

Digital future of signalling on the East Coast Main Line takes major step forward after section commissioning

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The East Coast Digital Programme has taken a big step forward with the renewal of infrastructure successfully commissioned that now enables the Welwyn to Hitchin (W2H) ETCS overlay to be tested and proven, with engineers having worked around the clock between 17-20 February. W2H is Britain's first instance of infrastructure commissioning towards a 'no signals' intercity mainline.

The overlay is a critical part of ECDP's delivery plan. To achieve the end goal of a 'no signals' railway on the southern part of the East Coast Main Line, it is necessary to create a section of the route that can be operated with both conventional and digital signalling. Drivers from all ECML operators will progressively be trained to drive in ETCS through the W2H overlay.

Once all fleets are upgraded and all drivers trained, the progressive roll out of digital signalling throughout ECML (South) can rapidly follow. The W2H overlay will be a key enabler not just for ECDP but for the wider roll out of ETCS across the GB network.

W2H commissioning has involved a 'lite' resignalling in preparation for system proving of the ETCS system. A new proving desk and Radio Block Centre will be put in place in York ROC, to enable the first overnight proving trains to operate from spring 2024. It is expected that migration to ETCS operations on passenger and freight services through the overlay section will begin in 2025.

The W2H resignalling lite has included existing assets moving to Westrac Trackside System equipment, introducing three new Trackguard Westlock interlockings and associated infrastructure, trackside fringe alterations at Hatfield, Biggleswade, Hertford and Letchworth, and renewing the existing train detection with axle counters. Power works took place in the form of introduction of three new principal supply point feeders and replacing seven existing 650v feeders.

Ed Akers, Principal Programme Sponsor for the East Coast Digital Programme, said: "This is a major milestone for the project and I'm incredibly proud of everyone involved in reaching this point. The East Coast Digital Programme will deliver major upgrades for passengers as they travel by train in the future.

"To reach this point and to implement digital signalling on the East Coast Main Line has meant a huge amount of collaboration between Network Rail, train operators, and other rail industry stakeholders through our unique industry partnership.

"While commissioning Welwyn to Hitchin is a key enabler for the East Coast Digital Programme, it is also a significant step towards the rollout of digital signalling across the network."

Ben Lane, Project Director for Siemens Mobility & Infrastructure Sector Lead ECDP, said: "This delivery is a great testament of the 500+ tenacious people we had on various sites that ensured the safe completion of this programme of works. We can now start a period of system proving, getting us closer to a 'no signals' digital railway that will reduce future renewals and maintenances costs, improve reliability for passenger and freight services on the route and provide better return on investment of taxpayers' money."

A spokesperson on behalf of passenger train operators said: "Our teams have been working hard over the last four days to keep passengers on the move and to get them to their destination as quickly as possible.

"We know that changes to services are never ideal and we want to thank our passengers for their patience while Network Rail carried out this vital work."

Maggie Simpson OBE, Director General, Rail Freight Group, said: "It is great to see real progress being made in ETCS development on the East Coast Main Line, with collaboration between freight operating companies, Network Rail and other partners ensuring that the solutions work for rail freight customers. This is a key step towards full deployment and we look forward to seeing further progress in coming months."

The first stage of ECDP is the Northern City Line (NCL) pathfinder project. This also involves an overlay between Finsbury Park and Moorgate on which Great Northern drivers are progressively being trained to drive in ETCS.

After a series of proving runs and regulatory approvals, the first digitally signalled passenger train

operated in November 2023. Currently around a quarter of NCL trains are being operated in ETCS and it is expected that the NCL will be a 'no signals' railway from early 2025.

The NCL pathfinder is enabling the ECDP to 'learn by doing' and the experience being gained by the cross-industry collaboration will be invaluable to the effective delivery of digital signalling on the mainline, starting with W2H.