

CASE STUDY - Arcadis (Technical Assurance) – M621 TTM Incursion Review – March 2024

Introduction

The National Highways (NH) project aims to improve journey times, network resilience, driver information and safety. These improvements will reduce the collision risk on the network, enable quicker responses to incidents, and the increase in capacity will reduce congestion and improve journey time reliability on the M621 between Junctions 1 and 7. The project, has required the installation of temporary traffic management measures over a length of 3.6 miles. The M621 is an urban motorway in Leeds and can, at peak times, be very congested, making members of the public's journey times unreliable and leading to shunts and slow-speed collisions between vehicles. The route acts as the main access to the southern section of the Leeds conurbation, and congestion can result in many drivers and pedestrians being subject to significant inconvenienced when traffic management restrictions are sited along the route and on the adjacent arterial road network.

This has resulted in a significant number of vehicle and pedestrian incursions occurring during the construction phase. After reviewing the number of incursions on the scheme, it appeared that the occurrences were disproportionally higher than on other schemes and as a result Arcadis (Technical Assurance H&S/CDM) working with the Principal Contractor (PC) and NH, undertook a detailed review commencing June to August 2023 to identify if there were any mitigation actions or lessons we could learn. The findings of this review have been presented to the industry at the National Highways RIP HSW forum in November 2023



Overview

Since the project commenced in 2022, there have been numerous incursions (66). Nearly 50% were found to have been due to vehicle breakdowns or pedestrians seeking information. This was due to the traffic volumes and the urban nature of the route. Broken down vehicles often accessed the slip roads as a safe refuge, to seek protection from the live traffic, until they could be recovered. There have been:

- 38no. Positive Interventions
- 27no. Negative Interventions
- 1 other



Challenges

Arcadis reviewed project documentation, the Raising the Bar requirements and NH guidance documents.

- We reviewed the PC traffic management processes.
- Compared the PC's processes against NH document requirements.
- Reviewed what was or was not compliant.
- Highlighted what actions were required, or were appropriate.



Quote from Sal Hopkinson National Highways Project Manager: *"The work that the TA undertook alongside NH, enabled the scheme and the business, to understand the figures when compared to other schemes nationally and ensure required improvements were made, and lessons learned could then be shared."*



Action Taken

Arcadis reviewed the following documentation:

- GG 128 – Requirements for reporting incidents, events and undesirable circumstances.
- RtB 27 – Preventing and Managing Incursions
- GG 119 – Road Safety Audit Standard
- PC Scheme Traffic Management Plan
- PC Scheme Construction Phase Plan
- PC Scheme Traffic Management RAMS
- PC Scheme Fire & Emergency Management Plan
- PC Scheme Incident Management Plan
- PC Scheme Incursion Reporting Process



Results

- GG 128 Compliance - The scheme was found to be fully compliant with the requirement to report incursions as per GG 128, as they had correctly recorded every form of incursion, including those from members of the public, which had resulted in significantly higher figures than would normally have been expected. Projects should be aware of this potential issue occurring particularly in very urban environments.
- Incursions Reporting Process – TA audit confirmed the scheme was following GG 128 & RtB 27 requirements and helped clarify individual responsibilities within the reporting process.
- TM Related Project Documentation - A review of all the TM related documented processes identified that these were not being reviewed at the frequency set out within the Quality Plan. This meant that a number of documents were out of date and in need of significant revision. This has since been rectified and a regular review process put in place.
- GG 119 Compliance – A review of the Traffic Management Plan identified that TM measures had, in some instances, been in place for over 6 months. GG 119 requires that TM RSA's should be undertaken every six months for long duration installations. A refreshed TM Road Safety Audit for the scheme was undertaken as an outcome of the TM incursion review.
- RtB 27 Preventing & Managing Incursions – Checking against the Arcadis RtB Minimum requirements Action Plan – the scheme could evidence general compliance, with a number of significant action areas identified across the TM arrangements.
- TM RAMS – The RAMS could not easily be located as part of the review; the PC subsequently provided these and as a best practice improvement they will form part of a quarterly review going forward.
- Incident Management Plan – This did not refer to the treatment of incursions, a point which has now been rectified.
- TM Incursion Trends – Trend analysis / lessons learnt findings had not been collated resulting in a lack of understanding of causation / incursion types etc. Early analysis could have highlighted the need for additional breakdown areas to be provided, which were subsequently added. Review now completed and noted within a lesson learnt paper completed with the following on site improvements.
- Following input from the TA and a resultant full review by the PC, the following measures have also been adopted:
 - Toolbox Talk for access & egress communicated at greater frequency.
 - Intellicone system installed / airlock entry at closed junctions is now always manned.
 - Improved communications on changes to TM design provided to all parties.
 - Road recovery to ensure calls relating to incursions responded to more swiftly.
 - Additional checks made to ensure signage remains clear and concise.
- These findings were presented at the RIP HSW Forum and provided for information at the Highways Safety Hub and Incursions Working Group.



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