

## CCF 469 – M48 high winds traffic management trial

### Evaluation report

#### **Purpose**

This report provides an overarching review of the above change control form (CCF), with a recommendation on whether the trial should be adopted into BAU activities or not. It is addressed for the consideration of Incident Management Requirements Team (IMRT) Team Leader and the Operational Signatory on behalf of the Network Operations Managers (NOMs) group/.

The above CCF was introduced into the SW region on a trial basis. This report will set out any key information received back into IMRT highlighting successes and/or areas for improvement

#### **Background and context**

Since September 2007, the South West region have been filtering traffic on the M48 Severn Bridge in high wind conditions (Annex A provides further details on these arrangements). Following a request from the SW region for a review of this activity in March 2018, CCF (change control form) 469 was instigated in April 2018. Under this CCF, existing risk assessments were reviewed by regional H&S teams and the regional work instruction devised by IMRT.

This work instruction was released on a trial basis, and circulated around relevant staff within the SW region on 24 February 2019. The frequency at which the work instruction would be used was very much dependent on specific weather conditions and factors, therefore it has only now been deemed that enough data and information has been captured from usage of the work instruction to draw conclusions on whether the activities within it are safe and control measures as low as reasonably practicable (ALARP).

#### **Overview of CCF 469**

##### **Objective**

The task was instigated with the following objective:

*‘M48 Bridge filtering on the English side of the bridge. Enable customers to enjoy the social and economic benefits this route provides by safely maintaining essential capacity and ensuring that the M48 Severn Crossing is a viable and safe link between England and Wales during period of high winds through traffic management.’*

This was specifically broken down into three parts:

1. *Identify hazards apparent when performing high winds traffic management and bridge filtering and how these differ, both in terms of additional and heightened risk, in relation to agreed national safe systems of working.*
2. *Assess the impact of the risks identified.*
3. *Identify mitigations through the use of additional control measures, where the risk is identified as serious.*

## Monitoring

The trial was setup to be monitored using the following 'Monitoring requirements':

Ref.	Monitoring requirement
<b>Operational concept (OC) monitoring</b>	
<b>OC1</b>	Number of high wind events requiring filtering
<b>OC2</b>	Traffic officer (TO) and regional operating centre resource requirements
<b>OC3</b>	Deployment issues due to incidents on strategic road network
<b>OC4</b>	TO near misses and accidents
<b>OC5</b>	Severe weather condition specifics – high winds
<b>OC6</b>	Interaction with customers
<b>OC7</b>	Compliance with mandatory hot debrief requirements
<b>OC8</b>	Social media monitoring and Customer insight survey

Effectively, information pertaining to most of the 'Operational concepts' (OCs) would be gathered and monitored through **OC7** – the requirement to complete and send a hot debrief form to IMRT and IAU each time the trial work instruction / process was used. The notable exception to this is **OC4**, where any undesirable circumstances, near misses and/or accidents would also (but primarily) be reported through AirsWeb as per Highways England's process for monitoring and investigating incidents of this nature.

## Outcomes

During the period between 24 February 2019 and 18 August 2020 (the writing of this report), six debriefs were completed following the completion of the activities within the trial work instruction.

Having looked at the debriefs, the following considerations for improvements have been identified:

- Concerns over the maintenance of Chapter 8 Traffic Management (TM), with faults reported to Gloucestershire CC regarding the A frame at J2;
- The general usage of large A frames questioned in high winds situations;
  - o One instance of one being 'blown over, reported and corrected'
  - o One question raised regarding Manual Handling, and the 'very large A frame' at J2M slip, with the question 'can they be changed to lower level signs'
- Infrastructure not matching the requirements of the work instruction;
  - o 'Height restriction flashing lights didn't work' as well as being blocked by the Chapter 8 sign;

- A total of five breaches of TM, although none considered serious and 'crews were not affected', with a suspected breach of the J2M slip on one occasion after it was found that 'cones had been moved by a member of the public at some time prior to reopening to enable use of the bridge'

One particular note of positive feedback was received:

- 'Job went well, all involved are happy with the process and feel supported.'

### **Recommendation**

It is the **recommendation** of Incident Management Requirements Team that this process **be approved for use as part of business as usual activities**, and the work instruction be incorporated into the Traffic Officer Manual.

Given the debrief information highlighted above, it is the **further recommendation** of Incident Management Requirements Team that SW regional H&S team reassess existing risk assessments and arrangements for this activity, with specific attention to:

1. Traffic management equipment;
  - a. Quality and suitability for purpose;
  - b. Manual handling activities and arrangements
2. Surrounding infrastructure and technology;
  - a. Variable signs and signals (VSS) being in suitable working order and condition to support this activity being undertaken.
3. Prevention of breaches of TM and associated potential for injury

## **Annex A – Existing M48 high wind arrangements**

From 24 September 2007, Highways England TOs began filtering restricted traffic in high wind conditions on the M48 Severn Bridge. This is in accordance with a rigid protocol such that when wind is gusting between 40-60 knots (46.1 – 69.1mph), as measured on anemometers (the bridge wind monitoring system located in the South West regional operations centre); motorcycles and all other vehicles over 6'9" (2.1m) in height are not permitted to cross. When high winds traffic management is in operation the main carriageway of the M48 is closed to all traffic at the junctions prior to the Bridge. The traffic is diverted onto the roundabouts at junctions 1 and 2 and they're only allowed to re-join the M48 via the slip road if the vehicle is not prohibited.

Highways England TOs will provide a high visibility presence at J1 M48. The South Wales Trunk Road Agency (SWTRA) will deploy the closure on the Welsh side at J2, without a requirement for any ongoing presence.

**Note** - If the wind gusts above 60 knots (69.1mph) then the Bridge is closed to all traffic.

**Note** - For the purposes of this trial, high winds traffic management can take place at any time, including during 22:00hrs to 06:00hrs, when deemed appropriate by the duty operations manager, to test this approach.

The **scenarios** in which the Traffic Officer Service may be requested to operate in this environment include:

1. Filtering restricted vehicles at J1 (English side) Not currently permitted at Eastbound J2
2. Closing junctions
3. Reopening junctions

### **Purpose of high winds traffic management**

To enable customers to enjoy the social and economic benefits this route provides by safely maintaining essential capacity and ensuring that the M48 Severn Crossing is a viable and safe link between England and Wales during periods of high winds, through traffic management.

### **Key Responsibilities**

#### **On-road**

1. Deploy as an immediate response, in line with the trial work instruction to manage incident stages as applicable.
2. Undertake a debris run-through prior to implementing high winds traffic management or for reopening the bridge.
3. Manage any breaches of filtering by prohibited vehicles.
4. Utilise resource rotation plan and welfare facilities.
5. Take part in a hot debrief for monitoring and continuous improvement purposes after every event.

#### **ROC**

1. To continually monitor the weather forecast.
2. To apply for ETRN and ensure it's in place prior to start of high winds event.
3. To escalate or de-escalate filtering currently in place, and arrange TM as appropriate in line with the trial work instruction to manage incident stages as applicable.
4. Ensure on-road resources assigned to this activity are not to be deployed to any other incidents unless agreed by the Duty Operations Manager (OM).
5. Consult with MSP following a total closure as salting may be required.
6. Arrange a hot debrief for monitoring and continuous improvement purposes, after every event.

**Debriefing**

Although debriefing isn't ordinarily required for high winds traffic management, it will be for the purposes of the trial. This is to ensure that the safe system of working developed is sufficient and appropriate, prior to any potential rollout as BAU. This will be an opportunity for operational staff to make any amendments to future working methodology.

**Outside of scope**

Highways England should not tolerate the risk brought about by the potential conflict with motorcycles at J2 (on the Welsh side) when undertaking filtering activities. Bridge filtering at this location should not be undertaken as motorcycles present a high risk to traffic officers. Further review is required with the South West Traffic Road Authority (SWTRA) to review if and how filtering could be conducted safely at this location.

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