DRAFT INTERIM ADVICE NOTE 150/yy

Temporary Traffic Management Signs Simplification - guidance at road works using relaxation layout traffic management

Diagram 7202 TSRGD, 2002
Diagram 7208 TSRGD, 2002
Detail A (Table A.1.5) TSRGD, 2002

Summary

Guidance to HA supply chain on omission of certain temporary signs in the lane change zone at road works where relaxation layout traffic management is used

Instructions for Use

This guidance is supplementary to (but does not replace any elements of) the existing DfT Traffic Signs Manual – Chapter 8 (2009 Revision).
Executive Summary

The Highways Agency has set out its vision for improving safety and is taking forward a programme of work entitled “Aiming for Zero”.

Research and trials by the Highways Agency has shown that some temporary traffic management (TTM) signs in the lane change zone can be safely omitted from relaxation layout traffic management without any identifiable change in road user behaviour. By reducing the number of signs, the time spent on-road and the number of live lane crossings by the HA supply chain operatives is reduced. This can significantly reduce safety risks to road workers.

This IAN forms guidance to the supply chain and gives the supply chain the option to vary from the relaxation layout provision for the lane change zone as set out in guidance provided in the DfT Traffic Signs Manual (TSM) Chapter 8. Adoption of this guidance is not mandatory and it represents an alternative and equivalent approach to providing lane change zone signing in parallel to that shown in the TSM Chapter 8 Part 1: Design.

With immediate effect, where conditions permit and where the Service Provider considers (based on appropriate risk assessment) it is safe to do so, lane closure signs to Diagram 7202 / 7208 may be omitted from both the near side and off side at 600 yards and 200 yards, together with the “Detail A” elements (Table A.1.5 of the TSM Chapter 8 Part 1: Design) on the hard shoulder adjacent to the entry taper on motorways.
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1. Introduction

This IAN provides interim guidance to the supply chain in respect of the use of temporary traffic management signs. The guidance does not change the standard requirements and guidance for temporary traffic management as set out in the DfT Traffic Signs Manual, but it does allow for omission of some sign components as specified in Annex C below.

This change has the potential to make a major contribution towards the Highways Agency achieving its target to achieve a substantial reduction in carriageway crossing by road workers. It will also help the Highways Agency to fulfil its future vision for improving road worker safety as set out in its “Aiming for Zero” programme.

1.1 Purpose and required actions

Highways Agency research and trials have shown that some of the signs specified within the current lane change zone signing specification within Chapter 8 can be omitted at relaxed layout lane closures without affecting the warning provided by the signs to road users.

The supply chain is asked to consider the need for full Chapter 8 signs provision on a location by location basis and apply the following relaxation arrangement.

With immediate effect, where conditions permit and subject to the professional judgement by the Service Provider, the existence of suitable network conditions and the satisfactory outcome of an appropriate risk assessment, Highways Agency supply chain contractors may choose to omit the 600 yard and 200 yard near side and off side signs to Diagram 7202 (and Diagram 7208 distance plate), in the lane change zone of relaxed layout lane closures, together with the “Detail A” elements (Table A.1.5 of the TSM Chapter 8 Part 1: Design) on the hard shoulder adjacent to the entry taper on motorways.

The omission of the above sign elements at relaxed layout lane closures has been accepted by the Highways Agency as an operationally valid alternative to the current Chapter 8 TTM layout for relaxation temporary traffic management, subject to the above conditions.

1.2 Relationship

This IAN is issued as supplementary guidance to the DfT Traffic Signs Manual (TSM) Chapter 8.

1.3 Impact of Implementation

This guidance affects workers who maintain the Highways Agency road network who operate in close proximity to fast-moving traffic that is not under their direct control. A number of these operatives are involved in setting out the cones, signs and lamps associated with road works and undertake some of the most hazardous activities during their work, as they are in close proximity to live traffic travelling at or above the national speed limit with little or no physical protection and often during the hours of darkness. As a result, contact between the road workers and passing traffic presents an injury risk that can result in fatal or life-changing injury to road workers.
Highways Agency research has shown that the signs relaxation referred to in this IAN has the potential to deliver the following reduction in risk to road workers:

- a reduction in safety risk (injury likelihood and severity) of 19%
- a reduction in carriageway crossings of c.40%

In deciding the merits of deploying the full Chapter 8 signing in place of the relaxed requirement set out in this document, those managing roadworks must take account of the safety improvement for roadworks afforded by the relaxed arrangements.

1.4 Scope

This IAN applies only to relaxed layout temporary traffic management in the lane change zone of motorways. It does not apply to sign layouts for long-term standard layout traffic management.
2. Guidance

2.1 Background

The Highways Agency has set out its vision for improving safety and is taking forward a programme of work entitled **Aiming for Zero**.

Research and trials conducted on behalf of the Highways Agency have shown that some of the signs specified within the current lane change zone signing specification within Chapter 8 can be omitted at relaxed layout lane closures without affecting the warning provided by the signs to road users.

The Highways Agency conducted background research and on-road trials to determine what interventions had the potential to improve road worker safety. Details of these can be found at **Annex A**.

2.2 Guidance on the application of relaxed signage layout

With immediate effect, and where road conditions permit, on sites with temporary traffic management, HA supply chain contractors may choose to omit the near side and off side Diagram 7202/7208 (TSRGD, 2002) signs at 600 yards and 200 yards, together with the Detail A (Table A.1.5 TSRGD, 2002) elements on the hard shoulder adjacent to the entry taper on three lane motorways. This alternative layout can be applied to offside or nearside closure types where a relaxation layout could be used.

- Annex B shows the standard Chapter 8 layout
- Annex C shows the permitted simplified layout

2.3 Factors to be taken into account

The supply chain should take account of road conditions in its decision as to where to adopt this sign simplification. Factors such as anticipated traffic flow levels, sight lines and obscuration of remaining 800 yard, 400 yard and “Detail A” signs should be considered. If appraisal of these aspects indicates that poor visibility of the remaining signs may result, the contractor is advised not to adopt this simplification, but instead set out the standard layout, as shown in TSM Chapter 8 (**Annex B**).
3. **Withdrawal Conditions.**

The Highways Agency intends that this IAN will remain in force until such time as this change can be incorporated permanently in a future revision of the DfT Traffic Signs Manual.
4. Contacts

Ian Smith
Highways Agency
Woodlands
Manton Lane
Bedford
MK41 7LW

Tel: 01234 796276  GTN: 3013 6276

Email: Standards_Feedback&Enquiries@highways.gsi.gov.uk
5. References

DfT Traffic Signs Manual (TSM) Chapter 8 (2009)

6. Bibliography

6.1 DfT Documents

DfT Traffic Signs Manual (TSM) Chapter 8 (2009) -
http://www.dft.gov.uk/pgr/roads/tss/tsmanual/

Traffic Signs Regulations General Directions (TSRGD) -
http://www.dft.gov.uk/pgr/roads/tss/tslegislation/

6.2 Highways Agency - Aiming for Zero


- Download Aiming for Zero (PDF 3MB)
- Road Worker Safety Strategy (PDF 3.3MB)
- Road Worker Safety Action Plan (PDF 3MB)

Highways Agency Knowledge Compendium

6.3 TRL Reports

TRL Report RPN 479 (2009) - Driver Interaction with Temporary Traffic Management

TRL Report RPN 887 (2010) - Driver Interaction with Temporary Traffic Management -Simulation Trial

TRL Report RPN 1813 (2011) - Driver Interaction with Temporary Traffic Management – On Road Trials
Annex A - Background Research and On-road Trials

A number of alternative TTM designs were considered in place of the current Chapter 8 layouts. In addition, a literature review was conducted to inform further decisions on the TTM layout designs.

TRL Report RPN 479 (2009) "Driver Interaction with Temporary Traffic Management"

This research suggested that in the current TTM configuration, there may be more signs than are required for a driver to understand how they are required to behave in order to pass through roadworks safely.

Simulation Trials

Computer simulation trials were used to test for driver recognition of and responses to alternative signs layouts:

TRL Report RPN 887 (Feb 2010) - Simulation Trial

Each layout reduced the number of signs on approach to the roadworks, while still informing drivers about the upcoming road configuration and the required behaviour. The simulation trial showed the drivers behaved in a safe and consistent manner in the different trial configurations.

On Road Trials

The first part of on-road trials commenced in Areas 4 and 10 in October 2010 to January 2011 to test removal of 600yd Diagram 7202/7208 signs.

Omission of the 200yd Diagram 7202/7208 (TSRGD, 2002) signs was also trialled on-road. This was conducted within the second part of the on-road trials where removal of both 600yd and 200yd Diagram 7202/7208 (TSRGD, 2002) together with “Detail A” (Table A.1.5 TSRGD, 2002) signs was tested. The following report details the findings from this second phase:

TRL Report RPN 1813 (2011) - Driver Interaction with Temporary Traffic Management – On Road Trials

Trials were conducted in two Highways Agency areas. Analysis of 120,000 vehicles travelling through alternative and control layouts showed no evidence to suggest there was any difference in lane movement of vehicles under the experimental conditions.

Consultation: Road Safety Working Group (RoWSaF) and Technical Project Board

The Highways Agency has consulted key stakeholders on this change of guidance and has considered any feedback received. The consultation group consisted of RoWSaF members plus other key stakeholders consulted via a “Technical Project Board”.

Conclusion

The results of this research indicated that drivers behaved in a safe and consistent manner through the modified layout. There were no significant changes in any safety critical behaviour on the approach to roadworks.

The Highways Agency has approved this layout as an operationally valid alternative to the current Chapter 8 TTM layout.
Annex B – Standard Chapter 8 TTM Signs Layout - advance warning and lane change zone signs layout (adapted from Diagrams DZA2 and DZB6)
Annex C – Permitted alternative lane change zone signing layout as described in this IAN