# CASE STUDY FUTRAN JV – February 2024
## Highway – Reopening of Temporary Road Closures

# Introduction

FUTRAN are a Joint Venture comprising Arcadis, Pell Frischmann and TrL and they are currently providing Construction Assurance services on behalf of National Highways (NH) for those HS2 construction works which impact on the Strategic Road Network (SRN). The assurance work, which has been underway for 2 years, has included reviews of temporary traffic management diversion works and associated SRN road closues on the M42, A5 and A43. To support the HS2 construction teams our Construction Assurance Managers (CAM's) have developed a number of processes and Check Sheets to ensure that the impact on the SRN from a health and safety perspective is kept to the absolute minimum. The objective of this Case Study is to share their best practice assurance procedures, which have helped support the challenges that have been faced during the delivery of these projects.These works initially encompass traffic management arrangements and associated road closues in connection with the installation of the new HS2 Marston Box Overbridge on the M42 and subsequently on the A5 and on the A43 Brackley Bypass.

## Overview

The M42 Marston Box overbridge was constructed offline from the M42 Motorway and slid into place during a 10 day full closure of the carriageway, during the 2022 Christmas period. This period was chosen as it was recognised that the diversion routes chosen would be subject to significantly reduced traffic flows, due to the extended period of public holidays.

The bridge slide was completed successfully and as predicted saved many weeks on programme, delivered a considerable reduction in working hours and significant saving on project costs. The WH&S benefits for both the construction team and travelling public were significant, when compared to more traditional construction methods.

Residual risks remained particularly in respect reopening the carriageway following the 10 day possession. The FUTRAN CAM's worked closely with the construction team during development of the proposals, programming and risk mitigation meetings. However, the CAM's identified a number of lessons learned to deliver improved assurance processes to allow sign off and timely re-opening of the SRN. These practices have been shared at subsequent SRN closure events e.g. the A43 and A5 etc.

## Challenges

We will now focus on the issues associated with ensuring that the Motorway closure and reopening occurred within agreed procedures and allocated timescales:

- Early development of planning and communication protocols between all organisations.
- The potential for use of 4D digital simulation to model the activities and access arrangements required.
- Development of agreed joint Checklists in advance of the road closure to define inspection parameters for both the structure and existing carriageway during closures, to allow sign off prior to re-opening.
- Creation of an Incident Reporting Flow Chart so that it was completely clear how incidents and accidents would be dealt with and where responsibility rested.

National Highways HS2 Integration Team - "FUTRAN's HS2 Assurance Inspectors have provided invaluable support to National Highways and the HS2 Construction team, in helping to develop SRN hand back protocols, and also provided on the ground support to our area teams, to facilitate the safe and efficient re-opening of the network, following a number of prolonged temporary closures."

# Action Taken

- The FUTRAN CAM's played a significant part in the successful completion of the bridge slide within the allotted period. It was possible to re-open the motorway on time however this highlighted a number of areas for improvement.
- A fully documented re-opening procedure and protocol has been develop which is modified on a case by case basis.
- The re-opening protocol is jointly agreed by the CAM's, the Principal Contractor and other stakeholders, which is in three stages:
- Stage 1: As the Principal Contractor (PC) approaches the end of the work, a notification is now issued to agreed members of the FUTRAN CAM's team, the NH Interface team and the Operations Direct Area team to arrange for formatted handover inspections.
- Stage 2: The NH Interface team communicate any final observations, identified during handover inspection, that still required to be actioned prior to re-opening. Once satisfied, the team notified the PC that the road is ready for final inspection.
- Stage 3: The NH Area team will arrange a final walkthrough with PC and communicate any final observations prior to re-opening. Once satisfied, the PC will be notified that the road is ready to re-open and guidance will be given if any area team maintenance works are still ongoing. After all works are completed, a final confirmation will be given to all departments to allow re-opening.
- Agreed Check Lists have been developed to ensure all existing & new assets are included in the checking process.
- An Incident Reporting Flow Chart has been developed to provide clarity on the actions at every escalation level.
- Interim RSA3's have now been introduced to pick up any significant design issues immediately following re-opening.

# Results

- By improving the inspection and sign off procedures, we have ensured that the right people are present to enable a smooth handover and reopening of the SRN. The process has now been utilised successfully on a number of occasions, which has minimised disruption to the travelling public, delivering WHS and quality benefits, as well as efficiency savings across the schemes.
- The protocol has delivered improved levels of communication between all stakeholders and better understanding of the programme.
- The decision-making process was clear and concise which has reduced the levels of stress across the delivery team.
- Development of the Incident Reporting Flow Chart has brought greater clarity to the roles and responsibilities during the road possession, which is delivering greater assurance, that the programme can be met.
- Implementing an immediate RSA3 ensures that any WHS issues can be addressed quickly and with minimum impact on the public.
- The processes and procedures which have now been used across a number of SRN interface projects are available on request to share across the wider supply chain.
- Use of 4D simulation is recommended where possible to identify potential areas where clashes or restricted access may be an issue.

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home safe and well