# HIGHWAYS AGENCY NETWORK MANAGEMENT MANUAL

# PART 4 – TRAFFIC MANAGEMENT

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# 4.1 Chapter 8 of the Traffic Signs Manual and Notes for Guidance on 'Safety at Road works'

#### 4.1.1 Introduction

Chapter 8 of the Traffic Signs Manual (TSM) is the Department for Transport's standard for all aspects of signing and management of traffic at static and mobile road works on the network carried out by the Service Provider. Part 1: Design and Part 2: Operations provide guidance for those responsible for the design and operation of temporary traffic management arrangements.

Chapter 8 also includes guidance on the design and operation of emergency traffic management.

The following Departmental Standards and Advice Notes which form part of the Design Manual for Roads and Bridges (DMRB) are referred to in Chapter 8 (2006):

(a) TA 11 Traffic surveys by roadside interview (DMRB 5.1.4); (b) TA 89 Use of passively safe sign posts to BS EN 12767:2000 (DMRB 8.2.2); (c) TA 92 Crossover and changeover design (DMRB 8.4.6); (d) TD 9 Highway link design (DMRB 8.4.6); (e) TD 19 Requirement for road restraint systems (DMRB 2.2.8) Layout of grade separated junctions (DMRB 6.2.1); (f) TD 22 (a) TD 27 Cross-sections and headrooms (DMRB 6.1.2); (h) TD 69 The location and layout of lay-bys (DMRB 6.3.3)

The Service Provider must take into account the content of Traffic Management and Signing Guidance Notes which are published periodically to supplement/amend TSM Chapter 8 and the associated DMRB Standards and Advice Notes.

Many of the basic principles contained in Chapter 8 are also covered in the Safety at Street Works and Road Works: A Code of Practice, which has legal backing under Sections 65 and 124 of the New Roads and Street Works Act 1991. Guidance is also included in the document 'Guidance for Safer Temporary Traffic Management' (2002) published on behalf of the County Surveyors Society (CSS), the Highways Agency and the Health & Safety Executive. Service Providers must also take the contents of these two documents into account when designing and operating temporary traffic management arrangements.

# 4.1.2 Implementation

The requirements of TSM Chapter 8 must be taken into account for all works on live motorways and all-purpose trunk roads.

The document makes recommendations based on good practice for the guidance of temporary traffic management designers and operators. It is not a prescriptive specification or a collection of model traffic management layouts. The guidance given cannot cover all situations and it is for the designer to adopt, adapt or develop the required traffic management to suit the actual conditions.

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In a situation in which the Service Provider feels that a departure from the Highways Agency's standards is required then the Service Provider must submit details in accordance with the terms of his contract. Authorisation must also be obtained for the use of any non-prescribed signs.

Temporary Traffic Regulation Orders (TTRO) must be used to ban turning movements and enforce lane and carriageway restrictions such as contra-flow working, carriageway closures and speed and vehicle restrictions which are needed to guide and control traffic safely past the works (see TSM Chapter 8, Section D3.37 (Design)). The Service Provider must submit requests for temporary traffic orders on Form TR514, and allow 8 weeks for the preparation and publication of the necessary orders.

All those involved in temporary traffic management operations must be adequately trained.

Workforce issues are dealt with in Section O6 of Chapter 8. Section O6.2 (Operations) deals with training.

## 4.1.3 Mobile Works

## **Single Vehicle Works**

Advice about single vehicle works is provided in Section O8 of TSM Chapter 8 (Operations). Except for works such as gritting, salting etc. which are undertaken at a controlled speed nearing that of normal road speed, single vehicle works must not be carried out on dual carriageway roads where the national speed limit applies. Instead, works should be carried out by static traffic management, or where appropriate, by use of the Mobile Carriageway Closure (MCC) technique. Single vehicle works should only be carried out on the nearside lane of a carriageway.

When a single vehicle operation is being considered for works which move steadily but at slower speed than normal road operating speeds, there is a need to interpret the underlying principles contained within TSM Chapter 8 in relation to the specific circumstances prevailing at the particular location.

A risk assessment must be produced which takes into account the logistics of setting out and operating the various traffic management options. This assessment should include such factors as the normal traffic speed on the road, the difference between the speed of the works vehicle and normal traffic speed, the alignment / sightlines / width of the road, and the duration of exposure to risk for the operatives.

Where single vehicle works are appropriate, they can be used in conjunction with an impact protection vehicle (IPV). This will afford the additional protection of being highly visible and being equipped with a crash cushion. It should be noted, however, that unless supported by the required level of advance signing, this arrangement does not constitute the provision of a MCC.

# **Mobile Carriageway Closure**

Although the Traffic Officer Service may implement rolling road blocks, for the deployment of emergency traffic management (Section O7.2 of TSM Chapter 8), they do not have a role to create MCC. Guidance on the use of mobile carriageway closures for planned, rather than emergency, works is included in Section O11 of TSM Chapter 8. Specially-signed vehicles are used to create such closures.

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# 4.2 Driver Information Signs at Road works

#### 4.2.1 Introduction

- 4.2.1.1 A prime objective of the Highways Agency is to provide road users with information that is relevant to their journeys to have 'informed travellers'. This chapter directs readers to the Highways Agency's policy relating to driver information signs at road works that require closure of a lane or hard shoulder. These signs are designed to give drivers advance notice (chronologically and geographically) of future or current road works and to provide information about the works.
- 4.2.1.2 When investigating traffic management for future road works, consideration should be given to the use of VMS to supplement proposed signing. The Service Provider should contact the NTCC or the relevant RCC to develop any proposals.
- 4.2.1.3 Signing principles and details of informatory signs are dealt with in Traffic Signs Manual Chapter 8, Section D4 (Design).

# 4.2.2 General Principles

- 4.2.2.1 Information signs should be used where the temporary traffic management design identifies that there are likely to be traffic delays of two minutes or greater or there is a need for specific driver information.
- 4.2.2.2 For major works schemes an information sign located near the beginning and the end of road works should contain the Highways Agency's logo.
- 4.2.2.3 Information signs, other than for future road works, should be installed as part of the temporary traffic management arrangement and removed on completion of the works or when no longer required.
- 4.2.2.4 For signs on adjoining non-Highways Agency roads agreement must be reached with the adjoining local highway authority on the need for the signs, their number, location and costs payable by the Highways Agency.

# 4.3 Design of Vehicle Recovery at Road works

#### 4.3.1 Introduction

- 4.3.1.1 The Highways Agency provides free recovery within many of its major road works sites. The design and operational aspects of vehicle recovery operations are dealt with in Sections D3.35 (Design) and 07.3 (Operations) of TSM Chapter 8. Guidance on the design of Recovery Operations is also included in documents such as the Specification for Highway Works and Guidance for Safer Temporary Traffic Management.
- 4.3.1.2 The purpose of this document is to provide the Service Manager/Service Provider with comprehensive guidance on the range of issues to be considered and the options available to them when deciding to provide recovery operations within a Highways Agency scheme.
- 4.3.1.3 This guidance applies to both motorways and all-purpose trunk road parts of the Network.

# 4.3.2 Why have a recovery service at road works?

- 4.3.2.2 Whenever works involve a reduction in the amount of carriageway available to traffic, then congestion is more likely to occur and accidents or breakdowns are more likely to result in stationary traffic. Stationary vehicles in the carriageway represent a safety hazard both for the occupants of that vehicle and other road users. Also, by blocking a traffic lane, the traffic capacity at the road works site is further reduced, thereby causing further delays on the network. Hence it is in everyone's interest to remove that vehicle as quickly and safely as possible and in these circumstances it may be appropriate to have recovery arrangements in place to minimise the disruption caused.
- 4.3.2.3 The provision of a free recovery service should be considered whenever works are likely to involve the following:
  - Reduction in the number of lanes available
  - Narrow lane widths
  - Sections of motorway without hard shoulders
  - Hard shoulder running
  - Known congestion sites
  - Lack of availability of emergency roadside telephones over a significant length of carriageway.
- 4.3.2.4 Appropriate signing, including "Free Recovery await rescue" (Diagram 7291), must be used when vehicle recovery is used at road works.

# 4.3.3 Liaison and Planning Issues

- 4.3.3.2 Early planning and consideration of the options available is essential to ensure the correct level of service is provided and the cost minimised.
- 4.3.3.3 The Police and Highways Agency RCC Traffic Officer Service should be involved at an early stage of planning to offer advice on the need for and specification of recovery services appropriate to the particular section of the network affected.
- 4.3.3.4 The Service Provider/designer should note that local Police forces and the RCC Services currently have their own contracted recovery operators and may be able to provide advice and guidance on the performance and capabilities of local operators.

- 4.3.3.5 If not involved with the contract already, the Service Provider should be consulted for advice on the proposed locations of recovery stations and setting down points. These should also be checked to ensure they do not conflict with proposed works.
- 4.3.3.6 Where it is proposed to construct, or site, temporary facilities for recovery operators outside the highway boundary, the Local Authority must be consulted over planning consent issues, waste arrangements and statutory charges.
- 4.3.3.7 Siting of recovery operations on the local road network (i.e. off the Network) must be discussed with the Local Highway Authority and the Service Provider must obtain written agreement of proposals.

# 4.3.4 Monitoring of Site

- 4.3.4.1 In order to achieve rapid removal of broken down vehicles, it is essential that an efficient system be set up to monitor the affected network for broken down vehicles throughout the duration of the works. This is dealt with in Section D3.36 (Design) of TSM Chapter 8. Monitoring of the site can be achieved using one of the following methods:
- 4.3.4.2 Closed Circuit Television (CCTV) Such systems are relatively expensive to install and maintain but are reliable and allow 24 hour monitoring and recording of the affected part of the Network. CCTV systems can be linked either directly to the recovery contractor's office or else to a dedicated monitoring station provided by the Service Provider.

Monitoring stations must be manned for the duration of any restrictions imposed by the works and must be provided with appropriate communications systems.

4.3.4.3 **Roving patrols** – These require additional recovery or contractors' staff to drive through the works area looking for broken down vehicles and offer a cheaper alternative in terms of set up costs. Once found, the patrol reports the location of broken down vehicles to the recovery base.

Unless roving patrol vehicles are fitted with appropriate impact protection, they must not be used to protect broken down vehicles. [Advice on appropriate impact protection vehicles is given in TSM Chapter 8, Section o5 (Operations).

On larger sites the use of roving patrols can slow the recovery operation when compared with CCTV and hence this system is not recommended for road works where congestion is currently or likely to become a major problem. Costs will be minimised if the decision to provide roving patrols results in the inclusion of this facility in the road works contract at the outset rather than as an addition to a contract.

- 4.3.4.4 **Watchman** This is the cheapest of the three systems and relies upon contractors' staff within the site area acting as lookouts for broken down vehicles. This system can be very effective within small sites but has limited value on larger sites. Watchmen can be useful when used in conjunction with roving patrols.
- 4.3.4.5 The Contractor is to report traffic flow in the road works to the Regional Control Centre. Details on the traffic flow reporting must be agreed prior to the start of the scheduled road works directly between the RCC and the Contractor.

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#### 4.3.5 Level of service

- 4.3.5.1 Having located a broken down vehicle, the level of recovery service employed should be appropriate to the risk of accident and /or scale of congestion likely to develop. The following tried and tested options exist:
- 4.3.5.2 **Dedicated** / **On site recovery equipment** This is the most costly option as the recovery vehicles and staff are based on site permanently for the duration of the works / restrictions. Response times will be dependent upon the size of site and number of bases but are usually quicker than any other arrangement.
- 4.3.5.3 **Minutemen** / **Local arrangements** This system is reliant upon there being locally based recovery services available. The Service Provider must make arrangements with an appropriately accredited local service provider for a priority call-out system. The required service level including response times and minimum equipment levels will be specified by the designer.

# 4.3.6 Location of dedicated recovery services

- 4.3.6.1 The choice of location for a recovery base station should normally be left to the contractor unless there are particular safety implications that limit the number of suitable locations.
- 4.3.6.2 When choosing the location of the base, Service Providers/designers/contractors should give consideration to the safety of both the recovery operator and the road user. Recovery vehicles should not be located such that they are required to carry out dangerous manoeuvres on the network in order to exit or leave their base. If located adjacent to the carriageway they should be suitably protected from accidents involving errant vehicles or debris. The use of cones, permanent barriers, temporary proprietary vehicle restraint barriers, etc should be considered as appropriate. Where appropriate, base stations may be protected by locating them behind bridge abutments/piers provided visibility for access and egress is not compromised.
- 4.3.6.3 The likelihood of congestion/accident will influence the level of response time required and this should be considered at the pre-contract planning stage.
- 4.3.6.4 The Service Provider must carry out a risk assessment of his proposals before implementation. The Service Manager must satisfy himself that this risk assessment is adequate before giving agreement to any location.
- 4.3.6.5 When choosing the location of the base, the Service Provider should consider use of the following:
  - (a) **Motorway Service Areas** If these are convenient for the works, they offer an ideal and safe location. Local permissions from the operators should be obtained.
  - (b) Local garages located off network These are not appropriate where congestion is likely to block slip roads/local roads quickly preventing access. Response times will depend on distance away from site.
  - (c) **Hard shoulder** Sufficient width should be provided to ensure ease of access/egress. Temporary widening of the back of hard shoulder may be required if there is insufficient width. Adequate protection is essential. Consideration should be given to arrangements for recovery vehicles to turn around before they return to base.
  - (d) Slip roads As for hard shoulder.

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- (e) Access roads Where access roads are provided for emergency access and or gritting purposes, these can offer a useful location for the recovery base provided there is sufficient width to allow their intended use to continue unhindered.
- (f) Lay-bys on / off the Network
- (g) Verge hard standings Where there is sufficient highway land, a temporary hard standing behind the hard shoulder or verge may be constructed to accommodate the base station. After completion of the road works temporary hard standings should be removed to prevent their use as general stopping points. In locations where the provision of a hard standing would involve substantial construction costs, consideration should be given to more cost effective alternatives.
- (h) **Abnormal load lay-bys** If conveniently located near to the works, these can offer a low cost option. Prior to use, the Police should be consulted regarding likely abnormal load movements during the works period. Protection should be provided as appropriate and signage to deter illegal parking erected.
- (i) **Emergency refuges** These should be avoided if possible unless the works prevent their use by road users.
- (j) Service Provider's depots and compounds Local maintenance depots and winter maintenance compounds may be used subject to there being sufficient space and easy access to the network. The Service Manager should seek permission for use at a very early stage of planning, as there will be issues of safety and security to overcome.
- (k) **Surplus land** Land located within junctions or owned by the Highways Agency can be used subject to the use not interfering with sight lines, visibility splays etc and safe access and egress being possible.

#### 4.3.7 Setting down locations

- 4.3.7.1 Once the broken down vehicle and its occupants have been recovered, the recovery operator needs to be able to convey them to a safe location as quickly and safely as possible so that he/she can return to standby ready for the next incident.
- 4.3.7.2 The Service Provider should give consideration to the following when deciding upon a setting down location:
  - (a) Safety Recovered motorists should be protected as far as reasonably practicable from the possibility of involvement in accidents with other traffic. Hence, if possible, the setting down point should not be located on a high-speed road. Where this is not possible, physical barriers should be provided to give some protection from traffic.
  - (b) **Security** It is important to consider and mitigate as far as practicable any danger to recovered occupants from criminal threat or activity. In remote setting down locations, it may be necessary to provide safeguards in the form of staff or CCTV and lighting.
  - (c) **Facilities** It is strongly recommended that telephone facilities are available to enable recovered motorists to make arrangements for further assistance.
- 4.3.7.3 In addition to the above requirement the following facilities are deemed to be desirable but not essential:
  - a) Toilet facilities
  - b) Drinking water facilities
  - c) Shelter with heat, light and seating.

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- 4.3.7.4 **Suitable locations** Listed below are typical locations that are currently used as setting down locations for recovered vehicles and occupants. However this list is not exhaustive, and circumstances may arise where a combination of these locations on a day / night basis may best serve the interests of the road users. In addition, local knowledge may be employed to identify unique locations, which fulfil the requirements for setting down recovered vehicles and occupants. The Police are often able to advise on this.
  - a) **Motorway Service Areas** At service areas, the facilities for recovered vehicles and passengers listed above already exist. Setting down recovered vehicles and passengers at a service area should be considered whenever one is near a road works site. The service area operator should be consulted at the planning stage to ensure that there are no insurmountable problems.
  - b) **Local services or garages** Checks should be made to ensure facilities are 24 hour and the local Police should be consulted to ensure there are no security issues.
  - c) Service Provider's compound Service Provider's compounds may be considered as setting down locations where they are situated close to the road works site and there is sufficient land for parking and other facilities. For safety and security, it will generally be necessary to fence off the recovery setting down area from plant, materials, and any potential health and safety hazards in the compound.
  - d) **Winter maintenance compounds** As for Service Provider's compounds. Operational times may not coincide with the site times causing problems of access/security.
  - e) **Temporary lay-by** Where there is sufficient land available within the highway boundary, a temporary lay-by behind the hard shoulder may be constructed to accommodate recovered vehicles and passengers. However the construction of the temporary lay-bys may be made impractical by topographical and land ownership factors. After completion of the road works temporary lay-bys should be removed to prevent their use as general stopping points. In locations where the provision of a temporary lay-by would involve substantial construction costs, consideration should be given to more cost effective setting down locations.
  - f) Off route lay-bys Where the road works are near a suitable junction, a lay-by on an adjoining road may provide a good location for setting down recovered vehicles and occupants.
  - g) **Hard shoulder** This option is unlikely to be suitable since the facilities listed in 4.3.7.2 and 4.3.7.3 are not available.

If the hard shoulder is selected, some measure of physical protection from passing traffic must be given to the setting down point. The provision of a suitable impact protection vehicle equipped with a crash cushion or the deployment of a temporary vehicle restraint barrier are two possible ways of providing such protection. Neither method will be able to fully protect a broken down vehicle from damage should an HGV impact at speed. If either of these methods is being considered advice should be sought from the Service Manager on their deployment.

#### 4.3.8 Leaflets

4.3.8.1 The Specification for Highway Works requires that leaflets are handed out to drivers/riders of recovered vehicles. The leaflets should include telephone numbers for directory enquiries, motoring organisations and local garages (only after liaison with the Police) which may assist with onward recovery. See Notes for Guidance on the Specification for Highway Works, Clause NG120.2(v).

## 4.3.9 Vehicles & Equipment

- 4.3.9.1 The Specification for Highway Works (see MCDHW Vol 1 Cl 120 and Vol 2 Appendix 1/20) provides a generic specification for basic types of recovery vehicles, equipment and inspection requirements.
- 4.3.9.2 The designer should note that the list of equipment represents only guidance and he/she is recommended to consult with one of the recognised recovery industry associations for advice and guidance on the latest equipment and capabilities of vehicles. Alternative equipment specifications should be agreed with the Service Manager.
- 4.3.9.3 The use of impact protection vehicles (IPV) should be considered where vehicle speeds passing the broken down vehicle are generally in excess of 30 mph. This applies to the incident site and also to the setting down point.

#### 4.3.10 Communications

- 4.3.10.1 The key to an effective recovery system on site is good communication between the relevant parties.
- 4.3.10.2 The Service Provider must operate an effective two-way communication system, which takes account of any local communication black spots or low signal areas. Secondary 'back-up' communication systems must also be provided to ensure continued service.
- 4.3.10.3 A dedicated landline must be provided between the recovery base station / CCTV monitoring station, the Regional Control Centre and the Police for use in emergencies.

## 4.3.11 Qualification & Training

4.3.11.1 Vehicle recovery operatives must hold appropriate certificates of competence for the tasks they are performing.

The Sector Skills Council for the industry has developed National Vocational Qualifications in respect of automotive skills. Advice can be gained from the Service Manager. In addition, vehicle recovery operatives must hold a current driving licence free of endorsements other than for parking or speeding. They must also have in place, appropriate insurance covering damage to broken down vehicles while being recovered to a place of safety as well as third party liability insurance.

- 4.3.11.2 With effect from September 2006, all recovery operators working within Highways Agency construction sites must be accredited to the National Highway Sector Scheme for Vehicle Recovery at Highway Construction Sites. As soon as Sector Scheme SS17 is available, recovery vehicle operators on Highways Agency sites will be expected to be registered to the scheme within 12 months of its availability on the United Kingdom Accreditation Scheme (UKAS) web-site.
- 4.3.11.3 The company employing vehicle recovery operatives must ensure that each individual is vetted in respect of a Police record, which may be audited under the sector scheme.

## 4.4 Provision of Speed Cameras at Road works

#### 4.4.1 Introduction

For the safety of both road users and road workers, a temporary mandatory speed limit of 50mph or less is frequently imposed at major road works sites. An effective tool in improving compliance with temporary reduced speed limits is the use of speed cameras.

This chapter provides background about new wider Road Safety Partnerships, which replace the thirty eight English Road Safety Partnerships, provides instruction on making allowance for increased costs and gives guidance on providing speeds cameras within road work sites.

## 4.4.2 **Background**

Historical Road Safety Partnerships have evolved into Wider Road Safety Partnerships, which are now fully established. These new partnerships give local authorities, the Police and other local partners greater freedom and flexibility to pursue whichever locally agreed mix of road safety measures they see fit in order to reduce road casualties in their area. With the new arrangements come greater local accountability for the future deployment and operation of cameras.

These new arrangements mean that the previous cost recovery process, for the processing of fixed penalty notices, is no longer available. Although fixed and mobile Highways Agency core camera site costs are covered by local authority local transport plan settlements those for road works may not be. Given the wide variation in make up and operation of these newly evolving partnerships, largely funded by local transport plans, it is not yet possible to present a national model for these costs. For this reason individual cost negotiations will need to take place as explained below.

#### 4.4.3 Guidance

DfT Circular 01/2007 'Use of Speed and Red-Light Cameras for Traffic Enforcement' provides guidance and best practice advice on deployment, visibility and signing. This document is available for download from the <a href="DfT">DfT</a> web site. Service Providers should be aware of their responsibilities regarding deployment.

The Highways Agency has issued a document 'Speed Limit Enforcement at Road works: Guidance and Best Practice' which offers advice and procedures to follow when carrying out this activity. The Service Provider is strongly advised to take this guidance into account when planning major schemes where the speed limit is to be enforced.

The Highways Agency's guidance and best practice document referred to above offers advice on roles and responsibilities of various parties involved, in particular highlighting the earliest possible communication with the enforcing authority (the Police, through the relevant Wider Road Safety partnership).

Advice is also provided regarding key activities including the use of TASCAR (Temporary Automatic Speed Cameras at Road Works) clauses in contracts, regulations, evidence recording and witness statements.

Where TASCAR systems for roadworks are to be used, the requirements are set out in the Manual of Contract Documents for Highways Works (MCDHW), Volume 2, Series NG 100.

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# 4.4.4 Working with Partnerships

The most appropriate way of operating a speed camera system at road works is by cooperation with the Wider Road Safety Partnership. The Highways Agency remains committed to the working in partnership with these groups. These Parnerships offer the ideal forum for Police consultation, publicity preparation, camera deployment and signing regimes to be developed.

#### 4.4.5 Cost Issues

Service Providers must ensure that all necessary speed enforcement equipment costs are planned into scheme costs given the cost recovery process previously available to fund speed limit enforcement terminated in April 2007.

As back office processing costs were previously 'cost recovered' by Safety Camera Partnerships, they did not impact upon HA budgets. From 01 April 2007, the Highways Agency may be asked to contribute to these operational costs by Wider Road Safety Partnerships. Area Performance Teams, with the assistance of their Service Manager, must negotiate payment of back office processing costs where road works schemes include a requirement for temporary speed limit enforcement using cameras. This is in addition to the equipment costs which would also be incurred.

Back office processing costs are difficult to forecast and could be substantial, so to avoid potentially significant overspends, early communication with Wider Road Safety Partnerships is strongly recommended. Some analysis of previous and planned enforcement schemes resulted in an indicative average cost of £65k per enforcement site per month.

Some large partnerships might choose not to impose these charges, but it is expected that most will.

Existing Highways Agency contacts with historical Safety Camera Partnerships should be used and involved in these discussions as soon as possible. Service Providers should contact their Service Manager to obtain the name of the contact(s) covering their Network.

Negotiation should include development of a suitable scheme specific enforcement regime which

- a) provides a deterrent to speeding motorists by ensuring enough 'real' camera enforcement takes place.
- b) minimises the impact of our scheme on the normal operation of the partnership. This will also serve to minimise costs to the Highways Agency.

# 4.4.6 Signing

Speed check area signs and speed cameras signs, as appropriate, must be used where there is a reduced maximum speed limit in force within the works site and the Police / Wider Road Safety Partnership have agreed to operate speed enforcement equipment.

Signs should be located in pairs (one on each side of the carriageway or slip road) within the verge, central reserve or works site

#### 4.4.7 Further Information

Further information on these matters may be obtained from the NetServ Network Operational Policy Team.

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