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# Safe Use of Automated Lane Keeping System (ALKS)

RoSPA's Response to the Department for Transport's Call for Evidence

Date: October 2020



Response to Department for Transport's Call for Evidence: Safe Use of Automated Lane Keeping System (ALKS)

## Introduction

This is the response of The Royal Society for the Prevention of Accidents (RoSPA) to the Department for Transport's call for evidence on the Safe Use of Automated Lane Keeping System (ALKS). It has been produced following consultation with RoSPA's National Road Safety Committee.

The Department for Transport is asking for information and views on how best to safely introduce the first step in automation in the UK. It also explores how the UK can safely take the next step, by supporting this early technology to go further. In particular, the call for evidence explores the challenges associated with switching control of a vehicle between the driver and the vehicle system, and the changing role and responsibilities of a driver, including the potential for the driver to safely undertake other activities when the vehicle system is engaged. It explores the implications for insurance, data and cybersecurity as well as the potential challenges for the technology in meeting domestic road traffic rules. Finally, it explores the potential to safely use these vehicle systems at higher speeds.

## Data Storage

### Question

#### **Do you foresee any legal barriers to accessing data for incident investigation?**

RoSPA is not in a position to comment.

## Driver Education

ALKS is designed to allow the driver to disengage from the driving task and places requirements on drivers that are likely to be new to them. For example, whilst ALKS is engaged, applying pressure to the brake pedal will not slow the vehicle, but rather commence a transition demand. A driver is likely to expect that applying pressure to the brake pedal will slow the vehicle.

It is therefore important that drivers are appropriately educated on the abilities and limitations of the system, as well as their remaining responsibility.

### Question

#### **How do you think the driver should be educated and informed to understand the abilities and limitations of the system to ensure they use it safely?**

RoSPA believes that the traditional method of providing information with a vehicle handbook or digital owner's manual would be insufficient for vehicles fitted with ALKS. As the system is designed to allow the driver to disengage from the driving task and places requirements on drivers that are likely to be new to them, drivers will need to fully understand how to operate ALKS safely and how to override the system if required.

Some drivers may not read the literature that accompanies their vehicle and even if they do, it is not always possible to fully understand or test how to operate every feature, such as how to activate traffic jam assist, when the vehicle is stationary. This could mean that drivers either avoid using some features or they may need to divert their attention from the road to activate them. Therefore, RoSPA recommends that practical education be undertaken by drivers before being permitted to use ALKS independently on public roads, using the customer's own vehicle or one from the same vehicle manufacturer. Training could include the requirements for engaging



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ALKS and how to perform the process, the role and responsibilities of the driver during operation and the procedure of handing back control to the driver.

Employers have a duty of care to manage occupational road risk so it is important that suitable arrangements to manage health and safety are put in place. RoSPA would encourage employers to provide education and practical training for drivers and if vehicles are fitted with ALKS, this should be included in any training programme. If an employee is killed while driving for work and there is evidence that serious management failures resulted in a 'gross breach of a relevant duty of care', the company could be at risk of being prosecuted. It is important to note that employers owe the same duty of care under health and safety law to staff who drive their own vehicles for work (often referred to as 'grey fleet') as they do to employees who drive company owned, leased or hired vehicles. Employees should also be encouraged to report near-misses to their line-manager, particularly where this new technology is concerned, as this could provide valuable information.

### Question

#### **What role do you think manufacturers selling this system should play in providing this education and information?**

RoSPA believes that the manufacturer should play a vital role in providing education and information for ALKS. They are best placed to point out the operating procedure and limitations, having developed the system. A number of vehicle manufacturers already offer additional training for their high-performance vehicle customers so a similar approach could be implemented.

However, we believe a number of education options will need to be provided to assist drivers that may not be the owner of the vehicle, such as family members and fleet users, and in preparation for when these vehicles enter the used car market, particularly outside of the franchised-dealer network. RoSPA is concerned that the main driver of the vehicle could receive instruction on how to use ALKS at the point of purchase, but other users may not be identified by the vehicle manufacturer.

It should also be noted that there is the potential for vehicles fitted with ALKS to be supplied to daily rental companies. Although this may not happen for some time, there could be safety issues surrounding the lack of driver education for ALKS at the point of handover if the system is operational. As it is possible manufacturers will offer automation on a subscription basis, RoSPA would recommend that the system not be activated on daily rental vehicles.

### Question

#### **What role do you think Government and its agencies should play in providing this education and information?**

RoSPA believes that at a minimum, the Government should publish guidance outlining the level of education that should be provided by the vehicle manufacturer. This would ensure consistency and could enable training providers to develop additional courses for fleet operators as part of their obligations relating to managing occupational road risk.

The Government could also consider the potential for providing an accredited course which includes the competences needed for safe and responsible use of ALKS. If this approach was adopted, a certificate of competence could be provided which would assist the insurance industry in identifying which drivers have received additional training.



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As the technology develops, if the scope of the regulation is no longer limited to M1 category (light passenger) vehicles, an approved Driver CPC module could be developed for professional lorry, bus and coach drivers to form part of the 35 hours of periodic training required every 5 years.

## Automated and Electric Vehicles Act 2018

### Question

**Subject to the outcome of this call for evidence and subsequent consultation, would you have concerns about a scenario where any vehicle approved to the ALKS regulation would be automatically considered to be an automated vehicle under AEVA?**

RoSPA is not in a position to comment.

## The Control Test

The Control Test is as follows:

A vehicle is not being 'controlled' by an individual if the individual controls none of the following:

1. Longitudinal dynamics (speed, acceleration, braking, gear selection)
2. Lateral dynamics (steering)

### Question

**Do you agree that the criteria set out in the Monitoring and Control Tests provide a reasonable framework for testing compliance with the AEVA definition of automation? Why?**

RoSPA is not in a position to comment.

### Question

**Do you agree with our preliminary assessment of how ALKS meets the criteria set out in Annex A? Why?**

RoSPA is not in a position to comment.

## Road Traffic Rules

Vehicle A is ALKS-capable. It is proceeding along its lane in traffic. The automated mode is engaged and so the driver is not paying attention to the environment outside the vehicle. A police officer in a nearby vehicle has noticed that Vehicle A has a faulty brake light. The police officer pulls in behind Vehicle A and switches on the flashing blue lights.

Rule 106 says the following on drivers responding to a police officer:

Police stopping procedures. If the police want to stop your vehicle they will, where possible, attract your attention by

- flashing blue lights, headlights or sounding their siren or horn, usually from behind
- directing you to pull over to the side by pointing and/or using the left indicator



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You MUST then pull over and stop as soon as it is safe to do so. Then switch off your engine. Rules 107 and 108 make similar requirements for responding to DVSA and traffic officers.

Whilst an ALKS-capable vehicle will not be able to pull over, it may be able to issue a transition demand to the driver. If listed under AEVA (as an automated vehicle), the driver would not be responsible for responding to the signalling of the police vehicle, only to a transition demand. However, there is no explicit requirement in the ALKS Regulation for the vehicle to possess rear-facing sensors. The vehicle may therefore struggle to 'know' to make a transition demand if it is being requested to stop by the police.

ALKS must also be able to respond to other signals from Police/DVSA/Traffic Officers, which may include flashing amber lights, flashing red lights, or flashing headlamps.

### Question

**How do you think ALKS will detect and respond to a police or other enforcement vehicle approaching from behind signalling for the vehicle to pull over?**

RoSPA is not in a position to comment.

### Question

**Do you think that 10 seconds is fast enough in the foreseeable circumstances to comply with the rules on responding to enforcement vehicles? If not, why?**

RoSPA believes that 10 seconds would be sufficient to comply with the rules on responding to enforcement vehicles. Drivers are advised to remain calm and to check it is safe before changing their speed or direction during normal driving, and the same should apply when responding to enforcement vehicles. This short time could be beneficial in allowing the driver to fully check their surroundings without having to concentrate on the task of driving and prepare to take control of the vehicle. Particularly in heavy traffic, it would be reasonable to expect a driver without ALKS to take a number of seconds to alter their speed and direction when responding to an enforcement vehicle.

RoSPA understands that if listed under AEVA, the driver would not be responsible for responding to the signalling of a police vehicle, only to a transition demand, and that there is no explicit requirement in the ALKS Regulation for the vehicle to possess rear-facing sensors. While not required for the safe operation of the vehicle travelling forward, this does seem to be an oversight. Although systems such as active cruise control only use forward-facing sensors, the driver is still in control of the vehicle when these systems are active and has the ability to change lanes promptly if they encounter emergency vehicles or an aggressive driver behind.

As an ALKS enabled vehicle will not necessarily be obvious to those travelling behind, we hope this does not result in an increase of road rage incidents where the driver behind wrongly assumes that the vehicle is being operated by a driver and will not move out of the way. As automated driving technology progresses and sensors are required throughout the vehicle to perform additional functions, RoSPA is confident that situations like this can be avoided.

## Stopping after an incident

Vehicle B is ALKS-capable. It is proceeding along in its lane in heavy traffic at low speed. Motorcyclist C is filtering between the lanes of traffic. As the traffic flow speeds up, Motorcyclist C is involved in a minor collision with by Vehicle B, which nevertheless causes her to lose balance and be knocked from her bike into the road.

Rule 286 requires a driver to stop if they involved in an incident. It says:



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If you are involved in a collision which causes damage or injury to any other person, vehicle, animal or property, you MUST:

- stop
- give your own and the vehicle owner's name and address, and the registration number of the vehicle, to anyone having reasonable grounds for requiring them
- if you do not give your name and address at the time of the collision, report it to the police as soon as reasonably practicable, and in any case within 24 hours

The ALKS Regulation requires a vehicle to stop if a collision is detected. Under paragraph 5.1.1., where a vehicle is involved in "a detectable collision", the vehicle shall be brought to a standstill. However, the Regulation sets no standards for collision detection systems. It is therefore not clear if the vehicle will detect the collision (in order to stop after Motorcyclist C has been knocked from her bike).

### Question

**How will ALKS detect a minor or low-energy collision, in order to come to a stop and alert the driver?**

RoSPA is not in a position to comment.

### Question

**Do you foresee any risks should ALKS vehicles not stop for low-energy impacts?**

Particularly where a vulnerable road user is involved, such as a motorcyclist, low-energy impacts could unfortunately still result in serious injury or death. Where a car or goods vehicle is involved in a minor collision, the vehicle would usually remain upright and could display hazard warning lights to notify other road users. It is also often possible for the driver to move the vehicle to a place of safety. However, where a motorcyclist is involved, even a low-energy collision could result in the rider lying on the carriageway with no method of informing approaching vehicles. The situation could be worse during the hours of darkness. RoSPA is concerned that if ALKS vehicles do not stop following a low-energy impact, a secondary incident could occur which may not have taken place had the vehicle been operated by a driver.

Although ALKS is designed to perform the dynamic driving task instead of the driver, RoSPA believes that Rule 286 of the Highway Code which requires a driver to stop if they involved in an incident, should be amended to instruct the driver to prepare to take control of the vehicle as soon as practical and then follow the same procedure as if they were the driver at the time of the collision. However, due to the distance that may have been travelled before the driver is able to stop safely, it raises the question as to what the driver should then be expected to do. RoSPA would not want to see drivers attempting to reverse or walk a considerable distance along the hard shoulder to reach the scene, particularly where the incident is passable and other traffic is continuing along the carriageway.

## Reading GB road signage

### Question

**How will manufacturers ensure that ALKS vehicles deployed in Great Britain are able to recognise signage located above the road that may be unique to Great Britain?**

RoSPA is not in a position to comment.



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## Registration of automated vehicles

### Question

**Do manufacturers intend to offer automation as an optional package for customers at the point of purchase? Please provide details.**

RoSPA is not in a position to comment.

### Question

**Do you have concerns about vehicles that are registered as AVs on the DVLA database but the keeper has chosen to have the functionality disabled so they are not capable of operating as an AV?**

RoSPA is not in a position to comment.

## Coming to a stop in lane

If the vehicle comes to an unjustified stop in lane where no emergency or genuine mechanical defect was present, it seems unfair to hold the driver criminally responsible where the apparent cause of the problem has not prompted any transition demand.

Government therefore proposes an amendment to both of the Motorway Traffic Regulations, adding a further exception where ALKS has come to an unexpected stop in lane.

It would be for the courts to decide how long would be unacceptable for a driver to allow the vehicle to remain at rest if they had allowed the vehicle to come to a stop and were not incapacitated.

### Question

**Do you agree that it is appropriate to exempt the driver from prosecution – if the vehicle comes to an unjustified stop when ALKS is engaged – by creating a further exception in the Motorway Traffic Regulations? If not, why?**

If the vehicle comes to an unjustified stop when ALKS is engaged and the driver has no warning or ability to override the system in time, RoSPA would agree that the driver be exempt from prosecution. Where a vehicle may come to a stop in lane due to perceiving a danger which requires such an emergency manoeuvre, it is important that the driver is not held unfairly responsible for any action taken by the system which could cause the vehicle to drive unlawfully and/or results in damages.

However, RoSPA does not think it would be appropriate to exempt the driver from prosecution if it was reasonable to expect the driver to have sufficient time to disengage ALKS and be able to take control of the vehicle, such as where the vehicle performs a Minimum Risk Manoeuvre (MRM) when the driver fails to respond to a transition demand.

Where a vehicle performs an emergency manoeuvre, for example when a piece of debris has been deposited in the carriageway, it is understood that the vehicle will stop in the live lane. As the technology is already available to perform lane changes with very limited driver input, RoSPA questions why it would not be possible for ALKS enabled vehicles to be given the capability to change lanes if safe to do so, or move to the hard shoulder when a stop is required.



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## Relying on the system

Currently, drivers are responsible for maintaining sufficient attention to the driving task to ensure safety. Indeed, Rule 150 of the Highway Code warns the driver of distraction and to not rely on driver assistance systems. It says:

*There is a danger of driver distraction being caused by in-vehicle systems such as satellite navigation systems, congestion warning systems, PCs, multi-media, etc. You MUST exercise proper control of your vehicle at all times. Do not rely on driver assistance systems such as motorway assist, lane departure warnings, or remote control parking. They are available to assist but you should not reduce your concentration levels. Do not be distracted by maps or screen-based information (such as navigation or vehicle management systems) while driving or riding. If necessary find a safe place to stop.*

*As the driver, you are still responsible for the vehicle if you use a driver assistance system (like motorway assist). This is also the case if you use a hand-held remote control parking app or device. You MUST have full control over these systems at all times.*

Should ALKS comply with the definition of automation under AEVA, it will be the first automated driving system which is not classified as a driver assistance system. The expectation will be that the driver can rely on ALKS to carry out the driving task in certain circumstances. Similarly, ALKS or an infotainment system would not distract from the driving task, as this is being performed by ALKS, and may actually maintain the driver's attention. Government therefore proposes a change to Rule 150 to enable a driver to rely on ALKS as an automated vehicle.

### Question

**Do you agree that amending Rule 150 is sufficient to clarify that the driver may rely on the ALKS? If not, why?**

RoSPA broadly agrees for the need to amend Rule 150 to clarify that the driver may rely on ALKS. However, we are concerned of the potential for drivers to become significantly distracted by external devices, such as mobile phones or tablet computers, when ALKS is engaged. The THINK! campaign encourages drivers to put their phone away before driving so they will not be tempted to use it, making the glove compartment the phone compartment. RoSPA believes that this practice should still be encouraged.

If there is an excuse or justification to use a device part way through a journey, when control of the vehicle passes back to the driver, particularly where a transition demand is unexpected, there could be temptation for drivers to continue interacting with the device, particularly if they had not quite completed the task they were undertaking, such as sending an email or a text message. In 2019, there were 2,563 road traffic collisions where 'distraction in vehicle' was cited as the contributory factor, with 65 of these being fatal.

RoSPA believes that drivers should not be allowed to perform other activities when ALKS is activated unless there is sufficient evidence showing that it does not compromise safety when the driver is required be in control of the vehicle. We agree that Rule 150 should be amended to clarify that the driver may rely on ALKS, but we believe that it should specifically highlight that drivers must always be ready to respond to a transition demand and that performing other activities could hamper the driver's ability to do so.

## Responding to a transition demand

While it is important that drivers are able to safely and fairly delegate the dynamic driving task (DDT) to the system when it is engaged, this does not mean that they delegate all responsibility.



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In fact, where the system is not designed to deal with a situation it encounters (e.g. exiting its ODD), or where the driver is found to be unavailable, the vehicle will issue a transition demand, and if the driver fails to take control in response, it will perform a Minimum Risk Manoeuvre involving a stop in lane according to the ALKS Regulation.

### Question

**Do you agree that not changing the Motorway Traffic Regulations, except for unjustified stops, ensures the driver is suitably incentivised to take back control when requested? If not, why?**

RoSPA strongly agrees that not changing the Motorway Traffic Regulations, except for unjustified stops, ensures the driver is suitably incentivised to take back control when requested. The consequences of a vehicle coming to a stop in a live lane could be catastrophic to the vehicle occupants and other innocent road users, so the driver should be responsible for resuming control of the vehicle when requested.

We understand that eCall is not activated if the vehicle performs a MRM and we agree that it would not be appropriate to activate eCall if the vehicle performs an emergency manoeuvre and then successfully avoids a collision, or if the driver regains control of the vehicle and continues the journey safely. However, RoSPA would be keen for vehicle manufacturers to explore the potential for eCall technology to be activated where a MRM is performed because the driver fails to respond to a transition demand and the vehicle remains at a stop in a live lane.

### Question

**Do you agree that the Highway Code should be changed so that drivers of ALKS must be alert to a transition demand? If not, why?**

RoSPA agrees that the Highway Code should be changed so that drivers of ALKS must be alert to a transition demand. Drivers may not pay much attention to the operation of the vehicle if they believe that the technology will perform the task flawlessly and stop them being involved in a collision no matter what. It could be argued that the use of automated driving technology would not be attractive for drivers if they still had to act like they were driving, but as ALKS is designed for use on motorways at speeds up to 60 km/h (37 mph) and is intended for situations of heavy, slow moving traffic, the driver still has a vital role in operating the vehicle for the majority of their journey.

### Question

**Do you think that amending the Highway Code is sufficient to communicate to drivers their responsibility? Why?**

RoSPA does not agree that solely amending the Highway Code is sufficient to communicate to drivers their responsibility. Although drivers and riders are encouraged to keep updated with changes in the Highway Code, unfortunately many drivers may not have referred to it since passing their driving test and may only choose to do so if they intend to add another category to their driving licence or take part in driver training as part of their employment.

RoSPA strongly recommends that the wording in the Highway Code be complimented by driver education and training to include the requirements for engaging ALKS, how to perform the process, the role and responsibilities of the driver during operation and the procedure of handing back control to the driver.



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## Performing other activities

### Question

**Do you think the driver should be allowed to perform other activities when ALKS is activated if they must only be ready to respond to a transition demand, with particular reference to any implications for road safety? If not, why?**

RoSPA does not agree that the driver should be allowed to perform other activities when ALKS is activated.

We fully understand that the technology has the potential to improve the driving experience and give back productive time to the driver while travelling, and we recognise that the dynamic driving task will be delegated to the vehicle when ALKS is enabled. However, RoSPA is concerned that allowing drivers to switch off completely and perform other tasks could have devastating consequences if the driver fails to respond to a transition demand within the 10 second time frame. We also seek reassurance that when ALKS is enabled, there is no possibility that the steering wheel could be accidentally knocked resulting in the vehicle moving from its lane.

Although we agree that a lack of engagement in the driving task may result in drivers becoming bored, RoSPA believes that engaging in distracting activities that can limit the speed and effectiveness of system handovers could be of greater risk. If a driver is suffering from the effects of fatigue, whether ALKS is engaged or not, RoSPA would recommend that a suitable location is chosen to stop safely and take a break.

If it is decided that performing other activities will be permitted, RoSPA would expect to see clear evidence to show that these tasks will not affect the driver's ability to respond to a transition demand and that the driver has the capability to continue operating the vehicle safely for the remainder of their journey.

### Question

**What other activities do you think are safe when the ALKS is activated?**

Automated vehicle technology has great potential to reduce collisions and take the stress out of driving, particularly during situations of heavy, slow moving traffic on a motorway. ALKS would allow drivers to rest their arms and legs for a period of time before continuing their journey at full motorway speeds or on rural and residential roads.

Due to the potential safety implications of becoming distracted, RoSPA does not believe that the driver should be allowed or encouraged to perform other activities when ALKS is activated in addition to what is already legally permitted when driving. As technology develops and if evidence shows that vehicles are able to start, stop, change lanes and safely navigate a complex route without driver intervention, our position could change. RoSPA can see the many benefits automation could bring but we are mindful that many years of development by vehicle manufacturers could be undone if drivers are allowed to switch off completely from the driving task.

### Question

**Do you think that the driver should be allowed to undertake other activities if ALKS is not listed under AEVA? If not, why?**

RoSPA believes that regardless of whether ALKS is listed under AEVA or not, drivers should not be encouraged to undertake other activities in addition to what is already legally permitted while driving. This is to ensure the driver is ready to take control of the vehicle when required.



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## The Infotainment System

Regulation 109 of the Construction & Use Regulations 1986 prohibits a person from driving, or causing or permitting a vehicle to be driven on the road:

*if the driver is in such a position as to be able to see, whether directly or by reflection, a television receiving apparatus or other cinematographic apparatus used to display anything other than information -*

*(a) about the state of the vehicle or its equipment*

*(b) about the location of the vehicle and the road on which it is located*

*(c) to assist the driver to see the road adjacent to the vehicle*

*(d) to assist the driver to reach his destination*

For a driver of an ALKS vehicle to be able to use the infotainment system as anticipated – for activities other than driving – it would be necessary to add an exception to Regulation 109.

### Question

**Do you agree that an exception should be added to enable the use of the infotainment system for activities other than driving? If not, why?**

RoSPA does not agree that an exception to Regulation 109 of the Construction & Use Regulations 1986 should be added to enable the use of the infotainment system for activities other than driving.

While the infotainment system is required to cut out in the event of a transition demand, we are concerned that drivers may become significantly distracted if they connect external devices to the vehicle infotainment system to watch a film, check emails or respond to text messages, or access other video or written content. Although a driver would be able to tether their mobile phone to the system as is possible today, for many years the THINK! campaign has encouraged drivers to put their phone away before driving so they will not be tempted to use it. RoSPA believes that this practice should still be encouraged for those using vehicles fitted with ALKS.

### Question

**Are there any activities you consider unsafe to perform through the infotainment system?**

RoSPA is concerned about the driver becoming distracted if they use the vehicle infotainment system to watch films or television, reply to messages, or interact with media or written content.

A proportion of drivers already carry out distracting activities occasionally without realising the extra risk that it causes. Eating, drinking or making adjustments to the infotainment system are examples of activities that drivers may do without always contemplating the risks involved. With the upsurge of touchscreen infotainment systems being fitted to vehicles with additional menus and features being added, drivers could be removing their attention from the road for sustained periods of time merely to adjust the radio station or change music track – tasks that should ideally not be done while the vehicle is in motion.

When ALKS is engaged, this could give the driver the opportunity to undertake these brief tasks that they would normally have done while driving, in a manner that would be safer than if they were fully in control of the vehicle, but still be in a position to respond promptly to a transition demand. RoSPA believes this is one of the benefits of automated driving systems and we are optimistic that this technology could potentially improve the safety of vehicle occupants and other road users.



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## Use of ALKS up to 70 mph

The Government is considering allowing ALKS to operate at speeds up to 70 mph, provided the manufacturer declares that the system has the capability to do so safely and in compliance with other technical requirements of the ALKS Regulation not affected by this higher maximum speed.

### Question

#### Do you agree with this approach? Why?

If vehicle manufacturers confirm that ALKS has the capability to operate at up to 70 mph safely and in compliance with other technical requirements of the ALKS Regulation, RoSPA agrees that this would be acceptable.

Multiple scenarios should be considered before permission is granted, such as how the vehicle would perform in an emergency at higher speeds. For example, when following another vehicle at 70 mph, the driver in front observes a collision ahead and is able to change lanes safely to avoid it. As the vehicle with ALKS engaged is unable to see through the vehicle in front, sensors only detect the obstruction when that vehicle changes lane so may not be able to slow in time to avoid a second collision. Although it is not certain that a collision would be avoided if the ALKS vehicle was being operated by a driver, a competent driver should be looking ahead of the vehicle in front and may have observed the collision well before sensors could detect an obstruction.

As there is the potential for ALKS to be engaged for longer periods of time when compared to operation only being permitted up to 60 km/h (37 mph), which is intended primarily for traffic queues, driver fatigue must be carefully considered.

Fatigue increases reaction time, which could be critical if a transition demand is requested by the vehicle. It also reduces vigilance, alertness and concentration so that the ability to perform attention-based activities could be impaired. Even if the driver responds to a transition demand within the required 10 seconds, it would be likely that a driver suffering from fatigue would not be fully alert to continue the task of driving in a safe manner. For example, if a driver were to be unexpectedly called upon to take control of the vehicle and was asleep or had a low level of consciousness, they may be in a state which would be unsafe for driving and could fall asleep again.

Therefore, it is essential that drivers make sure they are fit to drive before setting off, have a good night's sleep and take regular breaks. If they start to feel tired, even if ALKS is engaged, they must stop and have a break or find a suitable location to take a nap.

### Question

#### Do you have any other comments you'd like to make?

RoSPA believes that automated vehicle technology has the potential to reduce collisions often caused by human error which could result in fewer casualties on our roads. Unfortunately, many collisions that involve human error also involve other factors that may have contributed, such as poor road design or faulty vehicle design, even if the human had not made a mistake. Signage and road markings will be particularly important for vehicles fitted with ALKS as they are likely to rely heavily on clear and visible lines for lane keeping and signs for speed limit compliance.

As technology advances or where potential errors are discovered, vehicles can be recalled by manufacturers for software updates or to install a hardware solution. As ALKS will be the first approved system designed to perform the dynamic driving task instead of the driver, it is imperative that updates are performed as soon as possible to mitigate the risk to the vehicle occupants and other road users should the system fail.



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When vehicles are recalled, a small minority of owners are unable to be traced by the manufacturer or there may be a significant delay in the fault being rectified if the owner ignores correspondence. RoSPA would like to see strong collaboration between vehicle manufacturers, the Government and the insurance industry to locate any affected vehicles. RoSPA would also recommend owners still be contacted for critical updates even if an official recall is not initiated, where the vehicle warranty has expired or when the vehicle has left the franchised-dealer network for servicing or maintenance.

As vehicles become increasingly autonomous it is essential that drivers understand the technology in their vehicles, what it does, how to use it safely and the potential risk of misuse. Drivers should receive vehicle familiarisation training when they obtain any new vehicle, including the safe use of technology, particularly if their previous vehicle did not have that feature. If used properly, automated vehicles have enormous potential to reduce collisions and casualties, but if they are not used properly, they can also increase risk, especially if drivers over-rely on the technology.

RoSPA has no further comments to make on the consultation process, other than to thank the Department for Transport and the Centre for Connected and Autonomous Vehicles for the opportunity to comment. We have no objection to our response being reproduced or attributed.

