

Smart motorways are a scandal – it's time to end this deadly experiment



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Removing the hard shoulder from motorways has already led to deaths. At what point should this dangerous farce end? CREDIT: KAY ROXBY / ALAMY STOCK PHOTO / ALAMY

Smart motorways, then. No doubt you've heard the term bandied about a fair bit in recent weeks. First we found out, thanks to a report by the AA, that breakdowns were deemed an astonishing 216 per cent more dangerous on smart motorways than on old-fashioned 'dumb' ones, according to Highways England's own analysis.

Then we learned that the widow of a man killed on a stretch of the M1 that had been converted to run as a smart motorway is to sue Highways England for corporate manslaughter.

And hot on the heels of these revelations came the news that that the same stretch of motorway – on which three more people lost their lives in 10 months – has generated an astonishing £6 million in speeding fines since 2017, and that in 2019, the number of fines issued increased six-fold compared to 2016, when the majority of the route was not 'smart'.

No wonder smart motorways are increasingly earning themselves a reputation as not only unsavoury example of infrastructure management gone wrong, but also self-evidently unsafe.

So what exactly is a smart motorway? Well, the term actually refers to two different kinds of motorway which allow different forms of driving on the hard shoulder.

M1 'smart' motorway deaths

The first smart motorway is a traditionally laid-out motorway, with a hard shoulder that's divided from the rest of the carriageway with a solid white line. When there's lots of congestion, Highways England operatives watching on from a central control room will open the hard shoulder to normal traffic, in effect allowing them to add an extra

lane at the drop of a hat. Messages on overhead gantries tell drivers when they can use the hard shoulder to drive on.

The second type of smart motorway is called 'all-lane running', and involves changing the hard shoulder into an additional lane and doing away with any sort of safety lane altogether. On smart motorways like this, the new inside line (formerly the hard shoulder) can be closed with the aid of overhead gantries when a car is stranded; there are also occasional 'refuges', or lay-bys reserved for broken-down vehicles, which can be used if a driver is able to get to them.

(Obviously, this requires motorists to have their mechanical or medical emergencies at very specific points along the motorway network, spaced about a mile-and-a-half apart. Road users coming to grief between these 'refuges' must stop on the live carriageway.)

In short, the two types can be differentiated by their use of the hard shoulder. The former has a hard shoulder that can be opened to traffic during peak time, while the latter has no hard shoulder, and instead has a 'slow lane' that can be closed.

The first smart motorway scheme, opened on the M42 way back in 2006, was one of the former, and Highways England claimed it to be a success, citing an improvement in journey reliability – in effect, a reduction in traffic delays – of 22 per cent; a reduction in personal injury accidents by more than half, and a reduction in injury severity.

However, there is evidence that as the smart motorway network has expanded and all-lane running has been introduced, safety standards have slipped.

Radar technology exists that would enable Highways England to detect stationary vehicles automatically as much as 16 minutes more quickly than a camera-based system.

This technology, known as 'stationary vehicle detection', or SVD, sets off an alarm in the control centre telling the operator where there's a problem, and as you might expect, Highways England told the Transport Select Committee in September 2016 that it was "implementing measures to further improve the performance of all-lane running, which includes the introduction of stationary vehicle detection to all all-lane running sections."

However, according to a Highways England report obtained by the AA, SVD has so far been installed on only 18 percent of motorways converted to all-lane running.

What's more, seven percent of these motorways are only covered by old-fashioned 'pan, tilt and zoom' CCTV – which means the camera can only look in one direction, controlled by the operator. So if a breakdown happens on one of these sections when the operator is looking in the other direction, the stranded car won't be spotted until the operator turns the camera around to see it.

It should come as no surprise, then, that Highways England is falling short of its own targets for incident detection by quite some margin.

It describes as one of its Key Performance Indicators the requirement to "set signs and signals within three minutes of an incident being verified". In other words, the lane should be closed with a red 'X' on the overhead gantry, no more than three minutes

after the incident occurs – a length of time somehow deemed suitable for a family to be trapped in the live lane of a motorway.

Yet on all-lane running motorways where SVD technology doesn't exist, 36 per cent of breakdowns in live lanes took more than 15 minutes to find. Some even took more than an hour before the CCTV operator happened to look in the right direction.

It's situations like this, say the AA, that are putting lives at risk. "Taking three minutes to set the red 'X' is too long for someone in a broken-down vehicle to wait," says Edmund King, the AA President. "Expecting someone to wait in a dangerous and life-threatening position for 20 minutes is simply inexcusable.

"Ultimately, until you are found by the camera you are a sitting duck."

Despite this, however, Highways England maintains that smart motorways are as safe as, if not safer than, normal motorways.

"Motorways in this country are among the very safest roads in the world," says Mike Wilson, the agency's chief highway engineer. "Highways England would never carry out a major improvement scheme without being confident that we would maintain or enhance this position.

"Evidence indicates that smart motorways are helping to improve safety. The first nine of the latest generation of smart motorways have reduced casualty rates by more than 25 per cent.

"Smart motorways are good for drivers, adding vital extra lanes to some of our busiest motorways and making journeys safer and more reliable. As with other roads, we monitor the safety performance of smart motorways and are rolling out enhancements to improve the road user experience."

Better smart motorways are on their way, then, but that'll be cold comfort for those left stranded at the side of a fast-flowing motorway today – or indeed, those motorists who suddenly find themselves confronted with a stationary vehicle that hasn't yet been detected while travelling at 70mph.

Whichever set of safety statistics you believe, it isn't easy to escape the notion that the smart motorways we've been given are not those which were touted a few years ago. High-technology incident detection systems that were supposed to have been a part of these schemes from the word go have not yet been implemented on the vast majority; some of these systems have not even been revealed yet, let alone installed.

As a result, detection times have grown unforgivably long in some parts of the country. And if you break down in an area where there's no hard shoulder, that's a scary thought. If Highways England really wants its smart motorways to be well-regarded by the public, it will need to convince us that it really is paying attention to our roads – ideally, with something rather more reassuring than a bog-standard CCTV system.

What do you think of smart motorways? Are they a deadly menace whose profitability seems more than coincidental, or are they a necessity in improving capacity on our creaking road networks? Share your thoughts in the comment section below, or head to the Telegraph's Motoring Club on Facebook to discuss.