

M25 J5-7 Smart Motorway All Lane Running (Variable Speed Limit) scheme

Overview

The M25 is one of Europe's busiest motorways, handling around 200,000 vehicles every day. It is at the core of our network and is suffering from increasing congestion levels and journey times. Various options to improve the traffic flow from junctions 5 to 7 were considered and the implementation of a 'Smart Motorways' scheme was chosen as the most cost effective solution. The scheme was possible due to the availability of proven ITS technology and traffic management systems previously trialled and implemented on the M42, where the benefits and impacts were fully assessed.

Objectives

General background

The improvement in the reliability of journey times, whilst maintaining safety is the main objective of this scheme. Additional benefits include the reduction of, traffic collisions, noise and vehicle emissions as well as providing a boost for businesses and the economy.

This section of the M25 between junctions 5 and 7 is now running as a "smart" motorway. Smart motorways help relieve congestion by converting the hard shoulder to a running lane. Technology is used to detect incidents, monitor traffic flow and vary the mandatory speed limits to keep traffic moving smoothly and safely.

Project description

This twelve mile section of the M25 on the Kent/Surrey border is a new style of 'smart motorway' where pioneering ITS technology and use of the hard shoulder as a permanent running lane combine to reduce congestion and ease traffic flow. Smart motorways enables proactive management of the carriageway, including slip roads, deliver additional road capacity more quickly and at less cost than traditional road widening schemes, while remaining at least as safe.



The new infrastructure and technology that has been added between junctions 5 and 7 includes:

- 9 gantries that span both carriageways
- 10 refuge areas
- 13 emergency telephones
- 88 overhead signals
- 33 verge mounted signs
- 38 CCTV cameras

Work to convert this section of motorway to smart motorway followed the completion of the central barrier upgrade. Three lanes were kept open in both directions at peak times using narrow lanes.

New technology was installed on the road to provide drivers with safe and reliable journeys. This includes infra-red CCTV, being used for the first time by Highways England,¹

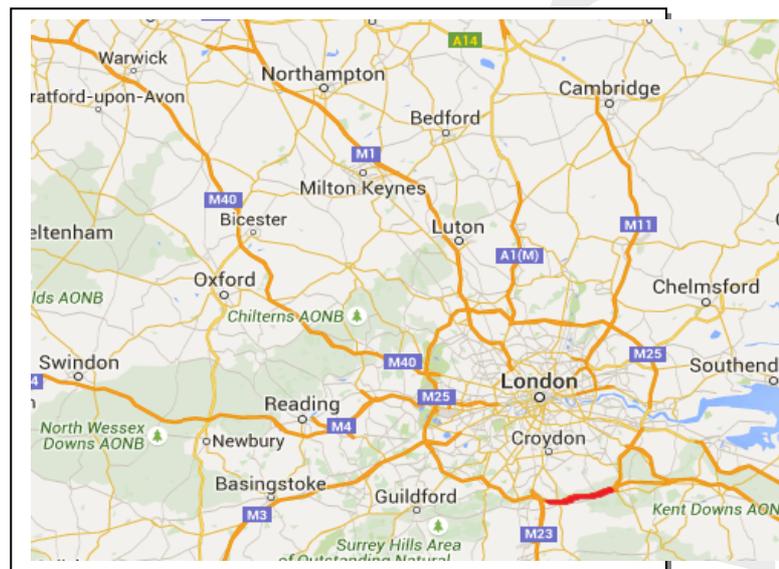
to enable staff in the control centres to have increased visibility of the network and reduce the response time to incidents.

undertaken. The evaluation is generally carried out at one and five years after scheme opening.



Geographical Location

The scheme is located at the south east section of the M25 where the M25 and M26 motorways merge with the A21. This section experiences a high level of freight traffic from continental Europe from Eurotunnel and the port of Dover.



Member States involved:

United Kingdom



Results expected

The evidence of the benefits that a smart motorway scheme can bring taken from other similar projects indicate that journey time reliability improved by 22 per cent and reduced emissions by up to 10 per cent due to traffic flowing more smoothly. In addition, personal injury accidents have reduced by more than half (55.7%) since hard shoulder running was introduced. There was also an overall reduction in the severity of accidents with zero fatalities and fewer seriously injured.

A Post Opening Evaluation (POPE) to assess whether the scheme has achieved its anticipated outcomes will be

Contact People

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