



# Motorways ~~outsmarted~~?

The rise of the smart motorway has been one of the biggest technological advancements on our long-distance roads in the last two decades. So why are construction teams now facing a pit stop? **Neil Barrett** investigates

**THEY HAD** to change. More and more vehicles on the country's motorways, more congestion at key pinch-points... there came a point when 'just making it wider' ceased to be a viable approach, for financial and other reasons. Something more fundamental, something more creative just had to be done.

Perhaps surprisingly, it was as far back as 1995 when the first long-term steps into active traffic management on the motorways were taken. But perhaps unsurprisingly, it was on London's M25 where it happened. Between junctions 10 and 15,

gantries announcing the country's first mandatory variable speed limits on a permanent basis were proudly switched on, with some commentators hailing the move as a potential congestion-buster and emissions-reducer.

However, even back then, it wasn't just about dynamically adjusting the speed limit for stretches of road. "AVOID changing lanes" insisted the big blue signs. In other words, there were different expectations placed on driver behaviour for this part of the road. The human factor plays a part in where we are now (more





In the mid 2000s the M42, part of the network of motorways surrounding Birmingham, became the location for the first permanent deployment of Active Traffic Management (ATM), one of the biggest milestones on the smart motorway journey. With the M42's ATM scheme, alongside variable speed limits came selective hard shoulder running, with the former emergency-only lane being available as a 'live running lane' (how we dislike this terminology) at times of heavy demand, displacing any vehicle needing to



### ALL-LANE RUNNING

The former hard shoulder has been converted to a 24/7 'live' running lane with emergency refuge areas by the side of the motorway.



pull over into one of 41 small emergency refuge laybys along the side of the road.

The package of 'front-end' features also included part-time traffic lights on slip roads to control the flow of traffic onto the motorway, as well as the latest variable message signs providing real-time information to drivers. The behind-the-scenes technology was impressive, with traffic sensors built into the road surface which, alongside CCTV, control room staff and traffic officers, made it all work.

Following a few tweaks, expansion of the tech to more of the 'Birmingham Box' (the city's network of perimeter motorways) and a total rebranding of the scheme to 'managed motorways', the scale of the roll out increased massively to the point we have reached now. Somewhere along the line, perhaps with the advent of the 'internet of things' and its vernacular of smart devices, we now live - and drive - in the era of the smart motorway. New branding aside, the reality is that there is now a mish-mash of different schemes up and down the country under the same banner. Different traffic management needs and varying physical constraints have led to different initiatives being rolled out.

Here's where we come back to the human factor. Whilst the technology running these roads is clever, many people are now asking how smart it really is to have so much for drivers to take in, especially when the rules on any given stretch of smart motorway can change several times over the course of a day and when there is so much difference between the types of smart motorway, as well as between these high-tech roads and classic, un-upgraded stretches of motorway.

There is something to be said for driver education and personal responsibility, of course, but safe driving could perhaps do with fewer, >>

about that later).

In the following decade, there wasn't too much advancement. The M25 scheme was extended to one further junction beyond Heathrow and there



### CONTROLLED MOTORWAY

Variable speed limits on a motorway where the hard shoulder operates normally as an emergency lane. In many cases, controlled motorways have previously been widened, so the hard shoulder is intermittent to accommodate bridges and other narrow passes which weren't enlarged.



was some experimentation on the M20 in Kent for what was to come later. How much of this inaction was due to a perception of low practical necessity and how much was due to the political masters of the time favouring public transport, is unclear.

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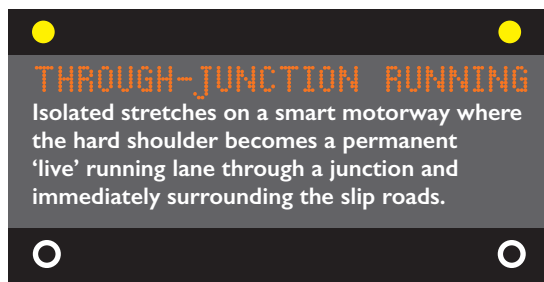
*the technology was impressive, with traffic sensors built into the road surface...*

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>> rather than more, things for those behind the wheel to think about.

The safety concerns are very real, with fatal collisions on motorways up in 2018 and a number of widely-reported incidents on smart motorways, many connected with vehicles stopping on the hard shoulder when it is a live running lane with tragic, almost inevitable consequences.

Such is the level of concern that a number of motoring organisations, not least GEM, are



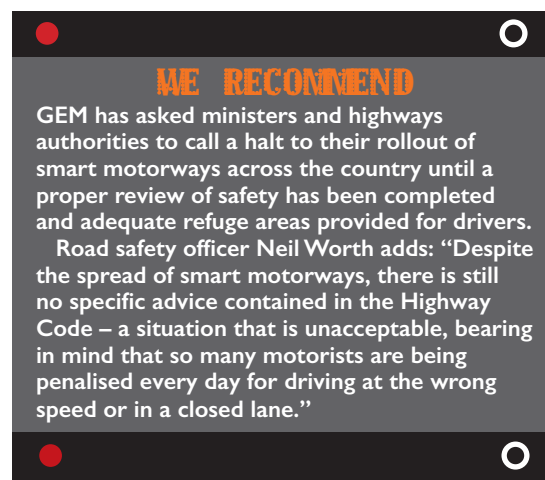
publicly calling for a halt to the rollout of smart motorways until a full review can be carried out into their safety, including adequate provision of refuge facilities.

It looks as though these calls are now being heeded. Soon before this edition of *Good Motoring* went to press, the transport secretary announced a complete pause whilst a safety

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... it would have been better if these car owners did not bother to add a third-party system that may or may not have been approved by the manufacturer.”

review takes place, telling MPs bluntly: “We know people are dying on smart motorways.” In the same week, the boss of Highways England Jim O’Sullivan said that the dynamic type of smart motorway is “too complicated” for drivers.

Yet more motorway tech is just around the corner. In late 2018 another Kent-based trial saw the A2/M2 corridor and connected vehicles ‘talking’ to each other about road conditions, speed limits, traffic light timings and more. However, as this magazine lands on your doormat, the hitherto fast-expanding smart motorway roll out is now forced to take a contemplative break. ■



■ Familiarise yourself with the rules and signs that apply to smart motorways, so that you stay safe and avoid a penalty ticket for speeding or using a closed lane. Visit the GEM website ([motoringassist.com/smartmotorways/](http://motoringassist.com/smartmotorways/)).

■ Knowing what to do if you break down in a stretch of smart motorway will be very helpful for everyone’s safety. Then you will know what to do if you experience a breakdown yourself, and will also understand what’s happening if another vehicle breaks down.

■ On a smart motorway, one or more lanes may be closed because of an incident ahead. You’ll know because of red X signs above the carriageway. Emergency vehicles will use these lanes if they can. It is illegal to drive in a lane showing a red X so you should move safely into another lane.

■ Motorway and dual carriageway breakdowns are distressing and potentially risky – for recovery operators as well as for occupants of stranded vehicles. If you see a stranded vehicle or a recovery taking place, please help those involved to stay safe by slowing down and moving to the right.

■ Take a look at GEM’s recently revised *Motorist’s Breakdown and Emergency Guide* leaflet, with smart motorway advice included. Download a copy from [motoringassist.com/leaflets/](http://motoringassist.com/leaflets/)