line through the West Midlands. Work is now taking place at Fulfen Wood to replace the tracks and railway systems over the new bridge which will allow the railway to reopen to passenger and freight services on Monday 24 July.

John Emery, Senior Sponsor for Network Rail, said: “I’d like to thank passengers for their patience this week while we carry out major upgrades on the West Coast main line in Staffordshire which will help to make rail journeys more reliable. We’ve worked closely with our partners at HS2 to combine their work with track and signalling upgrades in Colwich, as well as platform upgrades at Lichfield Trent Valley station to minimise disruption.”

One of over 3,000 supply chain companies working on the HS2 project, specialist construction company Byrne Bros led the bridge build over the last six months.

Tom Lyons, Construction Director for Byrne Bros said: “Byrne Bros are delighted to have been involved in such an amazing project. The BBV team have been fantastic to work with, demonstrating great leadership, teamwork and management of a complex engineering project.”

Specialist lifting company Mammoet – based in Stockton-on-Tees, undertook the bridge move with state-of-the-art transportation equipment.

Peter Schoenmakers, Lead Engineer at Mammoet UK Ltd said: “The Fulfen Wood Overbridge installation does show that with a collaborative approach and early engagement with all involved parties during the design stage of the structure, a cost effective and a most efficient installation method can be developed early on in the project.

“The early engagement allowed the designers of the structure to design the bridge that suited the available and existing equipment to be used and no special equipment had to be fabricated or purchased. This approach is very important from a sustainability perspective. All in all, this was a great project for Mammoet and we are proud to be part of its success.”

After this operation, the same transporters will be utilised to install another huge bridge drive which will take place a little further up at Streethay, where a similar 2,600 tonne structure is being moved into place under the South Staffordshire line between Lichfield High Level station and Derby.

Once complete, HS2 will link London Euston with Birmingham, Manchester and the East Midlands. It will act as a catalyst for growth by improving connections between major towns and cities, opening up new employment and leisure opportunities for millions of people.

Network Rail advise people travelling between London Euston, the Midlands and the North West between now and Sunday 23 July, to please check at www.nationalrail.co.uk or with their train operator to see how their journey will be affected.