

**Law Commission – Automated Vehicles: Consultation Paper 3**  
**A regulatory framework for automated vehicles. A joint consultation paper**  
**Written response from Transport for London**

**1. Executive Summary**

- 1.1. This paper has been prepared as a response to the Law Commission’s consultation paper on a regulatory framework for automated vehicles (Consultation Paper 252). We welcome the consultation carried out by Law Commission, which builds on the initial consultations on safety assurance and legal liability and on highly automated road passenger services (HARPS). We welcome continuing engagement in the future and offer of our assistance, given the complexities of the London transport network.
- 1.2. The Mayor’s Transport Strategy (MTS) is a central part of the Mayor of London’s vision for a healthier, cleaner and safer city. Fundamental to this vision is the need for a shift away from car use and to encourage walking, cycling and public transport use, through the Healthy Streets Approach set out in the MTS.
- 1.3. The Healthy Streets Approach puts human health and experience at the centre of planning the city, streets and the public realm to create spaces that are appealing to walk, cycle and spend time in. This approach will help reduce car dependency, increase active travel, reduce road danger, improve air quality, in turn reducing health inequalities.
- 1.4. The MTS sets out the goal that, by 2041, all deaths and serious injuries will be eliminated from London’s transport network. This commitment is underpinned by the Vision Zero action plan.
- 1.5. New mobility services, such as Autonomous Vehicles (AVs), have the potential to change the way people move around cities and to improve their lives. We have identified seven guiding principles, set out in policy 23 of the MTS, to evaluate new transport services to ensure they support the Healthy Streets Approach.
- 1.6. We recognise that AVs could present multiple benefits to society, including offering additional transport options to those less mobile and improving safety by reducing the risk of road traffic collisions. However, they may also present operational risks to road networks, with early analysis suggesting that, without policy interventions, they could potentially increase congestion and discourage active travel and public transport use.
- 1.7. We welcome this regulatory review and the ambition to identify the right regulatory reforms which, if enacted, would allow the potential benefits of highly autonomous vehicles while limiting the potential risks.
- 1.8. We are particularly pleased to see good progress in relation to the approval of vehicles and a strong focus on safety.
- 1.9. We have responded in detail to the questions most relevant to us based on our current understanding but would also like to make the overarching points

below.

#### 1.10. **User-in-charge**

1.10.1. We remain uncertain about the user-in-charge concept. While we understand the theory and accept the need for a clear distinction between when the vehicle is self-driving and when the driver is responsible, it is still not clear how this would work in practice. Further detail on the transition arrangements in real life situations will be key.

1.10.2. We are concerned that it is vulnerable road users who are most likely to be impacted. They must be at the heart of the design process if AVs are to have a positive impact on road safety. It is important that not only are the vehicles safe but that they feel safe to both those in the vehicle and all other road users.

#### 1.11. **Retaining flexibility to update legislation as we learn more about AVs**

1.11.1. While recognising they may be out of scope for the Law Commission's work, key considerations such as cyber-security, communications networks and connectivity (with infrastructure and other vehicles) are central to understanding how the vehicles will operate and may also require the development of new legislation.

1.11.2. Many elements are currently dealt with at a high level and it will be of paramount importance to look at each proposal with fresh eyes as more detail starts to emerge on likely models of deployment and operational considerations. Development of technology in this area is fast paced and existing thinking may quickly prove to be out of date. We would therefore advocate for a flexible approach which can be adapted as needed.

1.11.3. Setting out a list of broad principles, whilst also retaining a degree of flexibility to enable lessons learnt and best practice to be incorporated as the likely path for deployment of AVs becomes clearer, will be vital.

1.11.4. We would also stress the need for enabling legislation that allows local authorities to create frameworks that align with the specific needs of their cities. For example, a city may need powers to penalise fleet operators in cases where vehicles are left in a location which impedes the efficient movement of traffic.

#### 1.12. **Integration with public transport and local powers**

1.12.1. The Highly Automated Roads Passenger Services (HARPS) proposals are understandably less developed and we are unable to draw any conclusions from this document on how these are envisaged to sit alongside either the legislation by which our responsibilities are underpinned or mass public transport in the future.

1.12.2. We are supportive of national legislation covering vehicle standards and operators of no-user-in-charge fleet operator however local powers will also be essential.

1.12.3. The recently announced National Bus Strategy for England recognises the

important role buses play. It seeks to see buses across the country become more frequent, more reliable, easier to understand and use, better co-ordinated and cheaper. We would expect the evolving HARPS proposals to be aligned with and support this vision and the existing bus legislation and to not undermine the shift towards sustainable modes and away from low-occupancy car use.

### 1.13. Transition Period

- 1.13.1. The scale of change required for the introduction of CAVs on a mass scale cannot be underestimated. This will require careful planning and consideration, not just from a legal perspective. A smooth transition will need considerable work to understand every element of existing and future operations for example the impact on infrastructure, practicalities of enforcement activity or how the behaviour of other road users may impact AVs. We envisage that there will be a long period of mixed traffic, where AVs (both user-in-charge and no-user-in-charge (NUIC)) and conventional vehicles co-exist. Further consideration needs to be given to the practical and legal challenges of running multiple different systems, for example on licensing and enforcement.
- 1.13.2. It is difficult to predict at this stage how automated vehicles will evolve and to what degree their systems will rely on existing highway infrastructure or connectivity. It is highly likely that there will be a significant impact for highway authorities and how they manage and maintain their roads. Examples would be road markings and signage or safety management of tunnels, many of these standards are defined in law. There may also be differing requirements while a mixed fleet of conventional and self-driving vehicles are operating side by side. We would suggest that this topic is addressed swiftly so expectations on all sides are clear and whether or not the existing legislation is adequate can be assessed.
- 1.13.3. We also believe that further consideration will need to be given to the interplay between AV regulation and other regulatory regimes applicable to all vehicles for example Taxi and Private Hire.

## 2. Responses to Consultation Questions

- 2.1. Below are our responses to the questions raised in the consultation paper “Automated Vehicles: Consultation Paper 3 A regulatory framework for automated vehicles. A joint consultation paper”.
- 2.2. All chapter and paragraph references relate to the full consultation paper.

## 3. CHAPTER 4: SELF-DRIVING AND HUMAN INTERVENTION

### Consultation Question 1 (Paragraph 4.114)

We provisionally propose that:

- (1) a vehicle should not be classified as self-driving if, with the ADS engaged, the user-in-charge needs to monitor the driving environment, the vehicle or the way it drives;
- (2) it is nevertheless compatible with self-driving to require the user-in-charge to respond to a clear and timely transition demand which:
  - a. cuts out any non-driving related screen use;
  - b. provides clear visual, audio and haptic signals; and
  - c. gives sufficient time to gain situational awareness
- (3) to be classified as self-driving, the vehicle must be safe enough even if the human user does not intervene in response to any event except a clear and timely transition demand.

Do you agree?

Yes

No

Other

- 3.1. While at first reading the position taken above would seem reasonable, we have some reservations as to whether a vehicle operating with a user-in-charge, in the way described in this and other consultations, is desirable or safe in a complex urban environment like London.
- 3.2. There are clearly some tasks which fall outside the dynamic driving task which a user-in-charge will be well paced to undertake for example liaising with emergency services. We also recognise the need for clarity on who is responsible for a vehicle at all times. However, based on the limitations of ALKS (the nearest practical example thus far), we have concerns over the lack of monitoring of the driving environment, the vehicle and the way it drives by the user-in-charge. Since the first law commission consultation, our understanding of how this is expected to work in practice has evolved significantly, accelerated in particular by the Department for Transport’s (DfT) call for evidence on Automated Lane Keeping Systems (ALKS). It is worrying to note that many of the examples raised as of concern in this consultation paper and the ALKS document relate to vulnerable road users. It is imperative that the potential roll out of this technology is safe for all road users.

- 3.3. This disengagement by the person at the controls, as the question notes, means it will take time for the user-in-charge to establish sufficient situational awareness and to take back control of the vehicle safely. Questions certainly still remain over what constitutes sufficient time and distractions will not be limited to those that the vehicle is able to cut out.
- 3.4. Critical to this proposal is clarity in exactly what circumstances the user-in-charge will be required, through a transition demand, to take control. We would expect this to be tested and assured during the pre-deployment approval process and for there to be absolute confidence that the vehicle will be able to safely 'self-drive' until the user-in charge takes over. Even if they fail to respond to a transition demand, we would expect the vehicle to be able to come to a safe stop. If there is an expectation that the user-in-charge is able to take control of the vehicle at will or, most controversially, to avert an accident we would question the safety of this arrangement.
- 3.5. Whilst the proposal addresses the cutting out of non-driving related screen use, to ensure that the user-in-charge responds swiftly to a transition demand, it does not address the fact that drivers currently engage in activities which are not permitted, such as using a handheld mobile phone. It is conceivable that the temptation will only increase if the vehicle is largely self-driving. How this can be prevented will need to form part of the transition demand assessment.
- 3.6. Although covered to some degree in the data section of the report, it is not clear how simple it will be for investigators to know whether a vehicle was self-driving or whether the user-in-charge had taken over at the time of a collision. We know that when faced with possible criminal charges, people will often put forward different versions of events, either because their recollection is poor or they deliberately want to distort the truth.
- 3.7. The temptation to classify vehicles as self- driving before they really are should be resisted. Advanced driver assistance features will more than likely contribute significantly to improving road safety and should be used under existing arrangements, with the driver maintaining full responsibility for the vehicle.
- 3.8. We also note that a user-in-charge being a driver in some instances and not in others does not sit comfortably with private hire legislation, which currently defines licensing requirements by reference to whether a vehicle is provided with a driver. Interchangeability of concepts has the potential to create uncertainty as to whether a user-in-charge, who has the status of a driver in some driving circumstances but not others, will be within scope of existing regulations when providing passenger carrying services.

*Consultation Question 2 (Paragraph 4.115)*

**We welcome views on whether self-driving features should be designed to ensure that they can be used by people with hearing loss.**

- 3.9. The development of a new form of transport provides an ideal opportunity to design in the highest levels of accessibility and inclusivity. We believe self-driving features should be designed to ensure that they can be used by people with hearing loss for example with clear visual warnings and haptics as

well as audible warnings used for transition demands.

- 3.10. At present, hearing loss does not affect the ability to drive a car, with people who are profoundly deaf able to hold a car driving licence. The consultation paper does not appear to suggest any changes to existing driving licence requirements.
- 3.11. Hearing loss is often gradual, and an individual may not notice any changes straight away. Therefore, designing self-driving features so that they can be used by those with hearing loss, by reducing the reliance on audible alerts, could improve safety.
- 3.12. As well as transition demand features, where possible other features of self-driving vehicles should be designed so they can be used by those with accessibility needs – for example, if a self-driving vehicle will be overseen remotely, functionality for the passenger to alert the vehicle’s supervisor to issues such as a medical emergency or a potential threat to their security should be in place and should be designed to be fully accessible.
- 3.13. Co-design would be particularly helpful: by engaging early with accessibility organisations it should be possible to capture hearing impaired and other users’ needs. It is important that any new set of accessibility requirements are updated in the light of increasing experience and that relevant stakeholder groups are considered throughout the design and testing process of AV services.

#### 4. CHAPTER 5: HOW SAFE IS SAFE ENOUGH?

##### Consultation Question 3 (Paragraph 5.118)

**We provisionally propose that the decision whether a vehicle is sufficiently safe to “safely drive itself” should be made by the Secretary of State, as informed by advice from a specialist regulator.**

**Do you agree?**

- Yes
- No
- Other

- 4.1. We agree that the decision that a vehicle is sufficiently safe to be self-driving should be taken at a national level. We recognise that there will be an element of judgement in this decision and it seems appropriate that the Secretary of State should make the final decision. This would be in line with Part 1 of the Automated and Electric Vehicles Act 2018 and with decisions to authorise vehicles under Vehicle Special Orders (s44, Road Traffic Act 1988).
- 4.2. The advice from the specialist regulator will be key to informing this decision and we would expect this, as far as possible, to provide a degree of uniformity, noting the issues described in relation to measurement.
- 4.3. It is important that the specialist regulator mentioned above consults highway authorities on their views of what is considered to be sufficiently safe. We note

that this has been partially addressed in the consultation, for example through the proposal to develop a scenario database (Question 8). We would also expect that the detail of the vehicle’s operational design domain would form part of this listing and be agreed with the relevant highway authority. We look forward to understanding the detail behind the Secretary of State’s decision-making process, as it emerges and contributing to this discussion.

- 4.4. We would also be interested to understand what the process would be for deciding vehicles either imported or travelling into the country temporarily are sufficiently safe to self-drive.
- 4.5. We would stress that the specialist regulator needs to include some permanent staff knowledgeable about access and mobility for disabled people and people with other protected characteristics.
- 4.6. We would expect a clear technical justification to be provided where a materially different position is taken from other UNECE members, particularly in the case of approval.

Consultation Question 4 (Paragraph 5.119)

**We welcome observations on which of the following standards is most appropriate when assessing the safety of automated vehicles:**

- (a) as safe as a competent and careful human driver;**
- (b) as safe as a human driver who does not cause a fault accident;**
- (c) overall, safer than the average human driver.**

as safe as a competent and careful human driver

as safe as a human driver who does not cause a fault accident

overall, safer than the average human driver

none of the above

- 4.7. Our Vision Zero approach to road safety aims to eliminate all deaths and serious injuries from London's transport network by 2041. To this end we would advocate for the highest level of safety possible. We would expect this to be safer than a competent and careful human driver and continually improving.
- 4.8. Much has been made of the potential safety benefits from removal of the human driver and the associated errors. If these can be eliminated, this of course presents a real opportunity to improve safety. What is not clear is if there is yet sufficient understanding of the new ways in which an AV may fail.
- 4.9. We would suggest that an assessment needs to be made of the situations where an AV may not be as good as a competent and careful human driver. Of particular concern is that the majority of the examples given point to vulnerable road users, who represent 80 per cent of those killed or seriously injured on London’s roads. If self-driving technology does not improve the safety of these groups, it will not meaningfully improve road safety.
- 4.10. We do however recognise that waiting for AVs that are many times safer than human drivers misses opportunities to save lives and that there may be a

case for introducing AVs when they are significantly less likely to cause incidents than humans. This weighing up of benefit and risk support our suggestion that the decision to allow a particular vehicle on the road should sit with the Secretary of State.

- 4.11. We would also suggest that, as the technology evolves and improves, the bar should be further raised to ensure that safety is constantly improving. In particular, we would expect to see a step change in safety levels when automated vehicles are no longer sharing the road with conventional vehicles, driven by humans. We would consider this period of mixed operation to be the most challenging.
- 4.12. We would anticipate that machine learning would be able to improve safety further in future. However, we acknowledge the concern raised in chapter seven that the system could learn to react in a way that was not foreseen during the design and approval process and would suggest further consideration is given to how these risks could be minimised and how assessing this could be incorporated into the 'in use' regulator role.
- 4.13. We are in a period of learning and the provision and sharing of data on AVs between manufacturers, operators and other organisations in the ecosystem would work towards a collaborative culture of continuous improvement with safety at its heart. This is something we already advocate for in Connected and Autonomous Vehicles (CAV): Guidance for London.

Consultation Question 5 (Paragraph 5.120)

**We welcome observations on how automated vehicles can be made as safe as reasonably practicable.**

- 4.14. We do not feel best placed to answer this question in detail however we would suggest that all elements are considered, from the physical design of the vehicle, including positioning of any computers, sensors wiring and so forth, through to operation of the Automated Driving Systems (ADS) and, importantly, including any cyber security. We would also suggest that a process for continuous assessment is put in place eg as new software is installed. A clear understanding of the vehicle's capability and the role any individual is expected to take will be central to safety.
- 4.15. Any design of an automated vehicle intended to make a meaningful impact on road safety must start with pedestrian, cyclist and motorcyclist safety, rather than assuming motorway style conditions. In 2019 in London, there were 3,147 deaths and serious injuries of pedestrians, cyclists and motorcyclists, versus 575 for car occupants. Automation has the potential to deliver a sea change in road safety for these vulnerable road users, and we aren't currently seeing the level of focus and ambition here that we would like.
- 4.16. Connected Vehicle (CV) technology and services are a key stepping-stone towards autonomy and could play a beneficial role in the development of the ecosystem. We feel that this is an area which is currently receiving insufficient attention given its potential to improve safety and underpin the efficient operation of the networks of the future. For instance, vehicle to vehicle (V2V) communications would enable AVs to forewarn vehicles behind them of



potential hazards and issues downstream. Similarly, vehicle to infrastructure (V2I) connected communications would enable highway authorities to receive real-time information on road conditions from AVs or connected vehicles and to then issue hazard warnings to AVs well in advance of the hazard.

- 4.17. The V2I information that could be exchanged would include geo-referenced information relating to fixed and dynamic speed limits, lane closures, other temporary restrictions, diversions and potential hazards. So, as well as assisting AVs to be as safe as practicable, this CV information would also help to ensure that they are compliant with road traffic regulations.
- 4.18. Where an AV's ability to deal with a hazard/scenario is outside its operating parameters, providing the AV with an earlier notification of hazards through CV services would also provide more time for the ADS to issue a transition demand to the vehicle's user-in-charge, and for the user-in-charge to then gain sufficient situational awareness to safely take control of the vehicle from the ADS.
- 4.19. We would also suggest, as referenced in our response to questions relating to no-user-in-charge vehicles, that transport and local authorities be granted powers to add further safety requirements that they deem necessary for safe operation, specific to local conditions.
- 4.20. Developing a culture of sharing best practice and learning for the benefit of the whole ecosystem will be critical, as recognised in the rail and airline industries. Furthermore, we would note the significant investment and effort required to develop the requisite skills across multiple parts of that ecosystem from the whole industry.
- 4.21. The rail industry may also provide a useful starting point for this question. Some of the challenges faced through varying degrees of automation are comparable.
- 4.22. The vehicles will not operate in isolation. Roads are designed to minimise the risks, for example 20 mile an hour speed limits in busy urban areas, pedestrians segregated from traffic on high speed roads and increasingly cyclists segregated from other traffic.
- 4.23. In the case of self-driving vehicles, irrespective of how safe the vehicles are, the open nature of the road network and the inability in most cases to segregate self-driving vehicles from all other road users will inevitably create problems. We would welcome more engagement on how some of these risks can be mitigated, in order to maximise safety.

*Consultation Question 6 (Paragraph 5.121)*

**We welcome practical suggestions for how AV regulators can fulfil their public sector equality duty.**

- 4.24. We have not responded to this question.

**5. CHAPTER 7: ASSESSING SAFETY PRE-DEPLOYMENT**

*Consultation Question 7 (Paragraph 7.99)*

**We provisionally propose that:**

- (1) safety assessment should use a variety of techniques;**
- (2) manufacturers/developers should submit a safety case to regulators showing why they believe that the automated driving system is safe;**
- (3) regulators should:**
  - (a) provide guidelines for what is in the safety case;**
  - (b) audit the safety case;**
  - (c) prepare guidance for manufacturers and developers on preferred standards; and**
  - (d) carry out at least some independent tests.**

**Do you agree?**

Yes

No

Other

- 5.1. We view the pre-deployment safety assessment of automated vehicles as fundamental. We agree that the safety assessment should use a variety of techniques and would expect the regulator responsible for pre-deployment safety assurance to develop a robust system of assessment by using methods and expertise from conventional vehicles and developing entirely new elements and tests based on the new functionality and risks presented.
- 5.2. Whilst noting that the process will not yet have been designed, we do feel that bullet point 3(d) should be made much stronger. We would expect the regulator to undertake extensive tests of the vehicle in its entirety in both the real world and simulated environments.
- 5.3. Even though cyber security is excluded from the Law Commission's terms of reference it will be central to the safe operation of the vehicles and we would expect extensive testing and assurance of this pre-deployment.

Consultation Question 8 (Paragraph 7.100)

**We seek views on whether an approval authority that intends to use a scenario database as part of the testing procedure should consult road user groups on the range of scenarios to be included.**

- 5.4. We fully support involving a broad range of road user groups including those representing vulnerable road users, such as cyclists (including those with adapted cycles), those with accessibility needs and the general public.
- 5.5. It is of paramount importance to establish as comprehensive a list as possible. The list should be regularly reviewed and updated. An AV operating in the centre of London will clearly face entirely different challenges to a vehicle operating in a more rural setting at the fringes of outer London.
- 5.6. We would be particularly interested to understand how situations where a human driver would naturally exhibit more caution such as when someone with a white cane is approaching the edge of the road or a ball is rolling out into the road, potentially followed by a child, can be incorporated.

- 5.7. We would suggest that the range of stakeholders invited to input be broadened, recognising this is new territory for everyone. We would suggest inclusion of the police, highway authorities and perhaps insurance companies, who would have a good database of accident scenarios.

## **6. CHAPTER 8: INITIAL APPROVALS AND CATEGORISATION – PROPOSALS**

### Consultation Question 9 (Paragraph 8.17)

We provisionally propose that:

- (1) unauthorised automated driving systems should be prohibited; and
- (2) this should be subject to an exemption procedure by which the Secretary of State may authorise unauthorised systems to be used in tests and trials.

Do you agree?

Yes

No

Other

- 6.1. We agree that all unauthorised driving systems should be prohibited.
- 6.2. We accept that on-street trials will be necessary. In principle we would be supportive of an exemption procedure as referenced in 9(2) however we believe this should be subject to a number of safeguards, such as a safety driver (this would only be practical for user-in-charge vehicles and some suitable alternative arrangement would be required for no-user-in-charge vehicles). Pre-deployment testing as referenced in question seven, should also be required for tests and trials.
- 6.3. If the tests or trialling for which a system is authorised subject to the exemption procedure in part 2 of this question require further approvals from regulators eg the granting of a PHV licence, then this exemption must also come with an indemnity for regulators of the activities being trialled and tested.
- 6.4. It is not clear to us how the proposed two-step authorisation process as described in chapter eight will accommodate the authorisation and categorisation of ADS-equipped vehicles from continental Europe or the Republic of Ireland, that are being driven on the UK's roads, eg HGVs delivering freight.
- 6.5. We think that ADS systems installed in pre-registered vehicles should be treated in exactly the same way and therefore prohibited unless authorised by the Secretary of State for use in test and trials, even when the vehicle is equipped with a safety driver.
- 6.6. A number of trials have already been successfully undertaken in the UK, however, we would like to see the system tightened as new entrants join this market, to ensure that all trialling organisations are adhering to the highest standards. We would expect the specialist regulator to determine what level of

pre-deployment assurance would be appropriate for tests and trials to operate safely, looking both at the vehicle and the processes and safeguards around operation.

Consultation Question 10 (Paragraph 8.25)

We provisionally propose that:

- (1) the Government should establish a domestic scheme to approve automated driving systems (ADSs) for use on roads in Great Britain (a “national ADS approval scheme”);
- (2) manufacturers should have a free choice to apply for approval under either the UNECE system of international type approvals or through the national scheme;
- (3) developers should be able to submit an ADS for national approval, even if they are not responsible for manufacturing the whole vehicle.

Do you agree?

Yes

No

Other

- 6.7. We think this approach needs further consideration. We understand the rationale behind the proposal, however, a domestic scheme could result in GB-specific ADS that are incompatible with other EU-approved systems, and are unable to communicate with them or to share hazard, safety and other critical road network information with them. It is not yet clear to what degree connectivity will become a key component of AVs however this approach would seem limiting.
- 6.8. TfL’s recent experience with InterCor (a European Commission co-funded Connected Vehicle (CV) pilot), demonstrated that, for CV services to operate across international borders, they have to be developed to the same technical standards, otherwise connectivity cannot be established. Therefore, in reality, ADS that are compliant with GB-specific standards and approved for GB-only use, may also need to comply with European Telecommunications Standards Institute (ETSI) standards and other European technical standards.
- 6.9. We would expect that most vehicle manufacturers currently based in the UK will continue to meet the requirements of the EC Whole Vehicle Type Approval standards and believe that, in a complex and rapidly evolving area of technology, the UK would benefit from the input and expertise of other countries.
- 6.10. Finally, it is worth noting that, if the intention is that the vehicle will be used as a taxi or PHV in London, it will need to satisfy the requirements of the relevant legislation. Any existing vehicle model which has been significantly modified, either through modifications to the original internal or external body or changes to the existing drive train, would be subject to inspection by TfL as the licensing authority before it could be used as a taxi or PHV. Any prior approval from the regulator would form part of these considerations, however even today there are cases, for example, some small series vehicles, where

the requirements for operating as a taxi or PHV are not met. We would consider the risk of this situation arising to be lower if the system approvals have been granted through the international (UNECE) route, as detailed in chapter eight.

Consultation Question 11 (Paragraph 8.43)

**We provisionally propose that:**

- (1) an ADS approval scheme should be established through regulation under the Road Traffic Act 1988, without further legislative reform;**
- (2) an ADS should be defined as a combination of software, hardware and sensors, which can be installed in a “type” of vehicle;**
- (3) when an ADS is approved, the approval should be accompanied by specifications for:
 
  - (a) the type of vehicle in which it can be installed; and**
  - (b) how the ADS is installed within the vehicle;****
- (4) where an ADS is installed in a pre-registered vehicle, an example vehicle should be submitted to the regulator for approval of the installation.**

**Do you agree?**

Yes

No

Other

- 6.11. We agree that regulation making powers under the Road Traffic Act 1988 seem sufficiently broad to enable regulations to be made in support of the establishment of an ADS approval scheme, but this is ultimately a matter for the Government’s legal team.
- 6.12. The other recommendations seem reasonable, and would be an important part of a regulator being able to determine whether an ADS should be approved and how it can be used in the future, however, please note our response to question 10, which suggests further consideration of this approach is required.

Consultation Question 12 (Paragraph 8.44)

**We invite observations on the appeal process in regulation 19 of the Road Vehicles (Approval) Regulations 2020, including:**

- (1) how it works in practice; and**
- (2) how well it is suited to the proposed national ADS approval scheme.**

6.13. We have not provided an answer to this question.

Consultation Question 13 (Paragraph 8.71)

**We provisionally propose that:**

- (1) once an ADS has received type approval at either international or domestic level, an Automated Driving System Entity (ADSE) would need to submit the vehicle to**

- the UK safety regulator for categorisation as able to safely drive itself;
- (2) the safety regulator should make a recommendation to the Secretary of State for how the vehicle should be classified;
  - (3) it should be open to the safety regulator to recommend that an ADS-enabled vehicle is classified in one of three ways: as not self-driving but driver assistance; as self-driving only with a user-in-charge; or as self-driving without a user-in-charge;
  - (4) the safety regulator should only recommend classification as self-driving (either with or without a user-in-charge) if it is satisfied that:
    - (a) an ADSE is registered as taking responsibility for the system;
    - (b) the ADSE was closely involved in assessing safety and creating the safety case; and
    - (c) the ADSE has sufficient funds accessible to the regulator to respond to improvement notices, to pay fines and to organise a recall.

Do you agree?

- Yes   
No   
Other

6.14. We have not provided an answer to this question.

Consultation Question 14 (Paragraph 8.77)

We provisionally propose that a new legislative framework should provide regulation-making powers to specify:

- (a) who should assess whether a vehicle is capable of self-driving;
- (b) the procedure for doing so; and
- (c) criteria for doing so.

Do you agree?

- Yes   
No   
Other

6.15. We agree that the above should have a statutory footing, in a similar way to existing type approval, however we would consider how this is achieved and whether a new legislative framework is required to be a matter for the government lawyers.

Consultation Question 15 (Paragraph 8.78)

We seek views on whether the new legislation should include provisions for appeals against a categorisation decision. If so, should these be similar to those in regulation 19 of the Road Vehicles (Approval) Regulations 2020?

6.16. It seems reasonable to us that there is a right to appeal against a categorisation decision, again how this is drawn up in law would be a matter

for government lawyers.

Consultation Question 16 (Paragraph 8.83)

**We seek views on whether the regulator that classifies vehicles as self-driving should have power to allow their deployment in limited numbers, so as to gather further data on their safety in real world conditions.**

- 6.17. We agree that the regulator that classifies vehicles as self-driving should have power to allow their deployment in limited numbers, however, we would make a distinction between limited deployment of a fully authorised system and limited deployment for the purposes of testing and trialling.
- 6.18. It is imperative that vehicles that are deployed with a fully authorised system do not require any further validation of their safety. Data on their safety in real world conditions should be established through testing and trialling. This will build on the approach that has been taken thus far, underpinned by the guidance documents produced by Centre for Connected and Autonomous Vehicles and TfL. This will help to establish any key issues before a system is fully authorised, while it is easier to make changes if safety issues are identified.
- 6.19. During this limited deployment, the role of the driver would be that of a safety driver, not a user-in-charge. This could be an important step both to ensure that passengers feel comfortable but also that the general public, particularly vulnerable road users, are assured that a 'safety first' approach is being adopted.
- 6.20. To be deemed safe for limited deployment, not only should the self-driving vehicle be deemed safe, but it also needs to be clear that its interaction with other modes of transport on the network, autonomous or conventional, as well as the network itself is safe (for example, if deployment requires changes to, or increased maintenance of network infrastructure such as signage, that this is put in place in advance of deployment).
- 6.21. To ensure safety assurance can be sensitive to local conditions (for example, larger, more complex cities such as London present specific challenges such as segregated cycle routes and red routes, rural areas present different challenges such as larger numbers of horse riders or lower levels of highway investment), it would be beneficial for the regulator to seek agreement from the relevant highway authorities on a geographic basis.
- 6.22. A limited deployment of vehicles with a fully authorised system will enable transport authorities and local authorities to assess how the vehicles are contributing to the transport offering and achieving the area's transport strategy. They should be able to identify and assess concerns which should be taken into account when determining the scale of rollout that is appropriate in their local area. An example would be monitoring the impact of HARPS on taxi provision. Taxis currently provide a valuable service for users with accessibility requirements, who may rely on the assistance of the driver. It is unlikely HARPS would be able to replicate this and as such travel options would be reduced for people reliant on this level of assistance, if the number

of taxis significantly diminished. Data sharing is essential for transparency and the regulator should have the ability to mandate.

## 7. CHAPTER 10: ASSURING SAFETY IN USE

### Consultation Question 17 (Paragraph 10.82)

We provisionally propose that legislation should establish a scheme to assure the safety of automated driving systems following deployment, giving scheme regulators enhanced responsibilities and powers.

Do you agree?

- Yes   
 No   
 Other

7.1. We fully support this. This will be critical to ensuring that AVs are operating safely.

### Consultation Question 18 (Paragraph 10.83)

We provisionally propose that the enhanced scheme should give regulators the following responsibilities and powers:

- (1) scheme regulators should be responsible for comparing the safety of automated and conventional vehicles using a range of measures;
- (2) to do this the regulator should have power to collect information on:
  - (a) leading measures (instances of bad driving which could have led to harm) and
  - (b) lagging measures (outcomes which led to actual harm);
- (3) regulators should have power to require an ADSE:
  - (a) to update software where an update is needed to ensure safety and continued compliance with the law;
  - (b) to keep maps up-to-date, where an AV relies on maps to ensure safety and compliance with the law;
  - (c) to communicate information about an ADS to users in a clear and effective way, including where necessary through training.

Do you agree?

- Yes   
 No   
 Other

7.2. We agree the regulator should have the responsibilities and powers listed above, however, we would not consider this list exhaustive. For example, we would expect the regulator to have the power to require an Automated Driving System Entity (ADSE) to update for new types of road users (eg e-scooters), whether or not their use of the highway is legal. Another example would be to understand how the way the vehicle reacts has deviated from the logic



observed/tested during pre-deployment approval, due to machine learning.

- 7.3. It is not clear whether these powers just relate to software and map updates that are necessary for the vehicles to continue to operate safely in self-driving mode in the domestic market, or whether they extend to updates that are required to enable vehicles to operate safely in continental Europe or the Republic of Ireland, for example vehicles used for importing or exporting goods.
- 7.4. We would expect the regulator’s powers to require data to be broad and reviewed over time.
- 7.5. We would also like to understand how other vehicle maintenance requirements will be addressed and to what degree existing processes such as MOTs will be relevant.

Consultation Question 19 (Paragraph 10.84)

We welcome views on the following issues:

- (1) Should scheme regulators be empowered to approve software updates that apply only within the UK, without requiring the manufacturer to return to the original type approval authority?**
- (2) Should the scheme should also deal with cybersecurity?**
- (3) Are other powers needed? (Note that data is discussed in Chapter 17.)**
- 7.6. We have concerns that this arrangement could lead to confusion. Further information on how it would work in practice would be required.
- 7.7. We agree that the scheme should deal with cyber security. As we have highlighted previously, we consider this absolutely central to safe deployment of AVs.

Consultation Question 20 (Paragraph 10.100)

**Should the authority administering the scheme to assure safety while automated vehicles are in use be kept separate from type approval authorities (as is already the case)? Alternatively, should both functions be combined in a single body?**

- Separate bodies
- Single body
- Other

- 7.8. We hold no strong view provided safety is upheld and there are no gaps. If two authorities are deemed appropriate, we would expect both to have an open approach regarding sharing of information in respect of any unintended issues arising from vehicle type approval and/or automated systems.

Consultation Question 21 (Paragraph 10.101)

**What formal mechanisms could be used to ensure that the regulator administering the scheme is open to external views (such as duties to consult or an advisory committee)?**

- 7.9. We would support a requirement for the regulator to consult or receive expert advice.

## **8. CHAPTER 11: INVESTIGATING TRAFFIC INFRACTIONS AND COLLISIONS**

### *Consultation Question 22 (Paragraph 11.24)*

We provisionally propose that a statutory scheme to assure AVs in-use should:

- (1) investigate safety-related traffic infractions (such as exceeding the speed limit; running red lights; or careless or dangerous driving);
- (2) investigate other traffic infractions, including those subject to penalty charge notices;
- (3) if fault lies with the ADSE, apply a flexible range of regulatory sanctions.

Do you agree?

Yes

No

Other

- 8.1. We agree that investigating both safety-related and other traffic infractions, including those subject to a penalty charge notice, is appropriate. This investigation would help build a picture of why certain infractions are occurring and provide the understanding to remedy them, improving both safety and compliance. This has the potential not just to relate to a single operator but also to drive improvements across the entire CAV ecosystem.
- 8.2. Question 23 would seem to suggest that the scheme proposed above would be the responsibility of the regulator which assures the safety of AVs in-use. We would consider it essential for the practicalities of this proposal to be discussed in detail with the police and other enforcement agencies ahead of any final recommendation.
- 8.3. Mixed operation of conventional and automated vehicles is likely to be a reality for some time and we would like to understand if consideration has been given as to how two types of enforcement activity, with two sets of sanctions would work in practice. It is not clear how it will be determined which vehicle type has committed an offence and therefore which sanctions apply (for example if a vehicle is caught speeding by a camera and the user-in-charge is in the driving seat it may not be immediately obvious whether it is being used in self-driving mode or being driven by the occupant).
- 8.4. Additionally, if there is any perception that AVs are 'getting away with it', perhaps by avoiding fines or prosecution for red light offences or driving in bus lanes, this will likely have a negative effect on other drivers' willingness to comply with the rules and could undermine enforcement against those driving conventional vehicles. A sense of there being a two-tier enforcement system is likely to be seen as unfair.

- 8.5. Sadly, we are well aware of the significant trauma of a death or serious injury on the road. It seems unacceptable as referenced in chapter 17 that a driver who seriously injures a motorcyclist could be facing a prison sentence but if the same situation is caused by an ADS the focus is on future prevention. It is likely that the public, and particularly victims and their families, will expect to see someone punished. It is difficult to see how this situation can be avoided and we believe it would be incumbent on the pre-deployment regulator not to recommend approval of a vehicle as self-driving, if it does not have the capability to avoid this type of incident.
- 8.6. Additionally, as mentioned in our response to question 25, there is a need for the body investigating the infractions to work with the police and highway authority to ensure that road closure durations are kept to a minimum during the investigation.
- 8.7. It is worth noting that there may be occasions when vehicles are directed to do something which is ordinarily prohibited eg use bus lanes, either by signage and road layout changes or by being directed by a police officer. AVs would need to be able to deal with such situations.

Consultation Question 23 (Paragraph 11.53)

**We provisionally propose that the regulator which assures the safety of AVs in-use should have powers to impose the following sanctions on ADSEs:**

- (1) informal and formal warnings;**
- (2) fines;**
- (3) redress orders;**
- (4) compliance orders;**
- (5) suspension of authorisation;**
- (6) withdrawal of authorisation; and**
- (7) recommendation of attendance at a restorative conference.**

**Do you agree?**

Informal and formal warnings

Fines

Redress orders

Compliance Orders

Suspension of authorisation

Withdrawal of authorisation

Recommendation of attendance at a restorative conference

- 8.8. All of the sanctions above have merit, subject to there being a right of appeal.
- 8.9. We would also expect the regulator to have powers to ensure that ADSEs recall vehicles to rectify faults, in instances where AV safety issues relate to the vehicle (eg their sensors), and not just their software.

Consultation Question 24 (Paragraph 11.54)

**We provisionally propose that the legislation should provide the regulator with discretion over:**

- (1) the amount of any monetary penalty; and**
- (2) the steps which should be taken to prevent re-occurrence of a breach.**

**Do you agree?**

- Yes
- No
- Other

- 8.10. We would suggest that the regulator who sets the penalties should be required to consult with the relevant highway authority and the police about the levels of fines. However, we do recognise the importance of setting them at a level which encourages action to be taken to prevent a re-occurrence of a breach.
- 8.11. The regulator which assures the safety of AVs in-use should be in a position to agree the steps to prevent a re-occurrence of the breach, agreeing these if appropriate with the body responsible for the pre-deployment safety assessment (if there are two separate organisations, see question 20).

*Consultation Question 25 (Paragraph 11.69)*

**We provisionally propose that a specialist incident investigation unit should be established:**

- (1) to analyse data on collisions involving automated vehicles;**
- (2) to investigate the most serious, complex or high-profile collisions; and**
- (3) to make recommendations to improve safety without allocating blame.**

**Do you agree?**

- Yes
- No
- Other

- 8.12. TfL considers the Metropolitan Police Service (MPS) role in helping keep London's roads safe absolutely critical and want to ensure the importance of local roads policing and collision investigation is not diminished through the creation of a national regulator. Where there are risks identified relating to an ADS being the cause of a collision, we could see a role for a national regulator to support the investigation into the manufacturer, but expect the MPS or relevant local police collision investigation unit to continue to lead that work with their expertise. We would be concerned if local roads policing and collision investigation teams were prevented from supporting investigations into collisions. For the families of those who are grieving, knowing the local police family liaison role can provide informed and timely updates into progress can provide much needed support and comfort.

Locally the police would respond to any collisions as they do currently, rapidly making the scene safe, closing roads, gathering evidence, seizing the vehicles and taking witness details and statements.

- 8.13. The speed of response from the police and subsequent actions can have a big impact on the duration of road closures. TfL and the MPS have worked together for years to reduce road closure durations, improving systems, changing the structure of collision investigation teams (eg in London they are 24/7 – unlike most other forces) and investing in training and technology. It is hard to overstate how damaging it would be to London if a change to the current arrangements led to regular long road closures, whilst waiting for the arrival of investigators.
- 8.14. In support of this and all enforcement and safety activities, we would encourage good working relationships. Trust and collaboration between the regulatory body and local police forces is essential. Sharing good practice, joint working on protocols, secondments between teams, observations in other roles etc could help with this.

Consultation Question 26 (Paragraph 11.82)

**We provisionally propose that the UK Government should establish a forum for collaboration on the application of road rules to self-driving vehicles.**

**Do you agree?**

- Yes
- No
- Other

- 8.15. Yes, we agree this would be sensible.

Consultation Question 27 (Paragraph 11.83)

**We welcome views on:**

- (1) the issues the forum should consider;**
- (2) the composition of the forum; and**
- (3) its processes for public engagement.**

- 8.16. We believe it is particularly important that it should draw from a wide range of stakeholders, representing the general public, all road users and the multitude of purposes for which AVs might be used.

## **9. CHAPTER 12: THE USER-IN-CHARGE**

Consultation Question 28 (Paragraph 12.24)

**We provisionally propose that that the user-in-charge:**

- (1) should be defined as an individual in position to operate the controls of a vehicle while an ADS is engaged and who is either in the vehicle or in direct sight of the vehicle; and**

**(2) is not a driver while the ADS is engaged, and would not be liable for any criminal offence or civil penalty (such as a parking ticket) which arises out of dynamic driving.**

**Do you agree?**

Yes

No

Other

9.1. We agree with this definition, based on current understanding. However, it is important to note that the ALKS consultation has brought a number of issues to the fore and, as more practical and detailed examples emerge, this should be re-examined.

Consultation Question 29 (Paragraph 12.37)

**We provisionally propose that following the end of the transition demand period:**

**(1) the user-in-charge should re-acquire the legal obligations of a driver, whether or not they have taken control of the vehicle; and**

**(2) if, following a failure to respond to a transition demand, the vehicle stops in a manner which constitutes a criminal offence, the user-in-charge should be considered a driver and should therefore be liable for that offence.**

**Do you agree?**

Yes

No

Other

9.2. Please note our response to question one and the appropriateness of a user-in-charge role as proposed.

9.3. We would suggest that even if the driver has not responded to the transition demand, the vehicle should be able to safely continue self-driving and come to a safe stop in a manner which does not constitute a criminal offence.

9.4. We remain concerned in situations where the driver has become incapacitated due to illness (perhaps temporarily), the vehicle has failed to give the transition demand or the vehicle has prevented the user-in-charge from taking back control it will be difficult to prove any of these events.

Consultation Question 30 (Paragraph 12.45)

**We seek views on whether a person with a provisional licence should be allowed to act as a user-in-charge, if accompanied by an approved driving instructor in a vehicle with dual controls.**

9.5. We think a person with a provisional licence should be allowed to act as a user-in-charge, if accompanied by an approved driving instructor in a car with dual controls.

- 9.6. Self-driving functionality allows the driver to disengage from the driving task and places new requirements on drivers which could be difficult even for experienced drivers (eg our current understanding is whilst ALKS is engaged, applying pressure to the brake pedal, without hands on the steering wheel, won't slow the vehicle but rather commence a transition demand). If, once they pass their test and hold a full license, current learner drivers will be allowed to act as a user-in-charge, they should have the option to learn and practise doing this if they wish to do so. Having dual controls and a driving instructor will allow them to do this in a way which minimises potential risks.

Consultation Question 31 (Paragraph 12.53)

**We provisionally propose that legislation should create new offences of:**

- (1) using an automated vehicle as an unfit or unqualified user-in-charge; and**
- (2) causing or permitting the use of an automated vehicle by an unfit or unqualified user-in-charge.**

**Do you agree?**

- Yes
- No
- Other

- 9.7. We would expect these new offences to have a positive impact on safety and are therefore supportive in principle.

Consultation Question 32 (Paragraph 12.59)

**We provisionally propose that persons carried without a user-in-charge should be guilty of a criminal offence.**

**Do you agree?**

- Yes
- No
- Other

- 9.8. As above we are supportive, given the likely positive impact on safety, subject to the additional comments in our response to question 33.

Consultation Question 33 (Paragraph 12.60)

**We seek views on whether the new proposed offence of being carried without a user in-charge should only apply if the person:**

- (1) knew that the vehicle did not have a user-in-charge; and**
- (2) knew or ought to have known that a user-in-charge was required.**

- 9.9. We agree that this offence should only apply if the person being carried knew or ought to have known that a user-in-charge was required. There would need

to be a way of making this very clear, perhaps with visual and audio signals.

- 9.10. We would also suggest that where a vehicle is provided for carrying passengers, the operator should bear some responsibility for ensuring that whether or not a vehicle requires a user-in-charge is clearly communicated to the customer and that a user-in-charge is present if required.

Consultation Question 34 (Paragraph 12.66)

**We provisionally propose that a user-in-charge who takes over control of the vehicle:**

- (1) should be considered a driver; but**
- (2) should have a specific defence to a criminal offence if, given the actions of the ADS, a competent and careful driver could not have avoided the offence.**

**Do you agree? If not, we welcome views on alternative legal tests.**

- Yes
- No
- Other

- 9.11. We agree in principle however we would be interested to understand how the assessment of whether a competent and careful driver could have avoided the offence would be established.

- 9.12. As mentioned previously, the interchangeability of the driver and the user-in-charge does not sit comfortably with existing PHV legislation which applies when a vehicle is supplied with a driver. We believe it will be necessary to take a detailed look at all the relevant taxi and PHV legislation and understand the impact.

Consultation Question 35 (Paragraph 12.94)

**We provisionally propose that the user-in-charge should be liable for criminal offences which do not arise from the dynamic driving task, including those related to:**

- (1) insurance;**
- (2) maintaining the vehicle in a roadworthy condition (including installing safety critical software updates);**
- (3) parking;**
- (4) duties following accidents to provide information and report accidents to the police; and**
- (5) ensuring child passengers wear seatbelts.**

**Do you agree?**

- Yes, the user-in-charge should be liable for all offences not arising from the dynamic driving task
- No, the user-in-charge should not be liable for any offences
- The user-in-charge should be liable for some but not all of the offences listed
- Other



- 9.13. The list appears reasonable however parking is largely not a criminal offence in London. It is important these responsibilities are clearly communicated to, and understood by, the user-in-charge.
- 9.14. It is possible that, in the case of a company with a fleet of work vehicles or a Private Hire operator, the organisation may take responsibility for some or all of the above: however, the user-in-charge must understand the onus is on them in relation to the above offences.
- 9.15. Sharing or mobility as a service business models may also present a problem with this type of approach. Whilst the user-in-charge should certainly be expected to ensure a child passenger is wearing a seatbelt, it is difficult to see how they could be responsible for ensuring safety critical updates have been installed in a vehicle which they may only have access to for an hour. The question is therefore one of both competency and practicality. It may be sensible for some of the responsibilities to fall to the owner however absolute clarity would be important.
- 9.16. Consideration also needs to be given to other civil offences such as the non-payment of the Congestion Charge or other tolls.

Consultation Question 36 (Paragraph 12.95)

**We provisionally propose that the legislation should include a regulation-making power to clarify those roadworthiness failings which are (and those which are not) the responsibility of the user-in-charge.**

**Do you agree?**

- Yes
- No
- Other

- 9.17. We agree that the that the above should have a statutory footing. How this is achieved is a matter for the government lawyers.

**10. CHAPTER 13: REMOTE OPERATION: NO USER-IN-CHARGE VEHICLES**

Consultation Question 37 (Paragraph 13.67)

**We provisionally propose that:**

- (1) where an individual is exercising latitudinal and longitudinal control (steering and braking) over a vehicle remotely, that should not be regarded as a form of “self-driving”; and
- (2) where lateral and longitudinal control are exercised by an ADS, all other forms of remote operation should be regulated as “self-driving”.

**Do you agree?**

- Yes

- No   
 Other

10.1. We agree that where an individual is exercising latitudinal or longitudinal control either within the vehicle or remotely, the vehicle should not be regarded as self-driving.

**We welcome views on whether the current definition of when a vehicle “drives itself” under the Automated and Electric Vehicles Act 2018 should be amended to deal with some forms of remote operation which may involve a degree of “monitoring”.**

10.2. In prospect it would seem sensible, however, we have seen through the ALKS call for evidence, that understanding of how something may work in legal and practical terms increases dramatically as it becomes a realistic possibility. In this case it may be too early to determine the right answer, so building in some scope for flexibility may be useful.

Consultation Question 38 (Paragraph 13.86)

**We provisionally propose that:**

- (1) the regulation of self-driving vehicles should distinguish between an Automated Driving System Entity (which vouches for the design of the system) and an operator (responsible for the operation of individual vehicles);**
- (2) all vehicles authorised for use on roads or other public places with no user-in-charge should either:**
  - (a) be operated by a licensed operator; or**
  - (b) be covered by a contract with a licensed operator for supervision and maintenance services;**
- (3) it should be a criminal offence to use a NUIC vehicle on a road or other public place unless it is operated by a licensed operator or is covered by a contract with a licensed operator for supervision and maintenance services.**

**Do you agree?**

- Yes   
 No   
 Other

10.3. We agree that the regulation should distinguish between ADSE and an operator, however we recognise that one organisation could hold both roles. It is important that there are no gaps between the roles in the regulations.

10.4. We see clear safety benefits to all NUIC vehicles being operated by a licensed operator. It is not clear to us why an option of being covered by a contract for supervision and maintenance is suggested as an alternative to being operated by a licensed operator. We would have thought that safety would be improved if all the basic responsibilities including insuring the

vehicle and reporting accidents and near misses were covered under contract with a licensed operator.

Consultation Question 39 (Paragraph 13.92)

**We welcome views on whether NUIC operators should be required to demonstrate professional competence through a safety management system, as set out in a safety case.**

- Yes   
No   
Other

10.5. We agree that professional competence should be demonstrated through more than the qualification of an individual and the proposal above seems reasonable. Further work will be required to ascertain what the safety case should cover and should draw on existing requirements across the range of operators, as well as entirely new elements. We would also expect an emphasis on continuous learning.

10.6. It will also be important, as referenced in our response to question 43, to ensure that there is an appropriate split between requirements set at tier 1 and tier 2 level.

Consultation Question 40 (Paragraph 13.108)

**We provisionally propose that, irrespective of the nature of the vehicle, a licensed operator should be under a duty to:**

- (1) supervise the vehicle;
- (2) maintain the vehicle;
- (3) insure the vehicle;
- (4) install safety-critical updates and maintain cybersecurity; and
- (5) report accidents and untoward events (as defined by the regulator).

**Do you agree?**

- Yes, a licensed operator should be subject to all the listed duties   
No, a licensed operator should not be subject to any of the listed duties   
A licensed operator should be subject to some but not all of the listed duties   
Other

10.7. We think a licensed operator should be subject to the duties listed, however at this stage there is insufficient detail behind the NUIC arrangements to agree that these should all be at a tier 1 level.

10.8. As noted in our response to question 43, it will be imperative to engage with

licensing authorities to determine the appropriate split between tier 1 and 2 requirements. We would expect there to be an extensive list of additional duties at a tier 2 level, which are specific to the use case and are determined in line with the local licensing arrangements.

- 10.9. We would also stress the importance of putting in place arrangements to efficiently and proactively share information between the tier 1 and tier 2 licensing authorities.

Consultation Question 41 (Paragraph 13.109)

**We provisionally propose that legislation should include a regulation-making power by which some or all of these duties could be transferred to the registered keeper or owner, if it was shown that it was appropriate to do so.**

**Do you agree?**

- Yes   
 No   
 Other

- 10.10. We would question under what circumstances it would be appropriate to transfer these duties and the potential benefits. Given that some of the responsibilities, such as installing critical software updates, are likely to require a high degree of expertise and the operator will have had to demonstrate their competence it is unclear how this would work if the duties were transferred to the registered keeper or owner. Would they be expected to prove their individual competence under a separate scheme?

Consultation Question 42 (Paragraph 13.116)

**We welcome views on how accessibility standards for Highly Automated Road Passenger Services (HARPS) might be developed.**

**We provisionally propose that:**

- (1) an accessibility advisory panel should be formed to include:
  - (a) the Equalities and Human Rights Commission; and
  - (b) representative groups for disabled and older persons;
- (2) the Secretary of State should be obliged to consult with the accessibility advisory panel prior to setting any national minimum standards on HARPS;
- (3) there should be a duty to periodically re-consult the accessibility advisory panel at set intervals to ensure requirements keep pace with developing evidence of technical feasibility and changing needs.

**Do you agree?**

- Yes   
 No

Other

- 10.11. In principle we support the formation of an accessibility advisory panel. This should comprise people knowledgeable about accessibility issues, with the power to carry out research and consult and engage with disabled users.
- 10.12. The introduction of HARPS offers a unique opportunity to shape future road passenger transport services in a way that they are fully accessible and inclusive. It is vital that the use of a strong evidence base on diversity and inclusion is mandated to inform decision making related to any future services and that relevant stakeholder groups are considered throughout the design and testing process of AV services.
- 10.13. It is also important that adequate consultation and engagement with relevant stakeholder groups is ensured and that an efficient mechanism is in place to ensure ongoing monitoring of real impacts of HARPS.
- 10.14. Any new set of accessibility rules should be flexible and updated in the light of increasing experience.
- 10.15. We understand from the consultation paper that the proposal is for accessibility to be part of the tier 2 requirements. Our view, as expressed in our response to question 43, is that the tier 2 requirements should be set and administered at a local level. The proposal above would be at odds with this, given it seems to be aimed at national requirements. Perhaps basic accessibility standards should be set at a tier 1 level, in line with the proposals above and further requirements could be added at a tier 2 level if appropriate.

**We welcome views on what the set interval for periodically re-consulting the accessibility advisory panel should be.**

- 10.16. We would consider it vital for the panel to consult on any change and otherwise at two to three-month intervals.

*Consultation Question 43 (Paragraph 13.133)*

**We welcome views on who should administer the operator licensing scheme.**

- 10.17. Given the model presented here covers operators of all NUIC vehicles, irrelevant of use case, we can see the value in having a single national organisation responsible for approving some generic requirements. However, it is imperative that this is not at the expense of effective operation of the network and does not compromise the safety of the public.
- 10.18. We think expanding the model, from the original proposal of HARPS in the second consultation, to all no-user-in-charge vehicles is a sensible move. We acknowledge that the distinction between passenger carrying vehicles and freight will likely reduce in the future and we have already seen some movement in this direction. We also believe these are two areas where

shaping requirements locally is very important.

- 10.19. We are pleased that a distinction has now been made, through the introduction of tier 2, between generic safety requirements and requirements that are specific to use cases. We would consider that tier 2 is where the fundamental role of local authorities and transport authorities in shaping services could be fulfilled and that tier 1 requirements would be licensed at a national level.
- 10.20. The success of the two-tier approach will to a large degree be dependent on ensuring that the requirements are underpinned by appropriate enforcement activity. Breaching the requirements for either tier must be subject to a full range of sanctions, including revocation of the licence. The organisation administering the tier 2 licensing requirements must have the authority to apply these without the need to revert to the authority which has granted the tier 1 operator's licence. The timely sharing of information between licensing organisations will also be critical.
- 10.21. It is clear the thinking is at an early stage and we would welcome further clarity on why some items have been identified as tier 1 requirements and others as tier 2. We cannot overstate the importance of engagement with licensing authorities to identify the appropriate split of requirements between tier 1 and tier 2 and to develop a more exhaustive list.
- 10.22. Key to the tier 2 requirements will be the power to manage numbers appropriately and to ensure only vehicles licensed to operate in a given area are able to do so.
- 10.23. Local and transport authorities are uniquely placed to understand the needs of their areas. In London this role is fulfilled by TfL as the regulator of taxi and private hire services and the London Service Permit system (operated by London Bus Services Ltd on behalf of TfL) and through the franchising model for buses. As other areas take advantage of the options within the 2017 Bus Act to deliver better and more locally accountable bus services, further consideration of how the tier 2 role could be shaped to work with existing legislation will require much further consideration.
- 10.24. We have worked hard to improve freight safety in London for example through the introduction of the Direct Vision Standard (DVS) and safety permit for heavy goods vehicles (HGVs) which requires operators of lorries over 12 tonnes gross vehicle weight to obtain a safety permit before entering and operating in most of Greater London. More direct control over standards of operation for freight in London through the licensing of tier 2 requirements could significantly improve safety and road use.

## **11. CHAPTER 14: CRIMINAL OFFENCES BY ADSES AND THEIR SENIOR MANAGERS**

*Consultation Question 44 (Paragraph 14.107)*

**We provisionally propose that:**

- (1) it should be a criminal offence for an ADSE to omit safety-relevant information or include misleading information when putting a vehicle forward for classification as self-driving or responding to information requests from the regulator;
- (2) the offence should apply to senior managers (where it was attributable to the manager's consent, connivance or neglect);
- (3) the offence should not apply to more junior employees;
- (4) the offence should carry a higher sentence if it is associated with a death or serious injury;
- (5) the offence should be prosecuted in England and Wales by either the regulator or the Crown Prosecution Service and in Scotland by the Procurator Fiscal.

Do you agree?

Yes

No

Other

11.1. We would expect these new offences to have a positive impact on safety and are therefore supportive in principle however we do not have a view on the detail.

Consultation Question 45 (Paragraph 14.108)

We seek views on the following proposed offences.

**Offence A: non-disclosure and misleading information in the safety case**

When putting forward a vehicle for classification as self-driving, it would be a criminal offence for the ADSE to

- (1) fail to provide information to the regulator; or
- (2) provide information to the regulator that is false or misleading in a material particular

where that information is relevant to the evaluation of the safety of the ADS or the vehicle.

The ADSE would have a defence if it could show that it took reasonable precautions and exercised all due diligence to prevent the wrongdoing. The penalty would be an unlimited fine.

**Offence B: non-disclosure and misleading information in responding to requests**

When a regulator requests specific information from an ADSE (whether before or after deployment), it would be a criminal offence for the ADSE to

- (1) fail to provide information to the regulator; or
- (2) provide information to the regulator that is false or misleading in a material particular

where that information is relevant to the evaluation of the safety of the ADS or the vehicle. The ADSE would have a defence if it could show that it took reasonable precautions and exercised all due diligence to prevent the wrongdoing.

The penalty would be an unlimited fine.

**Offence C: offences by senior management**

Where offence A and/or offence B committed by a body corporate is proved—

- (3) to have been committed with the consent or connivance of an officer of the body corporate; or
- (4) to be attributable to neglect on the part of an officer of the body corporate, then that officer is guilty of the offence.

An officer includes any director, manager, secretary or other similar officer or any person who was purporting to act in any such capacity.

We see this as equivalent to offences under the Human Medicines Regulations 2012 and General Product Safety Regulations 2005, which carry a penalty of a fine and/or a maximum two years' imprisonment.

**Offence D: aggravated offences in the event of death or serious injury following non-disclosure or provision of misleading information to the AV safety regulator**

Where a corporation or person commits Offences A to C, that offence is aggravated where the misrepresentation or non-disclosure:

- (5) related to an increased risk of a type of adverse incident; and
- (6) an adverse incident of that type occurred; and
- (7) the adverse incident caused a death or serious injury.

We see this as equivalent to the offence of causing death by dangerous driving, which carries a penalty of an unlimited fine and/or a maximum of 14 years' imprisonment.

- 11.2. We would expect these new offences to have a positive impact on safety and are therefore supportive in principle however we do not have a view on the detail.

*Consultation Question 46 (Paragraph 14.109)*

We welcome views on whether an ADSE should be under a duty to present information in a clear and accessible form, in which safety-critical information is indexed and signposted.

- 11.3. We are supportive of this being a duty as it will evidence how seriously safety is being taken and make safety information understandable and accessible to all users.

## **12. CHAPTER 15: NEW WRONGFUL INTERFERENCE OFFENCES**

*Consultation Question 47 (Paragraph 15.10)*

We provisionally propose that legislative amendment should clarify that the tampering offence in section 25 of the Road Traffic Act 1988 applies to anything that is physically part of a vehicle and any software installed within it.



**Do you agree?**

- Yes   
 No   
 Other

12.1. We support legislative amendments in relation to tampering which reinforce safety standards.

Consultation Question 48 (Paragraph 15.11)

**We welcome views on whether the tampering offence should apply to external infrastructure required for the operation of the AV.**

- 12.2. In the future, external infrastructure that is required for the operation of an AV could include ITS-G5, cellular or other communications infrastructure that is owned or operated by highway authorities. This is used to communicate directly with AVs and to share hazard, safety and other critical road network information directly with them, and to influence their behaviour. If this infrastructure is tampered with, then this could conceivably reduce safety. Through gaining access to roadside infrastructure, the system's security could also be reduced or compromised. It would therefore seem appropriate to also apply the tampering offence to external infrastructure.
- 12.3. Interfering with temporary traffic management is the most common occurrence, ie temporary direction signage, diversion signage and temporary traffic lights. This should also be considered as a possible offence, because an AV may attempt to blindly comply with signage that has been tampered with, whereas a human driver is more likely to identify that the signage has been tampered with.
- 12.4. We would also expect this offence to apply to external infrastructure owned or operated by the ADSE or licensed fleet operator, this may also need to include consideration of where data is stored.

Consultation Question 49 (Paragraph 15.53)

**We provisionally propose that there should be an aggravated offence of wrongfully interfering with an AV, the road, or traffic equipment contrary to section 22A of the Road Traffic Act 1988, where the interference results in an AV causing death or serious injury, in:**

- (1) England and Wales; and**  
**(2) Scotland.**

**Do you agree?**

Yes, in both England and Wales and Scotland

In England and Wales only

In Scotland only

In neither jurisdiction

12.5. We have not provided an answer to this question.

Consultation Question 50 (Paragraph 15.55)

**We provisionally propose that the appropriate mental element for the aggravated offence is intent to interfere with a vehicle, the road or traffic equipment.**

**Do you agree?**

Yes

No

Other

12.6. We have not provided an answer to this question.

Consultation Question 51 (Paragraph 15.62)

**We seek views on whether an approved work defence for repair or maintenance operations authorised by a vehicle manufacturer or Automated Driving System Entity is desirable.**

12.7. We have not provided an answer to this question.

### **13. CHAPTER 16: CIVIL LIABILITY**

Consultation Question 52 (Paragraph 16.24)

**We provisionally propose that the way the Automated and Electric Vehicles Act 2018 deals with contributory negligence and causation is:**

(1) adequate at this stage; and

(2) should be reviewed by the UK Government in the light of practical experience.

**Do you agree?**

Yes

No

Other

13.1. Given this is an emerging area of law we think it would be prudent for the government to keep the Act under review in light of practical experience.

Consultation Question 53 (Paragraph 16.32)

**We provisionally propose that measures should be put in place to compensate the victims of accidents caused by uninsured AVs.**

**Do you agree?**

- Yes   
No   
Other

13.2. We agree that this should be put in place.

Consultation Question 54 (Paragraph 16.47)

We provisionally propose that:

- (1) product liability law should be reviewed to take account of the challenges of emerging technologies;
- (2) any review should cover product liability as a whole, rather than be confined to automated vehicles; it should not, therefore, form part of this project on automated vehicles.

Do you agree?

- Yes   
No   
Other

13.3. We have not provided an answer to this question.

## 14. CHAPTER 17: ACCESS TO DATA

Consultation Question 55 (Paragraph 17.65)

We provisionally propose that:

- (1) for a vehicle to be classified as self-driving, it needs to record the location as well as the time at which the ADS is activated and deactivated;
- (2) the Government should work within the UNECE to ensure data storage systems for automated driving record these data; and
- (3) any national system to approve an ADS should require these data to be collected, subject to safeguards.

Do you agree?

- Yes   
No   
Other

14.1. We recognise the importance of data both at an aggregated level and a detailed level. The former could be used to improve safety across the industry ie added to scenario database or shared to drive improvements in safety. The detailed level will be key to investigating collisions and establishing whether the user-in-charge or the ADS was in control of the vehicle.

14.2. We do not feel there is sufficient information within this paper for us to fully understand how the proposed requirements can be made compliant with data protection legislation.

Consultation Question 56 (Paragraph 17.71)

**We provisionally propose that legislation should impose a duty on those controlling AV data to disclose data to insurers, where the data is necessary to decide claims fairly and accurately.**

**Do you agree?**

- Yes
- No
- Other

14.3. We have not provided an answer to this question.

Consultation Question 57 (Paragraph 17.81)

**We provisionally propose that:**

- (1) initially, DSSAD data from self-driving vehicles should be stored for three years; and
- (2) the issue should be reviewed in the light of experience.

**Do you agree?**

- Yes
- No
- Other

14.4. We have not provided an answer to this question.

Consultation Question 58 (Paragraph 17.95)

**We provisionally propose that:**

- (1) when an ADSE applies for categorisation of its vehicle types as self-driving, it should present the regulator with details on how data will be recorded, stored, accessed and protected;
- (2) the regulator should only categorise a system as self-driving if it is satisfied that that the ADSE has systems to abide by its obligations under the GDPR.

**Do you agree?**

- Yes
- No
- Other

14.5. We have not provided an answer to this question.