

Smart motorways

Emergency area width review – summary report



1. Introduction

The 2020 Smart motorway evidence stocktake sought to gather the facts on smart motorway safety and set out an Action Plan to ensure smart motorways are as safe as possible.

The Action Plan included the following action relating to emergency area widths:

'DfT has heard concerns about the width of some existing emergency areas where it is less than the current 15-foot-wide [4.6 metres] standard when measured from the edge of the carriageway. Though these slightly narrower emergency areas are still significantly wider than an 11-foot-wide [3.3 metres] traditional hard shoulder, we are committing to review these and if feasible and appropriate we will widen to the current standard.'

Smart motorways have emergency areas where drivers can stop, if they cannot make it to the nearest motorway service area or exit the motorway. Emergency areas are present at regular intervals and are wider than hard shoulders – so a vehicle in one is less likely to be struck by traffic.

We commissioned an independent review of the widths of 249 emergency areas. The review found 13 emergency areas required further investigation. Following this, two are to be widened. All 13 are considerably wider than the standard 11 foot (3.3 metres) width of a conventional hard shoulder.

We have considered the findings of the review, undertaken detailed assessments and started work on the next steps.

As the review and our response is technical, we have also produced this overarching report which summarises the independent findings, and our response and the actions we are taking.

2. Findings and next steps

We recognise that drivers are concerned about not being able to find a safe place to stop in an emergency. On smart motorways, the hard shoulder is replaced by emergency areas which are wider than a hard shoulder and set back from live traffic lanes. Smart motorways also have a system of measures which are not in place on conventional motorways. These include signs and signals that we can vary to display variable speed limits, Red X and driver information messages. We are also enhancing smart motorways with the addition of technology to detect stopped vehicles.

The 2020 Stocktake Action Plan [1] included the action to review all existing emergency areas, and, where they were less than the current standard, committed to widen to the current standard, if feasible and appropriate.

Independent review findings

We commissioned an independent review to address this action. This is documented in the emergency area width review technical report [2]. This

- reviewed the width of all emergency areas across England's smart motorway network
- concluded that, for those between 14 foot 5 inches and 15 foot (4.4 and 4.6 metres) wide, there is no measurable safety benefit compared to the current standard width of 15 foot (4.6 metres) to justify an intervention. This difference is 7 inches (0.2 metres) or the width of a white line
- identified that emergency areas less than 14 foot 5 inches (4.4 metres) wide should be subject to further investigation – this totalled 13 emergency areas
- undertook a location specific high-level assessment on the feasibility of potential widening interventions for these 13 emergency areas

Our response to the independent review

We have assessed all 13 emergency areas identified in the high-level review as being below 14 foot 5 inches (4.4 metres) wide. Seven are on dynamic hard shoulder sections and will be addressed as part of the dynamic hard shoulder upgrade to all lane running. The next steps of this report explains when and how this will happen. Of the remaining six, we have carried out on-site measurements which showed three are actually wider than 14 foot 5 inches (4.4 metres) and no widening is required.

We have assessed the viability and impact of widening the remaining three locations and have determined that at one location, widening would worsen the visibility to and from the emergency area. There would therefore be a detrimental impact on safety.

For the remaining two locations, we have completed feasibility assessments and started the design work to widen these emergency areas.

This is documented in the emergency area width review – Highways England response [3].

The table below summarises the review findings and our response.

	Motorway	Link	Direction	Marker post	Verified width*	Action we will be taking
All lane running	M1	J32 to 33	NB	A 253/8	12 foot and 2 inches (3.70 metres)	Widen - to 15 foot (4.6 metres)
	M1	J30 to 31	NB	A 241/0	15 foot and 0 inches (4.58 metres)	No action - exceeds 14 foot 5 inches in width
	M1	J30 to 31	NB	A 244/2	14 foot and 10 inches (4.53 metres)	No action - exceeds 14 foot 5 inches in width
	M25	J24 to 23	Anticlockwise	B 136/7	14 foot and 8 inches (4.47 metres)	No action - exceeds 14 foot 5 inches in width
	M25	J5 to 6	Clockwise	A 39/0	13 foot and 1 inch (4.00 metres)	Widen - to 15 foot (4.6 metres) or 14 foot 9 inches (4.5 metres)
	M3	J3 to 2	EB	B 38/5	13 foot and 2 inches (4.02 metres)	Retain - widening would worsen visibility. Existing operational mitigations are available.

	Motorway	Link	Direction	Marker post	Verified width*	Action we will be taking
Dynamic hard shoulder running	M6 M42 M5	Various	Various	7 no. emergency areas	TBC as part of work to convert to all lane running	Assessed as part of the upgrade to all lane running.

* Widths have been validated with actual site measurements (using a tape measure)

Key

 Verified width above 14 foot 5 inches (4.4 metres) threshold - no action

 Verified width below 14 foot 5 inches (4.4 metres) threshold - action/retain

Next steps

We are currently carrying out the design work to widen the emergency areas where we are taking action. We plan to complete the widening of these emergency areas by March 2023.

We will confirm the widths with actual site measurements of the emergency areas on dynamic hard shoulder sections and determine what actions are required. These actions will be implemented by the end of March 2025 as part of our programme to upgrade existing dynamic hard shoulder sections to all lane running.

Full reports

The full reports are:

The independent review report [2] which provides:

- Details of the methodology used by the independent review
- A summary of the findings
- A high-level feasibility assessment of each location considered for widening
- Suggested options for widening the narrow emergency areas

Our response report [3] which provides:

- Details of the methodology used to check the width of the emergency areas recommended for widening by the independent review
- Results of our review of the measurements
- An assessment of the options for widening
- Our plans for implementing widening

References

- [1] Smart Motorway Safety Evidence Stocktake and Action Plan
- [2] Specialist Professional and Technical Services (SPATS) Framework Lot 1 & Lot 2
Task 1127 Smart Motorway Incident and Infrastructure Investigation – Emergency
Area Width Review
- [3] Emergency area width review – Highways England response



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Highways England creative job number BRS21_0039

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Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ

Highways England Company Limited registered in England and Wales number 09346363