

CASE STUDY



PROJECT: SAS 13 Bridge Reconstruction.
DATE COMMISSIONED: May 2022

CLIENT: Network Rail (HS2 - On Networks Programme)
OVERALL PROJECT VALUE: £52 million



Background

Part of the On Network Works Programme (required to facilitate HS2 construction in Birmingham), SAS 13 was a £52M complex multidisciplinary bridge reconstruction project with HS2 as the Client. Managed by Network Rail, Skanska was the civils delivery partner with the Central Rail Systems Alliance (CRSA) delivering the rail systems scope.

The key challenges

The main on-site construction was planned to take place within a 23-day blockade, with several weekends of preparatory works prior to the main blockade. Eight weeks from the start of these works, Network Rail identified a shortfall in their Project Management resources, leaving question marks over the planning and execution of the delivery assurance processes.

Having worked with D2 personnel previously, Skanska, introduced us to Network Rail to help provide experienced project management resources with the knowledge and track-record of delivering large multi discipline railway projects.

Our approach

Working on Network Rail's behalf, we deployed a Senior Project Manager (SPM) who rapidly integrated themselves into the Skanska and CRSA delivery teams.

Collaborating seamlessly with the delivery partners, our SPM quickly identified areas of the assurance process for Delivering Work Within Possessions (DWWP) that required attention. Calling on their extensive major project experience, they set up a robust Entry into Service process with buy-in from the Designated Project Engineer (DPE).

Realising that collaboration with stakeholders was a critical success factor, our SPM built strong relationships with HS2 and Network Rail Maintenance teams - securing their alignment with the hand back processes before works began.

Our SPM also ensured that all DWWP assurance process reviews and documentation, including blockade management plans, contingency and reporting, were in place in advance of the blockade.

In addition, they organised a full roster of Network Rail Project Management staff to cover 24-hour reporting during the both the weekend works and main blockade.

Benefits Realised

- **Successful Delivery of Construction Works** – Demolition of the old bridge and installation of the new structure were delivered to programme and handed back on time with no impact to operational railway and zero accidents.
- **Robust DWWP Assurance** – All DWWP assurance activities were successfully completed before construction began, including DWWP reviews, and the sign-off of all documents including blockade management plans, contingency plans, and communication plans.
- **Entry into Service (EIS) Completed prior to Hand Back** – EIS tracker adapted and developed from previous best practice and reviewed in T- process prior to construction. Library and tracking of construction certificates to ensure efficient review and sign off with Infrastructure Manager.
- **Successful Hand Back of all Land to HS2** – On completion of construction works, due to the relationships that we had help build with HS2, we were able to progressively hand back land parcels to HS2 to facilitate the planned start of their works.

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Why D2?

We have developed a strong industry-wide reputation being able to deploy experienced project management staff who have a proven track-record of successful major project delivery and who have direct Network Rail experience. This was a key deciding factor in Network Rail's decision to accept Skanska's suggestion that we could support the preparation and delivery of such a large multi-disciplinary project.

Challenges and Solutions

The most significant challenge was time. When D2 got involved, there were just eight weeks until the start of the 23-day blockade. This meant that our SPM had to get up to speed very quickly, complete a handover with the outgoing Project Manager, and build the relationships that were necessary to ensure all Network Rail assurance had been achieved to enable the blockade to begin. They also identified several areas that needed to be improved to maintain full compliance with the programme.

Our SPM arranged the DWWP reviews to include specific attendees and ensure a robust review model was in place including reviews of design status, key risks to the blockade and reviewing all resource / plant supply status. The outcome was that all assurances were in place to permit the blockade and that the blockade was delivered successfully.

Similarly, our SPM's review of the blockade / possession document status identified gaps in the blockade management plans, contingency plans and communication plans (including reporting times / frequencies during the blockade). We addressed these gaps and ensured buy-in and sign-off by all the relevant stakeholder signatories, enabling the works to begin.

By converting a meeting room into a fully IT-enabled control room environment, our SPM created a hub where all blockade reporting staff from CRSA / Skanska and Network Rail could be co located for both the preparatory weekend possessions and the main blockade. This proved instrumental in creating a one team collaborative approach where everyone was bought into a common goal.

Displaying the schedules and site plans as visual reference points, the control room provided a fully immersive collaborative environment that enabled clear and aligned reporting upwards to senior teams within the respective organisations. Our SPM also established conference call facilities and invited the project team to morning and evening briefings where any issues were quickly resolved, avoiding delays and minimising risks.

Another challenge was the lack of an Entry into Service (EIS) process. From their previous experience of large multi-disciplinary projects, our SPM realised the importance of getting this process right and so developed an EIS tracker based on industry best practice. Going a step better than a simple EIS checklist, the tracker covered all the necessary engineering documents.

We established weekly T- meetings to review the status and production of design and construction certificates, along with a filing system to store certificates for easy reference during the blockade. This preparation resulted in an agile EIS process and enabled a seamless post-commissioning to sign off from the Infrastructure Manager, who gave very positive feedback testifying that the process made it easy for them to approve EIS.

Much of what was achieved would not have been possible without the formation of strong collaborative relationships in a very short timescale. Our SPM achieved this by co locating in Skanska's offices full time and interfacing daily with CRSA. They also realised significant benefits by developing relationships with the local maintainer to ensure Asset Management Plan compliance, and with HS2 to manage the staged hand back of land and update them on progress. This was achieved through regular site stakeholder meetings to enable them to see project progress first hand and address any issues. This approach was key in successfully handing back of all land parcels to HS2 ahead of the planned strategic milestones in the project schedule - leading to very positive feedback from HS2.

"Dan came into the project eight weeks before the blockade into the Integration PM role supporting both Network Rail (NR) and Skanska. The NR team had limited resources and therefore were struggling in the preparation of the blockade. Dan supported NR and Skanska in the integration, DWWP process and blockade management to enable successful completion of the 23-day blockade".

Keith Gardner, Skanska, Project Director