

Great Northern Great Eastern (GNGE) Capacity Relief to the East Coast Main Line (ECML)



CASE STUDY



Overview of deliverables

The United Kingdom rail network is being used by unprecedented numbers of trains and the demand for more passenger and freight services continues to rise, particularly on arterial routes such as the East Coast Main Line. The line provides a vital North-South path for long distance traffic from London to Scotland via Yorkshire and the North East, as well as serving a great many commuter and regional passenger markets and carrying a significant amount of rail freight.

The Great Northern Great Eastern Line (GNGE) runs roughly parallel to the ECML, between Peterborough and Doncaster, with Gainsborough, Lincoln and Spalding being the main stations on the line. The capacity relief project aims to reroute slow freight trains down GNGE, thus relinquishing space for additional passenger services.

Network Rail Infrastructure Projects requested that Vertex provide professional rail engineering services, in particular Engineering Safety Management, Verification & Validation, Systems Engineering, ROGS assurance, and Maintenance Analysis Support.

Deliverables included:

- Scheme verification & validation
- ROGS approval
- GRIP 4 SSV submission report
- Delivery of SSV for GRIP 4 to 8 GNGE capacity
- SSV closeout (GRIP 8)
- Project application safety case

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- Technical and operational implications assessment
- ISRP review and endorsement
- Update safety case in line with ISRP recommendations
- Provide proof of maintenance report supported by maintainability FMECA
- Compliance with EN5016 and EN50129
- Technical competencies applied in the delivery of the contract

Vertex employed the following competencies during these works:

- Technical knowledge of the proposed system in question, incorporating over 20 years' experience in project development and delivery and adhering to the Network Rail Project Management (GRIP) process.
- Systems Engineering- appreciating the impact of the proposed solution in terms of its whole-life implementation.
- Project Management, Stakeholder liaison and influence, in order to drive the project forward on the agreed timescales whilst maintaining stakeholder confidence.
- Safety Engineering- both at a systems and sub-system level, risk assessment and Hazard Identification and the provision of early ROGS assurance.
- Programme start and completion dates
- Project duration was from October 2012 to January 2015

Resources utilised

Vertex utilised its team of Railway Systems Engineers and Project Managers for this project. Qualification held includes membership of the Institution of Railway Signalling Engineers, membership to the Association of Project Managers (MAMP), Project Management Professionals (PMP) and professional Chartership (C.Eng.). Combined railway experience of the project team (4 persons) exceeded 60 years.

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