All-lane running smart motorways

The driver's view

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transportfocus

Foreword

This research looks at drivers' views about all-lane running 'smart' motorways – that is, those with variable speed limits, extra information for drivers, emergency refuge areas and no hard shoulder. It follows our earlier research into smart motorways in general, *Getting to the Heart of Smart*[1].

Our objective with this new research is to ensure that the perspective of those who use all-lane running smart motorways is understood and articulated on a subject that can generate emotional, polarised opinion.

As we have found in previous research, most drivers don't think much about their safety when using an all-lane running motorway – until, that is, they consider what would happen if they broke down. Although breakdowns are rare with modern vehicles, drivers know it *could* happen. They know that, if it does, the danger of being hit from behind by an inattentive driver is real and potentially very serious. And while crashes of that nature happen on all types of road, including conventional motorways, drivers feel it is less likely with a hard shoulder.

Key points emerging from the research

- Many drivers will continue to believe, even if they feel safe on a smart motorway, that they would be *even safer* with a hard shoulder.
- The visible, physical hard shoulder has been taken away, but the individual compensating features are less visible and aren't viewed as part of an overall *system* working to keep drivers safe.
- Drivers are conscious that if they break down, their safety is dependent on others following the rules and they see too many people ignoring them, in particular the 'red X'.

While these sentiments are not easy to fully address, we found that the conclusions of the Secretary of State's evidence stocktake – published just before the research took place – reassured drivers that their concerns are being taken seriously.

Transport Focus makes six recommendations in light of this research – set out on Page 8.

In summary, as well as delivering the welcome extra safety investment Government is making following the stocktake, most recommendations are about Highways England's need to go further in communicating with drivers, and on an ongoing basis. Especially, about what to do if they break down on an all-lane running motorway.

One recommendation will require discussion beyond Highways England and the Department for Transport: increased compliance with the 'red X' law.

I hope that focusing on this subject from a purely driver perspective is helpful to Highways England and the Department for Transport. Transport Focus will continue to work with both in this important area.

Jeff Halliwell
Chair

1 https://www.transportfocus.org.uk/research-publications/publications/getting-heart-smart-road-user-experiences-smart-motorways/

Background to the research

The introduction of all-lane running smart motorways in England has been controversial, although their purpose – to increase capacity and therefore journey reliability at lower cost than a conventional widening – is understood and broadly supported.

Transport Focus has previously explored drivers' views about smart motorways[2] in general and we wanted to build on that to look at views about all-lane running specifically. We therefore commissioned independent research agency Illuminas to explore the subject with drivers so as to understand their views and how they came to hold them.

At the time of commissioning the research we were keenly aware that there was 'live' debate taking place about the safety of all-lane running. With this in mind, we wanted to see how people with different views about it would discuss the issues with one another, and how they would interpret different types of information about these roads.

By encouraging this sort of conversation between different drivers we were able to draw out the practical steps that could be taken to give greater confidence about driving on all-lane running motorways. We were also able to learn more about how Highways England can most effectively explain the rationale, risks and benefits of all-lane running to drivers.

2 https://www.transportfocus.org.uk/research-publications/publications/getting-heart-smart-road-user-experiences-smart-motorways/

Summary of findings

1. Context is important: drivers do not tend to evaluate motorways in the abstract, rather they assess the motorway through experience

This is an important consideration where research into all-lane running is concerned. Things that immediately come to mind for drivers are not necessarily those which, on reflection, they consider to be the most important.

Congestion and driver behaviour are often initially mentioned as needing to be addressed, while issues relating to safety, while considered to be important, do not tend to be immediate concerns.

2. Drivers' knowledge and appreciation of the features of smart motorways is growing, but they don't see these features as forming part of a smart 'system'.

In previous Transport Focus research into smart motorways, drivers tended not to have a deep understanding of the features of these roads and how they work together to improve the journey experience.

Our discussions with drivers on this occasion suggests that this may be changing, and that drivers now have some understanding of the various features. Indeed, many of those involved in the research recognised the benefits in practice, including lorry drivers who may have the greatest experience of them. For example, many acknowledged that where a variable speed limit was in operation, but they saw no congestion, the smooth traffic flow was likely to be because of the lower speed limit.

While knowledge of the features of smart motorways appears to be growing, drivers still seem to have little awareness that they work together or that anybody is 'in charge'. They tend to see smart motorways as made up of a series of disparate features rather than as an overarching *system*.

3. Most drivers do not feel unsafe when using all-lane running sections of smart motorway. However, on reflection they tend to think that the sum of the individual features does not compensate for the loss of the hard shoulder.

The most prominent feature of all-lane running is concerning, and the reassuring things about it are not immediately apparent.

Most drivers feel safe when driving on all-lane running sections of motorway, however if asked about the safety of them they have concerns. Again, the difference between thinking about the issues out of context and actual experience is at play here.

On reflection drivers tend to over-estimate the likelihood of breaking down on an all-lane running motorway, but they are fully aware of the possible consequences if it happened. Breaking down on any type of high-speed road is unpleasant. While crashes where a vehicle is hit from behind can happen on motorways with a hard shoulder, drivers feel it is less likely if there is one.

Most of the features of smart motorways are uncontentious but, in part because they are not seen or experienced as elements of an overarching system, they are not currently seen to compensate for the loss of the hard shoulder. The operation of what is replacing the hard shoulder is not obvious and it is relatively complex to understand.

The hard shoulder, on the other hand, is an obvious feature of traditional motorways. In contrast to features of an all-lane running smart motorway, the hard shoulder's purpose is clear, drivers are used to seeing it in operation, and they know how it works.

4. Drivers do, to some degree, feel that people will 'get used' to all-lane running, and that behaving appropriately on these roads and obeying the rules will become a social 'norm'. Drivers felt that to ensure this happens, rules such as the red X should be strictly enforced.

Some drivers who are inclined to support the introduction of all-lane running argue that the new system would operate effectively if others behaved appropriately. Others argue that the danger of all-lane running is that some drivers do not appreciate the rules, or wilfully ignore them, thereby putting others at risk.

Drivers think that there should be more information to help people understand the operation of all-lane running stretches of motorway. They also believe that rules, such as the 'red X', should be strictly enforced.

Most drivers think that eventually 'social norms' will develop around obeying all-lane running rules and driving appropriately on these stretches of motorway. However, they do not feel that behaviours such as ignoring the 'red X' are currently viewed with the same seriousness as, say, going through a red traffic light.

5. Drivers are open to information and reassurance about the operation of all-lane running stretches of motorway, but the tone and emphasis of these communications is critical. They should recognise concerns, and offer practical advice.

Drivers are willing to accept that all-lane running may be a solution to the congestion that they experience. They are also willing to accept that the alternative of road widening may not be financially viable. Some, however, are more sceptical about this argument. Some feel that all-lane running represents cost-cutting where reducing congestion is prioritised at the expense of safety.

Drivers tend to evaluate the motorway based on their experience rather than on data, and drivers can find statistics difficult to interpret. Communications which rely on statistics to demonstrate that all-lane running improves efficiency or safety compared with traditional motorways can therefore be viewed with scepticism. Drivers are more sceptical if the tone of these communications appears to be dogmatically defending what is seen as a vested interest.

Drivers appreciated communications which recognised that some people have legitimate concerns about the safety of all-lane running, and that did not try to rationalise the concerns or downplay them. Instead, the communications which were most effective in reassuring drivers were those which offered practical advice about how to use all-lane running stretches of motorway,

explained how some of the features worked to keep people safe, and informed drivers what they should do, or what they should expect, in the event of breaking down.

Many drivers argued that it is important to provide information about how to use all-lane running stretches of motorway to ensure that enforcement is effective. They argued that drivers should be given the opportunity to understand the reasons why the rules were in place so that sanctions for transgressions were regarded as justified.

6. Drivers value reassurance that there is an overarching system or 'organisational principle' under which individual features of the smart motorway operate.

While drivers felt that detailed information should be provided about some of the least well understood features of all-lane running (such as stopped vehicle detection and emergency refuge areas), it is important that communications about all-lane running explain how these features work together as an overarching 'smart' *system*.

Drivers felt that it was important for them to be able to appreciate that the hard shoulder had been replaced with something meaningful and effective.

7. Drivers also need reassurance that there is a human dimension to the changes; that there are people overseeing the system, and that it is being consistently monitored and reviewed.

Some of those involved in the research were impressed by the amount of technology which is being employed on smart motorways, while others found it reassuring that smart motorways are covered by CCTV. Many admitted that they had not thought that there might be operations centres where people observed what was happening on the motorways.

In each case, and particularly when considering what might happen in the event of a breakdown, drivers were reassured to know that there is a balance between the technological interventions and the human ones on all-lane running sections of motorway.

A further important consideration of communications around all-lane running was related to the need for these not to downplay concerns. Drivers felt reassured to know that all-lane running was being reviewed to determine how its benefits can be delivered with greater regard to safety. In this context, drivers welcomed the Secretary of State's smart motorways evidence stocktake and its conclusions.

Conclusion

As the research progressed, previously held opinions about all-lane running tended to become more nuanced. Ultimately, most drivers were willing to consider all-lane running as a possible way of dealing with the congestion that they all felt was problematic. While this was the case, many drivers will always have reasonable concerns, and these should be recognised. Specifically, many drivers will never be 100 per cent convinced that, even with the technology in place, a motorway will be as safe without a hard shoulder if you break down.

Whatever an individual's level of support for all-lane running, there is broad consensus that there is a need for ongoing communication about it and that getting the tone of this right is important.

Communications

- Acknowledge drivers' concerns about all-lane running and do not downplay them.
- Explain how the individual features work together as a system.
- Give practical advice on appropriate behaviour on all-lane running sections of motorway.
- Take care with statistics which can be difficult for people to interpret. Ensure that communications are balanced and that they do not appear to be defending a vested interest.
- Discuss the technology involved in all-lane running, but ensure that the human element of the system is also highlighted.

Practical considerations

- High profile enforcement of the law, in particular 'red X', along with an information campaign.
- Demonstrate ongoing review of safety and effectiveness.
- Demonstrate ongoing improvements (such as progress with implementing the stocktake conclusions).
- Increase the frequency of emergency refuge areas.

Recommendations

In light of this research, Transport Focus makes six recommendations.

1. Highways England should implement the conclusions of the Secretary of State's smart motorways evidence stocktake as rapidly as possible and report publicly on progress. It should keep listening to drivers' views and continually explore ways to make journeys on all-lane running motorways safer still.

2. Highways England should increase its efforts to communicate practical advice about how to drive appropriately on an all-lane running motorway, including what to do if you break down. This is likely to require imaginative use of different channels to achieve cut-through with numerous audiences. This should not be seen as a 'one off', but a sustained effort over time.

3. Highways England should communicate how the individual elements of an all-lane running smart motorway work together as a system to reduce congestion and maintain safety. This should focus on technology and human oversight. It should allow drivers to see how they make up a coherent system that compensates for not having a hard shoulder. Again, this is not a 'one off' need.

4. Highways England should, internally and in the tone of its external communications, acknowledge that many drivers have reasonable concerns about having no hard shoulder and should guard against downplaying those concerns. Care should be taken to avoid communications appearing to defend an existing policy position irrespective of how some drivers feel about it.

5. Highways England should work with the Government and the police to increase compliance with road traffic law on all-lane running motorways. In particular, obeying the 'red X' given that it is fundamental to driver safety when a vehicle breaks down or there is a crash.

6. Highways England should measure, and strive to continuously improve, its performance on each all-lane running section in respect of:
   - time taken to spot a stopped vehicle or a crash
   - time taken to then display the 'red X'
   - time taken for a Highways England traffic officer or the emergency services to arrive at the scene.

   Although an ongoing need, this is particularly important before stopped vehicle detection is installed on every section of all-lane running motorway.

How we completed this research

Transport Focus commissioned independent research agency Illuminas to conduct two discussion groups with drivers in each of four locations (Birmingham, Leeds, London and Sheffield). In addition, we held a discussion group with lorry drivers, as well as five in-depth interviews with vulnerable drivers.

At the time the discussion groups were held, travel restrictions were in place due to the Covid-19 pandemic. For this reason, discussion groups and interviews were held online rather than face-to-face. In each location we held a discussion group with frequent users of all-lane running motorways and another with less-frequent users of these roads. Each group included a mix of different types of driver, including those with differing levels of support for all-lane running motorways, differing ages, physical abilities and travel patterns.

In discussion groups and in interviews participants were asked to explain their views on all-lane running. They were also presented with different material about it and asked for their reaction. This document summarises the key findings from these discussions. Full results are available in the Illuminas presentation which is published on the Transport Focus website.

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