



Highways England: 60mph in Roadworks Speed Trials – Microwave Sensor Data

As part of the 60mph speed trials on the M4 SMP Junction 3-12, Mobile VMS microwave sensors collected data that enabled the project to determine the impact of using the speed limit of 60mph, rather than 50mph.

The sensors were used on two trial sites. The M1 between junction 13 and Newport Pagnell services, trialling the permanent use of 60mph and M4 between junctions 11 and 12 which trialled the dynamic use of 60mph.

At both trial schemes, the microwave sensors were positioned on the roadside at the experimental location (where the speed limit was 60mph) and the control location (where the speed limit was 50mph) during a baseline monitoring period and the trial phase.

The data relating to average vehicle speed, the proportion of vehicles over the speed limit and the proportion of vehicles over the enforcement threshold was provided by

Mobile VMS via JamLogic software and reviewed on a weekly basis by a subgroup of the scheme safety control review group. They used the data to understand the impact of the higher speed limit on driver behaviour and inform the decision to continue with the trial. Reviewing the data weekly was part of the safety case for the trials and mitigation within the risk assessment. The data was also reviewed at the end of the trial to inform the decision of whether to extend the use of 60mph across the scheme.

The data collected enabled the project to identify changes between the baseline and trial for average vehicle speeds, the number of non-compliant vehicles, the proportion of vehicles close following and lane distribution in order to understand the impact of the increased speed limit on driver behaviour.



Mobile VMS were part of a collaborative multi-provider team working to deliver a safe 60mph speed limit through roadworks on the smart motorway scheme. This was part of a wider programme to improve the customer experience of roadworks. Mobile VMS diligently supported the development of an innovative smart traffic management solution integrating alerts from a stopped vehicle detection system directly to portable VMS to alert drivers of potential obstructions in the road ahead.

Mark Fell, Operational Safety Design Lead
 WSP - M4 Smart Motorway Jn. 3-12

The evidence from these trial schemes and others has been used to support the development of a Highest Safe Speed toolkit and inform the decision for the wider adoption of 60mph speed limits.

Michelle Price, Senior Project Manager
 – Highest Safe Speed in Roadworks
 including 60mph



Safety Metric	M1 J13-16	M4 J3-12 (Weekday)	M4 J3-12 (Weekend)
Average vehicle speed	Increased 12%	Increased 8%	Increased 13%
Non-compliance with posted speed restriction	Reduced from 31% to 13%	Reduced from 22% to 7%	Reduced from 17% to 9%
Proportion of HGVs close following	Reduced by 8%	Reduced by 4%	Reduced by 21%
Lane choice and position	When three lanes in each direction were available, the distribution of vehicles across the running lanes was marginally affected by the change in speed restriction.		