



TEMPORARY TRAFFIC MANAGEMENT ON HIGH SPEED ROADS - GOOD WORKING PRACTICE

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This guide has been written to give advice on safe methods of working practice in temporary traffic management operations on high speed roads. It should be reviewed annually to maintain the currency of its advice.

Temporary traffic management on high speed roads is a hazardous activity. The selection of the actual method of work should be made by a competent contractor and should reflect the risks and site specific circumstances of the planned work.

The deployment and removal of temporary traffic management arrangements usually necessitates the presence of stationary/slow-moving vehicles and/or members of the workforce on the carriageway and this creates a potential point of conflict with high speed traffic.

The planning of such operations should consider:

ELIMINATION - Seek to eliminate potential conflicts

But, where it is not possible to eliminate the risk,

REDUCTION AND CONTROL - Seek to control potential conflicts

Set out below are a series of good working practice guidelines which are derived from the application of the concept of Elimination and Reduction and Control of risk from temporary traffic management operations.

Planning Issues

Good planning is a key component in safe operations, see document "Guidance for Safer Temporary Traffic Management" *.

* HSE/HA/CSS(2002). Guidance for Safer Temporary Traffic Management. [Available on the Highways Agency website](#). Hard copies available from TRL Ltd, Crowthorne.

P(1)

Information concerning the highway for which the operations are proposed should be provided for the organisation undertaking the temporary traffic management operations. Examples relating to highway features and traffic are:

- narrow central reserves,
- VMS signs and/or matrix signals,
- safe taper positions,
- lack of hard shoulder,
- specific locations without provision for stationary traffic management vehicle(s) off carriageway,
- permanent mounting facilities for temporary signs, and
- traffic data.

P(2)

Consideration should be given at an early stage to the use of a highway authority approved rolling block technique to support temporary traffic management operations.

P(3)

The criterion for the commencement of traffic management operations should relate to traffic flow not clock time.

P(4)

On highways equipped with VMS signs and/or matrix signals, the appropriate authority should be approached to activate these systems in support of the setting up, alteration, or removal of temporary traffic management arrangements.

P(5)

Pre-placement or delayed removal of temporary traffic management equipment may be necessary in some temporary traffic management operations. In such cases, this should only take place as part of the ongoing temporary traffic management operations and equipment should be left in position for a minimum time.

P(6)

During vehicle procurement, the need for vehicles to facilitate easy movement from the offside seat to nearside door and vice versa should be one of the considerations.

Vehicle Issues

V(1)

The categories and specifications of vehicles that fulfil the different roles in temporary traffic management operations are shown in Tables A - D. These are:

- Table A - Inspection/ supervisor vehicle,
- Table B - Traffic management/ maintenance vehicle (personnel/equipment carrier),
- Table C - Cone laying/ removing vehicle operating adjacent to live traffic lane(s),

- Table D - Impact protection vehicle

V(2)

The presence of stationary or slow moving vehicles in live traffic lanes on high speed roads should be minimised. Where temporary traffic management operations involve the encroachment of stationary or slow moving vehicles into live traffic lanes, each such vehicle should:

- be afforded impact protection,
- be fitted with a Light Arrow sign,
- be protected by advance signing, and
- take up a position in the centre of the lane to be blocked.

This does not apply to vehicles entering or leaving the works area, hard shoulder or verge.

V(3)

In addition, on roads without hard shoulders, operations should be planned to identify safe taper positions which facilitate the provision of advance signing without the need for stationary or slow moving works vehicles to encroach into live lanes when pre-placing, erecting or removing traffic management equipment.

V(4)

In those locations where V(3) is not practicable, the works vehicle should be afforded impact protection and be fitted with a Light Arrow sign to act as advance signing, or a highway authority approved rolling block should be used.

V(5)

When engaged in the initial installation and final removal of longitudinal coning directly from a vehicle, the vehicle used shall be specially adapted to provide a low level working platform with a guard rail arrangement within the normal width of the vehicle (Table C).

V(6)

Traffic signs mounted on and displayed by vehicles involved in temporary traffic management operations shall be in accordance with the requirements set out in Chapter 8 of the Traffic Signs Manual as updated and extended by TD49, TA63 and TA64, of the Design Manual for Roads and Bridges.

V(7)

For the purpose of activities involving vehicles, the area within the taper should be treated as a live lane.

V(8)

Vehicles which are located outside the works area and are engaged in the installation and removal of traffic management equipment adjacent to live lanes should face in the direction of the traffic at all times.

V(9)

Trailers should not be used for temporary traffic management operations which involve reversing.

Workforce Issues

W(1)

Crossing live traffic lanes by foot should be minimised and there should be a presumption against crossing the carriageway on foot whilst working alone. Safe gaps in the traffic are likely to occur in traffic flows of less than 40 vehicles per minute on 3 lane carriageways.

W(2)

Crossing of carriageways in excess of 3 lanes, by foot, should only be carried out after location specific risk assessment. (Allow at least 3 seconds per lane when estimating crossing times.)

W(3)

Operatives should only cross carriageways by foot where the central reserve provides a safe place to conduct work.

W(4)

Each operative engaged in the installation, removal and maintenance of traffic management equipment shall possess a level of competence in accordance with the requirements of the appropriate Sector Scheme. This includes appropriate driver instruction.

W(5)

Traffic management, operatives should be assessed to ensure that they:

- have full use of neck, trunk, arms and legs;
- have at least 6/12 distance vision when wearing glasses or contact lenses;
- have good hearing;
- are suitable for this work, and that, by means of checks, that safety is not compromised by them suffering from specific conditions, e.g. vertigo and balance disorders, psychotic illnesses, diabetes, cardiovascular and gastrointestinal conditions, sleeping disorders.

W(6)

Organisations undertaking temporary traffic management operations should adopt policies regarding the use of medication, drugs and alcohol. They should jointly be working towards achieving an alcohol policy which gives a maximum blood alcohol content of 30mg/100ml of blood.

W(7)

Operatives who are engaged in activities on live traffic lanes should wear high visibility garments to BS EN 471, Table 1: Class 3.

W(8)

Pedestrian operatives engaged in the installation and removal of traffic management equipment should work facing oncoming traffic, wherever practicable.

Signing Equipment Issues

E(1)

All temporary traffic management equipment shall be clean and fit for the purpose on initial deployment and be regularly maintained in such condition until completion of the work.

E(2)

Advance signing should be consistent and accurate, particularly when mobile traffic management techniques are used in conjunction with a static traffic management arrangement.

E(3)

A sign with the legend "Workforce in road Slow" should be positioned on the nearside of the carriageway, in advance of the first crossing point.

E(4)

Following installation of temporary traffic management arrangements, changes or removal, an inspection shall be carried out to ensure that all signs and delineators are correct/ have been removed/ covered, as appropriate.

E(5)

Measures must be taken to stabilise traffic signs/frames, with ballast in the form of sacks containing fine granular material, or to otherwise secure them to permanent fixtures.

E(6)

Temporary traffic signs/cones should be cleaned by personnel in a place of safety.

E(7)

Cone bases, sign plates and frames should be marked to facilitate identification of ownership.

Definitions

Guard rail arrangement

The guard rail arrangement should incorporate rail(s) at a height of no less than 910mm, but shall not obstruct the loading and unloading of equipment.

High speed road

A motorway or dual carriageway which, in normal circumstances, is subject to a speed restriction of 50mph or greater.

Impact protection

Either an intervening block vehicle or a crash cushion attached to the works vehicle.

Light Arrow sign

A sign that has been Type Approved and Authorised on behalf of the Secretary of State for Transport (reference GT/46/43/167)

Live lane

A traffic lane that does not form part of the works area or safety zone. Unless signing advises to the contrary, the hard shoulder should not be classified as a live lane.

Place of safety

A location that provides at least 1.2m clearance between a pedestrian operative and a live traffic lane.

TABLE A - INSPECTION/SUPERVISOR VEHICLE	
Standard at 1st Jan 2003	
Conspicuous colour (eg yellow/white)	
50mm 'Highway/Motorway Maintenance' sign (externally mounted on rear of vehicle)	
Roof mounted amber light bar (visible 360°)	
Class 1/microprismatic reflective markings on the rear of vehicle	
Company/client livery on side of vehicle	

TABLE B - TRAFFIC MANAGEMENT/MAINTENANCE VEHICLE (personnel/equipment carrier)	
Standard at 1st January 2003	1st April 2003
Conspicuous colour (yellow/white)	Conspicuous colour (yellow/white)
100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)	100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)
Class 1/microprismatic reflective markings on rear of vehicle	Class 1/microprismatic reflective markings on rear of vehicle
All seats must be fitted with head restraints and 3 point inertia reel belts	All seats must be fitted with head restraints and 3 point inertia reel belts
Working light/s	Working light/s
Reversing bleeper	Reversing bleeper
Front roof mounted twin amber light bar (visible 360°) and rear mounted amber flashing beacon(s) (visible 360°)	Front roof mounted twin amber light bar visible 360°) and rear mounted amber flashing beacon(s) (visible 360°)
Company/client livery on side of vehicle	Company/client livery on side of vehicle
High-visibility strip along side of vehicle	High-visibility strip along side of vehicle
-	CCTV for rearward vision

TABLE C - EQUIPMENT INSTALLATION/ REMOVAL VEHICLE - used for the initial installation and final removal of longitudinal coning operating adjacent to live traffic lanes	
Standard at 1st January 2003	1st April 2003
Conspicuous colour (yellow/white)	Conspicuous colour (yellow/white)
100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)	100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)
Class 1/microprismatic reflective markings on rear of vehicle	Class 1/microprismatic reflective markings on rear of vehicle
All seats must be fitted with head restraints and 3 point inertia reel belts	All seats must be fitted with head restraints and 3 point inertia reel belts
Working light/s	Working light/s
Reversing bleeper	Reversing bleeper
Front roof mounted twin amber light bar (visible 360°) and rear mounted amber flashing beacon(s) (visible 360°)	Front roof mounted twin amber light bar (visible 360°) and rear mounted amber flashing beacon(s) (visible 360°)
Company/client livery on side of vehicle	Company/client livery on side of vehicle
High-visibility strip along side of vehicle	High-visibility strip along side of vehicle
Special adaption to provide a low level working platform with a guard rail arrangement within the normal width of the vehicle (eg tail lift or well)	Special adaption to provide a low level working platform with a guard rail arrangement within the normal width of the vehicle (eg tail lift or well)
Driver/operative communication system	Driver/operative communication system
-	CCTV for rearward vision

TABLE D - IMPACT PROTECTION VEHICLE	
Standard at 1st January 2003	1st April 2003
Conspicuous colour (yellow/white)	Conspicuous colour (yellow/white)
10 tonne minimum on the road weight	10 tonne minimum on the road weight
Lorry Mounted Crash Cushion (LMCC)	Lorry Mounted Crash Cushion (LMCC)
Automatic brake activation system	Automatic brake activation system
Signing equipment in accordance with Departmental Standard TD49	Signing equipment in accordance with Departmental Standard TD49
Light Arrow sign	Light Arrow sign
100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)	100mm 'Highway/Motorway Maintenance' sign (externally on rear of vehicle)
Reversing bleeper	Reversing bleeper
Class 1/microprismatic reflective markings on the rear of vehicle when LMCC is in 'up'	Class 1/microprismatic reflective markings on the rear of vehicle when LMCC is in 'up'

position.	position.
Front mounted twin amber light bar, rear mounted amber flashing beacons visible when the cushion and the light arrow are in the stowed position	Front mounted twin amber light bar, rear mounted amber flashing beacons visible when the cushion and the light arrow are in the stowed position
All seats fitted with head restraints and 3 point inertia reel belts	-
-	All seats fitted with head restraints and 4 point harness
-	CCTV for rearward vision

Note: A vehicle complying with this specification can also be used in Category C operations as long as it is fitted with a well or tail lift (see paragraph V(5)).

All major elements of the highway industry, including Highway Authorities, Contractors, maintenance agents, police, health and safety practitioners and enforcers were represented on the group which produced this document. The organisations on the group were:

- Association of Chief Police Officers
- Association of Consulting Engineers
- Civil Engineering Contractors Association
- CSS
- Department for Regional Development Northern Ireland
- Health & Safety Executive
- Highways Agency
- National Assembly for Wales
- National Term Maintenance Contractors Safety Forum
- Quarry Products Association
- The Scottish Executive
- Traffic Management Contractors Association
- TRL

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