

## EXPLANATORY MEMORANDUM TO:

### THE M25 MOTORWAY (JUNCTIONS 5 TO 7) (VARIABLE SPEED LIMITS) REGULATIONS 2013

2013 No. 2397

1. This explanatory memorandum has been prepared by the Department for Transport and is laid before Parliament by Command of Her Majesty.
2. **Purpose of the instrument**
  - 2.1. The Regulations will restrict drivers on roads to which the Regulations apply from driving a vehicle at a speed above the maximum indicated by each speed limit sign passed by that vehicle, until that vehicle passes a sign indicating that the national speed limit applies, or that vehicle leaves the roads covered by the Regulations. In addition, for the lengths of road covered by these Regulations, the Regulations modify the Motorways (England and Wales) Regulations 1982 (“the Motorway Regulations”) to insert into those Regulations the concept of an “emergency refuge area”. The roads to which these Regulations apply are the M25 Motorway between junctions 5 and 7 and are more fully described in the Schedule to the Regulations.
3. **Matters of special interest to the Joint Committee on Statutory Instruments**
  - 3.1. None.
4. **Legislative Context**
  - 4.1. These Regulations have been made under Sections 17 (2) and (3) of the Road Traffic Regulation Act 1984 (“the 1984 Act”), which empowers the Secretary of State to make regulations with respect to the use of special roads generally and, as in this case, with respect to particular lengths of motorway. These Regulations allow for the operation and enforcement of variable mandatory speed limits in relation to the specified roads set out in the Schedule to the Regulations.
  - 4.2. Section 134 (2) of the 1984 Act requires the Secretary of State to consult with such representative organisations as are seen fit prior to making regulations under the 1984 Act.
  - 4.3. The Traffic Signs Regulations and General Directions 2002 as amended, enables certain traffic signs to be used to convey information applying to the use of variable mandatory speed limits on motorways.
  - 4.4. In addition, traffic signs authorised by the Secretary of State under section 64 of the 1984 Act will be placed on or near specified roads set out in the Schedule to the Regulations to indicate to drivers that vehicles are entering, have entered or are exiting a road covered by the Regulations.
  - 4.5. The Motorway Regulations govern the use of motorways in England and Wales, including the use of hard shoulders by vehicles.
5. **Territorial Extent and Application**
  - 5.1. This instrument extends to Great Britain but applies only to England. Only those sections of motorway specified in the instrument will be affected, all of which are located in England.

## **6. European Convention on Human Rights**

- 6.1. As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

## **7. Policy background - What is being done and why**

- 7.1. The M25 is one of Europe's busiest motorways, handling approximately 200,000 vehicles every day. It is recognised as being the core of the strategic network and is suffering from increasing congestion levels and journey times. It is also recognised that investing in the strategic road network and making the best use of the current capacity, while adhering to a baseline safety strategy, is paramount in providing additional network provision to aid economic recovery. The stretch of the M25 covered by these Regulations implements the latest version of Managed Motorways known as "All Lane Running". The Regulations firstly provide for the application of variable speed limits between junctions 5 and 7 of the M25. For the same location, the Regulations also modify the Motorways Traffic (England and Wales) Regulations 1982 to insert the concept of an "emergency refuge area" which will be provided as part of the All Lane Running scheme. All Lane Running refers to the hard shoulder being converted to a permanent running lane to create the required additional capacity. Managed Motorways deliver these benefits at a significantly lower cost than conventional motorway widening and with less impact on the environment during construction. Alongside the conversion of the hard shoulder to a running lane, a series of emergency refuges will also be constructed at regular intervals along the inside of the motorway carriageway. The carriageways of the M25 covered by these Regulations between Junctions 5 to 7 will abut to carriageways covered by the M25 Motorway (Junctions 7 to 16) (Variable Speed Limits) Regulations 2012 for the controlled motorway scheme in operation.
- 7.2. The use of variable mandatory speed limits is an essential element in achieving these requirements. It is aimed at tackling congestion through the introduction of technology to make best use of the existing road space whilst maintaining and, where possible, improving current safety standards.
- 7.3. Variable mandatory speed limits on the M25 managed motorway scheme ("the M25MM Scheme") between junctions 5 and 7 will enable proactive management of the motorway network in Surrey and Kent, an area with a previous history of congestion and accidents. The variable mandatory speed limit displayed on the motorway will take into account prevailing traffic conditions with the aim of ensuring the smooth flow of traffic.
- 7.4. The Highways Agency is committed to building upon the success of the existing managed motorway schemes which have already been implemented at a number of busy motorway sections across the country. It is expected that the managed motorways scheme (including conversion of the hard shoulder to a running lane and variable mandatory speed limits) on the M25 between junctions 5 and 7 will:
  - increase motorway capacity and reduce congestion;
  - help to smooth traffic flows;
  - provide more reliable journey times;
  - increase and improve the quality of information for the driver; and
  - maintain the current baseline safety standards.

## 8. Consultation outcome

- 8.1. The Consultation period on the proposal to introduce variable mandatory speed limits on the M25MM scheme between junctions 5 and 7 ran for a period of 6 weeks from 24 September 2012 to 5 November 2012. A 6 week consultation period was considered appropriate given the level of stakeholder engagement already undertaken and received ministerial approval.
- 8.2. A total of 40 responses were received with 18 (45%) in favour or generally supportive of the scheme, 10 (25%) were non-committal and 12 (30%) against. The majority of the consultation responses expressed concerns on the workings of the Managed Motorway system, rather than the introduction of the Variable Mandatory Speed Limit (VMSL) signs which, together with the intention and purpose behind the proposed modifications to the Motorway Regulations, was the subject of the consultation. Although many of the issues raised were of a general nature, regarding the design and operation of All Lane Running (ALR), the Highways Agency felt it appropriate to respond to consultees' concerns accordingly. Two consultees opposed the introduction of VMSL. The Association of British Drivers felt there was a lack of evidence to show that VMSL aided the management of traffic while one non-affiliated consultee responded that the average driver has the ability to assess the speed they should be driving at.
- 8.3. Those organisations who were in favour, or generally supportive, of the scheme included:
- Sevenoaks District Council;
  - Surrey Fire and Rescue Service;
  - Kent Police;
  - The Road Haulage Association (RHA) southern and eastern area; and
  - The Automobile Association (AA).
- 8.4. Comments made included:
- "I welcome in principle the proposal to introduce a Managed Motorway Scheme between Junctions 5 to 7. It is the assessment of Kent Police that the use of an additional lane with variable speed limits will reduce congestion at a very busy section of the M25...Kent Police are committed to supporting the Highways Agency in ensuring that the scheme is as effective and safe as possible." Kent Police;
  - "We support the current proposal with its aim of reducing congestion, improving journey time reliability, and reducing the number of traffic accidents, at the same time as improving the air quality and reducing the noise pollution..." The Road Haulage Association (RHA);
  - "Sevenoaks District Council fully supports these measures which should help reduce traffic congestion and delay, and improve the safe use of the motorway network." Sevenoaks District Council;
  - "The AA welcomes the significant improvement to journey times/congestion reduction the MM scheme will bring to M25 between J5 to J7." The Automobile Association (AA); and
  - "I consider that the proposal to introduce the Managed Motorway Scheme on the M25 between Junctions 5 to 7 will lead to an improvement in travelling conditions on this section of the motorway". Surrey Fire and Rescue Service.
- 8.5. While each of the above consultees generally supports the proposals, their responses also included some concerns regarding the design and execution of ALR. The primary issues raised included:
- a) Kent Police is concerned about the spacing of the emergency refuge areas (ERAs) and measures in place to avoid their misuse;

- b) Kent Police also wanted to know what the contingency plans were in place in the event of power shortage;
- c) Surrey Fire and Rescue Service and Kent Police were concerned about the apparent increase in risk to personnel (due to live lane working) attending to incidents without a dedicated hard shoulder available;
- d) Sevenoaks District Council is concerned about the environmental impacts on air quality and the resulting noise levels;
- e) The AA questioned what would happen to those people left stranded due to a lack of hard shoulder;
- f) The RHA and the AA raised concerns about driver confusion caused by the implementation of the differing forms of motorway standards; from controlled motorways (the use of VMSL on a standard dual 3/4 lane motorway) to the use of both types of Managed Motorways (both dynamic hard shoulder and All Lane Running);
- g) The RHA were cautious that the enforcement of speed limits was the only means to obtain road users compliance; and
- h) The RHA were against “the developing of a culture” where it is accepted that an extra lane need not be provided for use for the emergency services.

8.6. In response to the above:

- a) Research on the use of the hard shoulder on motorways (*Safety on Hard Shoulders on Dual Two-Lane and Three-Lane Motorways – TRL published report PPR017*), shows that discretionary stops on the hard shoulder (i.e. stops in contravention of the prohibition on stopping on hard shoulders ) outnumber breakdowns by between 8 and 10 times. These are usually drivers stopping to use their mobile phone, read a map etc. By increasing the spacing between the refuge areas in ALR the Highways Agency expect to eliminate discretionary stops, as far as is practicable, and as a consequence the risks to road users associated with them. Data obtained over a 24 months period by the RAC, highlights that 71 per cent of drivers would still be able to find a refuge in a genuine emergency. Based on the experience of designing and operating Managed Motorways for more than five years, detailed assessment has demonstrated that decreasing the frequency of emergency refuge area spacing will not have a detrimental effect on traffic flow, overall safety or incident numbers. Comprehensive CCTV coverage will be provided on the carriageway including emergency refuge areas. Misuse of these will be managed through detection equipment that will alert the Highways Agency Regional Control Centre (RCC) of any vehicle entering the area and the RCC will be able to respond accordingly.
- b) MM ALR does not require a specific contingency plan for a power outage. If signs and signals fail due to a power outage, drivers can continue to use it as normal. It is anticipated that in a controlled environment, with enforcement cameras present, the risk of accidents will reduce. The risk of an incident requiring signals, occurring at the same time as a catastrophic power outage, is statistically low.
- c) The RCC will advise all emergency responders on the most appropriate access route to an incident. Signs and signals will be set to clear and protect this route. Despite the loss of the hard shoulder as an emergency only lane, in the case of MM this emergency lane can be created on any lane of the motorway and this should benefit the emergency services.
- d) Regarding air quality impacts, the Managed Motorway scheme covered by the Regulations will not affect compliance with European Union obligations on air quality.

- e) Experience on our dynamic hard shoulder running (DS) schemes (where the hard shoulder is converted to a running lane at times of congestion) has shown that by creating and maintaining a controlled driving environment, a reduction in both the frequency and severity of collisions can result. The Highways Agency's RCC will be responsible for ensuring that lane closures are put into place in order to help protect stranded vehicles and they will set the appropriate signage to warn other travellers of potential approaching dangers.
- f) While the physical layout of managed and controlled motorways is similar, there are certain notable differences. Unlike controlled motorways (which rely solely on the use of variable speed limits to help aid traffic flows) ALR is marked up with four lanes, with no hard shoulder. On the controlled motorway there is a solid white line to delineate the separation of the inside lane and the hard shoulder. It should also be noted that the use of real-time information will be provided to drivers in advance of the road ahead, clearly indicating the nature of road use expected of them (i.e. use of the hard shoulder through speed limit signs in DS, speed restrictions in controlled motorways and lane availability and speed restrictions in ALR).
- g) Compliance with speed limits is an important aspect of the safe operation of all managed motorways, including the all-lane running design. It is generally accepted that some form of enforcement is considered essential. If driver compliance is to be achieved by enforcement cameras then it is necessary to put the required notification and their associated repeater signs, on the relevant part of the network. Experience from running variable mandatory speed limits on both the controlled part of the network (i.e. just variable mandatory speed limits), and those parts of the motorway network where the hard shoulder is used, shows that enforcement works to obtain compliance.
- h) The situation with ALR is no different from the current arrangements where the hard shoulder is utilised as a running lane at times of congestion. The aim is to use our technology as a means to provide an access route for emergency services. Where this differs from most motorways is that the Highways Agency can provide this route on any of the lanes in operation.

8.7. Objections were received from a number of sources although the majority came from unaffiliated consultees. The British Association of Drivers being the main group opposing the scheme. Of the 12 objections received the main issues raised were:

- a) lack of evidence to show that VMSL work;
- b) visual blight due to new gantries;
- c) removal of the hard shoulder is unsafe;
- d) the preference of dynamic hard shoulder running over All Lane Running;
- e) increased noise levels;
- f) the effects on air quality; and
- g) safety during periods of poor visibility due to adverse conditions (or at night).

8.8. In response to the above:

- a) VMSL on sections of MM schemes with or without hard shoulder running deliver benefits for road users as part of an overall package of technology measures. Examples include:
  - M25 between junction 10 and 16. VMSL introduced in 1995. Reduction in frequency of collisions by 10%;

- M42 between junctions 3a and 7. VSML introduced 2006. 50% reduction in accidents. Reduction in accident severity – 0 fatalities. 22% improvement on journey time reliability. 10% reduction in emissions; and
  - M40 between junctions 16 and M6 junction 5. Journey time improvements (a combined average daily saving of about two minutes per vehicle for a return journey in peak periods when MM are in operation).
- b) A landscape and visual impact assessment has been carried out in accordance with the relevant guidance. This has recognised that the scheme will have a slight adverse effect. Design and location of infrastructure has been carried out to minimise visual impact and there will be a reduction in the number of full carriageway gantries. Practical screening will be provided where needed.
  - c) Evidence from the M42 scheme demonstrates that using the hard shoulder as a running lane has not compromised safety. The hard shoulder is used far less now than for the purpose for which it was originally designed (emergency lane only). As is currently the case on current MM schemes, the Highways Agency will be able to create an emergency lane on any lane on the motorway and manage traffic with signs and signals to provide access for the emergency services or traffic officers.
  - d) The existing dynamic hard shoulder running schemes have provided the evidence to develop the new designs. Statistical data has shown that existing managed motorways have been highly successful at providing additional capacity when it is required, increasing journey reliability and maintaining the safety to road users. All Lane Running is about an evolution in design, not changing the concept. The design changes will make managed motorways quicker to build, more efficient to operate and more intuitive for drivers, without reducing the overall safety for road users and delivered at significantly less cost.
  - e) Currently 60-70% of the M25 between junctions 5 and 7 currently has low noise surfacing (the use of a material that produces less dB than traditional hot rolled asphalt). The scheme does not include resurfacing but the whole motorway will have low noise surface installed as part of maintenance operations over the next 10 years. Once construction has been completed, 10 properties are anticipated to experience a minor increase in noise at just above 1dB. All other properties will experience negligible/no change in noise levels.
  - f) Regarding any adverse effects on air quality the scheme will not affect compliance with EU air quality obligations.
  - g) Low light CCTV with infrared capability will be in operation. Traffic will be managed in the same way as existing MM schemes which have a good safety record. As the frequency of breakdowns is generally proportional to the volume of traffic, most breakdowns are expected to occur during ‘controlled conditions’.

8.9. A number of additional topics were raised which are considered not to be within the scope of this consultation. These issues are dealt with in more detail within the Consultation Response Report. The issues are:

- a) concern over aspects of use of average speed cameras; and
- b) concern regarding the junction improvements required.

8.10. A more detailed analysis of the consultation outcome and report, including responses to the issues raised above, is available on the Highways Agency website at the

following address <http://www.highways.gov.uk/roads/road-projects/M25-Junctions-5-7-Managed-Motorways?publications>. Those who responded to the consultation will shortly be sent a copy of the final Consultation Response report.

## **9. Guidance**

9.1. The consultation document issued by the Highways Agency to stakeholders on 24 September 2012 contained information on the operation of variable mandatory speed limits on the M25 between junctions 5 and 7 and the proposal to modify the Motorways Traffic (England and Wales) Regulations 2002 to provide for emergency refuge areas. Stakeholders included members of the emergency services, road user groups and vehicle recovery operators. Stakeholders will continue to receive updates and news on the scheme implementation, with particular consideration given to the effects of the scheme on local residents, the travelling public and businesses. Prior to the commencement of the scheme operation road users will be made aware through the media and press releases.

## **10. Impact**

10.1. The impact on business, charities or voluntary bodies, and the public sector is that managed motorways, through the introduction of variable mandatory speed limits and ALR, where appropriate, will benefit the motorist by helping to reduce congestion, be informative and improve journey times. It aims to reduce the impact of accidents and reduce driver stress.

10.2. A preliminary Impact Assessment for the instrument was prepared and included in the consultation document. A waiver from the requirement for impact assessments for Managed Motorway instruments was granted subsequent to the consultation and accordingly the Impact Assessment was not finalised.

## **11. Regulating small business**

11.1. The legislation applies to small business.

11.2. To minimise the impact of the requirements on firms employing up to 20 people, the approach taken is to ensure that Stakeholders receive updates and news on the scheme implementation and operation.

11.3. It is expected that the proposed measures will not impose any new or increased burden upon small businesses.

## **12. Monitoring & review**

12.1. The operation of the variable mandatory speed limits scheme will be monitored and assessed to establish the effectiveness of the scheme on traffic flows, accidents and environmental factors.

## **13. Contact**

13.1. If you have any queries regarding the Regulations please contact John Martin at the Highways Agency Tel:(0)1306 878129 or e-mail: [M25Junction5-7MM@highways.gsi.gov.uk](mailto:M25Junction5-7MM@highways.gsi.gov.uk)

