Written evidence submitted by Dr Alan Cribbens (RSM0036)

I am a retired railway engineer with over 40 years' experience in the development and application of safety-critical systems for railway signalling. I was awarded an MBE for my work in 1993 and was elected to fellowship of the Royal Academy of Engineering in 2001. My input to the consultation follows:

1. There can be nothing more dangerous or frightening than coming to a halt in a live lane of a motorway. Even on a conventional motorway, unless already in the inside lane, one is liable to be prevented from reaching the relative safety of the hard shoulder by nose to tail HGVs and other fast-moving traffic.
2. Everyone knows that people drive too fast and too close together on motorways. Any unexpected obstruction of a live lane carries a high risk of multiple collision.
3. The idea that "safe" havens at intervals is an adequate solution to the smart motorway problem seems seriously flawed to me. Does a car without power have the inertia to reach one? Can one expect the driver to force his way through up to three lanes of traffic, without braking, to reach it?
4. Stationary vehicle detection is a wholly inadequate technology, in that it cannot address the most serious and most immediate risk of immediately following traffic failing to stop.
5. I cannot accept that the (probably temporary) reduction in congestion is a sufficient justification for the increased risk. I say temporary because, for as long as road transport is free at the point of use, congestion will be the only effective limiting factor on usage. Increasing capacity will always increase traffic volume.
6. I would argue that, while some aspects of smart motorways are undoubtedly helpful, removal of the hard shoulder presents a safety risk that would be totally unacceptable in any other form of transport. In my view full hard shoulders should be reinstated and the consequent increase in congestion accepted as an inevitable consequence of the lack of any other mechanism for rationing of road use.

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