

The Delivery Hub health, safety and environment

Raising the bar 11

Influencing driver behaviour at road works

Version 1 - June 2013

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Objective

The objective of this raising the bar document is to improve the safety of road workers by positively influencing the way in which people drive in the vicinity of our worksites to reduce the risk of injury to road workers

Background

The Health and Safety Executive report that the average fatality rate for road workers is one of the highest amongst employment sectors. Each year road workers are killed or seriously injured on our network, many more sustaining slight injuries. This is in addition to the near misses, cone strikes and accidents that occur within traffic management.

Between 2008 and 2012, nine road workers were killed and 122 seriously injured on motorways and major A roads in England.

Working on or near live carriageways is the most hazardous environment for our workforce. Whilst casualty levels have reduced in recent years, the number of fatal and serious injury accidents remains at an unacceptably high level.

Incident and near miss analysis has highlighted that several key risk factors are associated with accidents at road works including: speeding vehicles, driver fatigue, lack of awareness / information, distractions and changes to road layouts due to temporary traffic management.

One of the Highways Agency's strategic goals is to highlight the importance of road worker safety to road users by raising awareness thereby influencing driver behaviours. The strategy involves the communication of road worker safety initiatives and sharing of good practice throughout the supply chain.

A number of industry groups have already produced some useful guidance and tools on this subject and this document will provide links to information and also captures current best practice from the delivery partners.

RoWSaF is an industry group, established in 2001, promoting the health, safety and welfare of road workers. Membership includes: enforcement agencies, contractors and designers. Full details are available on the [RoWSaF](#) website.

Minimum requirements

The expectation is that all the guidance contained within should be considered as minimum requirements.

Driver information programmes

These are aimed at informing the public of road safety issues and there are a number of national and local media based initiatives available, several of which are outlined in the following pages.

Respect our road worker

A suite of material designed to raise awareness and to encourage drivers to alter their behaviour and respect road workers for the work they do. The predominant message is the need to reduce speed through road works.

There are two short films and four radio commercials and these are supported with a series of posters and post cards to aid any local or national campaigns. This material has been cleared by the Highways Agency (with some restrictions) and is available for download from the [Highways Agency YouTube channel](#). The films are also available in DVD format.



AOne+ radio campaign

A series of three radio adverts produced in 2012 targeting drivers of heavy goods vehicles. The hard hitting messages are aimed at keeping drivers awake and keep road workers safe.

These adverts are unbranded and are available at [RoWSaF](#) for all road worker safety forum (RoWSaF) members and can be used free of charge.

Also available is a [clip on You Tube](#), targeting drivers approaching road works.

Engagement with local businesses

It is good practice to undertake a survey of the locality to identify any businesses or local transport providers, for example:

- Bus / coach / taxi companies
- Warehouse distribution / logistics depots

Whilst these stakeholders form a relatively small population of overall road users, they are often frequent users in the vicinity of the road works and their feedback may prove extremely beneficial in the planning of construction activities.

One such initiative has been implemented in MAC Area 14 where assistance was sought from the local taxi licensing authorities. A letter was sent to each authority outlining the risks to road workers and together with a request to promote safe driving amongst their licence holders.

As a result of this action the number of errant taxis entering the works areas reduced to zero. Full details of this initiative are available on the [Highways Agency's health and safety toolkit](#).

Establishing liaison with these user groups will provide a better understanding of their specific needs and concerns during the construction works and the interface can be used as a vehicle to promote safety campaigns, such as those listed above.

Promotional events

On most projects there are opportunities to promote safe driver behaviour through liaison with local schools, colleges, youth centres, interest groups etc.

This could be in the form of presentations and distribution of literature through a planned public relations programme.

Roadside signs

Roadside signs provide travel, journey time and safety information, via temporary signs, which can be installed at strategic points in advance or throughout the road works.

Mobile trailer mounted portable variable message signs, pVMS, (below) indicating journey times / temporary speed limits. These may be manually operated from the unit itself however some types offer full remote operation. Battery recharging from solar panels is available.



It is important to avoid overloading the message to drivers and to avoid a succession of messages at critical points such as road junctions. Effectiveness of the signs is dependent on the ability of drivers to assimilate and understand the information, so messages should be clear and unambiguous. It is suggested that

any new messages are trialled and monitored to ensure no adverse affect on driver safety. General safety messages may include:

- Caution road works ahead
- Keep your distance
- Please drive carefully
- Watch your speed

Vehicle activated sign (VAS) with 'SLOW DOWN' text (below). These signs are particularly useful within road works where a temporary speed limit is in force. They are only triggered by those exceeding the pre-set trigger speed. Research has shown that drivers can be influenced to reduce speed when they are specifically targeted and hence these units are effective in reducing speeds.

A switching facility on the sign allows the user to select a range of detection speeds, typically 20, 30, 40 and 50 milers per hour. Also available with in-built solar panels.

Errant vehicle signs (see opposite) have been installed on several Highways Agency projects to date.

These signs attempt to make the safety message personal and appeal to drivers to take care in the road works.



Poor decisions are often made by drivers who rely on satellite navigation systems for directions and traffic information. Where a diversion route has been set up or a road layout has been significantly altered, then SATNAV instructions may be inappropriate to the new layout and indeed cause major congestion or serious incident.

Service providers should undertake a route survey with SATNAV to identify where this is the case and consider installing warning signs to drivers to ignore SATNAV instructions at these locations.



Site access

The preferred option for site access control is to utilise manned access points with physical barriers to prevent unauthorised access to the site.

Projects necessitating long sections of lane closure(s), for example during narrow lane working, may require numerous access / egress points through the traffic management in the form of gaps/openings in temporary safety barriers (or cones). See raising the bar document [B4 Temporary safety barriers](#).

When gaps are installed they provide a possible means of access for errant vehicles. In order to minimise the risk of unauthorised entry the following considerations must be made:

- Reduce the length of the gap to a minimum by using cones and safety line
- Add a taper of cones to the end of the opening in order to reduce the view into the closure and hence deter access



- Avoid locating any other temporary traffic management directional signs near to junction slip roads
- Openings not required for that days works are closed overnight using cones and, where required, safety line.

Note: The Traffic Safety and Control Officer is responsible for carrying out a check of temporary traffic management to ensure that the installation is effective and fit for purpose. Observations must be recorded and any necessary corrective measures implemented accordingly.

Closed circuit television (CCTV)

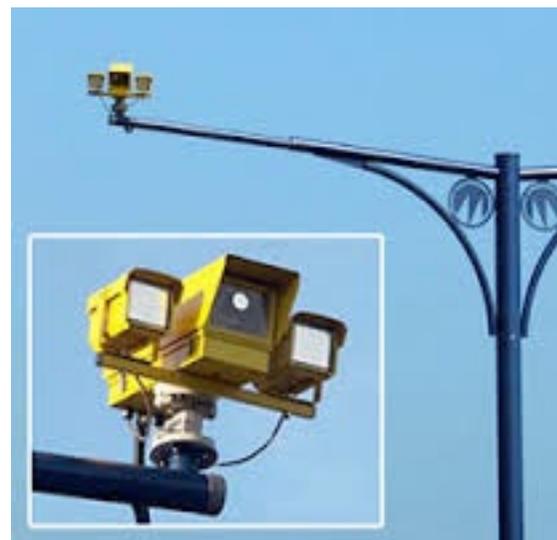
Much of the existing road network has CCTV coverage in place. Where recovery services are provided on the project this facility may be enhanced to aid the recovery teams to monitor traffic flows and incidents.

The presence of CCTV may directly influence driver behaviour and it also provides real time footage of road traffic incidents in order to analyse possible causes. Monitoring of driver behaviour via CCTV can identify hotspots and assist with ongoing traffic management strategy for the project.

There is an ongoing project within the Highways Agency to use incidents captured on CCTV as road safety information films. Safety through road works will be included as part of this project. When individual clips are identified and converted they will be available on the [Highways Agency's YouTube channel](#).

Average speed cameras

Average speed camera systems utilises automatic average speed digital technology which calculates and records the average speed of a vehicle over a given set distance by using an automatic number plate reading (ANPR) video system.



The set distance can be between two or more cameras, creating a speed control zone. In addition, the cameras are each fitted with infrared illuminators so they can operate at night or at times of poor daylight.

The cameras are usually found on cantilever structures above the road positioned at the roadside verge or in the central reservation. This allows them to maximise their capture rate of three vehicle images per second. As the vehicle passes each camera, its registration number is read, photographed and digitally recorded.

The time the vehicle takes to pass between each pair of cameras is then recorded, where the data is then transferred to an enforcement cabinet.

The ANPR system matches up the vehicle's corresponding images and, using the date and time stamp carried with each image, the system calculates the vehicle's average speed. If the vehicle is recorded as exceeding the speed limit, the cabinet automatically generates a violation record.

This record includes a black and white image of the registration plate, a colour image of the vehicle, the date and time, location and average speed between the two cameras.

The records are then stored within the enforcement cabinet until downloaded – and the penalty notice is then issued.



Life endangering events (LEE)

This has been created to encourage the police to take action enforcement action where vehicles have deliberately entered road works or where driver behaviour is threatening the lives of other road users or road workers. Further details are available on the [Highways Agency health and safety toolkit item 335](#).

References and sources of information

Organisation	Description	Link
Think	Part of Department for Transport. Provider of road safety information for road users. Aim: to encourage safer behaviour.	http://think.direct.gov.uk/index.html
Roadsafe	Representatives from government, vehicle and component manufacturing and road transport industries, road safety professionals and specialist media. Aim: to devise and promote solutions to road safety problems.	http://www.roadsafe.com
BRAKE	A road safety charity. Aim: to develop campaigns to promote safer road use and supports victims of accidents	http://www.brake.org/
RoSPA	Registered charity. Aim: to promote safety and the prevention of accidents at work, at leisure, on the road, in the home and through safety education.	http://www.rospa.com
Health and Safety Executive Road Safety	Section of the Health and Safety Executive website dedicated to promoting standards of safety on the road.	http://www.hse.gov.uk/roadsafety/
Road Safety Knowledge Centre	An online source of road safety information. Free of charge to anyone with a professional interest in road safety. Registration required.	http://www.roadsafetyknowledgecentre.org.uk/
Road Safety GB	A national road safety organisation that represents local government road safety teams across the United Kingdom. Aim: to reduce the number and severity of road accidents through education, training and publicity policies and programmes	http://www.roadsafetygb.org.uk/

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