Staffordshire Alliance Improvement Project

CASE STUDY

Overview of Deliverables

The Stafford Area Improvement Programme (SAIP), consisting of the Stafford Re-Signalling Project and the Norton Bridge Improvement project, was conducted to create extra capacity on the West Coast Mail Line (WCML) route, thereby allowing more train paths and shortening journey times. The programme will also help to reduce congestion and delays in the Stafford area by providing a more reliable railway. SAIP has modernised Stafford and the surrounding areas by replacing and upgrading the existing systems and support infrastructure.

SAIP is delivered by the Staffordshire Alliance, which is a partnership of Atkins, Laing O'Rourke, Network Rail and Volker Rail.

The Stafford Re-Signalling project delivered a number of enhancements including the construction of a new Goods Loops, increased line speeds, and the re-signalling of Stafford 4 and 5 control areas including the transfer of control to Stoke Signalling Control Centre. The Norton Bridge Improvement Project was remitted to remove the operational bottleneck in the Norton Bridge area of the WCML, and included bridge construction, grade separation works and line speed increases.

Deliverables Included:

- Conducting HAZID workshops in order to assess risks for the programme. Workshops included those for signalling, interlocking, main commissioning and risks associated wth bridge parapet heights;
- Risk analysis and risk evaluation of the identified hazards. Identification of practical control measures and developing the system and subsystems to eliminate, mitigate, control and manage the risks;
- Further detailed analysis of signalling hazards identified during initial assessments that were of particular difficulty to resolve; and
- Production of CSM-compliant Hazard Logs and associated Hazard Assessment reports detailing findings and Hazards requiring further consideration.

Technical competencies applied in the delivery of the contract

- 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 and how it could be deployed in a safe, structured manner;
- Project Management, stakeholder liaison and influence – in order to drive the project forward on the agreed timescales, whilst maintaining stakeholder confidence;
- Chairing Hazard Identification workshops and production of the ensuing CSM-compliant Hazard Logs;
- Optioneering of technical, operations, maintenance and whole life cost to develop the feasible options for Hazard closure/mitigation and demonstration of acceptability to stakeholders' requirements.

Programme start and completion dates

Vertex engagement with the programme was from November 2014 to January 2016.

Resources utilised

Vertex utilised its team of Railway Systems and Safety Engineers and Project Engineers for the programme. Qualifications held includes membership of the Institution of Railway Signalling Engineers (IRSE), membership of the Association of Project Managers (APM), Project Management Professionals (PMP), and professional Chartership (C.Eng).