HOUSE OF COMMONS

Transport Committee

Oral evidence: The roll-out and safety of smart motorways, HC 26

Wednesday 19 May 2021

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Watch the meeting

Members present: Huw Merriman (Chair); Mr Ben Bradshaw; Lilian Greenwood; Simon Jupp; Karl McCartney; Grahame Morris; Gavin Newlands; Greg Smith.

Questions 1 - 131

Witnesses

I: Edmund King, President, The Automobile Association; Nicholas Lyes, Head of Roads Policy, RAC Motoring Services; Elizabeth de Jong, Director of Policy, Logistics UK; and Assistant Chief Constable Chris Todd, West Midlands Police.

Written evidence from witnesses:

- Automobile Association (RSM0111)
- RAC Motoring Services (RSM0099)
- Logistics UK (RSM0076)

Examination of witnesses

Witnesses: Edmund King, Nicholas Lyes, Elizabeth de Jong and Chris Todd.

Q1 **Chair:** This is the Transport Select Committee's first evidence session in our inquiry on smart motorways. In today's session we will be hearing from representatives of road users, as well as emergency and breakdown services. As our inquiry continues, we will take evidence from those on the engineering and business case, as well as those ultimately responsible for the roll-out, Highways England and the Department for Transport. We will also be meeting those who campaign for improved safety on smart motorways, including those who have lost loved ones on smart motorways and to whom, of course, we extend our condolences.

During today's session, we plan to discuss the case for and against reinstating the hard shoulder, where it is not used; examine how smart motorways currently are; and look at the Government's stocktake, which was published in March, as well as Highways England's recently released one-year progress report. We aim to look at the public's awareness of smart motorways; the problems that arise for drivers, passengers and emergency services when a vehicle breaks down in a live lane; the decision to abolish the dynamic hard shoulder; the provision of emergency refuge areas and safe places to stop; the use of stopped vehicle detection to spot broken-down vehicles; and the enforcement of red X signs. We will also look at the economic case.

The previous Select Committee, of which Mr McCartney and I were members back in 2016, took the view that the roll-out of smart motorways caused great difficulties and should be paused. This Committee is an entirely new Committee, and it has the right to follow a very different course should it wish to do so.

On that note, let's introduce the witnesses for this morning's session.

Elizabeth de Jong: I am Elizabeth de Jong. I am director of policy at Logistics UK, one of Britain's largest business groups. We have 18,000 members. Our aim is to enhance the safety, efficiency and sustainability of freight throughout the supply chain across all modes.

Q2 **Chair:** Good morning to you, Elizabeth. We now go to Assistant Chief Constable Chris Todd.

Assistant Chief Constable Todd: Good morning, Chair. I am Assistant Chief Constable Chris Todd from West Midlands police. I have, among my responsibilities, that for the central motorway patrol group covering the West Midlands and Staffordshire police force areas and the motorway network therein.

Q3 **Chair:** Good morning, Mr Todd. Thirdly, we go to Edmund King.

Edmund King: I am Edmund King, president of the Automobile Association and director of the AA Charitable Trust for Road Safety and

the Environment. I am occasionally a visiting professor at Newcastle University.

Q4 **Chair:** Thank you, Edmund. Finally, Nicholas Lyes.

Nicholas Lyes: Good morning, Chair. I am Nicholas Lyes, head of roads policy at RAC Motoring Services.

Q5 **Chair:** We have a lot to get through this morning. I am conscious that we could very quickly move into segments seamlessly, so please don't answer everything in one go. I will break matters up, if needs be.

Let's get right to the point. Should the Government reinstate the hard shoulder on all motorways where it is not in use?

Edmund King: I think it is worth giving a little bit of background about how we got here because it is relevant to the position.

In the early 2000s, congestion was a major problem on our motorways. In 2006, the then Labour Government set up a so-called pilot scheme on the M42 for a managed motorway. That was the precursor to so-called smart motorways. It is worth bearing in mind that that early pilot had lots of technology. It had overhead gantries and emergency refuge areas about every 500 metres. It had a dynamic hard shoulder so, in effect, when it was busy on the M42 you could use the hard shoulder, and when it was not busy you couldn't.

It worked relatively well because it had ERAs every 500 metres. Where the system went wrong was after that, between 2006 and 2012. Smart motorways were rolled out, but the technology was totally changed. The goalposts were moved. Rather than ERAs every 500 metres, they went to 2,500 metres, or every mile and a half. They had less technology and fewer overhead gantries. That was where the problems with smart motorways began, because if you break down between ERAs, you are at risk. The major problem, which we have been raising for more than 10 years, with more than 12 Secretaries of State and Ministers, is the danger of breaking down in a live lane; 38% of live lane stops happen on smart motorways.

The broader question is that it was rolled out without the initial technology, without stopped vehicle detection and without adequate ERAs. Tragically, people have died as a result. They have died because they break down in a live lane.

That is the background. The choice now is, can we do enough to make them safe, as arguably they were on the M42, or has the time come to change them? I think there are a lot of things to be debated around that.

Q6 **Chair:** I am going to push you a bit. We are politicians, and we get this as well. You rightly outlined some of the difficulties with rolling out, but if it comes to it, should the hard shoulder therefore be reinstated, or are you advocating different measures? I do not want to go too much into the

different measures at this stage.

Edmund King: What we have advocated throughout is doubling the number of emergency refuge areas and putting in stopped vehicle detection. We have argued that consistently. If you want the safest motorways out there, they should have some of the technology of smart motorways and some from old motorways. If you look at the stats, the safest motorways are what they call a controlled motorway. A controlled motorway has a hard shoulder, but it also has the overhead gantries and the technology that can warn if there is an obstruction ahead or a crash ahead. It can warn of those things.

Using the Government's own figures, controlled motorways have deaths per 100 million miles of 0.06, whereas with a dynamic hard shoulder it is 0.08 and all-lane running is 0.12. If you are arguing for the safest thing, and, ideally, we have vision zero for no road deaths, we should be engineering the safest motorways we can. Following that argument and following the statistics, a controlled motorway that has a hard shoulder and gantries would be the safest.

If you wanted to make it extra safe, one of the things that works on smart motorways is the emergency refuge areas being pushed back from the lane, so that traffic going past does not hit them. We know that on a hard shoulder you can get hit. Ultimate safety would be a controlled motorway with ERAs built in. That would certainly be the ultimate in terms of safety.

Q7 **Chair:** We will go into some of the mitigation measures and how well they have been rolled out. I am going to stick and ask for an absolute answer from the other three, if I can. Elizabeth, I will start with you. Your members obviously use these motorways in transporting logistics around the country. Does Logistics UK feel that the hard shoulder should be reinstated, where it has been removed?

Elizabeth de Jong: Yes, we have a view on this. Of course, safety is of paramount importance for the logistics industry. Our assessment of the safety of smart motorways is very much focused on the published statistical evidence, some of which Edmund has spoken about.

Overall, we agree that Highways England's evidence aligns with the Government's overall finding that in most ways smart motorways are as safe as or safer than conventional ones, but not in every way. It also suggests that smart motorways would meet the safety criteria given to Highways England for them to be at least as safe as the road they replace.

It suggests that further measures are needed to address the accident rate and increase safety on the network. Logistics UK supports the need for the dynamic hard shoulder to be removed and replaced with all-lane running. We believe that that would remove a lot of confusion and would improve the accident rate. Alongside that—I am sure we will get to this

later—would be an increase in public awareness and education, and greater police presence to make sure that there is correct use of smart motorways.

We appreciate that smart motorways have a role to play in increasing capacity and reducing congestion, with more reliable journey times and significant benefits for the environment. We are asking for dynamic hard shoulders to be removed and replaced with all-lane running.

Q8 **Chair:** Your connection is not great. I was trying to give the eye to the broadcasting team. I do not know if there is anything they can do, but I think we picked up your evidence. You felt that the hard shoulder should not be returned and that all-lane running, with some of those measures, was the right policy.

Chris Todd, can I come to you for a police perspective? Do you believe that the hard shoulder should be reinstated?

Assistant Chief Constable Todd: I do not speak on behalf of national policing in this area; I speak on behalf of the region. Some of the points that have already been made are really well made. It is important to appreciate that, when we talk about smart motorways, we are talking about a number of things.

In this region, we have a selection of a number of different types of smart motorway and conventional motorway, and other forms of carriageway. We have the Aston Expressway, which runs out of Birmingham. That was there before smart motorways and has a similar feel to them. We have all-lane running motorways. We have the dynamic hard shoulder. We have managed motorways and conventional motorways as well. We have experience of all of those, and there are different effects across each of those types of carriageway.

They present challenges from a policing perspective in how we access scenes, be that for emergencies or for other incidents. They have an impact on the way we deliver enforcement. I am sure that we will come to some of those points later.

Chair: We will.

Assistant Chief Constable Todd: One of the points that was just made was around the visible presence of policing. Of course, on a smart motorway that is often less evident; we tend to take people off the motorway rather than stop on the hard shoulder if we are enforcing, for example. There is that factor as well.

One of the key factors to remember is that when we talk about road safety, in road policing terms, we talk about the fatal four. One of those, of course, is speed. A smart motorway does not really have any impact on drink/drug driving per se, on the use of mobile phones or on the use of seatbelts by drivers, which are the other three of the fatal four. Speed is something that can be influenced by a smart motorway, by controlling

the speed and the flow. A well-controlled motorway is a safer place than a congested motorway where people are more likely to be at a standstill.

The risks that come from being stationary in a live lane are still present on a conventional motorway. People often break down or have incidents in lane three of a conventional motorway and are unable to get to the hard shoulder. All of those factors together present quite a complex picture. From a policing perspective, our position will be that we always respond to incidents on any type of motorway. We will always enforce as appropriate on any type of motorway. We adapt our policies and our procedures accordingly.

Q9 **Chair:** Let me try to distil that. Would you rather police a motorway with a hard shoulder on it or a motorway without, or doesn't it make any difference?

Assistant Chief Constable Todd: Hard shoulders themselves are not inherently safe. I think that point was made by one of the contributors earlier. We see a lot of issues on hard shoulders as well, so they are not safe places. They are safer than a live carriageway.

I would say that, of the three types of smart motorway, the dynamic hard shoulder is the most problematic. It causes confusion among drivers and road users.

Q10 **Chair:** Finally, I will put the same point to Nicholas. Please be brief with the response and I will then ask you a follow-up. Would you like to see the Government reinstate the hard shoulder on all motorways?

Nicholas Lyes: Apologies, Chair, my camera appears to be having difficulties, but I hope you can hear me.

Chair: Don't worry. We can hear you loud and clear.

Nicholas Lyes: Excellent.

It is a difficult question to answer because in an ideal world, when you look at the data, the safest option appears to be controlled motorways; that is four lanes plus a hard shoulder, with some of the technology that we have on the smart motorways. When you look at whether the hard shoulder is a safe environment, the answer is that it is a relative place of safety. It is not safe. The data between 2011 and 2016 show that there were 680 collisions on a hard shoulder between a moving vehicle and a stationary vehicle. Some of those, obviously, were fatal.

The issue we have at the moment, Chair, is that we have an all-lane running smart motorway that does not have all the safety systems that it should have been designed with. If we had had one of those, it would probably be easier to answer the question as to whether or not it would be better to have a hard shoulder inserted. If you are going to look at all the different options, you have to look at which are the safest. All-lane

running, in terms of fatalities, is less safe than the dynamic hard shoulder and the controlled motorway systems.

Q11 **Chair:** Thank you. I deliberately asked a yes/no question, and you have taken a leaf out of all of our books by giving us a little more detail. That is understandable for the opening, but perhaps you could be a little bit more succinct in your answers as we go through.

Nicholas, Highways England told us that reinstating the hard shoulder would not only be costly and disruptive but would lead to "a significant reduction" in the "overall safety performance of the strategic road network." Do you agree with that view?

Nicholas Lyes: I don't think I agree with that view. If you were to take some elements of what you have with the technology and have that on a controlled motorway, which has a permanent hard shoulder, the data suggests that that is actually the safest type of motorway, so I am not sure I would agree with that.

Where I agree with them is that, if you put in a hard shoulder, you are obviously taking out a running lane, which will bring with it congestion issues. It is a very tricky question to answer. Perhaps the way around it is to look at the dynamic hard shoulder system, which the Government have decided to scrap, and see whether or not that is a viable way forward where, on a part-time basis, you open the hard shoulder up to traffic and have refuge areas spaced at every 500 to 800 metres apart.

Chair: Thank you. I will hand over to Karl McCartney on this section before I move on to the Government's stocktake and action plan.

Q12 **Karl McCartney:** This is a question to all four of our witnesses. Are any of you keeping records of all incidents, including near misses, on hard shoulders or smart motorways?

Elizabeth de Jong: No, we are not. We use the information that we receive from Highways England, and we certainly welcome that they are working with their regulator, the Office of Rail and Road, on that. We are looking forward to more information, which we have been asking for, on fatality and slight incidents—all types of accident rates—and we will use that in our assessment, rather than collating our own information.

Q13 **Karl McCartney:** Okay. The same question to Edmund.

Edmund King: We have some information from our patrols that they flag up to us about incidents on hard shoulders or smart motorways. I have one here from someone travelling on the M6 this week. Ahead of them, they saw, in lane two, that there was a hazard. There was a vehicle stopped. There were no warning lights. The patrol put on his beacons to warn people behind him as he was driving. As he approached, the vehicle had no hazard lights on, but there was a vehicle in front that had hazard lights on. Someone nearly smashed into them.

We get reports like that all the time from our patrol force because they are on those motorways every day. We also collate serious incident reports if members have broken down on smart motorways. There is lots of detail. I accept that much of it is anecdotal; it is hard to get a comprehensive picture, particularly of near misses.

Q14 **Karl McCartney:** Do you report that to the Department for Transport or Highways England? Can you make it available to us?

Edmund King: Indeed. I have been talking about this to Ministers, the Highways Agency and Highways England for more than 10 years. I have to say that, until the current Secretary of State, they have not shown a great deal of interest. The current Secretary of State obviously has, because he instigated the stocktake.

Q15 **Karl McCartney:** I am going to ask the same question of Nicholas.

Nicholas Lyes: No, we do not have any statistics, unfortunately. Our head of health and safety is in touch with patrols to discuss any incidents that have occurred. What we try to look for, and find it difficult to get hold of, are statistics on near misses on the network from Highways England. As far as I am aware, I have not seen any data that has been published from Highways England traffic officers on the numbers of near misses that have been reported. I would like to see that, particularly with some of the camera technology that they have.

Q16 **Karl McCartney:** It is fine asking Highways England, but if you could provide any information that you, as an organisation, have, that would be quite useful.

Nicholas Lyes: We certainly can.

Q17 **Karl McCartney:** I will ask that question as well to Chris.

Assistant Chief Constable Todd: We focus primarily on the data around collisions involving those who are fatally or seriously injured. That data will be available through Highways England and publicly known already.

We do not record data on near misses for road users generally on the motorway network. We have separate data for our own officers and staff who may be involved in a near miss, which would sit within our health and safety records.

Q18 **Karl McCartney:** Could you make that available to us? Would that be possible?

Assistant Chief Constable Todd: I am sure that would be available. I think it would normally be available to the public through freedom of information requests, but I am sure that we can access some data as well.

Q19 **Karl McCartney:** Thank you. I have a question for Edmund and Nicholas specifically. I will come to Chris with a slightly differently worded one.

What percentage of daytime and night-time call-outs to motorway incidents—whatever type of motorway it might be—do your companies send your direct employees to versus sending contractors?

Edmund King: First, on your last question, there is data that there was a twentyfold increase in near misses on the M25 when it became a smart motorway. That is from Highways England figures. They have been published.

Karl McCartney: Thank you for that.

Edmund King: When sending out AA patrols to incidents on smart motorways, we follow the guidance of the group, SURVIVE, which is made up of the major motoring organisations, the police and Highways England. That guidance says that we should not recover a vehicle in a live lane unless the lane has been protected, so either the police are there or Highways England traffic officers are there and actually stopping the traffic and protecting the scene. That would be the same for our recovery people as well as any contractors we use. It is exactly the same.

Q20 **Karl McCartney:** I am after daytime and night-time figures for you sending your direct employees to do a recovery or attend an incident or sending contractors. Do you have that information, or can you make it available?

Edmund King: It would depend on the day of the week and the time. It would depend on whether we have resources close by.

Chair: Mr King, if you do not have the evidence, just say no. You can always write to us. I am very conscious of time, so please be direct to all of our questions.

Edmund King: I do not have the evidence to hand, no.

Q21 **Karl McCartney:** If you could make it available, that would be helpful. Nicholas, the same question to you, please.

Nicholas Lyes: I will give you the same answer. I do not have the data available to me now, but I am happy to look into it and follow up.

Q22 **Karl McCartney:** A rough percentage is fine. That would be helpful.

Chris, I am going to ask you the same question but slightly differently. For the incidents on the motorways within the network that you cover, what percentage do you send police officers to, or Highways Agency officers who work as traffic enforcement officers or highways enforcement officers? Do you have those figures, or can you get them for us?

Assistant Chief Constable Todd: I do not have those figures. What I can say in terms of your earlier question to the others is that we are a 24/7 service. We respond day and night. When there is an incident in a live lane, Highways England would respond to that, but we recognise the restrictions that they have in their speed of response, so we would categorise any stranded vehicle in a live lane as a P1 incident, an

emergency response. We would get there ahead of Highways England to make it safe for them to take over.

Q23 **Karl McCartney:** In which case, could you make the statistics available for those that either police officers or Highways Agency staff attend, or when both of you do?

Assistant Chief Constable Todd: I will certainly look into that.

Q24 **Karl McCartney:** I have one more question. Elizabeth, you mentioned earlier that you think perhaps all-lane running can be a way forward. Do you trust the technology that has been in place or is supposedly coming along? We are told that it works maybe only 80% of the time.

Elizabeth de Jong: In terms of technology, are you thinking of the automatic stopped vehicle detection? Although we are not experts in technology, it seems an effective addition to smart motorways to improve their safety levels further and to build public confidence. I think there is a lot of public confidence that needs to be rebuilt.

In terms of its functionality, we rely on the information we get from both Highways England and the DFT stocktake, which we welcomed. Clearly, we need it to be working before it is rolled out, so that it does its job, improves safety and improves how we feel about safety.

Karl McCartney: Thank you for that clarification.

Chair: We are now going to go through each section. Members will have 10 minutes each, with an exception for one Member. I ask you to keep your answers succinct and I ask Members to be succinct in their questioning as well. We will not be completely strict. If we are on the cusp of a wave, we may take a little longer. I ask everyone for discipline so that we can get all the way through the evidence. It will be a real shame if we have to stop midway through.

The first proper section is on the Government's stocktake and action plan. Simon Jupp will take us through that.

Q25 **Simon Jupp:** Good morning to all the panel. Last March, the Government revealed an 18-measure plan to improve smart motorways. I understand that eight of those measures have now been put in place. Do you feel that the interventions in place, and those planned—all 18—will be effective?

Edmund King: We had quite an input into the 18-point plan, particularly pushing for ERAs to be implemented every three quarters of a mile. That was our main concern.

We welcome much of the plan that has been improved and the bits that have been speeded up, making ERAs more conspicuous and having an information campaign. Where we still see problems are in the retrofitting of emergency refuge areas. There are places on the network where the distance is still more than a mile and a half. There are still motorways planned to be opened, like on the M4, that do not have the three-

quarter- of-a-mile criterion, despite the fact that we raised this with Chris Grayling when he was Secretary of State, probably five years ago, before they started building it.

The stocktake is a move in the right direction. There is lots of good stuff in there, but we have concerns about the delay of retrofitting, and even opening new stretches of motorway that do not fit the criteria outlined in the stocktake.

Q26 **Simon Jupp:** Thank you. The same question to Nicholas, please.

Nicholas Lyes: When the stocktake was published, we had mixed views about it. We certainly welcomed the commitment to more refuge areas on future schemes. We welcomed the installation of stopped vehicle detection technology across the entire network and an additional commitment to more traffic officers on the network. There has been some good progress.

We felt that two tiers of all-lane running were being created: future schemes that would have additional refuge areas, and existing schemes that would have refuge areas at the current 2,500 metres apart. That is not a satisfactory way to proceed, in our view. You would have to say that the decision to scrap the dynamic hard shoulder was questionable. It was a bit of a red herring. There are additional things that should have been looked at in terms of the spacing of gantries, speeding up the enforcement of red X signs on motorways and that sort of thing. Those were all important elements.

The stocktake will make all-lane running safer to a certain degree, but I do not think it has completed the jigsaw puzzle.

Q27 **Simon Jupp:** Thank you. Noted regarding the dynamic hard shoulder, which I heard you mention in earlier evidence as well. Elizabeth, what do you make of what has been planned and put in place? Will it be effective?

Elizabeth de Jong: We are very pleased that the stocktake and action plans are taking place. It aligns with many of our priorities. We welcome the scrutiny and the update, with the earlier target dates, but it is the amount of scrutiny that is important to us.

In addition, rather than repeat what others have said, I would like to look at one area, which is the safety statistics. I believe that many of our views on smart motorways are reliant on those statistics. I would welcome the ORR providing further analytical assurance. We need to believe the conclusions. We need to understand the conclusions and the statistics. We need to trust the data, and rebuild public confidence over time, and that safety information is a really important way of doing it. I would like to see repeated stocktakes and action plans until we get to that point of confidence.

Q28 **Simon Jupp:** Thank you. Finally, Chris.

Assistant Chief Constable Todd: I reiterate what has been said already. I welcome the stocktake. I think the level of scrutiny goes towards helping us provide the best service we possibly can.

There are two areas I would focus on. Again, it is the ERAs. In this region, we saw the well-engineered M42 at the outset with regular ERAs versus, perhaps, the elements of the M6 with retrofitted ERAs at a greater distance. Consistency and reduced distance between them would be welcome. The SVD—stationary vehicle detection—system is not something that is evident in our region. It is something that we would like to see across all of the motorways for consistency as well.

Q29 **Simon Jupp:** My next question would have been about what other steps you would like to see, but in the spirit of the time we have, and the fact that you have all mentioned steps that you would like the Government to take, I would like to go round the room again and ask whether you feel listened to when you put your views forward to the Department for Transport and Government about the concerns and the specific changes that you would like to see made.

Chris, do you feel that the Government listen to police forces like yours when it comes to issues regarding smart motorways?

Assistant Chief Constable Todd: Yes. We have very good relationships. Our relationship with Highways England, first of all, is very good. We have joint control rooms and patrol bases. We work very closely together on the motorway network. In our governance structures, we have a national lead for roads policing, who has very good relationships with Government. I report on behalf of the region through those structures.

Q30 **Simon Jupp:** I only have a couple of minutes, so can you be brief in your commentary, Edmund. Do you think the Government are listening?

Edmund King: Yes, I think this Government are listening. We have regular dialogue with Grant Shapps and Baroness Vere on these issues. It is the first Government who have listened in 10 years.

Q31 **Simon Jupp:** Elizabeth?

Elizabeth de Jong: We have a very good working relationship with Highways England on this matter. We are able to speak openly with them. We are part of the smart motorways advisory panel and we also have a regular freight steering group with them, so there is listening. I have a relationship of trust and belief in people at Highways England and at the Department at ministerial level on this.

Q32 **Simon Jupp:** Thank you. Nicholas?

Nicholas Lyes: Yes, I think the Government and Highways England are listening. There is a general will among everybody to try to get this right.

Simon Jupp: Thank you. It will remain to be seen how long it takes for the rest of the 10 major points the Government set out last March to

come to pass and be put in place. On that point, I hand back to the Chair.

Chair: And well within time, Simon. You are an exemplar to us all. We will move on to the next section. We have 10 minutes to cover replacing a dynamic hard shoulder with all-lane running and whether that is the right decision. Over to Greg Smith.

Q33 **Greg Smith:** Good morning to all the witnesses. The difference between a dynamic hard shoulder and all-lane running started to be teased out in the opening section. I want to try to dive into it a little bit more. Perhaps I could start by asking whether any of you, as witnesses, feel there is enough data to be able to say categorically that one model is safer than the other. We have been on a path of rapid roll-out of all-lane running for some time. I am not certain that there has been exact analysis of the dynamic hard shoulder model. Elizabeth, you came out with quite a clear answer on all-lane running earlier. Perhaps we could start with your view on that, please.

Elizabeth de Jong: I absolutely agree with the point you are making, and I have slightly struggled with it myself. We clearly have good data around fatal casualty rates. We have serious casualty rates and slight casualty rates, but they jump around for the difference between dynamic hard shoulder and all-lane running.

I was looking into this a little more—*[Inaudible.]*—the quality of statistics is often related to the sample size. The statistics we have look over a five-year period. Some of the road lengths in miles for dynamic hard shoulder running and all-lane running have been very low and quite late. I think the statistics perhaps cannot guide us at the moment because there is not enough evidence and enough of both types of running to do that.

However, we have statistics where we need to apply our thoughts, common sense, experience and observations. We recognise that the dynamic hard shoulder is the most confusing for drivers, given that the hard shoulder is not always used as a live lane. Therefore, a change to all-lane running should remove unnecessary confusion for drivers, while enabling the logistics sector and other sectors to continue to benefit from the additional capacity that the lanes have provided.

We need to be cautious and careful around the statistics, because the sample sizes are quite low, in order to draw strong conclusions from the data at this point. That is my view at the moment.

Q34 **Greg Smith:** Thank you for that answer. You mentioned common sense, which is always a good thing to follow. What would be your opinion on applying said common sense? On a dynamic hard shoulder motorway, you only bring the hard shoulder into use as a live lane when there is high congestion and more traffic to move through that place. When you have that greater volume of traffic, it is certainly my experience of 25 years of motorway driving that speeds are slower because of the physical additional volume of vehicles, which would make all-lane running, at least

on a common-sense basis, that little bit safer, because you do not have big open spaces for cars to maybe push their limits in a way that the assistant chief constable would want his officers to challenge.

Clearly, when the road is clearer, the hard shoulder would be in use for someone who breaks down or has a tyre blow-out or something that means they cannot even get three quarters of a mile to a refuge area. Wouldn't common sense apply there? With the right education, so that it is not confusing for people, that would be a more common-sense model.

Elizabeth de Jong: That is a model that I am sure uses capacity, and there is a logic behind what you said. The area I am particularly looking at is confusion for drivers. Our thoughts on that are that all-lane running is less confusing.

At the moment, Highways England has started an education and awareness campaign called Go Left, and there is more awareness, understanding and education work that they have planned. That education is very important, particularly for car users who are less familiar with smart motorways, purely because they drive on them less often. We understand that professional drivers are more confident with smart motorways. There are courses that they could be using. We have produced one at Logistics UK with Highways England. Take-up has been reasonably low compared with other professional courses that drivers and organisations could choose to take. We believe that dynamic running is confusing for car users at the moment. It may be that after the awareness and educational work we will say that it is like bread and butter to us all, but at the moment it is confusing.

Q35 **Greg Smith:** Thank you very much. Assistant Chief Constable, are you of the view that it is just too confusing for drivers, and that your officers will be spending all their time pulling up people for being in the hard shoulder when they should not be, because they have failed to notice a green tick or a red cross, or do you think it is something that the public could get used to? Do you think that dynamic modelling to ease congestion, but which could equally leave the hard shoulder available when it is not rush hour, is a more common-sense model?

Assistant Chief Constable Todd: Elizabeth's points are very well made. I echo them, to be honest. The data does not necessarily point to anything of statistical significance, from what I have seen at the moment. Anecdotally, my officers tell me that adherence and compliance with the red Xs on the gantries when lanes are closed is inconsistent, suggesting that drivers get confused at times, particularly when there is a dynamic hard shoulder—when the hard shoulder is in play at some times and not at others. Anecdotally, my officers would say that they repeatedly witness drivers following others through red Xs, whereas in effect they are the same as a red traffic light: don't go beyond this point. Drivers would not follow other drivers through a red traffic light, so appreciation by the driving community perhaps needs greater awareness.

Q36 **Greg Smith:** That is very helpful. Edmund, from your perspective, you gave very clear answers about the need for regular refuge areas on all-lane running. Accepting that the hard shoulder is not as safe as a refuge area, but if you could, out of rush hour times, keep the hard shoulder as a non-running lane in a dynamic way, how would you and your organisation react?

Edmund King: First, I think we need more data. I know that the Chair of this Committee has asked for data on the post-opening project evaluation reports on the M1, and so on, and they have not been forthcoming. We need all those evaluation reports to work it out.

In terms of a dynamic hard shoulder, I agree that there could well be a middle way. It does not have to be confusing. Some of the deaths on the M1 have happened at night when there is not much traffic and when vehicles have been in a live lane. If you had a dynamic hard shoulder, you could use the hard shoulder from 7 am to 7 pm, for instance, but during the night it could be used as a hard shoulder so that the crashes that occur in stationary lanes, 38% of breakdowns, would be less likely to occur. If we had a consistent system across all motorways and if we communicated it before it was opened, rather than after it was opened, I think drivers would understand that.

On the red X thing, part of the problem is that half of the cameras are not currently up to scratch to enforce the red X. Therefore, yes, I accept that some drivers are playing Russian roulette by risking the fact that they will not get a ticket. We need to speed up the technology on those cameras and the enforcement.

Q37 **Greg Smith:** Nicholas, would you agree with that, very briefly?

Nicholas Lyes: I would say that there are a lot of good points there. When you look at the risks involved when you break down in a live lane, the data suggests that the risk of collision increases by up to 200%. I say, "up to", because when you get to the upper end, it means that generally speaking the risk is much greater at night in the dark.

You could have a system with a dynamic hard shoulder that operates at peak times only, and has refuge areas like we have on the M42 and on certain stretches of the M1, with additional gantries and additional signs that can inform people when the hard shoulder is open and closed for running. That makes it very clear. They have to be overhead gantries as well, rather than just verge-mounted gantries.

In addition, one of the aspects that the dynamic system has is that, on a very basic level, it is a solid white line in the road. It has the psychological advantage that drivers can delineate where they should and should not be driving. I think that makes a difference.

Of course, we are not in a position at the moment with all-lane running, with all the additional new technologies that are coming on, to be able to

make a direct comparison. What we know from the statistics is that the dynamic hard shoulder had a pretty good safety record.

Greg Smith: Thank you very much. I fear that my 10 minutes are up, so I hand back to the Chair.

Q38 **Chair:** Indeed. It was almost within 10 minutes. I am going to give 15 minutes to our next Member, Lilian Greenwood, because, Lilian, this will be your last contribution in the Select Committee. You chaired us brilliantly between 2017 and 2019, and you have been a member since. Your work on decarbonisation, access to transport for all, and active travel and safety has been phenomenal. A lot has been accepted by Government. It has been an absolute honour to serve under your chairmanship. We are all sorry to see you go. Keir Starmer's gain is our loss. It is rather fitting that I hand over to you for the section on whether smart motorways are safer than conventional motorways.

Q39 **Lilian Greenwood:** Thank you, Chair, for those very kind words. Thank you to all my colleagues and the staff who work with the Committee, and the witnesses we have worked with over a long time.

I am trying to get to the nub of the question about what the safest system is and what we would like the Government to do. I will ask each of our witnesses this question. It is not where you would drive, but where would you rather have your loved one drive? Would it be a controlled motorway with a hard shoulder or an all-lane running motorway with frequent emergency refuge areas and stopped vehicle detection in place? If it was your significant other or your grown-up child, Edmund, which would you prefer them to be driving on?

Edmund King: One hundred per cent. controlled motorway. No doubt at all.

Q40 **Lilian Greenwood:** Elizabeth?

Elizabeth de Jong: I have to pretend that my loved one is a lorry driver because that is who I represent at the moment. I am fine with smart motorways for logistics companies. I would like all-lane running for them. I believe that they have more awareness of smart motorways and training on how to use them safely. I am reasonably confident for our sector.

Q41 **Lilian Greenwood:** Nick, I can't see you, but what is the answer? Which would you prefer your significant other or your loved one to be driving on?

Nicholas Lyes: To answer the question, I think it would be a controlled motorway with a hard shoulder, and with additional technology. It is taking some of the aspects of the smart motorways and putting them on there with the technology to detect even when there is a breakdown in the hard shoulder and to notify people.

The reason why I say that, Lilian, is that my father is disabled. I would not like to see a situation where my mother, who drives him around, breaks down and cannot make it to a refuge area. Frankly, the only advice that they can follow in that situation is to dial 999 and put the hazard lights on. I do not think that that is an acceptable situation for people with mobility issues to be in.

Q42 **Lilian Greenwood:** Chris, the same question to you.

Assistant Chief Constable Todd: In the way that it was described, with all-lanes running, regular ERAs and the SVD system in place, I would have a high level of confidence. If I was pushed for an either/or, binary decision, I would probably opt for the controlled motorway in terms of the additional facilities that provides from a policing perspective.

Q43 **Lilian Greenwood:** I had a follow-up question, but actually it is pretty clear. If you had a choice, if you wanted to design the safest system, you would have a controlled motorway because we know that that rules out some risks. You would not take away the hard shoulder because that adds extra risk, which is what our predecessor Committee said. The two things are entirely separate. You can have a controlled motorway without having to take out the hard shoulder.

The question is whether we ask the Government to institute what I think three of the four of you said you prefer, which is a controlled motorway with a hard shoulder, or whether to implement their stocktake, which would add the better but not as good emergency refuge areas and stopped vehicle detection technology.

Why would you go for the second rather than the first? Elizabeth, you said you would be satisfied with that, but why would you go for that, rather than a controlled motorway with a hard shoulder?

Elizabeth de Jong: Safety is obviously a delicate and difficult thing for the Government. They will be trading off safety and different types of safety versus costs and versus investment. One of the reasons why the Government brought in smart motorways was that they were a way of delivering additional capacity on the motorways, potentially either at a lower cost or with less planning disruption of other people's lives.

We cannot take safety in isolation. If Highways England has been asked to provide roads that are at least as safe as the road they replace, we must trust our democratic system to have decided that those are the safest criteria. I believe that is what the stocktake is working towards.

If we are not going down that way and have a hard shoulder, we need to ask ourselves how else we are going to provide the capacity? We know that there are forecasts of growth over the next 20 or 30 years. There has been a 23% increase in motorway journeys since 2000. We need to be providing for growth, for cost, for efficiency, for our economy and for the environment.

We need not just to be looking at motorways in isolation. We know that A roads are less safe than motorways. I think we can be more confident over the statistics on that; the lack of capacity on motorways could move people on to roads that are less safe. It is the system that we need to be looking at.

Q44 **Lilian Greenwood:** That is the argument that the Government have put forward. I do not want to pinch one of my colleague's questions because I think we are going to return to whether there is a reasonable trade-off between the added risk on all-lane running motorways and the overall impact on safety on our roads.

Can I come back to Edmund? On behalf of the AA, you told us in your written evidence that too many people have died unnecessarily on smart motorways. I think you have already explained the reasons for that. What would a full safe systems approach look like, and would it have avoided some of the unnecessary deaths we have seen and read the inquests in relation to?

Edmund King: The safe systems approach is very important in designing infrastructure. What it tries to do is design infrastructure that tries to mitigate mistakes made by people. It makes out that people are fallible and have physical vulnerabilities, and that human error occurs. That human error might be not having enough fuel, so you break down in a live lane. That is wrong; you should have enough fuel, but in life mistakes are made.

A safe system would be designed so that there are get-outs if people make errors. In fact, the Select Committee, which I believe you were on, actually advocated a safe system approach in 2008, but it was not adopted by Highways England until 2015. The designs for a smart motorway were based around congestion and avoiding congestion, and not necessarily on safety. It did not take the safe systems approach.

People have died because they stopped in live lanes because there was nowhere to go. There was not an ERA for a mile and a half. We cannot have that approach. That is where all-lane running currently falls down. No matter what the technology and no matter how good the radar or camera technology is, you are still at risk. A Highways England report said that from when you break down it takes, on average, 17 minutes until you are spotted. That is horrific. That is not a safe system.

Q45 **Lilian Greenwood:** If you could get to the position where it took less time than that—instead of 17 minutes it took 10—is that an acceptable level of risk? Even if you were spotted immediately and a red X went up on the gantry, there are still the people who have passed the gantry but are between the gantry and wherever you are stopped and who could be travelling at 70-plus mph. You cannot eliminate that risk, can you?

Edmund King: No, you cannot eliminate the risk in the live lane, but if there is a hard shoulder at least you have the option of trying to get out of the live lane. Yes, we know that 8% of deaths happen on the hard

shoulder, so there are some problems with that, but at least with a hard shoulder most people can try to get out of the left-hand side door and, if there is a barrier, get over the barrier and away from the vehicle. That would be the safest thing.

Q46 **Lilian Greenwood:** In the instance you describe, when someone runs out of fuel on the motorway, they are not necessarily going to be on the inside lane. They could be in any lane. Are they even going to make it to the hard shoulder, if there is one available?

Edmund King: Normally, depending on the fault—running out of fuel, punctures—you have some warning and you can freewheel. We have seen many instances of people who have developed a fault, even in the middle lane or the outside lane, freewheeling over to the hard shoulder. There will be other occasions, such as if the engine totally seizes and cuts out, when it will stop in a live lane. But it gives you the opportunity to get across, which we currently do not have on many of the all-lane running stretches.

Lilian Greenwood: Thank you. I think the issue we need to tease out later in this session is the overall one that Elizabeth touched on, which is whether there is displacement of traffic on to other sorts of roads. Otherwise you would just reintroduce a hard shoulder on the controlled motorway. Thank you, Chair.

Chair: Thank you, Lilian. Can I say that the jewellery on your hand will come in very helpful indeed in your new role as Deputy Chief Whip?

We are now going to move on to Simon Jupp for another 10 minutes to cover live lane breakdowns, which we have touched on a little, but let's go into more depth.

Q47 **Simon Jupp:** Thank you, Chair. No jewellery involved over here. I echo your sentiments earlier about Lilian. Good luck, Lilian, in your new role.

Edmund, the AA has previously stated that the risks associated with live lane stops are far too high and should not be sanctioned. Will the measures outlined in the Government's stocktake reduce the risk of live lane breakdown to what could be described as an acceptable level?

Edmund King: I think if all the ERAs are implemented and retrofitted to three quarters of a mile, the stopped vehicle detection system is speeded up, and we have more people in the control centres to spot vehicles when they break down, it will be improved. Whether that is good enough, I still question.

Q48 **Simon Jupp:** Thank you. I will go to Chris, if I may.

Assistant Chief Constable Todd: As I said earlier, live lane breakdowns do not go away, with or without a controlled motorway system, a smart motorway. We have to be in a position to respond regardless, which of course we do. As I say, in this region we categorise such incidents as P1, which is an immediate response, so that we can get our vehicles there and keep the driver and other road users safe while Highways England

make their way towards the incident. Regardless of which type of motorway we have, we will always see those eventualities.

Q49 **Simon Jupp:** Elizabeth, the same question to you.

Elizabeth de Jong: I would agree that the radar SVD technology, upgrading cameras to detect vehicles passing illegally, and more emergency stopping areas are all good things. It is hard for me to predict what the outcome will be from them all, but they all seem good things to be doing.

Q50 **Simon Jupp:** Thank you. Nicholas.

Nicholas Lyes: At present, 38% of all breakdowns on all-lane running occur in a live lane. We have to get that figure down quite significantly. To answer the question, some of the pointers in the evidence stocktake should help to do that. We need to focus on stopped vehicle detection technology and make sure that we have the best technology to detect live lane breakdowns, and that that can quickly close a lane not within minutes but within seconds. That is what I would consider to be more acceptable.

We need more SOS areas or refuge areas. We need more overhead variable message signs. We need consistent spacing. We need red X enforcement. All of those sorts of things will reduce the risks associated with stopping in a live lane. By how much, I cannot answer, I am afraid.

Q51 **Simon Jupp:** Thank you. Let us look at a scenario. Imagine that you are a car driver and you are breaking down in a live lane. I would like to go through some of the complications that arise in that scenario. I will focus my question, first, on you, Edmund. Can you talk me through the process, your concerns and what needs to be improved?

Edmund King: Yes. If someone is breaking down and they are on an all-lane running section—smoke coming out of the engine or a tyre blow-out—I have to say that my advice would be, "Don't stop." There is too much of a risk to stop. Even if it ruins the wheel, I would drive on to the next emergency refuge area or exit. In fact, I have seen this on stretches of the M3 with Range Rovers at the turn-off to the M25, with the tyre shredded because they did not want to stop in a live lane. I have some sympathy.

The official advice, if you stop in a live lane, is to keep your seatbelt on, put your hazards on, put other lights on and dial 999. It is an emergency. It is horrific. The fear that comes through in the calls that we get from breakdowns is atrocious. We should not be putting people in a system that is not safe and with that result. We have to give people a way out of it. The advice I would give is, drive on. Damage to your car may be expensive, but it is less than damage to yourself or your loved ones.

Q52 **Simon Jupp:** Do you think that message is clear, Edmund? Your advice is quite clearly different from others. Do you think that that is

understood, heard and appreciated? You obviously come across some of the cases when it has occurred, and that is heartbreaking and very distressing. Clearly, your advice differs from what is officially out there.

Edmund King: It is like all things. If you have been in that situation, or have seen what happens in those situations, as many of our patrols and members have—we have listened to the calls—my advice is, don't wait there and hope that you will be spotted, hope a red X comes up or hope that people will comply with the red X. There is too much chance. My advice would be to do what you can to get off.

Q53 **Simon Jupp:** I will ask the same question to the rest of the panel, if you have anything to add. If you do not have anything to add, please just say so. Elizabeth, what do you make of what you have just heard? Would you follow the same advice?

Elizabeth de Jong: This is more of a personal response. I would not. I would move into the refuge area and get out because I know that hard shoulders are not safe. That is a personal view.

The point I would quite like to make is one for us to reflect on. Conventional motorways produce more fatalities, yet we have a bigger reaction to smart motorway fatalities. As we begin to think about why that is, as a society and as a Government, I think that the type of accident is of more concern to the public. Somehow, it seems to be more acceptable to us if vehicles are moving when they have a serious accident than if one is stationary and the other is moving. There is a lot to unpick about what types of accident we find acceptable as a society and what types we do not. There is certainly something about smart motorway fatalities that is more concerning, it seems to me, than conventional motorway fatalities. They are obviously all people, but there is something about the ones that happen on smart motorways that is really provoking a reaction to them.

Q54 **Simon Jupp:** Maybe it is not acceptance. Maybe it is understanding. The advice for a smart motorway can be very different from that for a normal motorway, as we have discussed in this session. Maybe that is an element. Because people do not quite understand yet what a smart motorway is, and in some parts of the country they are not there, it can be a bit of a shock to some. Would you agree with that?

Elizabeth de Jong: I think it is very useful to explore, and then we will get to the bottom of what is safe, what is not safe and what we need to do. There is a lot we need to be looking at as to the types of accidents. Mitigation is so important. It is making sure that we have the right mitigation because we understand what is going on. Again, that takes us back to as much data as possible about the types and causes of accidents, so that the public can have confidence that all of us are working in the right ways to address those accidents to minimise them.

Q55 **Simon Jupp:** Nicholas, the same question to you.

Nicholas Lyes: I think the official advice is to go as far left as you possibly can. Even on an all-lane running smart motorway, there is not a barrier at all times on the left-hand side next to lane one. If you cannot make it to a refuge area, at least try to pull over as far left as you possibly can to get as much of the vehicle out of lane one. Again, you follow the advice that, if it is safe to do so, you get out of the vehicle on the left-hand side. If it is not, you dial 999 with your hazard lights on.

Q56 **Simon Jupp:** Briefly, Chris, what is your view?

Assistant Chief Constable Todd: Our advice to motorists would always be to follow the guidance that has just been described, which is given by both Highways England and RoSPA—the Royal Society for the Prevention of Accidents. From a policing perspective, as I say, we will treat it as an immediate response and we will get to the motorist as soon as we possibly can to keep them safe.

Q57 **Simon Jupp:** Some of you have touched on the measures that need to be taken to improve the advice in this scenario. I would like to move to a different element of my questions—the fiendishly quiet electric vehicles. We have new and improved electric vehicles on roads across our nations and regions. When it comes to knowledge of electric vehicles, are they more likely to come to an immediate stop, rather than coast like other vehicles? They behave differently as you drive around.

Edmund King: I drive an electric vehicle and have done for some time. You get adequate warnings when your charge is running out. You get it at 50 miles, 30 miles and 20 miles. Many satnav systems will point out where there is a close charging location. In the breakdowns that we deal with, less than 4% of breakdowns of electric vehicles are through running out of charge. That is coming down as there are more charging points, and the range is getting better.

There is a particular problem with electric vehicles when they break down. They are almost impossible to push, and most of them cannot be towed on two wheels, or cannot be towed at faster speeds or longer distances. We have developed a freewheeling hub that goes on to the rear wheels of an electric vehicle so that it can be towed on those two wheels; the freewheeling hub goes around rather than the wheels.

Potentially, there could be a problem with electric vehicles breaking down if there isn't a hard shoulder or an ERA, but you get adequate warning. Norway has far more electric vehicles than we do. Their breakdown rate due to running out of charge is now less than 1%, so it goes down as people get used to the vehicles.

Q58 **Simon Jupp:** We need to bear that in mind, of course, if the Government aim to reduce the number of petrol and diesel cars on the roads within set timeframes. Elizabeth, the same question to you. I am not sure how much of your industry is electric, but what do you understand are the concerns?

Elizabeth de Jong: We do not have it at the heavier end. The path to zero carbon for HGVs is uncertain and there are many options. We do not have experience of that. It is just the light vehicles, but I think Edmund has given a very good response that would cover those as well. I do not have more evidence to add to that.

Q59 **Simon Jupp:** Nicholas, welcome back to the screen. We can see you again now. Thank you very much for working out how your webcam went wrong. The same question to you.

Nicholas Lyes: Because I had technical difficulties, I am afraid that I missed the first question. I would appreciate it if you could repeat it.

Q60 **Simon Jupp:** Of course. I appreciate your multi-tasking, especially when technology is involved. I have the same issue.

Electric vehicles are more likely to come to an immediate stop, rather than coasting like other vehicles. How much of a concern is that, and what is your understanding of what those implications are on a smart motorway?

Nicholas Lyes: That is true. Generally, when electric vehicles are running out of charge, they tend to engage the braking system, which means that they come to a stop more quickly. There tend to be fewer things that go wrong with electric vehicles from a mechanical point of view, but you get the same type of faults occurring on electric vehicles as you get on conventional vehicles, which classically are to do with the wheels, tyres, and so on. In overall breakdowns on motorways, 30%, or a third, tend to be related to the tyre; it could be a catastrophic blow-out puncture or a slow puncture, for example. Each of those will affect how quickly the car can coast.

It is a slight concern. From the point of view of how it will affect the overall breakdown mix going forward, I do not think it is something to be extremely concerned about, but it is something to monitor.

Simon Jupp: Thank you, Nicholas. I am conscious of the time, so I hand back to the Chair.

Chair: Thank you, Simon. We are going to stay on the same vein. We have talked about spotting vehicles that have broken down in a live lane, stopped vehicle detection and CCTV monitoring in part, but we will go into a little more detail with Karl McCartney.

Karl McCartney: It currently takes up to 37 minutes to detect and respond to vehicles that have broken down in a live lane. To what extent will the implementation of stopped vehicle technology decrease the time it takes to detect broken-down vehicles? It currently takes 17 minutes on average for a stopped vehicle to be detected via CCTV. Do our witnesses think that is safe?

Nicholas Lyes: I do not think that level of time is acceptable. It needs to be reduced. Rather than dealing with minutes, we should be dealing with

seconds. As soon as the vehicle comes to a stop in a live lane, there should be technology that is automatically picking that up straightaway. Whether that then feeds back into the variable message signs that say, "Obstruction ahead, please move over," and then the alarm is raised in the control centre and the manual signs can be put in a little bit further back across the carriageway, could be an option, but we should be dealing, in my view, in seconds rather than minutes.

Q61 **Karl McCartney:** Thank you. The same question to Chris.

Assistant Chief Constable Todd: We would welcome the stationary vehicle detection system as widely as possible across the network. As I said, we do not see it at the moment in this region. That would be an improvement in the available technology, as far as I am concerned.

The use of cameras is helpful, but there is a lot of motorway to monitor, and it is probably unrealistic to expect that we would have enough camera operators to give the same level of reassurance. SVD would be the preferred option.

Q62 **Karl McCartney:** Thank you. The same question to Edmund.

Edmund King: The scandal with the SVD system is that it was not rolled out before smart motorways were opened, which is totally ridiculous. It will not be completely rolled out until 2022, which is speeding it up. It will give an extra level of detection, but it is not perfect. It depends how control centres react to it.

There are some concerns. There is a Highways England report that states that it might not be effective if you have an extremely low car. It quotes a Mazda MX5 sports coupé, which has a height of 1.225 metres. If the car is that low, it is below the detection of the system. It is not failsafe, but it will help.

Q63 **Karl McCartney:** Understood. As the Chair was mentioning earlier, back in 2016 we were told that we were going to get it a lot quicker than 2022 or 2023. Finally, on this question, Elizabeth.

Elizabeth de Jong: In the DFT stocktake, I remember reading that radar-based stopped vehicle detection was "not essential for achieving the safety objective for smart motorways to be as safe as, or safer than, the road they replace." However, we would still support it being rolled out. We would very much welcome that. We think they could be responding in as quickly as 20 seconds. It seems a very sensible mitigation to improve safety and build public confidence as well. We are supporters of it being rolled out as quickly as possible.

Q64 **Karl McCartney:** Elizabeth, you seem confident that the stopped vehicle detection system being rolled out by Highways England will improve the safety of smart motorways. How robust do you feel the trials have been that Highways England has carried out so far to assess the accuracy of stopped vehicle detection technology?

Elizabeth de Jong: We have not been involved in those trials, so we are receiving information from Highways England. It may be that other people have been more involved in the minutiae of those trials rather than receiving overall reports on them.

Q65 **Karl McCartney:** Edmund, how robust are the trials that Highways England has carried out?

Edmund King: I do not think we really know. There is a 2018 report from Highways England on stopped vehicle detection and it has not been published yet. We have been—

Q66 **Karl McCartney:** They have refused to publish it. They published the first one but then refused to publish the second one.

Edmund King: Yes, so it is very difficult to say, because we have not seen all the evidence. Certainly, questions have been raised by *Highways Magazine*. They have looked into the system. An ex-highways engineer, Alan Haines, who has given evidence to this Committee, has some questions on the technology. I am not an expert on the technology, but I feel that all those reports should be published so that we can look at the accuracy of the system.

Q67 **Karl McCartney:** Thank you for that. Nicholas?

Nicholas Lyes: I agree with that. I think we need to have all the evidence put in front of us. From what I can see, having stopped vehicle detection technology alongside the MIDAS technology, and alongside cameras, will make a big difference. It is something that we should be implementing, but we need to make sure that it is as effective as possible. I do not have the short answer to the question.

Q68 **Karl McCartney:** Chris, can I give you the opportunity to answer that question?

Assistant Chief Constable Todd: We have had no direct involvement in any tests or pilots that I am aware of. I echo that, if we are to bring this technology in, we would want confidence in the technology alongside it.

Q69 **Karl McCartney:** Thank you for that, and thank you for being so succinct in your answers. Chair, if it is possible, I will ask an extra question.

Edmund, you were giving us some examples earlier. Have you recently, in the past few years or at any point in time, broken down on a motorway, be it a smart motorway or a hard shoulder? How did you feel about being there?

Edmund King: Good question. I have not personally, but I have witnessed lots of breakdowns. The last time I broke down was on the M5, which had a hard shoulder—I had a puncture—and on the M1 some years ago. Even being on the hard shoulder of the M1 with a puncture was pretty frightening, with trucks going past.

Q70 **Karl McCartney:** Did you fix it yourself or did you wait for some help?

Edmund King: It was an inside tyre, so I fitted it myself. If it had been an outside tyre, I would have got someone to help. It is frightening on the hard shoulder.

Q71 **Karl McCartney:** It is not a good place to be.

Edmund King: It is not a good place to be at all.

Q72 **Karl McCartney:** Elizabeth, the same question to you.

Elizabeth de Jong: My last motorway incident was about 18 years ago, when a lorry clipped me and I ran along in front of the lorry horizontally to it. We came to a stop on the hard shoulder. I had excellent support from the police. We all went behind the barrier. My husband, though, has broken down on a smart motorway when the electrics in our car stopped working. None of these incidents is nice at all. The education about getting out of your car and moving away from the hard shoulder is something that I have certainly learnt.

Q73 **Karl McCartney:** We will come on to that shortly. Thank you. Chris?

Assistant Chief Constable Todd: I am afraid I have had no experience of breakdowns or stops on a smart motorway.

Q74 **Karl McCartney:** Lucky you, but I am sure you have attended various incidents in your time with the police.

Assistant Chief Constable Todd: Indeed.

Q75 **Karl McCartney:** Finally, Nicholas.

Nicholas Lyes: I have not had experience of that personally. However, about three years ago I was out with one of our patrols and we attended a breakdown on the M11 that was on the hard shoulder. I can tell you that it was very, very frightening, even on the hard shoulder.

Q76 **Karl McCartney:** You wouldn't want to do it every day, would you?

Nicholas Lyes: No.

Q77 **Chair:** Thank you, Karl. I want to probe a little more. A number of you have talked about increased confidence in Highways England. How confident are you that Highways England can install the technology by September next year, when it comes to stopped vehicle detection? Edmund, can I ask you first of all?

Edmund King: The Government have pushed for them to speed up the implementation of the technology, but, as I understand it, there is only one company in the UK that provides this technology. Therefore, it is perhaps difficult because there is not immense competition. There are other technologies that could have been looked at, I believe, but they are different technologies.

Q78 **Chair:** That is why I want to probe a little more about why you are confident. As a Committee, we have been rather badly stained by

assurances from Highways England on this matter. Back in 2016, this Committee was told that, going forward, it would be fitted to all new smart motorways and it would be retrofitted. I think we had the same thing in 2019, when the chief executive came before us. We are, therefore, somewhat bemused to be told, "Good news, this is going to be rolled out a year early, by 2022," when it appears to us that it is at least six years too late.

I do not have a great deal of faith in what I am told. I have also subsequently found out that there is only one provider. Are we just going on a whim, or is there something I am missing that gives you the confidence you speak to about Highways England on delivery when it comes to smart motorways?

Edmund King: The Transport Secretary said that he has pushed them to speed it up. He said that it can be done in that time. I know that originally they were saying that it would take three years. I am not an expert on the implementation, but that is what the Transport Secretary said.

Q79 **Chair:** I know that you are not expert on that aspect, but you have all spoken with perhaps a fair bit of confidence about the delivery. I can only judge it on the past, when it has completely failed. I am trying to tap into why you have greater faith than a cynic like me seems to have. What is it about the culture that has changed in all of this, apart from the Secretary of State taking a greater interest?

Edmund King: But I think that is quite important. The level of public interest in smart motorways and the number of letters that MPs and the Transport Secretary get is important. I get letters every day that are copied to the Transport Secretary on these issues. I feel that it is different, compared with five or six years ago when the Secretaries of State did not take the issue particularly seriously. I had the door closed on me several times by several Secretaries of State who thought I was being too emotional and that it really was not an issue. Well, it has proved, with 40-odd people dying on these roads, that it is an issue. I think the current Secretary of State takes it seriously, so I hope he is putting pressure on Highways England and the company concerned to speed it up.

Q80 **Chair:** Nicholas, can I ask for your view from an RAC perspective? Do you think there has been a culture shift in Highways England that should give us more assurance that they really are serious about this and are going to deliver to the promises that they make?

Nicholas Lyes: Yes, I do, Chair. The reason why I say that is that it is within the evidence stocktake. The evidence stocktake originally committed to having stopped vehicle detection technology rolled out, I think, by 2023. That has now been brought forward to, I think, September 2022. There is a speeding-up and a ramping-up process—I know that is quite an overused term these days—going on for the

installation of this equipment. It is within the evidence stocktake, so there is a firm commitment.

The evidence stocktake year one assessment has just been published. It is something that I know Ministers, the Secretary of State and everybody involved in the project is interested in. They are pushing to get this technology rolled out, so I would be confident that it is going to be installed by the end of 2022. At least, I hope I am.

Q81 **Chair:** It was sounding more positive until the last few words. That is helpful reassurance.

I want to ask briefly about the Highways England Go Left campaign, which was launched on 15 March. You probably know it well, so I won't sing it to you. Do you believe that it is effective in campaigning and educating the motorist as to smart motorways? Very briefly, Elizabeth, does it stay in the mind of your members?

Elizabeth de Jong: It is not really aimed at our members necessarily. It is a public campaign. We meet Highways England very regularly and scrutinise what is happening for freight; there are also the smart motorways meetings that I have spoken about. At our last meeting, they told us that it has a very high recall rate. As we can imagine, there is a Marmite response to its tone, but therefore it is more impactful. It is only the start of the publicity campaign. I believe the next thing they are looking at is eCall buttons in cars as well.

However, there is a difference between awareness and understanding. I know that they are working with Transport Focus on how to bring together more of an education campaign. I think this is just the start of something that we would probably all like to have seen before. Professional drivers—

Q82 **Chair:** Can I interrupt, Elizabeth? Do you feel that it is helpful for the general car motorist but does not aid safety when it comes to the lorry driver?

Elizabeth de Jong: Yes. Reminders to go left are always useful, but there is an amount of scrutiny of a professional driver and an amount of continuous development. They need to be doing CPC. They are part of the operator licensing system, which means that the companies employing them need to be professionally competent and knowledgeable. Things run really well. They already have a higher level of familiarity with smart motorways because they are likely to drive on them more frequently. In 2018, we helped to develop courses with Highways England for the professional motorist. My view of Go Left is that it is a more mass-market campaign rather than a bespoke one for professional drivers, but clearly reminders are useful.

Q83 **Chair:** I will put that to Assistant Chief Constable Todd. Do you think it is a helpful tool?

Assistant Chief Constable Todd: Yes, I do. I think it is the right message to give a simple direction to motorists to move to the left for their own safety, be that the hard shoulder or an ERA. It is also important that people know what to do in the unfortunate circumstances when they do not have that option and they are stranded in a live lane. The advice, equally from HE and RoSPA, is to remain in the vehicle with the seatbelt on, put on the hazard lights and call the emergency services immediately.

Q84 **Chair:** Thanks, Chris. Nicholas, you have described smart motorways as a radical design change. When we took evidence back in 2016, Highways England would have had us believe that it was more of a gentle evolution. Looking back over the roll-out, how could the changes have been communicated better?

Nicholas Lyes: First, I think the Go Left campaign that we now have is several years too late. We had made substantial changes to the design of motorways generally. We fundamentally changed what was needed to be done in the event of a breakdown. For decades, we have been used to having hard shoulders, and then suddenly you take the hard shoulder out and there is a completely different way of having to deal with an emergency breakdown.

While I think the Go Left campaign is very good—it is very simple, and I think it is the right point and the right tone to take—it is several years too late. It is a little bit like changing the emergency landing procedures of an aeroplane and not telling the pilot what to do. It is that simple.

There is a slight elephant in the room, in the sense that while the Go Left campaign gets one message across, we also need to be a little bit clearer in communication with people as to what to do—I think Chris mentioned it—if they cannot make it to a refuge area. The advert and the campaign do not really go into that level of detail.

Q85 **Chair:** Has either the RAC or the AA done research that shows the proportion of people who know what to do if they break down on a smart motorway?

Nicholas Lyes: Yes, we have. We conducted a survey of about 2,500 drivers. I have some data here; my memory is not good enough to remember the numbers off the top of my head. We found that in the event of breaking down in a live lane, generally speaking, there was quite a mixed response on whether people knew what to do if they were in a live lane breakdown scenario. I can certainly get some of that data across to members of the Committee.

Q86 **Chair:** Yes, please do. We would be delighted to read it. Edmund, very briefly, has the AA done similar research?

Edmund King: Yes. We did a survey of 20,500 members, and eight out of 10 said the removal of the hard shoulder made them feel that motorway driving has become more dangerous.

On your broader question, information on how to deal with smart motorways should have been included in the highway code years ago so that new drivers are taught. We actually wrote to Jesse Norman MP in November 2017 suggesting changes to the highway code and an information campaign.

Q87 **Chair:** What was the response?

Edmund King: The response was that they cannot change the highway code very often, so they did not bother doing it. That was disappointing, but it is being done now, four years later.

Chair: Disappointing is a bit of an understatement. Thank you. Let's move on to the next section, which is enforcement of smart motorways, the red X signals and police presence. Over to Gavin Newlands.

Q88 **Gavin Newlands:** This last year has been a bit of an eye-opener. I have driven down from Scotland a number of times throughout the Covid period, understandably for Covid reasons. We do not have this system in Scotland. I have to say that the compliance levels I have witnessed seem relatively low, in my opinion.

How accurate are the figures for compliance? This Committee saw figures in 2016 of 92%. In 2019, we saw figures of up to 94.3%, which is an improvement but still significantly below where we need to be. Edmund, how robust do you think those figures are?

Edmund King: Certainly initially, the police sent out 200,000 warning letters to offenders. Part of the problem has been, first, that the legislation was not in place to prosecute offenders until about a year and a half ago. There were red Xs and people were getting letters, but they were not being prosecuted. That has now been changed, but still, as I understand, half of the cameras have not had the software update to make them usable. That will not be completed until July 2023.

Surely, the red X system and the legislation should have been in place before smart motorways were rolled out and not afterwards. Unfortunately, we do not have great confidence in it. What we would say, and say to all drivers, is that they should comply with the red X because it can be a matter of life or death. We would like to see it enforced very strictly.

Q89 **Gavin Newlands:** What is your take on the figures and compliance overall, Assistant Chief Constable Todd?

Assistant Chief Constable Todd: As I said earlier, anecdotally our officers would say that compliance is a concern. That is more around the awareness of the needs of compliance and the seriousness with which people should take a red X. It should be treated in the same vein as a red traffic light, which people are quite clear about. Raising awareness is really important.

I would welcome consistency in the availability of cameras to the positioning of the red Xs. Obviously, the opening and closing of lanes is variable, so we need to be assured that we have a camera in each position so that we can enforce. We enforce as robustly as we possibly can, but invariably that will be by post after the event, rather than dynamically as it happens.

On wider enforcement, there are other issues of concern around smart motorways in terms of visibility of enforcement. The sight of a police vehicle on the hard shoulder has a deterrent effect on other motorists. We tend to use the "Follow me" sign to take motorists off the motorway quite often, or we use postal prosecutions. Some of our more robust tactics have to be adapted for smart motorways as well, so there are wider enforcement issues.

Q90 **Gavin Newlands:** Logistics UK has told the Committee that it is not just security cameras but lack of police presence on the motorways. You see a lot of Highways England traffic enforcement officers on the motorways but not so many traffic police, certainly from my constituents' perspective. Elizabeth, your organisation said that "insufficient enforcement can give the impression that it is OK to flout the rules." Would you care to expand on that?

Elizabeth de Jong: We are very keen that for any regulation there is both education about that regulation and enforcement. If there is not enforcement of regulations, we will not get a level playing field between different companies or different individuals who drive. Some people will think it is okay and that the rules do not really mean very much, because there is no consequence from ignoring them. That is human nature, which we all have.

Enforcement is very important to us. We have heard about the letters. We have heard that the police have powers to enforce on smart motorways. My understanding—Chris will perhaps elaborate—is that more needs to be done around enforcement of smart motorway violations. It is not just the cameras, but how to follow up.

There is the roads policing review at the moment. We want to make sure that sufficient resource is made available for roads policing, and that the different road stakeholders and organisations have a common and unified road safety objective, which all enforcement bodies are committed to achieving. Doing the roads policing review is a great opportunity to make sure that the enforcement of smart motorways is really working.

Q91 **Gavin Newlands:** I should probably come back to Assistant Chief Constable Todd on this. On the issue with cameras, obviously the legislation should have been in place. It is now in place, although there is an issue with camera software that will hopefully be resolved quicker than is suggested, which will help.

You said yourself that a police car sitting at the side of the road is a

deterrent. We have seen fewer of those. The figures I have seen may be out of date, but by 2017 about a third of the traffic police had been cut over the previous decade. That is difficult for any force. Can you update us with any more recent figures? That is obviously not helping with enforcement.

Assistant Chief Constable Todd: I apologise, but I do not have any figures immediately to hand at the moment. I cannot speak on behalf of all roads policing but only for this region. What I can say is that we have strong roads policing and motorway patrol units. It is one of our most proactive resources in the west midlands and has great effect, not just around enforcement of road policing but on wider criminality and denying criminals the use of the roads network.

It is a fantastic resource, but one of the things we see as a result of smart motorways is that visibility declines because of the tactics that we employ. We invariably prosecute by post if we can. Where there are cameras that we can enforce, we will do that. If we see a violation on the roads network, the safest way to deal with the motorist is not to pull them over into an ERA, because there are concerns around the speed of re-entry to the carriageway, which we need to take into consideration. With a hard shoulder, you have an acceleration zone, which you do not get with an emergency area. We tend to have a display in the rear of the police vehicle that literally lights up to say, "Follow me," and we take the motorist off the carriageway. That means it is not seen quite so often when we enforce.

Q92 **Gavin Newlands:** I have one very quick yes or no question. Would it be better if you had more resource available and had an increased traffic police force? Northamptonshire was down 83% according to the figures that I have seen to 2017. That is obviously not your force, but would it be preferable to have more officers? Yes or no?

Assistant Chief Constable Todd: I think every police officer would always want more colleagues working alongside them. The public can be assured that we give a good service with what we have, though.

Q93 **Gavin Newlands:** Thanks for that. My last question is to Nicholas. What more can the Government do, along with Highways England and perhaps the police, to ensure that there is full or close to full compliance with red Xs? We have about a minute.

Nicholas Lyes: The research we have done suggests that almost a fifth of drivers have disobeyed a red X signal, so there is a lot of work that needs to be done. We need to get the 50% of cameras that are not yet enforcing red X signs to be enforcing red X signs. I would like to see the variable message signs on motorways actually saying that they are being enforced. When I was driving through the west country last year that was the case, so I would like to see more communication to drivers that this is being done. If drivers know that it is going to be done, they will not

want to get a fine. I think that is important, but we need to get those cameras enforcing it because it is literally a matter of life and death.

Gavin Newlands: Thanks, I think I am close to my 10 minutes, Chair, so I hand back to you.

Chair: Many thanks, Gavin. Let's move on to the next 10-minute section, which is about safe places to stop in an emergency. That again touches on the removal of the hard shoulder and the emergency refuge areas that are in place. I hand over to Grahame Morris.

Q94 **Grahame Morris:** There has been some very interesting evidence. Perhaps I might go to Mr King, because you have been very direct with your opinions on behalf of the Automobile Association. You said in your opening remarks, and then in response to other questions, that you thought it was dangerous and a serious error to extend the distance between emergency areas on smart motorways from 500 metres to 2.5 km. That was back in 2012. Why was that decision wrong?

Edmund King: There is quite a good analogy that Walt Disney gave a while ago. When Walt Disney set up Disneyland, he had a policy for trash bins, which was that, if they could see a trash bin less than 30 steps away, 99% of people would put their rubbish in the bin. If they cannot see the bin, they drop it on the floor.

With smart motorways, on the original M42 you could almost always see the next ERA. If you can see an ERA and you have smoke coming out of your engine, the vast majority of people will get there. If the ERA is a mile and a half away, people panic—"Will my car set on fire? Is it dangerous?"—and they stop. The evidence from all walks of life is pretty compelling. The more safe areas there are to stop in, the safer the system and it will save lives.

Q95 **Grahame Morris:** ACC Todd, in view of our experience and the evidence that other witnesses have given, and indeed from your perspective in the police, should existing stretches of smart motorway have emergency refuge areas retrofitted to the same standard as the new schemes?

Assistant Chief Constable Todd: Yes, I would welcome that for the reasons that have just been described. We have the experience of the M42 in our region, and other motorways with longer distances between. I would welcome closer ERAs.

Q96 **Grahame Morris:** Nicholas, do you have a view on that?

Nicholas Lyes: I would 100% agree with that. We want to see more refuge areas, and we want them to be consistent across the board. We do not want future schemes with refuge areas close together and older schemes having them further apart. We need a retrofitting programme.

The other thing I would add, which is something that has been reported from our patrols, is that we need to make sure that the systems are in use when we are towing a vehicle out of a refuge area. That means that

Highways England are closing the lane for us to be able to do so. Some of our patrols have reported that there is a 50-minute or almost an hour's delay between when they are ready to tow the vehicle away and when they are effectively given the green light by Highways England to pull out. That is unacceptable. There are a few things that need to be ironed out when we are talking about refuge areas.

Q97 **Grahame Morris:** I understand that, and that is very useful. Elizabeth de Jong, do you have a different view, given the logistics perspective on these matters?

Elizabeth de Jong: No, we have a similar view. We support the need for more emergency areas to improve safety, and to reassure drivers that there are places to stop in an emergency. My understanding is that, if there were a commitment to have emergency stop areas every three quarters of a mile, one would be arriving every 45 seconds for someone travelling at 60 mph. That could be part of the communication of reassurance to people.

Grahame Morris: Some of the issues I was going to press you on have been covered in earlier questions, so I will hand back to the Chair. Thank you very much for your evidence.

Q98 **Chair:** Thank you, Grahame. I hope you don't mind, but I am going to touch on one part. We will go into the cost-benefit analysis in our next session with some of the engineers, but do any of you have an idea how much each of these emergency refuge areas actually costs to deliver?

Edmund King: We have been given different figures by different Secretaries of State. Chris Grayling said it was something like £400,000. I find it astonishing that it should cost that much. Obviously, it would have cost a lot less if they were built in initially rather than by retrofitting. The question is, what cost is a life? The cost of a life is more than millions of pounds, and too many lives have been lost already. I think they should be retrofitted as a matter of urgency, whatever the cost.

Q99 **Chair:** Nicholas, I suppose it gets to the point where you have them so close together that you may as well just build another lane and call it a hard shoulder. Do you have a view on the cost-benefit analysis?

Nicholas Lyes: Let's start with what we had before, which was a safe system, and was something more akin to the M42, and what we have now on much of the all-lane running network, and try to find the sweet spot in between. The refuge area spacing of up to 2.5 km apart is much too far, and 500 metres is perhaps a little bit too close. Perhaps it should be 800 metres. I am not an engineer, but one thing that I would say—I think Edmund has already raised it—is that, if you can see something, if it is in the line of sight, that makes all the difference. If you can coast a vehicle, in the absolute majority of cases, to one of the refuge areas, I think we will be on to a winner, so to speak.

Chair: Thank you for that supplementary. I will hand back to Karl McCartney to look at traffic patrol officers and responding to emergencies in a live lane, and of course the emergency services in general.

Q100 **Karl McCartney:** This question is to Chris, as it is West Midlands police oriented. When traffic is congested, how easy is it for emergency services to get through four lanes of stopped or slow-moving traffic to reach the scene of an accident when there is no hard shoulder?

Assistant Chief Constable Todd: It is a challenge. It presents new challenges to us when we are working in this environment. Some of the factors that we need to consider are that smart motorways tend to have a solid concrete central reservation. That obviously provides additional safety measures, but equally in the past we were able to use some of the gaps in the central reservation; in an emergency, in certain circumstances, we removed the central reservation in order to gain access to the other carriageway. That facility is denied us in these circumstances. That can mean that we can turn traffic around on to an alternative carriageway if it is necessary, but not where we have concrete central reservations.

The hard shoulder itself can be used as a means of emergency access to something further up the carriageway. If we have all lanes live, we do not necessarily have that capability. The traffic may be congested and covering all of those lanes, so that would slow our progress in many circumstances. Obviously, we deal with that accordingly.

The worst-case scenario is when we cannot get through the traffic. We adapt our tactics and we have a methodology that we employ there; it is, effectively, reverse access. If you imagine an incident halfway between two junctions of a motorway, say northbound on the M6, we would close the motorway ahead and look to come down the carriageway to the incident. In doing that, we would employ various tactics to survey the area in between from the parallel carriageway, to make sure that it was safe to do so.

Q101 **Karl McCartney:** Can I interrupt you? To be clear, you are saying that you would close the other carriageway where the incident has not occurred, on the opposite side of the motorway, and you would travel the wrong way down the motorway. That is what your officers would do. Is that what you are saying?

Assistant Chief Constable Todd: Sorry, no. We would close the carriageway ahead of the incident, ahead of the next junction, so that we could gain access safely. We would use the parallel carriageway to survey the gap in between, so that we could be sure that there was nobody creeping around the outside. If necessary, we would engineer a situation to prevent that from happening. We can literally, if necessary, close the parallel carriageway for maximum safety, so that we can jump across the barrier to the scene. Ultimately, this is intended to allow emergency vehicles to approach down the carriageway in the opposite direction,

knowing that there is a sterile area in place. We test and exercise for that eventuality. We accredit our officers to do that, to make sure that everyone is safe when we implement that tactic.

Q102 **Karl McCartney:** But to be clear, for yourself and all the other emergency services, having a hard shoulder, which in most cases is clear, allows you to access an incident a lot quicker and a lot more easily.

Assistant Chief Constable Todd: That is an ideal scenario. There are instances, inevitably, when the hard shoulder is blocked as well. In those situations—

Q103 **Karl McCartney:** The Government want to reduce the time it takes for Highways England traffic patrol officers, and presumably yourselves, to reach an incident from 17 minutes to 10 minutes. Do you think that target is achievable?

Assistant Chief Constable Todd: It is really difficult to say. Every circumstance is different. Clearly, the readier the access, the quicker we will get to the incident.

Q104 **Karl McCartney:** Give me an idea, roughly. If you have to close a motorway and travel the wrong way back down the carriageway to get to an incident, is that going to take longer than 17 minutes or longer than 10 minutes?

Assistant Chief Constable Todd: In most circumstances, I would say longer. We would look at other alternatives. If we could access from the parallel carriageway, we might be able to get there quicker, depending on the circumstances. We would survey and see what the severity is, and what the immediacy is. The golden 10 minutes is crucial. It would take us longer to get there—

Q105 **Karl McCartney:** Can you give us a rough idea of the time it takes to close down all traffic on a carriageway for you or your officers to travel the wrong way down it to reach an incident?

Assistant Chief Constable Todd: We would be unlikely to do that in 10 minutes unless there were exceptional circumstances.

Q106 **Karl McCartney:** Would you be likely to do it in 20 minutes, 30 minutes or 45 minutes?

Assistant Chief Constable Todd: Potentially, depending on the position on the carriageway.

Q107 **Karl McCartney:** I am trying to get a figure out of you, but I am not getting one. That is why I am pushing you.

Assistant Chief Constable Todd: I cannot give you a definitive figure, I am afraid. Every situation has to be—

Q108 **Karl McCartney:** Do many of them happen in less than 30 minutes?

Assistant Chief Constable Todd: They do not happen very often at all, to be honest. This really is quite the exception. We test and exercise at a safe time and overnight, when the carriageway would not be busy. I do not have any statistics for a live incident to hand, I am afraid.

Q109 **Karl McCartney:** Could you provide for us, for motorways that do not have a hard shoulder, what the actual response time for being on the scene is? That would be really helpful.

Assistant Chief Constable Todd: I will look into that.

Q110 **Karl McCartney:** Super. Thank you. Edmund, you stated as an organisation that the Department rejected your call for an emergency corridor in 2017. What reasons or reason did the Department cite at that time for that rejection?

Edmund King: We raised it in a letter to Jesse Norman, and I discussed it with Chris Grayling in 2017. The emergency corridor is a system they have in Switzerland, Austria and Germany. If there is an incident ahead and you are in the outside lane, you should park up your car towards the right. If you are in the middle lane, you should park up towards the left. This then creates a corridor whereby emergency services can come between the vehicles.

Yes, we raised that in 2017. We suggested that it should go into the highway code. We provided wording for the highway code, but it was not taken up by Government.

Q111 **Karl McCartney:** Any excuses or reasoning given for that?

Edmund King: No, just, "We don't like changing the highway code very often," so it was not taken up. It was a missed opportunity.

Q112 **Karl McCartney:** Chris, on that particular reason, is an emergency corridor a good idea? Would the police, along with the other emergency services, accept that as being a good thing?

Assistant Chief Constable Todd: Yes, ideally we try to get through the traffic as best we can, using an emergency corridor as described. Realistically, we know that road users often act in unpredictable ways on any carriageway, whether it is a smart motorway or just a standard carriageway. Some drivers pull over to the left, some pull over to the right, some keep going, and some just stop where they are. Drivers have to be trained to respond to whatever scenario is put in front of them, and not to expect every driver on the carriageway ahead to do what we ideally hope them to do. We have to be flexible and agile.

Q113 **Karl McCartney:** Understood. On that point, there is a mix of smart motorways and conventional motorways in the west midlands. What other challenges arise for the police, your colleagues and other emergency services in attending incidents on different types of motorway? Are there any that you want to make us aware of at this point in time? I am giving you a free hit, really.

Assistant Chief Constable Todd: The main issue is when there is no access through the hard shoulder or all lanes are blocked, including the hard shoulder, and then we are faced with reverse access, as described. The alternative tactic, which I have not described, is that we close the carriageway behind the incident and take traffic off at the previous junction. We are, effectively, peeling the traffic away to create a sterile environment to approach from the right side, so to speak.

Karl McCartney: Thank you for that. Back to the Chair.

Chair: Thank you very much indeed. For our final section we hand over to Ben Bradshaw to ask whether we actually need more smart motorways.

Q114 **Mr Bradshaw:** Just before I do, can I ask about the particular challenge that both you, Edmund, and you, Nicholas, outlined on recoveries on smart motorways without hard shoulders? Does what the Government are proposing in the stocktake address the concerns you outlined earlier?

Edmund King: In terms of recoveries, it still makes it more difficult. Obviously, if you have a hard shoulder or more ERAs that vehicles can go to, it is easier to recover safely. If you do not have that, for the recovery the road has to be made safe by a police vehicle or a Highways England vehicle. It will still be difficult even with the stocktake implemented.

Q115 **Mr Bradshaw:** Nicholas, do you have anything to add?

Nicholas Lyes: We will obviously attend a live lane breakdown, but there has to be a lane that is closed. The lane must be closed and there must be either police or Highways England traffic officers present to cover that.

One thing that I think is worth raising is that we have had reports from some patrols that traffic officers, when we have arrived at the scene, have then moved on to another incident and have, in effect, left us exposed. These are operational incidents, and I appreciate that things might go awry at times, but there is some finessing to be done of the operation of such things.

Q116 **Mr Bradshaw:** To wrap up, given what you have said about the safety concerns, should we be creating more of these smart motorways?

Edmund King: I think there is a question at the moment, after Covid and after lockdown, about what will happen to traffic. More people are working from home either full time or two or three days a week. In the AA, we have seen quite a change in breakdown rates at different times of the day. We do not have so much of a rush hour early in the morning or in early evening. Our breakdowns are occurring more at midday to 1 o'clock, which suggests that people are going out on the roads a bit later.

I think it is too early to say. Obviously, when lockdown lifts, we will see what happens to traffic patterns. I feel that we could put on hold the expansion of new smart motorways until we have evaluated the situation

with traffic and with the traditional rush hour. It is early to say, but it should be looked at.

Q117 **Mr Bradshaw:** Nicholas, are the two motoring organisations as one on this?

Nicholas Lyes: Certainly, when you look at some of the technology that smart motorways have, there is a lot of good technology. There are the variable speed limits, the variable message signs, the verge-mounted gantries and the overhead gantries. All of those things make a difference, and we should be encouraging more of that.

For us, it is more a question of, do you take the hard shoulder out and replace it with something else? That is the key question. For us, it is a very difficult question to answer because there is a wide range of issues that need to be looked at. For example, do you look at reverting back to something more akin to dynamic hard shoulder, or do you target expansion of the motorway network on key areas? Then, potentially, you can use a controlled motorway, with four lanes plus a hard shoulder, plus some of the technology. That question is difficult to answer at the moment, Ben, because we do not have figures on what the post-Covid world will look like in terms of traffic volumes.

Q118 **Mr Bradshaw:** As a matter of principle, you said in answer to Lilian Greenwood's question earlier that you would rather have a controlled motorway with a hard shoulder than any of the alternatives.

Nicholas Lyes: Yes. That response was about where I would rather have a relative stopping. I would rather have a relative stopping on a conventional motorway with a hard shoulder, or a controlled motorway I should say, because that is different from a conventional motorway.

Q119 **Mr Bradshaw:** But that implies a trade-off between human safety and cost. That leads me on to Elizabeth. If you do not mind me saying so, you were in a minority of one on this earlier, when you said that you accepted the need for the expansion of smart motorways because of the capacity issue, which is what the Government are saying. Do you understand how that can come across to families who have lost loved ones on these motorways? If we spent a bit more money, we could have the best of both worlds. We could have a motorway with a hard shoulder that was controlled.

Elizabeth de Jong: Yes. What I was talking about was congestion being an important thing for the Government to think about. It needs to be high on the Government's agenda, alongside safety. They have budgets to balance, and my understanding was that smart motorways were a potential way of expanding the motorway system at a lower cost than expanding in a more traditional way, where you take extra space or maybe it is not possible at all. These are really questions for Government and society to weigh up. It is between the cost of providing something, its safety impact and the capacity that it gives.

However, in the context of smart motorways, the statistics we have show that it is more or less there in the bar that has been set by Government to Highways England, that it needs to be at least as safe as the roads that it replaces. I believe, though, that the safety mitigations I have spoken about, the education mitigations and the enforcement are all needed for it actually to reach that bar. That is the support I am giving for smart motorways. There is still more to be done for them to reach that bar. Who decides where the bar should be is really for the Government to debate through our democratic processes.

Q120 **Mr Bradshaw:** Thank you. Edmund, is there any evidence that smart motorways address capacity issues?

Edmund King: We have some concerns, because, when we looked at capacity, 30% of our members said that they avoid the inside lane because they are worried that there may be a broken-down vehicle ahead. If a third of people are avoiding that lane, you are losing the extra capacity. That is a question.

As to the question on cost, when we looked at the M1 junctions 32 to 35, when they were planning that as a smart motorway, there was a proposal for six more ERAs that would have cost between £1 million and £2 million at the time. That was rejected purely on grounds of cost, despite the fact that the analysis showed it would lead to fewer live lane stops.

I have to say that I think safety has been compromised by just looking at congestion. Under a safe system, we should look at it across the board. I do not believe that has been done adequately.

Q121 **Mr Bradshaw:** The Government now say in response to that that without more smart motorways all this traffic would go off on to ordinary A roads, which would be much more dangerous. What do you think of that argument?

Edmund King: If people are going on a long journey, they tend to plan it on motorways, no matter what motorway. We see that on our route planner. If anyone is doing a journey of more than 100 miles, they tend to do it on motorways. I am not really sure that that argument stands up.

Q122 **Mr Bradshaw:** Nicholas, do you share Edmund's views on both cost cutting with regard to safety and the argument that the Government are using about pushing traffic on to other roads?

Nicholas Lyes: There are two bits of evidence that you can look at. For example, there is the M25 all-lane running scheme. The three-year report that they did after that showed that traffic volumes and traffic flow had improved, but it then started to go back to what it was before. The counterargument was that, if they had not done the work, it would have been more congested. I sort of accept that.

What we have also found from our own research is that on stretches of motorway on the M25, where they have done conventional widening—

controlled motorway, four lanes plus a hard shoulder—and then on the all-lane running stretch, there is a big difference in how reliable these schemes are. For example, the percentage of time that the live lane carriageway was reported as clear on an all-lane running stretch was 73%. That was over a one-year period. On the controlled motorway—four lanes plus a hard shoulder—it was 96%. There are far more live lane closures because you do not have the hard shoulder on all-lane running.

I accept that when all-lane running schemes are running fine, and there are no breakdowns or incidents, they tend to run quite well. If the slightest thing goes wrong, it can cause serious congestion. I am not convinced as yet about how robust they are when it comes to reducing congestion in the long term.

Q123 **Mr Bradshaw:** Edmund, you have mentioned a couple of times in this session international comparisons. You mentioned Norway and Switzerland and other countries that have done different things. Are you aware of any comparable countries that are doing what we are doing?

Edmund King: There are a couple that have similar motorway schemes— Germany, for instance—but, as I understand it, it is much more akin to the M42. It has ERAs every 400 to 500 metres rather than our design of 2,500 metres. There are a couple of countries that do not have a hard shoulder, but they tend to have more places to stop.

Q124 **Mr Bradshaw:** Elizabeth, were you indicating that you wanted to come in? Fire away.

Elizabeth de Jong: There are a few more things I would like to say about congestion, which I hope will be useful. I think we can still expect—

Q125 **Mr Bradshaw:** Sorry, can we come back to that because I was asking specifically about international comparisons? Do you have any international wisdom or comparisons?

Elizabeth de Jong: I will come back to you on that.

Q126 **Mr Bradshaw:** Nicholas, do you have any international intelligence that you would like to share?

Nicholas Lyes: I am afraid I don't. It is not something that I have looked at in a great amount of detail. I am aware that several other countries are looking at smart motorways, but I am not sure whether it is just about the technology that is being used or whether it is about the principle of taking away the equivalent of the hard shoulder.

Q127 **Mr Bradshaw:** Edmund, are you suggesting that you think our policy is out on a limb, that we are creating these on the cheap, and that other countries may be doing stuff but they are doing it much more safely?

Edmund King: Yes, I do believe that. We have said that consistently for the last 10 years.

Q128 **Mr Bradshaw:** Elizabeth, do you want to have a final word on

congestion?

Elizabeth de Jong: We still need to expect traffic to grow. The latest stats I have—there are obviously far more up-to-date ones—are that even in the depths of lockdown HGV traffic was at normal, usual before lockdown and before Covid levels. I do not think we can assume that it will reduce overall.

A typical city needs 45,000 tonnes of freight. That is what is delivered each day, so we need to be looking at congestion rather than building more smart motorways. Smart motorways are only part of the solution. Getting them to work effectively will solve some of that, but we clearly need different types of infrastructure and investment away from smart motorways. We need new capacity, and other pinch points need to be addressed. Our economy needs the smooth flowing of freight in order to function, so it is important.

Q129 **Mr Bradshaw:** There may be a trade-off between freight carrying on or increasing during Covid and ordinary private commuting to work decreasing. We do not really know how that is going to pan out in the medium or long term.

Elizabeth de Jong: We do not know how that will work out yet.

Mr Bradshaw: Thank you. Back to you, Chair.

Q130 **Chair:** Thank you, Ben. I just want to draw attention to a survey that Gavin Newlands has just notified us of from FairFuelUK. They polled over 14,000 motorists between 10 and 14 May. Of course, we do not have the details of what was said, but 83% of those polled wanted smart motorways abolished, and 64% said they were nervous and felt unsafe driving on a smart motorway in case of breakdown.

Edmund King, I want to draw you back to one thing you said to Ben Bradshaw. Given that general state of concern, do you believe that the Department for Transport and Highways England should pause the roll-out of further smart motorways until such time as they have retrofitted all of the technology that they have stated needs to be delivered on the smart motorways already built?

Edmund King: Yes. It is our view that new smart motorways should not be opened until all the technology that they promised has been put in place. We would include things like the M4, which has not yet opened and yet has been done to an earlier design, despite the fact that we raised reservations over five years ago. I do not think they should be rolled out until they are improved.

Q131 **Chair:** Nicholas, do you feel the same? It seems slightly bizarre to say that smart motorways can only be rolled out now with all of this technology in place, but it can still happen notwithstanding the fact that the technology has not been backfilled in the other parts. Surely, that is a way to keep Highways England's feet to the floor.

Nicholas Lyes: I would agree with a lot of that. I said this once before in this session, and I will say it again. Why are we opening up future designs of smart motorways to a different standard from what already operates? To me, that suggests that the existing standards that we have on all-lane running are not up to the right standard. For me, it is important that we have the same standards across the all-lane running network.

Chair: Thank you very much.

Nicholas Lyes, Edmund King, Elizabeth de Jong and Assistant Chief Constable Chris Todd, thank you for giving us so much evidence and for opening us up so well. Our next session will be with the engineers and those who look at this from a business case perspective. We look forward to that. I wish you a good rest of your day. Thank you again.