

Safety alert

Managing the risk of end-of-queue incidents

Safety Alert Summary

The risk of end-of-queue (EOQ) crashes is real. In recent weeks, there have been two incidents at roadworks sites resulting in fatalities. One of these involved a passenger on a motorcycle.

Traffic queues at roadworks sites pose risks due to congestion and reduced visibility. Proper control measures are crucial to prevent EOQ crashes. This safety alert outlines the control measures available to address the risk.

Control Measures

Managing EOQ risks at roadworks sites continues to pose a challenge. TMR has developed risk-based guidance to improve safety for motorists approaching queued traffic.

At many sites, standard traffic management signage – including advance warning, speed reduction, warning of the traffic control device and of queued traffic – provides adequate protection. However, additional controls may be required at more challenging sites such as on:

- high-speed roads
- high traffic volume roads
- roads with a high percentage of heavy vehicles
- roads where the road layout make it difficult to see traffic queue ahead.

Steps to manage EOQ risks involve:

1. Identifying the EOQ risks and determining measures to reduce them as part of a site-specific risk assessment, and documenting these in the Traffic Management Plan (TMP). (Note: Site-specific Traffic Guidance Schemes (TGS) should reflect the outcomes of the traffic management planning stage. Any subsequent changes should be documented including a re-assessment of the risks and the circumstances requiring the change).
2. Calculating the predicted queue length using guidance in the [Queensland Guide to Temporary Traffic Management Part 3](#), Clause 4.8.
3. Installing QUEUED TRAFFIC signs in advance of the predicted queue length so that motorists approaching the end of the queue are warned.
4. Regularly monitoring queue lengths to ensure queues do not extend beyond warning signs.
5. Monitoring approach speeds to confirm motorists can safely stop. Where approaching traffic speeds are excessive, additional traffic management measures should be implemented.

In addition to standard traffic management signage, additional safety controls may be deployed to help reduce EOQ risks. These include:

- managing speed on approach to the traffic queues through the use of -
 - speed indicator devices
 - rumble strips or rumble mats
 - UHF radio broadcasts
 - temporary speed humps

- variable message signs (VMS) with automatic number plate recognition speed indicator devices
- use more visible warning signs to alert drivers
- use of an additional Traffic Controller
- installing signs to encourage the use of hazard lights by the last vehicle in the queue
- on high-speed roads (> 80km/h) consider reducing the speed to 80km/h a minimum of 500m in advance of the predicted queue length.

More detail on these measures is provided in Chapter 2 of the [Guideline – Traffic Management at Works on Roads](#).

On site management of the risk

Temporary traffic management is not “set and forget”. Adequate monitoring of queues must be undertaken to ensure the setup is operating as designed. If queue lengths are greater than anticipated and extend beyond the warning signage in place, on-site adjustments may be necessary.

1. Initially, when traffic queues are approaching the estimated EOQ position, the traffic controllers should advise the site supervisor that traffic queues are approaching their maximum length and contingency planning may need to be implemented.
2. As an interim measure, the traffic controllers may adjust their timing or give priority to one approach to minimise queuing from the key direction.
3. If adjusting timings is not successful in managing queue lengths, implement a pre-designed contingency plan* to cater for the longer queue lengths being experienced – this will need to be completed by the traffic management implementer while traffic controllers continue to control traffic.
4. If a pre-designed contingency plan is not provided, seek urgent advice from the traffic management designer for the works.

* Contingency planning for longer than expected queue lengths should be included as part of the TGS design.

Technical Documents

Queensland-specific guidance is available in:

- Queensland Guide to Temporary Traffic Management Part 3
- Guideline – Traffic Management for Works on Roads
- Queensland MUTCD Part 3 for additional signs
- MRTS02
- MRTS02.1 Annexure

These documents are available on the [TMR website](#).

The attached fact sheet is a useful summary of the key points. It does not replace guidance in the above-mentioned technical documents.

EXTERNAL SAFETY ALERT SIGN OFF

This External Safety Alert has been discussed with undersigned and the implications for our work environment identified and understood.

Date: _____

External Safety Alert Number:

Summary of Possible Implications:

[illegible][illegible][illegible]