

DigiSig Rail

SIGNALLING DESIGN EXPERTS

MACCLESFIELD RESIGNALLING PROJECT

SIGNALLING CONTROL TABLE & INTERLOCKING DATA DESIGN

Client: Siemens



For the Macclesfield resignalling project Siemens Manchester approached DigiSig Rail to undertake the checking duties of the Westlock interlocking data, which they kindly accepted.

The check was carried out with a high level of competence resulting in a low number of principle test logs.

All the activities were completed within the time frames allowing the data to be signed off as planned. So many thanks DigiSig Rail for your assistance.

Andrew Dimelow - Senior Designer Engineer Siemens Mobility



OVERVIEW

Network Rail have been spending around £45m to improve the safety of their signalling platforms across the UK and this included the Macclesfield Resignalling Project.

Due to the fact this area was controlled by a mechanical lever frame interlocking in Macclesfield signal box, this resignalling project between Prestbury, Macclesfield and Congleton improved reliability along the busy West Coast Mainline through Cheshire.

The completed resignalling works upgraded 56 signals all to be controlled from Manchester ROC using a new Westlock interlocking. Power sources and electrical cabling also had an upgrade along with 2 structures carrying 25,000 Volt overhead lines to improve safety of new signals.

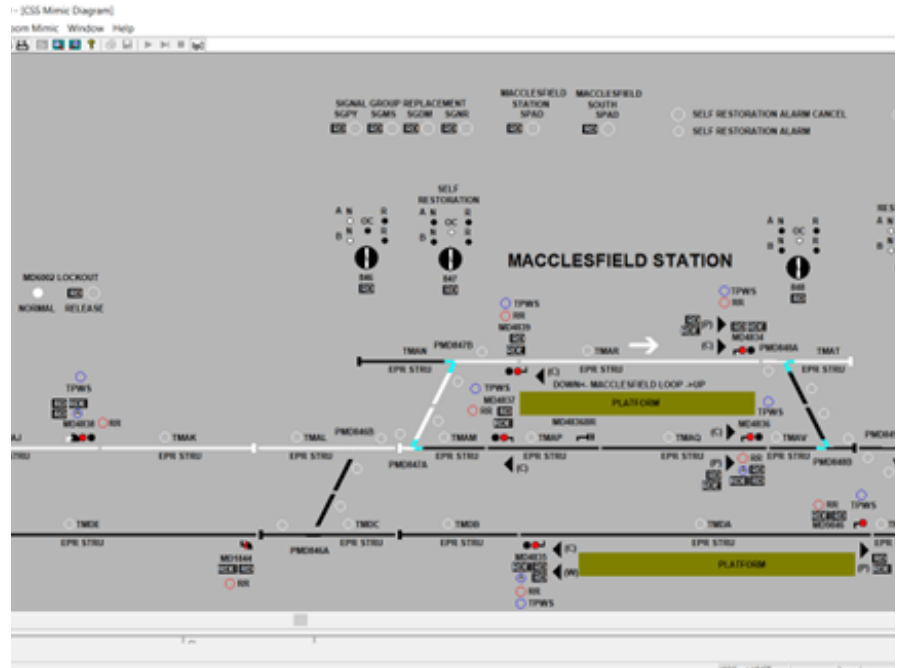
Ian Robinson, project manager for Network Rail, said: "This once in a generation overhaul of Macclesfield's signalling system has brought this key section of the West Coast main line up to the most modern standards. The £45m investment will future proof journeys and create a more reliable railway for passengers and freight services. I would like to thank local people and passengers for their patience while we carried out this essential work."

CASE STUDY

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OUR ROLE

With railway systems becoming ever more complex railway operators and maintainers need an interlocking system that they can count on and guarantee the performance of the system. The team at Digisig Rail were responsible for:

1. Grip 3-4 Design of the Signalling Control Tables
2. Grip 5 Westlock between interlocking & panel data checking
3. Design Office Cover whilst being commissioned



The control table and data design we were responsible for checking was also verified using the Siemens Westlock Simulation software. This is the big advantage of a CBI as it allows the interlocking to be tested off site reducing the long blockades & costly possessions required with older interlockings such as RRI that cause long disruptions to the operational railway and subsequently inconvenience to everyday commuters.

This software allowed us to simulate trains through the re-signalled area to highlight/eliminate any potential issues before it goes to test and then finally entry into service. This software also served as a great tool for the education of how an interlocking operates to our apprentices.

We were on Design Office Cover when the project was being commissioned to ensure there were no problems and everything was going smoothly by providing our continued technical support.

The project was successful commissioned on the 30th August 2022 with no reported issues.