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**About BLM**

BLM is a leading insurance and risk law specialist in the UK and Ireland. The firm is deeply established in the insurance sector, the Lloyd's and London Market, amongst brokers, and represents 13 of the top 15 UK insurers and four of the top five global insurers.

We have responded to those questions where we consider we are suitably placed. We believe that other stakeholders will be better placed to respond to others with, for example, empirical data or anecdotal evidence.

## CHAPTER 4: SELF-DRIVING AND HUMAN INTERVENTION

### Consultation Question 1 (Paragraph 4.114)

#### 18.1 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?

- (1) Agreed.

This proposition seems to reflect s 8(1) of AEVA 2018, which provides that a vehicle is “driving itself” only where it is operating in a mode in which it does not need to be monitored by an individual.

We acknowledge a tension with the ALKS Regulation, which – at 6.1.3.1 – would require the (same) vehicle to monitor whether the user in charge is monitoring the dynamic driving environment, and – if s/he is not – to initiate a transition demand and terminate the dynamic driving task by the system. However, we support the classification within the domestic legislation, rather than the ALKS Regulation.

- (2) Agreed.

- (3) We agree that, to be classified as self-driving, the vehicle must be safe enough even if the human user does not intervene.

[4.25] of CP3, makes the point well: *“Level 3 systems monitor the driving environment and ADS performance but not vehicle performance (except to the extent it arises from an ADS malfunction). This leaves a gap. Although the user is expected to be “receptive” to evident failures in non-ADS systems within the vehicle, neither the system nor the user is required to monitor them.”*

In order to mitigate the risk of accidents, and to be properly classified as self-driving, we consider that the vehicle must be capable of achieving a minimal risk condition without any intervention by the user in charge (i.e. Level 4 or 5 automation). Therefore, vehicles must be capable of reaching a safe, stationary position if there is failure of an automated driving system, which the individual not is monitoring, because they are not required by law to do so.

Whilst we understand from [4.78] that *"an individual who is not "monitoring" may still be expected to be receptive to a clear and timely transition demand"*, we remain of the view that – in default of an individual accepting a transition demand and resuming the dynamic driving task – vehicles must remain capable of achieving a safe minimal risk condition. However, we do not consider that a vehicle's failure strategy should comprise coming to a gradual stop *in lane*, without more, i.e. we disagree that coming to a gradual stop in lane should qualify as a satisfactory minimal risk condition.

Instead we endorse the position adopted by the ABI/Thatcham in its report, p 28: *"Stopping in a live traffic lane on the highway presents a clear risk of [i] a serious collision from the rear as well as [ii] introducing a new hazard to the other vehicles in the same lane."*

### Consultation Question 2 (Paragraph 4.115)

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

We consider that OEMs and ADSEs should aspire to design self-driving features – in conformity with national technical standards – that would further the technology's availability and accessibility by the broadest class of user, i.e. including those suffering with (partial) hearing loss.

By way of example, concurrent signals that are omitted via (i) optical (ii) acoustic, and (iii) haptic feedback would achieve a wider reach than limiting communication via an optical medium only.

## CHAPTER 5: HOW SAFE IS SAFE ENOUGH?

### Consultation Question 3 (Paragraph 5.118)

#### **18.3 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?**

We agree that any decisions by the Secretary of State (SoSfT) must be informed by a specialist regulator, whose technical experts – per [5.115] – *"... can [not only] check components against standards. They can see how an AV performs on the test track or the road. They can also test the AV against a large database of scenarios to see which scenarios the AV can (and cannot) deal with effectively."*

We consider that the nature of the SoSfT's discretion, together with the obligation to take advice from the specialist regulator, should be described in legislation to promote transparency and certainty about the circumstances in which any discretion may properly be exercised.

We would, therefore, endorse a two-stage process:

(1) Stage 1 would require – prior to admission on the list – applicants to demonstrate compliance with UN ECE regulations, which prescribe technical standards for automated driving systems.

(2) If an automated driving system was subsequently approved by a type approval authority within one of the 56 UN ECE countries, Stage 2 would then require the UK's specialist regulator to be satisfied that the vehicle is safe enough for British roads before it could provide appropriate advice to the SoSFT.

The justification for this two-stage approach appears at [3.27]: *“Assessing compliance is especially problematic as [a] type approval authority [within a UN ECE country] may have no knowledge of traffic rules in other jurisdictions.”*

CP3 seems to acknowledge that – in the absence of a two-stage approach – “[5.113] “... [this] risks confusing the issue of whether a system meets technical standards with a separate question: is the vehicle (together with the processes surrounding it) safe enough to be acceptable to the British public?”

Whilst we do not consider this to be a barrier to deploying automated driving in the UK, we consider this two-stage approach to be justified on safety grounds.

By way of example, a two-stage process could ensure that automated vehicles equipped with ALKS were capable of addressing variances in UK road networks, such as the ability to detect dynamic road signs located on overhead gantries, and which might be used to close lanes on smart motorways. In this example, stage 2 would additionally require the UK's specialist regulator to be satisfied that automated vehicles for use in the UK market were capable of sensing upwards before advising the SoSFT that the vehicle may be listed as automated.

#### **Consultation Question 4 (Paragraph 5.119)**

**18.4 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.**

(a) We consider the only appropriate safety standard should be as safe as a competent and careful human driver, which would continue to reflect the current standard of care for human drivers (below which civil liability may attach). We would, therefore, endorse (a).

(b) We strongly disagree that (b) could ever be the appropriate standard, given this proposal introduces a new concept of “fault” – contrary to the current test within s. 2(1)(a) of AEVA 2018 – which requires only that “an accident is *caused by an automated vehicle* when driving itself”.

We would also be concerned that a standard which refers to a human driver who does not cause a fault accident may artificially increase the standard by conflating improvements in road safety owing to the

increased prevalence of vehicles fitted with ADAS, with non-existent improvements in human driver behaviour.

Perversely, an increased tendency to rely on ADAS may actually adversely affect the performance and behaviours of human drivers because of overreliance on assisted driving technologies or complacency.

(c) A principal justification for the deployment of automated (or even assisted) driving is the propensity for technology to improve road safety for *all* users.

[5.69]: *"People are more likely to accept risks if they think that they are distributed fairly. They are less prepared to accept risks if their distribution is seen as unfair. This means that an overall reduction in risk may not be persuasive if (for example) the risk reduction is enjoyed by one group (such as car occupants) while the additional risks are experienced by another group (such as vulnerable road users)."*

We also agree with [5.107]: *"[AVs] should not redistribute risk in a way which damages those who receive no benefit from the technology"*. We, therefore, strongly oppose (c), which speaks only of (i) an "overall" application of a standard, and (ii) then applies a low standard in any event, being an average rather than median:

[5.65]: *"The median driver is much better than the mean. Given that the casualties that occur involve only a small minority of (often poor) drivers, a benchmark of "better than the mean" may be seen as too low."*

### **Consultation Question 5 (Paragraph 5.120)**

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

We are concerned that describing a safety standard by reference to a risk that must be "as low as reasonably practicable (ALARP)" lacks any measureable or practicable meaning, and may result in an inconsistent (and therefore illusory) standard only.

As for observations, we defer to other stakeholders who may be better placed.

### **Consultation Question 6 (Paragraph 5.121)**

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

We would advocate for a broad diversity of testing data, and scenarios, so that AVs do not inadvertently disadvantage any particular demographic group found within a vehicle's operational design domain.



We understand, per [7.39], it could be helpful to provide for “a standardised set of scenarios that could be used by a third party to test the ADS”, and so would advocate a requirement for applicants to test against each scenarios using defined demographic groups, for example, adult men, adult women, the elderly, children, a range of ethnicities, wheelchair users and users of other mobility scooters, cyclists, e-scooters.

We would, however, be concerned about any disclosure of test scenarios to applicants who may merely design automated vehicles or systems to pass specific tests, for example, defeat devices being used to control vehicle emissions whilst undergoing testing.

As for other practical measures, we defer to other stakeholders who may be better placed.

## CHAPTER 7: ASSESSING SAFETY PRE-DEPLOYMENT

### Consultation Question 7 (Paragraph 7.99)

**18.7 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?**

(1) We agree that (1) pre-deployment safety assessments should use a variety of techniques, such as (i) safety cases, (ii) simulations, (iii) track tests, and (iv) real-world road tests.

*[7.65]: The Ministry of Defence describes a safety case as “a structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given operating environment”.*

*[7.75]: The purpose of the safety case was to demonstrate that risks had been identified and adequate control structures were in place to reduce the risk.*

(2) We agree that manufacturers should submit a safety case to the UK’s specialist regulator described in Q3 demonstrating why the automated driving system is safe, so that – if satisfied – that regulator may provide appropriate advice to the SoSfT regarding the AV’s proper categorisation. We do not consider that the “belief” of the applicant is of any relevance when considering a safety case.

(3) We agree that the UK regulator must – rather than should – (a) provide guidelines for what must comprise each safety case (b) audit the safety case, and (c) prepare guidance for the applicant on preferred standards, which would tend to demonstrate competence.

We agree that the UK regulator must (d) carry out some independent testing, but consider that – pre-type approval and deployment in the UK – a role exists for another organisation to carry out much of the independent testing, such as Thatcham Research. However, we would propose that in order to remain independent, any organisation involved in independent testing should not otherwise be available for commissioning by applicants in support of their safety cases, who should instead defer to others such as Transport Research Laboratories (TRL).

### **Consultation Question 8 (Paragraph 7.100)**

**18.8 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.**

We agree that an initial consultation regarding the scope, and contents, of any proposed database would be helpful, however, we consider that any database would need to be updated regularly rather than static. We imagine data obtained as a result of market surveillance could support an effective feedback loop whereby dynamic, and evolving, scenarios could be adopted and refined based on real world accident data.

We would support any proposed consultation to identify a range of suitable scenarios. By way of example, we would propose that any database should include a range of micro-mobility scenarios to account for the increased incidence of e-scooters, electrically assisted pedal cycles, and bicycles on British roads as a result of the COVID-19 pandemic.

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

### **Consultation Question 9 (Paragraph 8.17)**

**18.9 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.

We consider it self-evident that, whilst prohibiting unauthorised automated driving systems, the SoSfT should retain the power to exempt certain systems for the limited purpose of undertaking approved testing or trials.



We consider that, in order for the specialist regulator to sufficiently scrutinise the applicant's safety case, evidence demonstrating competence must include real-world testing (in addition to simulation, and track testing), which would otherwise not be available to applicants without such an exemption.

### Consultation Question 10 (Paragraph 8.25)

**18.10 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?**

(1) We agree that the Government should establish a domestic scheme to approve automated driving systems (ADSs) for use on roads in Great Britain.

We agree that manufacturers should have a free choice to apply for type approval under either the UN ECE system of international type approval, or through the national scheme, provided always that a separate decision about categorisation continues to be reserved to the UK's specialist regulator prior to deployment.

We advocate the two-stage approach outlined at Q3 to determine whether an automated vehicle – as type approved – is capable of safely driving itself on British roads: Only if an automated driving system was approved by a type approval authority within one of the 56 UN ECE countries would the applicant then be required to satisfy the UK's specialist regulator that the vehicle is also safe enough to be categorised as self-driving for use on British roads.

(3) We tentatively agree developers – in addition to manufacturers – should be entitled to submit applications for type approval under the domestic scheme.

We understand that this proposal is intended for use in "Path 2" vehicles, albeit the intention is *not* to limit submissions by developers in this way. However, we query whether such submissions should actually be limited to systems intended for installation in "Path 2" vehicles only.

We also presume that permitting an ADS to be individually approved (whether by a manufacturer or developer) would always require an assessment of how approved systems interact and work together with all other systems once installed before an entire vehicle could be properly categorised as self-driving for the purposes of AEVA. We would, therefore, only agree with this proposal subject to subsequent testing of whole vehicles for the purpose of proper categorisation, prior to deployment on British roads.

By way of example, we have referred to the US National Transportation Safety Board's (NTSB) [preliminary report](#) into its [ongoing investigation](#) of a fatal crash on 18 March 2018. The accident involved a pedestrian, pushing her bicycle, and an Uber Technologies Inc. test vehicle (manufactured by Volvo Cars).

*... The vehicle was factory equipped with several advanced driver assistance functions by the original manufacturer Volvo Cars, including a collision avoidance function with automatic emergency braking...*

*... Data obtained from the self-driving system shows the system first registered radar and LIDAR observations of the pedestrian about six seconds before impact, when the vehicle was traveling 43 mph.*

*At 1.3 seconds before impact, the self-driving system determined that emergency braking was needed to mitigate a collision. According to Uber emergency braking manoeuvres are not enabled while the vehicle is under computer control to reduce the potential for erratic vehicle behaviour.*

*The vehicle operator is relied on to intervene and take action. The system is not designed to alert the operator.*

*In the report the NTSB said the self-driving system data showed the vehicle operator engaged the steering wheel less than a second before impact and began braking less than a second after impact. The inward-facing video shows the vehicle operator glancing down toward the centre of the vehicle several times before the crash.*

*All aspects of the self-driving system were operating normally at the time of the crash, and there were no faults or diagnostic messages.*

In this instance, despite the Volvo being equipped with automatic emergency braking, the operator (Uber) elected to suppress this functionality "to reduce the potential for erratic vehicle behaviour" and instead rely on a human operator to intervene. Whilst the ADS recognised emergency braking was required 1.3 seconds prior to impact, the ADS could not alert the human operator because it was simply not designed to do so; instead, the ADS was designed and intended to itself apply automatic emergency braking. The consequences proved to be fatal for the vulnerable road user.

### **Consultation Question 11 (Paragraph 8.43)**

**18.11 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?**

(1) We agree that, providing the powers outlined below at [8.26] are considered adequate, an ADS approval scheme should be established without further legislative reform.

*[8.26] The legislation already exists to establish a national ADS approval scheme. The Road Traffic Act 1988 provides the Secretary of State with wide regulation-making powers to prescribe "type approval requirements". These may be made "with respect to the design, construction, equipment and marking" of both vehicles and vehicle parts before they are used on a road [RTA 1988, s 54(1)]. The regulations may also be used to authorise who should carry out the examinations [RTA 1988, s 61(2)(f)(i)]. Furthermore, the Secretary of State may give directions "with respect to the manner in which examinations... are to be carried out" [RTA 1988, s 61(3)].*

(2) We agree that an ADS should be defined as a combination of software, hardware and sensors, which can be installed in a "type" of vehicle.

(3)-(4) We agree that where an ADS is approved or installed in a pre-registered "Path 1" vehicle, every example vehicle type within which an ADS may be installed must be submitted to the specialist regulator for national type approval of the installation(s) to validate how the systems – as installed – interact with every vehicle.

We imagine that "Path 2" vehicles will already have been type approved separately.

#### **Consultation Question 12 (Paragraph 8.44)**

**18.12 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 is it suited to the proposed national ADS approval scheme.**

We defer to other stakeholders.

#### **Consultation Question 13 (Paragraph 8.71)**

**18.13 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?**

(1) We agree that – per [8.47] – “systems with international type approval and systems with national [type] approval would both need to be submitted under the GB safety scheme for a decision on categorisation as self-driving” by a specialist regulator:

*[8.55] Self-driving categorisation asks a different question from type approval. Type approval under the UN ECE agreement asks whether the system meets the terms of the UN Regulation, and is therefore suitable for placement onto the market.*

*Self-driving categorisation asks if the system is safe without being monitored by an individual to such an extent that individuals in the vehicle can be absolved from liability for the dynamic driving task. While UN Regulations focus on verifying against specifications, the categorisation decision is instead concerned with validating against a standard - can that model of vehicle safely drive itself without being monitored by an individual?*

*[8.63] ... We therefore see the classification decision as looking at the safety of the vehicle as whole, as embedded within safe processes to update, maintain and repair that vehicle.*

- (2) The specialist regulator should then advise the SoSfT about whether the automated vehicle could be categorised as “safely driving” itself.
- (3) We agree that the safety regulator should classify the vehicle in one of three ways:
  - (i) as not self-driving but driver assistance only;
  - (ii) as self-driving only with a user-in-charge; or
  - (iii) as self-driving without a user-in-charge

Additionally, we would propose that – where a vehicle is categorised (i) as not self-driving, but driver assistance only – the specialist regulator should make recommendations to the applicant outlining

reasons for its decision in order for the applicant, if minded to do so, to resubmit for (re)classification once it has adequately addressed those matters.

(4) We agree that the safety regulator should only recommend classification as self-driving where satisfied that:

- (a) an ADSE is registered as taking responsibility for the system;
- (b) the ADSE participated 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 undertake remedial action, e.g., organising recalls.

We do, however, have concerns around the language “closely involved”, which may suggest the ADSE has the ability to delegate creation of the safety case to another entity, provided that it retained a supervisory role, and registered itself as taking responsibility for the system, per (4)(a).

We, therefore, question how the ADSE would be required to evidence that, per [8.67]“... it will need to show that it has been sufficiently involved in assessing safety and writing the safety case to vouch for the information in it. If the information in it is inaccurate, the ADSE might be guilty of a serious criminal offence...”

Whilst we understand, from [8.69], that “at this stage, [the Law Commissions] do not wish to be prescriptive, either about the total funds needed or about how they are held”, we do not consider that the current financial requirements for licensed operators of Public Service Vehicles would be adequate for AVs, albeit do support the Senior Traffic Commissioner’s guidance emphasising that “finance must be truly available on an ongoing basis”.

[8.69] In Consultation Paper 2 we discussed the appropriate financial standing for HARPS operators, drawing on the current provisions for Public Service Vehicle operators. These require an operator to show this it has at its disposal capital and reserves of at least 9,000 euros where one vehicle is used and 5,000 euros for each additional vehicle.

Operators may show that the money is available in a variety of ways. As an alternative to submitting audited accounts, the operator may provide other evidence, such as bank guarantees, credit facilities or insurance policies. The Senior Traffic Commissioner has issued detailed guidance on the issue, stressing that the finance must be truly available on an ongoing basis.

#### **Consultation Question 14 (Paragraph 8.77)**

**18.14 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.

**Consultation Question 15 (Paragraph 8.78)**

**18.15 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?**

Yes, we consider that provision should be included for appeals to be submitted against a categorisation decision.

However, our expectation is that – where a vehicle is categorised (i) as not self-driving, but driver assistance only – the specialist regulator should be obliged to provide reasons for its decision to the applicant in order for the applicant, if minded to do so, to resubmit for (re)classification once it has adequately addressed matters arising.

**Consultation Question 16 (Paragraph 8.83)**

**18.16 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.**

Yes, we consider that the specialist regulation with responsibility for classification should have the power to permit deployment in limited numbers, prior to those vehicles being admitted on to the SoSfT's list as automated.

We consider that permission would be required in order for applicants to be able to collect sufficient evidence to support their safety case – where unable to demonstrate competence to the regulator's satisfaction – which could only include real-world testing (in addition to simulation, and track testing) if test vehicles were able to be deployed prior to being admitted on the SoSfT's list.

However, given the limited scope of this purpose, we consider that authorised trials should restrict the number of vehicles capable of being permitted on British roads by the regulator, prior to admission on the SoSfT's list.

**CHAPTER 10: ASSURING SAFETY IN USE**

**Consultation Question 17 (Paragraph 10.82)**

**18.17 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.

We appreciate that, historically, there has been an absence of market surveillance activity or responsibility for regulating the safety of vehicles once deployed, i.e. after type-approval. We, therefore, agree that a regime should be established to assure the safety of automated driving systems following deployment, particularly given [9.43] below:

[9.43] The Government has legislative authority under regulation 36 of the General Product Safety Regulations 2005 to establish a sectoral surveillance programmes specifically for AVs. A surveillance authority could receive complaints and work with manufacturers to resolve problems. It would have formal powers to issue recall notices; to suspend or prohibit the supply of automated driving systems; or require warnings about how they are used. It could also bring criminal prosecutions against producers and distributors who supply unsafe products. This would provide the bare bones of a scheme to assure the safety of AVs while they are in-use on the road.

**Consultation Question 18 (Paragraph 10.83)**

**18.18 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.

**Consultation Question 19 (Paragraph 10.84)**

**18.19 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 also deal with cybersecurity?**

**(3) Are other powers needed? (Note that data is discussed in Chapter 17.)**

(1)-(2) We consider that either (a) the regulator(s) may be empowered to approve software updates that apply only within the UK, in which case the regulator(s) must be required to deal with cybersecurity, or that (b) the regulator(s) competence need not extend to cybersecurity where the applicant is required to return to original type approval authority, who will assess updates in conformity with the UN Regulation on the approval of vehicles with regard to cyber security and cybersecurity management systems [ECE/TRANS/WP.29/2020/79]. We would endorse the latter.

(3) We also consider that any regulator's (or regulators') powers must comprise a power to issue a range of sanctions, over and above the power to initiate a criminal prosecution, where a producer is either failing to co-operate with the regulator(s) – by, for example, refusing to disclose *complete* vehicle data which might evidence defects – or unwilling to properly implement any agreed plan:

[9.42] Where a safety defect has been found, the producer is expected to agree a plan with DVSA which might include:

- (1) safety recalls (stop drive): there is an immediate threat to safety, so the vehicle must not be driven.
- (2) safety recalls: the threat is not immediate and can be mitigated with "reasonable" consumer action.
- (3) consumer / garage warning: the safety defect can be mitigated through vehicle maintenance or similar checks. This may be used with a recall.
- (4) amendment to maintenance or servicing requirements: a reasonable change to maintenance or servicing requirements can detect a potential problem and avoid the defect.

**Consultation Question 20 (Paragraph 10.100)**

**18.20 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?**

We understand, from [9.28], that "the Road Vehicles (Approval) Regulations 2020, which provide the domestic regulatory framework implementing Regulation 2018/858, identify the Secretary of State as both the type approval and the market surveillance authority for the UK. In practice however the [Vehicle Certification Agency] VCA carries out the role of type approval whilst the [Driver & Vehicle Standards Agency] DVSA carries out the market surveillance role via its [Market Surveillance Unit] MSU."

In the circumstances, we consider that – whilst there must be a separation of powers between the specialist regulator responsible for pre-deployment type-approval and another responsible for



monitoring the safety of AVs post-deployment for use on British roads – this does not require two separate regulators but merely separate agencies for the reasons below:

[10.89] ... Only an agency that has records of testing during design and development can effectively assess if a software update or hardware change is being completed and tested according to the initial design tests or needs additional testing is needed etc.

[10.90] ... "Split responsibility seems likely to sow the seeds for mistakes and a lack of co-ordination".

### **Consultation Question 21 (Paragraph 10.101)**

**18.21 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)?**

We defer to other stakeholders.

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

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

**18.22 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?**

(1)-(2) Yes.

However, it is unclear how such investigations would be initiated. In order to avoid any overlap between the enforcement powers of local police forces and any regulator(s) – with duplication of effort – we would propose that infractions should continue to be investigated by police in the way, with a power to make referrals to the regulator(s) as appropriate.

(3) We agree that a range of regulatory sanctions – rather than criminal penalties – are more likely to achieve compliance by requiring ADSEs to address any underlying defects.

[11.22] Human drivers and ADSEs do not respond to penalties in the same way. For an ADSE, paying a... fine is unlikely to achieve greater compliance... [ADSEs should be encouraged (or sanctioned)] to address the underlying issue. Applying driving fines to an ADSE would not promote a learning culture; nor would it address failures to update software and maps.

We also generally agree that – per [11.32] – “... criminal offences *normally associated with driving* should not apply to an ADSE”. However, where there are aggravating factors – such as an ADSE’s prior failure to remedy underlying defects, which subsequently cause death or serious injury whilst an AV was driving itself – we consider that criminal offences (in addition to regulatory sanctions) must exist.

Without the availability of criminal sanctions, we would be concerned that a public perception of undue leniency may develop, particularly if ADSEs could escape any criminal punishment, whereas identical contraventions by human drivers could potentially face a loss of liberty. We consider that the Health & Safety Executive’s Enforcement Policy Statement<sup>1</sup> strikes the right balance:

*“Appropriate use of our enforcement powers is important, both to secure compliance with health and safety law and to ensure that those who have a legal duty (duty holders) are held to account for significant failures... We take enforcement action to prevent harm by requiring duty holders to manage and control risks effectively. This includes*

- *ensuring action is taken immediately to deal with serious risks;*
- *promoting and maintaining sustained compliance with the law; and*
- *ensuring that those who breach the law, including individuals who fail in their responsibilities, may be held to account (this includes bringing alleged offenders before the courts...)”*

### **Consultation Question 23 (Paragraph 11.53)**

**18.23 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?**

(1)-(2) Yes;

(3) Yes, save that we consider redress orders should be payable to any uninsured drivers’ scheme established by the Motor Insurers’ Bureau to compensate the victims of accidents caused by uninsured AVs whilst driving themselves.

(4)-(6) Yes;

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<sup>1</sup> <https://www.hse.gov.uk/pubns/hse41.pdf>

(7) Whilst recognising that restorative conferences could operate in the circumstances outlined @ [11.52]: “Following a death or serious injury, for example, senior managers from the ADSE could meet the victim and/or their family face to face to discuss why the accident happened and what steps were being taken to ensure that it never happened again”, we wonder whether a power to compel, rather than a power to merely make a recommendation, should be available to the regulator. Naturally, such conferences could only operate effectively if an ADSE was a willing and participating party.

Irrespective of the range of sanctions applied, we consider that a requirement must exist for the regulator to publicise its decisions – and sanctions applied – in order to promote confidence and transparency around this novel and emerging technology.

#### **Consultation Question 24 (Paragraph 11.54)**

**18.24 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?**

- (1) Yes, save that we consider guidelines should be published indicating the range, and parameters, to be considered by the regulator when applying a financial penalty; for example, lower penalties may be applied where the infringement is relatively minor and/or the first infringement of a particular kind by an ADSE whereas higher penalties might be levied for more serious infringements or repeated infringements.
- (2) Yes, save that we consider the regulator’s decisions must be published in order to promote transparency, and indicate the sorts of remedial action considered to be acceptable so that ADSEs are incentivised to implement solutions proactively without the threat of sanctions.

#### **Consultation Question 25 (Paragraph 11.69)**

**18.25 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?**

- (1)-(3) Yes.

The focus of a specialist incident investigation unit – which would not seek to allocate blame but instead focus on failures that led to serious collisions, and make recommendations about how they may

be avoided in future – should be established, given that the regulator's quite separate sphere of activity will include enforcement and liability for criminal offences.

We do consider that the power to make referrals to any incident investigation unit should not be limited solely to the regulator but should also include, for example, police forces and accident victims.

### **Consultation Question 26 (Paragraph 11.82)**

**18.26 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.

### **Consultation Question 27 (Paragraph 11.83)**

**18.27 We welcome views on:**

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

(1) Per [11.79] "Areas where work could be usefully undertaken include: (1) providing guidance on interpreting indeterminate terms in legislation and in the Highway Code; (2) identifying possible additions to the Highway Code to resolve conflicts between two automated vehicles (and which are currently resolved through non-standard communication between human drivers).

The forum could also consider any issues arising from any incident investigation unit's work, or that of the regulator, which concerned rules of the road.

(2) Per [11.80] "... A panel of developers and regulators, chaired by a respected independent expert..."

Whilst we consider that the forum's composition should be limited by numbers to avoid becoming unwieldy, we would propose senior representation by vehicle manufacturers or OEMs, developers, members of police forces' collision investigation units, Highways England, road safety organisations, and perhaps the Motor Insurers' Bureau if they were to administer a scheme to compensate accident victims of uninsured self-driving.

(3) We defer to other stakeholders.

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

### **Consultation Question 28 (Paragraph 12.24)**

**18.28 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?**

(1)-(2) Yes.

### **Consultation Question 29 (Paragraph 12.37)**

**18.29 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?**

(1) No; Whilst – per [12.10] – “... A user-in-charge must be ready, qualified and fit to take over driving a moving vehicle following a transition demand...”, we do not consider that every failure to accept a transition demand should be capable of giving rise to civil and criminal liability.

*[12.10]: “... A user-in-charge must be ready, qualified and fit to take over driving a moving vehicle following a transition demand, in accordance with the design of the system.*

*[12.32]: The transition [demand] period ends when the minimum risk manoeuvre begins.*

*[12.33]: We propose that, following the end of the transition demand period, the user-in-charge would re-acquire the legal obligations of a driver. **Even if they have not taken control of the vehicle, they would be deemed to be a driver and their immunity for dynamic driving offences would cease.***

*This means that the user-in-charge would become liable in both civil and criminal law, for anything that the vehicle does following the end of the transition demand period. This would be subject to the usual civil and criminal law principles which exempt drivers from failures due to incapacitation, such as a heart attack or stroke [In England and Wales, see Attorney-General's Reference (No 2 of 1992) [1993] 3 WLR 982].*

Despite the previous question proposing that “the user-in-charge is not a driver while the ADS is engaged, and would not be liable for any criminal offence or civil penalty... which arises out of dynamic driving”, the (re)imposition of criminal and civil liability upon the user-in-charge, under the current

proposal, appears to be triggered despite the ADS remaining engaged, i.e. “[12.32] following the end of the transition demand period... [12.32] when the minimum risk manoeuvre begins”.

We strongly oppose this proposition, and consider its effect – particularly where the period between the end of a transition demand and any subsequent collision is brief (seconds rather than minutes) – would be wholly unsatisfactory. Instead, we propose that the (re)imposition of liability upon a user-in-charge should be triggered only (a) at the end of a minimal risk manoeuvre, or (b) at some prior stage between the beginning of a transition demand period and the end of a minimum risk manoeuvre, when the user-in-charge has actually resumed the dynamic driving task following a clear “offer and confirm”.

In those circumstances, vehicle data would be available to evidence the user-in-charge / driver has either accepted a transition demand, or requested and confirmed control of the dynamic driving task.

(2) Yes.

We consider that the imposition of criminal and civil liability upon a user-in-charge / driver once a vehicle has reached a minimal risk manoeuvre would actually encourage them to resume control of the AV prior to the AV reaching a stationary, and potentially hazardous, position. They would effectively be taking over driving a *moving* vehicle following a transition demand without civil and criminal liability being imposed whilst the ADS is engaged and still responsible for the dynamic driving task.

### Consultation Question 30 (Paragraph 12.45)

**18.30 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.**

We consider that the ability to competently and quickly regain situational awareness (e.g. within 10 seconds, per the ALKS Regulation) requires years of experience. We would, therefore, oppose any proposal for persons with only a provisional licence to qualify as users-in-charge.

Instead, we would propose that newly qualified drivers may act as a user-in-charge after, for example, 1 year post qualification, and – in those circumstances – only where accompanied by an approved driving instructor in a vehicle with dual controls.

We consider this approach would be akin to a form of graduated licence for AVs. We do not consider that such an approach should be exclusively reserved for learner drivers, and consider the question to be intrinsically linked to how driver competence will be assessed, i.e. whether drivers will be re-examined before qualifying as a user-in-charge. Accordingly, we do not consider that such measures would disproportionately disadvantage a particular class of user, such as learner drivers only.

### Consultation Question 31 (Paragraph 12.53)

**18.31 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. These proposals seem a sensible and natural extension of the following conventional driving offences:

\* s 40A RTA 1988: "A person is guilty of an offence if s/he uses, or causes or permits another to use, a motor vehicle or trailer on a road when—

(a) the condition of the motor vehicle or trailer, or of its accessories or equipment, or

(b) the purpose for which it is used, or

(c) the number of passengers carried by it, or the manner in which they are carried, or

(d) the weight, position or distribution of its load, or the manner in which it is secured,

is such that the use of the motor vehicle or trailer involves a danger of injury to any person"

\* s 87(2) RTA 1988: "It is an offence for a person to cause or permit another person to drive on a road a motor vehicle of any class, otherwise than in accordance with a licence authorising that other person to drive, a motor vehicle of that class".

\* s 143(1)(b) RTA 1988: "A person must not cause or permit any other person to use a motor vehicle on a road or other public place unless there is in force in relation to the use of the vehicle by that other person... a policy of insurance..."

### **Consultation Question 32 (Paragraph 12.59)**

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

Yes.

### **Consultation Question 33 (Paragraph 12.60)**

**18.33 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.**

(1)-(2) We agree it should be an offence to be carried in a vehicle without a user-in-charge, [a] knowing that there was no user-in-charge, [b] when the passenger either [i] knew that a user-in-charge was required, or [ii] ought to have known that a user-in-charge was required.

Moreover, we consider that being carried without a user-in-charge is analogous to being carried by an unfit or unqualified user-in-charge. We would, therefore, wonder whether the new offence should be extended accordingly.

We do, however, believe that these offences must prescribe a minimum age, below which liability for the proposed criminal offence(s) cannot attach.

Finally, we query whether, in addition to comprising a criminal offence, these individuals should also be excluded from the benefits of the compulsory insurance cover under AEVA, in accordance with the current provisions of s. 151(4) RTA 1988, which apply to conventional vehicles; see proposed wording:

*““excluded liability” means a liability... [to] any person who, at the time of the use which gave rise to the liability, was allowing [them]self to be carried in or upon the vehicle and knew or had reason to believe that the vehicle [i] had been stolen or unlawfully taken, or [ii] had either no user-in-charge, or an unfit or unqualified user-in-charge, not being a person who—  
(a) did not know and had no reason to believe... until after the commencement of [their] journey, and  
(b) could not reasonably have been expected to have alighted from the vehicle”.*

#### **Consultation Question 34 (Paragraph 12.66)**

**18.34 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, for the reasons articulated at [12.64]: This would avoid holding the ADS responsible for actions that it did not take; equally it would protect drivers against being found guilty of criminal offences they had no [reasonable] opportunity to avoid.

However, if a user-in-charge has resumed the dynamic driving task, AEVA – in its current form – could not appear to attach liability to insurers because the automated vehicle would not have been “driving itself”. We are concerned that would leave a gap in cover for accidents victims – and the statutory protections – if an accident occurred, which a competent and careful driver could not have avoided, meaning civil liability would be unlikely to attach to the human driver, resulting in no route to compensation for any accident victim(s).

#### **Consultation Question 35 (Paragraph 12.94)**

**18.35 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?**

(1)-(2) s. 143(1) RTA 1988 deals with (i) using (ii) or causing or permitting use by another, without insurance, whereas this proposal seems to limit the first two offences to users only (rather than those causing or permitting, such as registered keepers). We, therefore, propose expanding offences (1)-(2) to cover causing or permitting offences to reflect the existing provisions relating to conventional vehicles within s 143(1)(b) RTA 1988 (insurance) and s 40A RTA 1988 (roadworthiness):

\* s 143(1)(b) RTA 1988: "A person must not cause or permit any other person to use a motor vehicle on a road or other public place unless there is in force in relation to the use of the vehicle by that other person... a policy of insurance..."

\* s 40A RTA 1988: "A person is guilty of an offence if s/he uses, or causes or permits another to use, a motor vehicle or trailer on a road when—

- (a) the condition of the motor vehicle or trailer, or of its accessories or equipment, or
- (b) the purpose for which it is used, or
- (c) the number of passengers carried by it, or the manner in which they are carried, or
- (d) the weight, position or distribution of its load, or the manner in which it is secured, is such that the use of the motor vehicle or trailer involves a danger of injury to any person"

We also consider that the ADS must be required to install safety critical updates automatically, i.e. without requiring user intervention, and to disable an automated vehicle's functionality until critical software updates have been successfully installed and validated. Such an approach would be promote consumer confidence, and avoid criminalising the digitally disadvantaged.

(3)-(5) Yes, we agree that these proposed offences should be limited only to a user-in-charge.

### **Consultation Question 36 (Paragraph 12.95)**

**18.36 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.

We would reiterate that the ADS – rather than a user-in-charge – must be required to automatically install safety critical updates, i.e. without requiring user intervention, and to disable an automated vehicle's functionality until critical software updates have been successfully installed and validated.

Such an approach would be promote consumer confidence, and avoid criminalising the digitally disadvantaged.

## CHAPTER 13: REMOTE OPERATION: NO USER-IN-CHARGE VEHICLES

### Consultation Question 37 (Paragraph 13.67)

**18.37 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?**

(1) Agreed.

(2) We disagree.

We consider that monitoring – in addition to control – must always be undertaken by an ADS to be regulated as "self-driving", however, we agree that discrete requests for assistance (i.e. remote intervention where an AV has already achieved a minimal risk manoeuvre) may still be capable of comprising self-driving under AEVA. If an individual is required to monitor a vehicle remotely, rather than merely responding to alerts or notifications from an ADS in the circumstances outlined above, we consider that should prevent the vehicle from being listed as self-driving under AEVA.

**18.38 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".**

We consider that the amendments proposed at [13.64] would remain effective, irrespective of the answer to Q. 37(2), i.e. A vehicle would be categorised as "self-driving" [under AEVA] if it was operating in a mode in which: (1) it was not being controlled (by steering and braking) by an individual; and (2) did not need to be monitored by an individual in the vehicle or in sight of the vehicle "[monitored or remotely, other than in response to a discrete alert from an ADS].

For the avoidance of any doubt, we consider that any amendments proposed should continue to exclude from the definition of "self-driving" under AEVA any operation of a vehicle that requires proactive monitoring remotely.

Separate remote monitoring into reactive remote supervision – in response to alerts or notifications from an ADS – which should continue to comprise “self-driving” for the purposes of AEVA, with proactively remote monitoring, which we maintain should disqualify a vehicle from being categorised as self-driving.

**Consultation Question 38 (Paragraph 13.86)**

**18.39 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?**

- (1) We agree that the regulation of automated vehicles should distinguish between an Automated Driving System Entity (which vouches for the design of the system) and an operator (responsible for its operation).

Whilst acknowledging that this has the potential to increase the scope for disputes between the ADSE and a licensed operator, we consider that disclosure of vehicle data will generally prove determinative in establishing fault.

We are persuaded – per [13.84] – that “requiring one combined organisation would reduce competition. It would effectively give a few major developers a monopoly of all automated passenger and freight services, reducing innovation in how these services are provided...”

- (2) Yes.

- (3) Yes.

**Consultation Question 39 (Paragraph 13.92)**

**18.40 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.**

We do not consider that a safety case alone would satisfactorily demonstrate professional competence. Instead, in the absence of a user-in-charge – NUIC operators should be required to nominate a qualified transport manager to oversee operations (per public service vehicle licensing), in addition to demonstrating professional competence through a safety management system within a safety case. A qualified transport manager encourages accountability.

#### **Consultation Question 40 (Paragraph 13.108)**

**18.41 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?**

(1)-(3). Yes.

(4) Yes, however, we consider that the ADS should be required to install safety critical updates automatically, i.e. without requiring intervention by a licensed operator, and to disable automated functionality until updates have been completed and validated [see Q. 35].

(5) Yes, however, we consider untoward events should be expressly defined (for example, by reference to near misses), and supplemented with an obligation to disclose vehicle data absent a collision.

#### **Consultation Question 41 (Paragraph 13.109)**

**18.42 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?**

We disagree.

Whilst it may generally be considered prudent to include a regulation-making power if a convincing case could be made for transferring (rather than delegating) these obligations to a registered keeper or owner, we consider that – in the absence of a user-in-charge – any transfer to a registered keeper or legal owner may succeed only in transferring liability for the obligations, rather than ensuring they are effectively discharged.

We, therefore, consider that these obligations should remain with the licensed operator, and the additional cost of compliance factored in to the cost of its service(s).

We also query whether, despite a transfer of these obligations, a licensed operator could potentially remain potentially liable under product liability law as a “supplier” for putting these automated vehicles into circulation (aka “liability for defective products” within the meaning of s. 2(3) of the Consumer Protection Act 1987). However, certain limitations inherent in the 1987 Act may mean that such liability is not imposed effectively or uniformly because (i) it applies only to consumer claims (rather than businesses), (ii) there exists a 10 year after market long stop limitation period, (iii) there exists a “state of the art” defence, and (iv) an exclusion of liability for damage to the product itself (in this case, the automated vehicle).

#### **Consultation Question 42 (Paragraph 13.116)**

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

We defer to other stakeholders.

**18.44 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.

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

3 years – 5 years.

#### **Consultation Question 43 (Paragraph 13.133)**

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

We consider that the regulator responsible for administering the AV safety assurance scheme should also be responsible for the operator licensing scheme. However, on the basis we consider that Traffic Commissioners would be best placed, we do wonder whether Traffic Commissioners could either be transferred (or, alternatively, seconded) into the safety assurance scheme.

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

### Consultation Question 44 (Paragraph 14.107)

**18.46 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?**

(1)-(4) We understand that the Law Commissions' concerns are outlined at [14.18], i.e. "... Some ADSEs might act dishonestly in their approach to safety assurance. In particular they may: (1) not carry out all the tests required; (2) misreport test results; (3) suppress poor test results; (4) install defeat devices, which make a system respond differently in tests than in real life; and (5) obtain confidential information about test scenarios, and then game the system by training only for the test and not for real life."

We agree with the proposals outlined at (1)-(4), subject to the qualification outlined at [14.84], namely that "in an AV context, we do not think it is necessary to criminalise *all* non-disclosures relevant to "efficacy"."

However, given the risks associated with the suppression of test results, we agree that the offense(s) should be limited to failing to provide information that is relevant to the regulator's evaluation of safety of the ADS or the vehicle as a whole. It should also be an offence to make representations which are "false or misleading in a material particular".

(5) We are concerned that the Crown Prosecution Service may lack the specialist knowledge to successfully prosecute offences arising out of the use of automated vehicles. On the basis any prosecutor – not being the specialist regulator – would be heavily reliant on the regulator, it may be preferable for the regulator to maintain responsibility for criminal prosecution in common with other high risk industries, particularly the Aviation industry. We consider such an approach would promote public confidence in this novel and emerging technology.

Consultation Question 45 (Paragraph 14.108)

18.47 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—

- (1) to have been committed with the consent or connivance of an officer of the body corporate; or
  - (2) 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:

- (1) related to an increased risk of a type of adverse incident; and
- (2) an adverse incident of that type occurred; and
- (3) 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.**

Agreed (in part); Offence A seems to be framed in terms of information exclusively within the safety case (whether non-disclosures or misrepresentations); Offence B seems to be framed in terms of only responses to specific requests by the regulator(s).

There seems to be no obligation – and corresponding offence – to update information within a safety case (or elsewhere) when, despite being accurate at the time a vehicle is classified, safety critical information later becomes inaccurate because of developments in technology. By way of example, there is an ongoing obligation to update software, yet there does not seem to be any corresponding obligation to update the safety case at the same time, which could also provide an audit trail in the event new updates inadvertently introduce defects into the AV or otherwise compromise the accuracy of the safety case originally submitted.

We would, therefore, endorse an express (legal) obligation to *maintain* the accuracy of disclosures and representations so that – whilst correct at the point of disclosure – neither may be lawfully permitted to become false or misleading, because of subsequent developments in technology such as software updates.

In an unrelated response, the proposed defence within Offence(s) A and B conflates two very different tests: “The ADSE would have a defence if it could show that it took reasonable precautions and exercised all due diligence to prevent the wrongdoing.”

Any proposed defence requires clarity about the circumstances in which it may be established and, crucially, the appropriate test to be applied (which is not to say that the correct test must be either of the two options proposed).

#### **Consultation Question 46 (Paragraph 14.109)**

**18.48 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.**

We consider that – per [14.103] – “the relevant information must be provided by the [ADSE]... in a manner “reasonably clear and accessible to [its regulator(s)]””. We consider that a failure to satisfy this requirement should (and does) amount to a misrepresentation.

Whilst we anticipate ADSEs will act in good faith, sanctions must exist to guard against the risk of ADSEs attempting to conceal or underplay adverse information by purporting to disclose it in such vast volumes that it effectively becomes effectively hidden.

In order to guard against this risk we would propose standardising, in a uniform format, the information required, which could facilitate chronological comparisons between the safety cases of an individual



ADSE, and comparisons between unrelated ADSEs where, for example, there appear to be common defects in AVs or ADSs.

## CHAPTER 15: NEW WRONGFUL INTERFERENCE OFFENCES

### Consultation Question 47 (Paragraph 15.10)

**18.49 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.

### Consultation Question 48 (Paragraph 15.11)

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

We do consider that any tampering offence must apply to external infrastructure.

If – per [15.9] – “unlawfully or maliciously damaging or tampering with railway infrastructure serving trains is a criminal offence in England and Wales [per Offences Against the Person Act 1861, s 32 and Malicious Damage Act 1861, s 35], it is difficult to imagine why any distinction should be drawn with other methods of transport that would be equally reliant upon infrastructure to operate safely.

Given the significant risk of harm, and scope for catastrophic damage, to large numbers of road users caused by a single incidence of tampering, we consider that tampering with external infrastructure must be criminalised in the same way as tampering with vehicles. If anything, the adverse consequences of tampering with infrastructure – rather than AVs – are likely to be more widespread (if not more disastrous).

### Consultation Question 49 (Paragraph 15.53)

**18.51 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.

**Consultation Question 50 (Paragraph 15.55)**

**18.52 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.

We consider that the focus of enquiry in any new offence must be the intentional interference – given an aggravated offence – in order to deter all objectively dangerous interferences with AVs.

**Consultation Question 51 (Paragraph 15.62)**

**18.53 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.**

We do not consider such a defence to be desirable, but would instead propose appropriate amendments should be made to clarify that the “lawful authority and reasonable cause” are actually conjunctive and not disjunctive.

Unless a proposed defendant also had reasonable cause – in addition to lawful authority – any interference, which caused a defect, would give rise to criminal liability under s. 22A RTA 1988.

**CHAPTER 16: CIVIL LIABILITY**

**Consultation Question 52 (Paragraph 16.24)**

**18.54 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?**

We do consider that AEVA’s framework is adequate at this stage, however, have invited areas for clarification below:

Contributory Negligence

Whilst AEVA’s provisions on contributory negligence could be criticised as awkward, the helpful explanation below renders the provisions fit for current purposes.

[16.16] ... Under section 3(1) of AEVA, where an accident was to any extent the fault of the injured party, the normal principles of contributory negligence will apply... [save that AEVA] requires the court to imagine two counter-factual situations: first, that the claim is brought against someone other than the insurer [s 3(1)], and secondly that the insurer is at fault because of the behaviour of the automated vehicle [which caused the accident when driving itself] [s 6(3)].

Whilst this paragraph describes the insurer being at fault because of the behaviour of the automated vehicle, rather than the insurer being liable where an accident is caused by an automated vehicle when driving itself, this description seems correct in the narrow context of contributory negligence – viewed under s. 1(1) of the Law Reform (Contributory Negligence) Act 1945 – which provides that “where any person suffers damage as the result partly of [their] own fault and partly of the fault of any other person or persons [i.e. insurers]...”

Our expectation is that – in addition to conventional scenarios in which contributory negligence currently arises, novel forms of contributory negligence may arise concern (i) the actions of the user-in-charge or licensed operator in using an automated mode outside of an AV’s Operational Design Domain, (ii) declining to accept an ADS’s transition demand to take over driving a moving vehicle, or (iii) intervening in the dynamic driving task, whether by a user-in-charge or licensed operator.

#### Causation

We agree that the courts would be better placed to determine causation than the legislator, given that factual scenarios generally prove determinative when considering causation.

However, we consider that clarification would be welcomed in one distinct respect: where an evasive manoeuvre is undertaken by an AV (in the agony of the moment) entirely owing the actions of a third-party vehicle, any accident involving the AV would be “an accident... caused by an automated vehicle when driving itself” rendering the AV’s insurer liable under s. 2(1) AEVA 2018 because the Act is wholly unconcerned with fault, but exclusively focussed on causation.

### **Consultation Question 53 (Paragraph 16.32)**

**18.55 We provisionally propose that measures should be put in place to compensate the victims of accidents caused by uninsured AVs [whilst driving themselves].**

**Do you agree?**

Yes, subject to our additional wording in square brackets [whilst driving themselves]. If an uninsured automated vehicle was involved in an accident whilst not driving itself – because it was not in an automated mode – we consider any new measures should not confer compensation in those circumstances.

As for how such measures should be funded, we do question whether it would be equitable to require only authorised motor insurers, who are currently members of the Motor Insurers’ Bureau, to continue

to fund the costs of accidents involving uninsured AVs whilst driving themselves [see. Q. 23 on redress orders imposed on ADSEs].

**Consultation Question 54 (Paragraph 16.47)**

**18.56 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?**

- (1) Agreed; We question whether the UK's departure from the EU may afford the legislator an opportunity – if it were considered desirable – for domestic law to be decoupled from European Directives.
- (2) We agree that a review should cover product liability as a whole, rather than be confined to automated vehicles.

However, we disagree that AV's should be widely deployed without clarity about how the law of product liability applies to software.

[16.31] recognises that “measures ensuring victims of uninsured AVs receive compensation need to be in place before any vehicle is listed as capable of safely driving itself under section 1 of the [AEVA]. Allowing an AV on the road before victims of uninsured drivers are covered would undermine [AEVA's] aim of ensuring compensation for victims”.

Yet AEVA's proper operation would also be undermined where an insurer, underwriting liability incurred to – and for the benefit of – accident victims, was unable to recover (and transfer that liability to the ultimate tortfeasor(s)) where the operative cause of the accident was a defect in the AV or its software. Current challenges are compounded – at [16.42] – by “the interconnectivity of products and systems [which] makes it harder to identify defect. Furthermore, the complexity and opacity of emerging digital technologies complicate chances for the ~~victim~~ [insurer] to discover and prove the defect and prove causation”.

If insurers were to factor into their pricings a relatively slim prospect of recovering compensation from an ADSE, premia may become prohibitively expensive, potentially increasing the incidence of uninsured driving.

## CHAPTER 17: ACCESS TO DATA

### Consultation Question 55 (Paragraph 17.65)

**18.57 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?**

- (1) Agreed. The rationale appears at [4.45]:

"... Developers would be required to store, process and provide access to information generated by an ADS for a variety of reasons. In particular, data is needed to:

- deal with civil claims, so as to compensate victims;
- support criminal investigations by the police;
- support non-criminal investigations under our safety assurance scheme with the purpose of improving safety and setting appropriate regulatory sanctions; and
- provide base line information including about distance travelled and the operational design domain, to put incident data and other safety metrics collected in context."

A range of examples justifying the collection of adequate location data are articulated below:

[17.4]

- (1) Under our proposals on investigating infractions, a registered keeper who receives a notice of intended prosecution needs to know if the ADS was engaged at the time of the incident.
- (2) Where a driver, user-in-charge or registered keeper states that the vehicle was driving itself at the time of the incident, the police need access to the data to confirm that this is true.
- (3) Insurers require data to process claims under the Automated and Electric Vehicles Act 2018. Insurers need to know whether the vehicle was present at the time and place of the alleged incident, whether the ADS was engaged and how the incident occurred.
- (4) If a specialist investigation branch is established, the branch will need data to investigate high-profile accidents.
- (5) The safety in-use regulator has the task of learning from incidents to prevent them from occurring again and applying regulatory sanctions in response to specific incidents to ensure accountability.
- (6) In Chapter 14 we propose a possible new offence where failures in a safety case result in death or serious injury. This requires a detailed investigation of specific incidents, including access to data.

The real-world consequence of failing to collect and process – or to, crucially, preserve – accident data (including location data) is articulated below:

[17.28] ... Unless AV data storage systems record the location at which an ADS was engaged, it may be difficult to assign civil or criminal responsibility for some collisions, especially those involving vulnerable road users...

[17.35] ... Without location data, it is difficult to prove either ADS or driver responsibility, which creates a liability gap.

[17.40] ... Without location data to show whether the vehicle was at the scene it might be difficult to distinguish between genuine and fraudulent claims.

The lawful basis for processing location data – in addition to other data – is articulated below:

[17.50] (1) Under Article 9(1)(f) of the GDPR, processing is allowed if it is “necessary for the establishment, exercise or defence of legal claims or whenever courts are acting in their judicial capacity”... In the first, information is necessary to prosecute (or defend) a criminal offence. In the second, the insurer needs location data to defend a legal claim under [AEVA].

(2) Agreed.

Whilst we understand that Data Storage Systems for Automated Driving (DSSAD) should not be confused with Event Data Recorders (EDR), the latter data storage system would simply be unfit for automated driving purposes:

[3.19] “... Event Data Recorders [EDR] only detect collisions involving a sharp deceleration. They may not be triggered by glancing blows or where the vehicle collides with something with a much lower mass (as where a car collides with a motorcycle or pedestrian)”

[17.15]: “... Generally, for a collision to be recorded [within an EDR] it must involve a sharp deceleration (defined as losing 8 km/h within 150 milliseconds or less). Most events will be written over, unless the data is locked. And for data to be locked, the deceleration must be even greater: usually a loss of 25 km/h within 150 milliseconds, or when the airbag is deployed.

(3) Agreed.

### Consultation Question 56 (Paragraph 17.71)

**18.58 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?**

We agree that legislation should impose a duty on those controlling AV data to disclose it to insurers, however, we consider this duty should be strict. It should require automatic transmission of data in the

event of a collision – to a neutral third-party server – rather than qualifying the obligation by reference to a requirement for the data to be necessary to decide claims fairly and accurately.

[17.68] From the ADSE's point of view, it would be simpler to fall within Article 6(1)(c) [of the GDPR]. This applies where "processing is necessary for compliance with a legal obligation to which the controller is subject". However, for this basis to apply, legislation would need to impose a duty on those controlling AV data to disclose them to insurers ~~where~~ because this was necessary to decide claims accurately and fairly.

We defer to Thatcham Research, whose paper ("[Defining Safe Automated Driving](#)") – on page 73 – considers the following data necessary:

- (1) GPS-event time stamp
- (2) Activation status of each automated driving feature
- (3) Driver acceptance between automated/manual mode time stamp
- (4) Record of driver intervention of steering, braking, accelerator or gear-shift
- (5) Driver seat occupancy
- (6) User engagement commenced
- (7) Has Minimum Risk Manoeuvre (MRM) been triggered
- (8) System status (linked to fault code)

#### **Consultation Question 57 (Paragraph 17.81)**

**18.59 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?**

- (1) Yes.
- (2) We consider that identifying an appropriate retention period should be reviewed in light of insurers claims history.

We anticipate that – even where a third-party claimant is under a disability, or treated as such because they are a minor – three years should provide claimants with ample opportunity to notify a compensator and to investigate liability, irrespective that legal proceedings would not need to be commenced during that time, per s 28(1) and 28(6) of the Limitation Act 1980, namely "... before the expiration of [three] years from the date when s/he ceased to be under a disability or died (whichever first occurred)...".

#### **Consultation Question 58 (Paragraph 17.95)**

**18.60 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?**

(1)-(2) Yes.



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