

Managed motorways

The Highways Agency is using technology to help tackle congestion on England's motorway network. Andrew Page-Dove, programme manager for managed motorways, explains the latest phase in the evolution of this approach



Congestion and delays cost the UK an estimated £4 billion per year. So the Government is investing in England's motorways to encourage economic growth and keep the country moving. This will help ensure timely delivery of goods from manufacturers to retailers and help people travelling to work by improving journey time reliability.

This investment will enable the Highways Agency to roll-out managed motorways, an approach that will quickly tackle some of the most congested sections of England's motorways.

It is important that our motorways are easy to use and information provided on signs easy to understand, meeting the needs of all road users. Managed motorways have been in existence for some years now, with the introduction of variable speed limits and hard shoulder running at peak times on the M42 and M6 and more recently on the M1. Variable speed limits have also been in operation on controlled sections of the M25 since the mid 1990s.

All-lane running

We know from our experience of operating these sections of managed motorways, that there can sometimes be some misunderstanding about whether the hard shoulder can be used. As a result, we have introduced a number of changes to the design of the next tranche of managed motorways that will be more easily understood, operate in a way that is more consistent with non-managed motorway sections, but still deliver the much needed additional capacity to reduce congestion. We call this managed motorways all-lane running.

So based on this experience of delivering, maintaining and operating these sections of managed motorway we have refined our approach to deliver the same congestion benefits but for a reduced cost which means that we can tackle more of the congested sections of motorway and support economic growth.

Features of a managed motorway



Andrew Page-Dove is programme manager for managed motorways and safety at the Highways Agency

CCTV to monitor traffic conditions including during incidents

Signed cameras monitor traffic speeds for enforcement purposes

Signs mounted at the verge provide enhanced driver information including informing drivers of the speed limit and the availability of lanes

There are always new challenges to face when things change and ensuring we can operate the all-lane running design safely is fundamental to our approach. From a maintenance perspective, we have undertaken considerable work with the Road Worker Safety Action Forum (RoWSAF) and our supply chain. This is essential to ensure we can plan and implement maintenance on these sections of motorway, reducing road worker exposure as part of our overall strategy - Aiming for Zero.

Of course when incidents do happen, there needs to be an agreed consistent national approach to managing them. Our intention is to republish the National Strategic Agreement and National Guidance Framework this autumn taking account of the changes in managed motorways brought about by the all-lane running design. To do this we are working closely with the Association of Chief Police Officers, the Chief Fire Officers Association and the Association of Ambulance Chief Executives.

The key changes include:

- Converting the hard-shoulder to a permanent running lane - to provide a more consistent driver experience in an environment that operates in a very similar way to the majority of the existing motorway network - in that running lanes will always be available for use unless we tell drivers otherwise, for example following an incident.
- More overhead verge mounted signs and signals, on the left hand side of the motorway, to inform drivers of conditions on the network, such as speed limits, incidents and lane availability - this enables drivers to absorb critical information more quickly and reduce disruption when maintenance has to be carried out. These signs will be in addition to overhead gantries on the approach to and from junctions.

We are retaining a number of aspects from previous managed motorway designs, many of which you will already be familiar with, including: variable mandatory speed limits, emergency refuge areas, emergency telephones and CCTV. All of these will help us manage congestion, improve journey times and provide a safe environment for road users and those who work on our network.

We are going to be starting work on a number of projects from 2013 onwards that will be built to this refined design standard. These will be delivered on the following sections of the network:

M1 J32 to J35a
M1 J28 to 31
M3 J2 to J4a
M25 J5 to J6/7
M25 J23 to 27
M1 J39 to 42
M6 J10a to J13
M60 J8 to J12
M60 J15 to J12
M62 J18 to J20

In summary, the things you need to know about the refined design standard for managed motorways are as follows:

- Managed motorways is a technology driven approach to the use of our motorways that will provide additional capacity and control traffic through the use of variable mandatory speed limits.
- More information will be provided to drivers from signs mounted above the carriageway.
- Signs and signals will be used to inform drivers of conditions on the network and when variable speed limits are in place. The speeds are mandatory. These will be positioned above the carriageway.
- Emergency refuge areas are located and signed at regular intervals where managed motorways will be in operation. These provide an area of relative safety for use in an emergency.
- If you have to stop and can't reach a motorway service area, the next motorway exit or emergency refuge area, then pull as far over to the left of the motorway as possible. The regional control centre operators will set signs and signals to protect broken down vehicles and provide advanced warning to road users.
- In the event of an incident, signs and signals will be displayed to provide advanced warning to drivers and lower the mandatory speed limit. In addition, regional control centre operators, will set signs and signals to help emergency responders gain entry and exit from the scene. ●



**Emergency
refuge
area**

**Loops hidden in the
road allow monitoring
of traffic flows**