

Chartered Institution of Highways & Transportation response to the Law Commissions' consultation on Automated Vehicles: A Preliminary Consultation Paper

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Contents

Consultation question 1.....	3
Consultation Question 2 (Paragraph 3.45)	4
Consultation Question 3 (Paragraphs 3.47 - 3.57).....	4
Consultation Question 4 (Paragraphs 3.59 - 3.77).....	4
Consultation Question 5 (Paragraphs 3.59 - 3.77).....	5
Consultation Question 6 (Paragraphs 3.80 - 3.96).....	5
Consultation Question 7 (Paragraphs 3.80 - 3.96).....	5
Consultation Question 8 (Paragraphs 4.102 - 4.104).....	5
Consultation Question 9 (Paragraphs 4.107 - 4.109).....	6
Consultation Question 10 (Paragraphs 4.112 - 4.117).....	6
Consultation Question 11 (Paragraphs 4.118 - 4.122).....	6
Consultation Question 12 (Paragraphs 5.30 - 5.32).....	7
Consultation Question 13 (Paragraphs 5.54 - 5.55).....	7
Consultation Question 14 (Paragraphs 5.58 - 5.71).....	8
Consultation Question 15 (Paragraphs 5.78 - 5.85).....	8
Consultation Question 16 (Paragraphs 5.86 - 5.97).....	9
Consultation Question 17 (Paragraphs 6.13 - 6.59).....	10
Consultation Question 18 (Paragraphs 6.61 - 6.116).....	11
Consultation Question 19 (Paragraphs 6.61 - 6.116).....	11
Consultation Question 20 (Paragraphs 7.5 - 7.11).....	11
Consultation Question 21 (Paragraphs 7.5 - 7.11).....	12
Consultation Question 22 (Paragraphs 7.14 - 7.19).....	12
Consultation Question 23 (Paragraph 7.21)	12
Consultation Question 24 (Paragraphs 7.23 - 7.35).....	12
Consultation Question 25 (Paragraphs 7.37 - 7.45).....	13
Consultation Question 26 (Paragraphs 7.37 - 7.45).....	13
Consultation Question 27 (Paragraphs 7.48 - 7.65).....	13

Consultation Question 28 (Paragraphs 7.59 - 7.61).....	14
Consultation Question 29 (Paragraphs 7.71 - 7.88).....	14
Consultation Question 30 (Paragraphs 7.71 - 7.88).....	14
Consultation Question 31 (Paragraphs 7.71 - 7.88).....	15
Consultation Question 32 (Paragraphs 7.92 - 7.123).....	15
Consultation Question 33 (Paragraphs 7.113 - 7.123).....	15
Consultation Question 34 (Paragraphs 8.1 - 8.58).....	15
Consultation Question 35 (Paragraphs 8.28 - 8.31).....	15
Consultation Question 36 (Paragraphs 8.32 - 8.39).....	16
Consultation Question 37 (Paragraphs 8.6 - 8.12).....	16
Consultation Question 38 (Paragraphs 9.6 - 9.27).....	16
Consultation Question 39 (Paragraphs 9.6 - 9.37).....	16
Consultation Question 40 (Paragraphs 9.6 - 9.37).....	17
Consultation Question 41 (Paragraphs 9.40 - 9.47).....	17
Consultation Question 42 (Paragraphs 9.49 - 9.55).....	17
Consultation Question 43 (Paragraphs 9.68 - 9.74).....	18
Consultation Question 44 (Paragraphs 9.76 - 9.88).....	18
Consultation Question 45 (Paragraphs 9.76 - 9.88).....	18
Consultation Question 46 (Paragraphs 9.91 - 9.93).....	18

CIHT would urge that the ongoing review considers the legal liabilities of highways authorities and the people that work on highways, as well as those of the users. Equally while the safety of road users is a major concern legislation must ensure that those who build and maintain our roads are sufficiently protected.

Connected and automated vehicles provide an opportunity to change the way vehicles interact with the highways network. The amount of data collected, and connectivity of these vehicles may greatly change the relationship between road users and providers specific legal duties which are embedded within the highways network. Developing that proper legal framework will be key to provide the best experience to all users of the UK’s highways.

Consultation question 1

Do you agree that;

- 1) *All vehicles which “drive themselves” within the meaning of the Automated and Electric Vehicles Act 2018 should have a user-in-charge in a position to operate the controls, unless the vehicle is specifically authorised as able to function safely without one?*
- 2) *The user-in-charge:*
 - (a) *must be qualified and fit to drive;*
 - (b) *would not be a driver for purposes of civil and criminal law while the automated driving system is engaged; but*
 - (c) *would assume the responsibilities of a driver after confirming that they are taking over the controls, subject to the exception in (3) below?*
- 3) *If the user-in-charge takes control to mitigate a risk of accident caused by the automated driving system, the vehicle should still be considered to be driving itself if the user-in-charge fails to prevent the accident?*

CIHT agrees that a user “in a position to operate the controls” should be a mandatory position in all vehicles unless permitted and specified otherwise. However, there should be clarity as to what the phrase means in practice as there is a growing understanding of the mental burden of preparing for action which users will face in highly automated vehicles. Regulation should show an understanding of realistic limits of human capability and vehicle for sold and authorised for use by the public should not expect the reaction times of paid professionals.

This is particularly relevant when it comes to defining ‘fit to drive’ as this refers to a wide range of possible barriers including mental health, physical health, drug or alcohol use as well as simple tiredness. In highly automated vehicles, particularly on long motorway journeys even relatively fresh passengers can quickly feel sleepy and it is likely the same symptoms will occur for a user-in-charge.

Police forces may already use roadside impairment tests to identify signs of sleepiness in erratic drivers and research shows that driver fatigue may be a contributory factor in up to 20% of road accidents, and up to one quarter of fatal and serious accidents so there is a need to clarify responsibility in the area.

CIHT also questions how (b) would interact with legislation that places further responsibilities on the driver, including littering offences and civil liability for opening doors and causing injury, despite these not being related to the dynamic driving task. Further (b) states that the user-in-charge will have to confirm they are taking over, but not if they are able to reject that request by the vehicle. This issue could arise when the user-in-charge feels unable to solve risks created by the automated systems actions. This could include driving manoeuvres that the vehicle is capable of, but not the driver or mistakes by the vehicle such as not recognising road signs.

CIHT agrees with 3) but argues that by limiting it to failing to prevent an accident there may be a gap. In the airline industry there are multiple examples of automated plane systems being overruled by pilots who then contribute to a crash, as occurred with Air France Flight 447 in 2009. In this case it appears that the pilot did not understand the steps being taken to prevent an engine stalling and it seems inevitable that we will see similar circumstances with

autonomous vehicles, even if the vehicle is operating correctly. However, it would be controversial in terms of liability and insurance if user error was placed on the automated driving system entity (ADSE).

CIHT believes that this situation should be interrogated further as it seems likely that both the vehicle provider and driver will not feel at fault in this situation as both are taking the action they see fit. It will be important not to require impossible decision-making skills but also provide sufficient legal remedy for those affected by a user's actions. This can be ameliorated through driver training but will remain an issue.

Consultation Question 2 (Paragraph 3.45)

We seek views on whether the label “user-in-charge” conveys its intended meaning.

CIHT agrees that it conveys its intended meaning but may be less clear than the phrase 'responsible user'.

Consultation Question 3 (Paragraphs 3.47 - 3.57)

We seek views on whether it should be a criminal offence for a user-in-charge who is subjectively aware of a risk of serious injury to fail to take reasonable steps to avert that risk.

CIHT agrees with the rationale outlined in the consultation document, that if a user is aware of serious harm taking place and able to prevent it they should have a legal duty to do so. This does not require any specific responsibility to be placed on the user-in-charge.

Consultation Question 4 (Paragraphs 3.59 - 3.77)

We seek views on how automated driving systems can operate safely and effectively in the absence of a user-in-charge.

CIHT's members have expressed a qualified scepticism of the development of automated vehicles and argue that it is very unlikely that fully automated (SAE Level 5) vehicles will be functioning on the entirety of the British road network in the next few decades. Therefore, we would suggest that there is time to assess the impact of highly automated vehicle before being concerned about how vehicles without users-in-charge operate in the general urban realm.

There is potential for fully automated systems to operate on less complex highways such as the Strategic Road Network managed by Highways England. With their clearer delineation of road types (Smart Motorways, Motorways, Expressways, All-purpose Trunk Roads), single authority, and general absence of vulnerable road users they will provide simpler scenarios for the Automated Driving System (ADS) to cope with. The Major Roads Network and the Local Highways Network support a wider range of users and will be more complex and riskier for vulnerable road users. Therefore, one way of operating automated vehicles safely will be to ensure they are restricted to the appropriate part of the network.

Other limited operational design domains that they may be permitted to operate in such as 'valet' parking, dedicated routes or on publicly accessible private property there must be a clearly identified automated driving system entity which takes responsibility for the vehicle, clear liability division between the infrastructure provider and sufficient insurance to cover damages to third parties.

We would also advocate that the chain of responsibility be published and accessible by the public to enhance confidence in the industry and to alleviate concerns.

Consultation Question 5 (Paragraphs 3.59 - 3.77)

Do you agree that powers should be made available to approve automated vehicles as able to operate without a user-in-charge?

CIHT agrees that it should be possible to approve this class of automated vehicle within a defined operationally designated domain but not for general urban usage. There are currently too many unknowns as to how automated vehicles will operate in practice and insufficient evidence to assess their safety and network management impacts.

CIHT would argue that powers to approve such vehicles should be able to mandate where they can be used, especially as allowing usage on the Strategic Roads Network motorways is very different to permitting usage on the Local Highways Network.

Consultation Question 6 (Paragraphs 3.80 - 3.96)

Under what circumstances should a driver be permitted to undertake secondary activities when an automated driving system is engaged?

CIHT argues that any engaged automated should enable drivers to undertake secondary activities, otherwise they are inherently unsafe and should not be permitted. Road rules should consider the cognitive capacity of road users and that regulation should not unfairly permit liability to be passed from manufacturers and providers to users.

Partial automation, particularly where a vehicle is not capable of obtaining a minimal risk condition, is the riskiest stage of the development of automated technologies. If technology permits users-in-charge to go for periods without interacting with the vehicle it is inevitable that attention will drift. Therefore, the question should not be should a driver be permitted to undertake secondary activities, it is whether an automated vehicle should permit or encourage those behaviours.

Consultation Question 7 (Paragraphs 3.80 - 3.96)

Conditionally automated driving systems require a human driver to act as a fallback when the automated driving system is engaged. If such systems are authorised at an international level: should the fallback be permitted to undertake other activities?

- (1) should the fallback be permitted to undertake other activities?
- (2) if so, what should those activities be?

CIHT acknowledge that a wide variety of activities will be undertaken whether they are permitted or not; these will range from reading, putting on make-up, sending email; and performing these activities will likely be a major selling point of automated vehicles.

Outside of drinking and drugs which are widely known as impairing decision making and for which there are existing laws, it is unlikely that any particular behaviour which you can do in a car seat can be prevented. Therefore, it does not make sense to create a list of permitted activities.

Consultation Question 8 (Paragraphs 4.102 - 4.104)

Do you agree that:

- (1) a new safety assurance scheme should be established to authorise automated driving systems which are installed:
 - a. as modifications to registered vehicles; or
 - b. in vehicles manufactured in limited numbers (a "small series")
- (2) unauthorised automated driving systems should be prohibited?

(3) the safety assurance agency should also have powers to make special vehicle orders for highly automated vehicles, so as to authorise design changes which would otherwise breach construction and use regulations?

CIHT strongly supports a new safety assurance scheme for 1(a) and 1(b) for when the normal 'type approval' does not apply and (2) in order to prevent the public and highways workers from undue risk but also for the developing industry as the impression of unregulated behaviour or an accident by an unapproved vehicle could set the industry back decades.

CIHT has no comment on (3)

Consultation Question 9 (Paragraphs 4.107 - 4.109)

Do you agree that every automated driving system (ADS) should be backed by an entity (ADSE) which takes responsibility for the safety of the system?

CIHT agrees that it is vital to have an automated driving system entity (ADSE) who bears legal responsibility for the decisions made by automated systems. Further there must be clear lines between what an ADSE is responsible for compared with the user-in-charge as when it comes to vehicle maintenance, software updates and similar activities there are multiple involved parties.

Consultation Question 10 (Paragraphs 4.112 - 4.117)

We seek views on how far should a new safety assurance system be based on accrediting the developers' own systems, and how far should it involve third party testing

CIHT agrees that third party testing should be a part of the process but many of the companies developing driverless technology are relying on complex software development sometimes referred to as artificial intelligence. This means that any safety assurance permit will only apply for a specific period and may not apply to a newly purchased vehicle which has been updated between licensing and sale.

Therefore, whilst it should be mandatory for automated vehicles to pass relevant tests, accrediting the developers own systems will be necessary for long term oversight.

Consultation Question 11 (Paragraphs 4.118 - 4.122)

We seek views on how the safety assurance scheme could best work with local agencies to ensure that is sensitive to local conditions.

CIHT distinguishes between the safety implications and the network management implications of autonomous vehicles. The safety assurance scheme should be concerned about whether a vehicle has the capability to operate safely and in what ODD, versus traffic management schemes which are about making the transport network operate effectively.

In terms of safety, the Safety Assurance Scheme in whichever form it takes place must ensure that automated vehicles are able to operate on the highway network as it exists today in whatever state it is in. This, would include temporary traffic management orders as the ADSE should be capable, and responsible for, navigating local conditions. The consultation also refers to trams, horse riders and horse drawn carriages as being specific to local areas, however they are clearly hazards which we would expect new drivers to cope with and automated systems must reach that minimum standard. In addition, it is unlikely that local

highways authorities will have the capability to assess vehicle safety and CIHT would oppose that expectation being placed on them.

In terms of network management, we would strongly support local authorities having the power to restrict vehicles to manage demand, air pollution and safety however it is unclear whether this should specifically apply to automated vehicles. We would like to see automated fleet operators working in good faith with local authorities and sharing data gathered by these vehicles on road condition and journey reliability shared with the local highways authority to improve the level of service on offer.

Highways England as the agency responsible for the Strategic Road Network has greater capacity to work with a safety assurance scheme provider and its network is more suitable for automated vehicles. CIHT would encourage a strong relationship be defined between Highways England, the Office for Rail and Road and any future safety assurance scheme to ensure sensitivity to local conditions.

Consultation Question 12 (Paragraphs 5.30 - 5.32)

If there is to be a new safety assurance scheme to authorise automated driving systems before they are allowed onto the roads, should the agency also have responsibilities for safety of these systems following deployment?

If so, should the organisation have responsibilities for:

- (1) regulating consumer and marketing materials?*
- (2) market surveillance?*
- (3) roadworthiness tests?*

We seek views on whether the agency's responsibilities in these three areas should extend to advanced driver assistance systems.

CIHT agrees that consumer and marketing materials should be regulated to manage expectations and to discourage unsafe behaviours from users-in-charge. Therefore, it seems logical for the safety assurance body to assess marketing claims as well.

Marketing communications in foreign media which may have laxer standards are also a concern and CIHT would urge the government to work closely with other jurisdictions to ensure compatible terminology where possible. Direct marketing and promotional communications that originate outside the United Kingdom are subject to the jurisdiction of the relevant authority in the country. Currently most members of the European Union, and many non-European countries, have a self-regulatory organisation that is a member of the European Advertising Standards Alliance (EASA) which coordinates cross border complaints. Once the UK leaves the EU, CIHT would encourage continuing to engage and shape decision making at the EASA in relation to automated vehicles.

Consultation Question 13 (Paragraphs 5.54 - 5.55)

Is there a need to provide drivers with additional training on advanced driver assistance systems?

If so, can this be met on a voluntary basis, through incentives offered by insurers?

CIHT believe that only safe driving systems should be implemented on UK roads and that safe should be defined against the highway network as it stands today. It should be unnecessary

for drivers of non-automated vehicles to undertake training and unfair to place a burden on those motorists.

For those purchasing autonomous vehicle there may be a justification demonstrating knowledge before taking ownership, such as through a dedicated 'theory test' but this will be difficult to enforce. Private sales, lack of knowledge by sales staff and lack of training systems will all present a challenge.

However, CIHT supports updating the highway code to include reference to automated vehicles and therefore including it as part of the driving licence theory test for new drivers.

Consultation Question 14 (Paragraphs 5.58 - 5.71)

We seek views on how accidents involving driving automation should be investigated. We seek views on whether an Accident Investigation Branch should investigate high profile accidents involving automated vehicles? Alternatively, should specialist expertise be provided to police forces.

CIHT argues that it is not practical for the approximately 50 police forces in the UK to hold the specialist knowledge required to investigate collisions by AVs or to hold the various international entities to account. Therefore, there will need to be a national level body given the task of monitoring and investigating collisions involving automated vehicles.

However, the consultation specifically discusses automated but not connected vehicles which will be unable to self-report incidents; and further relying on Automated Driving System Entities to report themselves may not be a trustworthy process.

This means the numerous pre-existing issues with collision data recording that occur in the UK will also affect automated vehicles. STATS19, the main system for recording collisions, is implemented in a variety of ways by police forces which can create difficulty in comparing data nationwide. Data collection would essentially be relying on police officers to record information on the existence and use of automated systems which is not currently recorded and difficult to determine on scene.

CIHT supports the development of an Accident Investigation Branch which should investigate high profile accidents however they will likely only be able to attend a fraction of the incidents that occur on the highway network each year. Therefore, specialist expertise will need to be provided to police forces as well. Given financial issues a similar system of funding could be looked at to the British Transport Police where officers are funded by the Train Operating Companies we could ask Automated Vehicle Operating Companies to self-fund.

CIHT notes that the purpose of regulation is not just to restrict commercial activities but also to enable them by providing consumer and investor confidence in new markets and products. Therefore, accidents involving driver automation should be investigated openly and transparently with conclusions published widely. Collision reports will help both policymakers and the general public assess whether they trust a certain technology and allow for open debate, it will also help avoid the commercial dilemmas which encourage information to be held confidentially. There must be a firm legal basis for requiring responsible parties to publish relevant information in a timely and comprehensive fashion.

Consultation Question 15 (Paragraphs 5.78 - 5.85)

Do you agree that the new safety agency should monitor the accident rate of highly automated

vehicles which drive themselves, compared with human drivers?

We seek views on whether there is also a need to monitor the accident rates of advanced driver assistance systems

CIHT agrees that a new safety agency should monitor accident rates of both highly automated vehicles and advanced driver assistance systems however we raise concerns about the increased level of responsibility on local authorities, highways authorities and police forces.

The law commission needs to understand the practical implications of mandating this data be collected. Stats19 has a component form which is a grid of 76 possible contributing factors, adding more technological factors to this will increase the difficulty and time required for the police officers fill it out. There is also a mix of reporting methods, with some forces providing the forms to local highways authorities to enter the data into the online database, others do it themselves, some report weekly and some monthly. It is estimated that this costs £2.6 million per annum across Great Britain.

The result is that after DfT data quality checks are included, reports are produced on a 6-month delay, which may not be enough to monitor the safety impact of automated vehicles in some scenarios.

Further, collisions which damage only property, with no human casualties, are not included and neither are 'close passes' of non-vehicle road users which we know are a major detriment to cycling and walking. The Department for Transport does not receive details of such incidents and cannot give any figures for them.

For those vehicles which are also connected to digital networks there is more scope, but we must be conscious that companies in this space are currently withholding all data about mileage, automation levels and safety driver intervention levels.

Consultation Question 16 (Paragraphs 5.86 - 5.97)

What are the challenges of comparing the accident rates of automated driving systems with that of human drivers?

Are existing sources of data sufficient to allow meaningful comparisons? Alternatively, are new obligations to report accidents needed?

CIHT believes that comparing accident rates between automated systems and human drivers has several potential issues, including the difficulty of extrapolating from the low mileage rates of automated vehicles, inconsistent recording between systems, and difficulty of assessing when driver assistance was used. Further automated vehicles will be at first newer and more expensive vehicles with a multitude of safety features and will likely be used on different journey types – we must be sure to compare like with like.

It may be less critical to estimate accident rates than to know what types of incidents are happening, identifying the causes and what changes will address those issues.

CIHT is also concerned that existing sources of data are mainly provided by manufacturers, and that the secrecy of the industry does not allow best practice to be followed. Manufacturers could be tempted to hide failed trials or only publicly report those which have been successful. In addition, recent reports show that the data requirements to make accurate comparisons are significant are higher than policy makers currently estimate. Therefore, we would argue that

authorising bodies must be able enforce strict standards for data collection rather than accepting what manufacturers are willing to publish.

CIHT supports changes to the obligation to report accidents. The Road Traffic Act only states drivers must report accidents within 24 hours and in many areas police rarely attend minor collisions, meaning that there is the potential to lose a lot of information that will help determine the safety of automated vehicles. There is currently no fixed standard on how minor incidents are reported across the UK with some forces accepting submissions online and others requiring it be done in person however the government recently consulted on developing a national online form. CIHT would encourage data on what automated systems were in enabled in any accident to be included in any new form.

Consultation Question 17 (Paragraphs 6.13 - 6.59)

We seek views on whether there is a need for further guidance or clarification on Part 1 of Automated and Electric Vehicles Act 2018 in the following areas:

- (1) Are sections 3(1) and 6(3) on contributory negligence sufficiently clear?*
- (2) Do you agree that the issue of causation can be left to the courts, or is there a need for guidance on the meaning of causation in section 2?*
- (3) Do any potential problems arise from the need to retain data to deal with insurance claims? If so:
 - (a) to make a claim against an automated vehicle's insurer, should the injured person be required to notify the police or the insurer about the alleged incident within a set period, so that data can be preserved?*
 - (b) how long should that period be?**

Section 3 (1) states that the 'Law Reform (Contributory Negligence) Act 1945' applies to automated vehicles, and 6(3) states that this applies to whoever is liable for the action of the vehicle. If further legislation implements the role of an official Autonomous Vehicle System Entity as discussed in question 7 it would follow that they assume any liability and therefore there is an argument to be made that the clauses should refer directly to that role rather than leave any room for misinterpretation.

CIHT agrees that the issue of causation is currently decided through the court system and that there is no need to alter this specifically for automated vehicles. However, there may be a role for further training of magistrates and judges as to the expected capabilities of autonomous vehicles so that human standards are not applied incorrectly in terms of viewing ability or reaction times.

CIHT argues that it is unreasonable to expect ADSE's to retain data indefinitely and in some circumstances retaining that data may breach privacy legislation. However, there is a firm public interest in being able to investigate accidents and retaining sensor data therefore a clear legal expectation of what data should be retained, how long for and who can request that data should be set. Further research should be done as to the average length of time before road users report incidents, which may be delayed as they initially think damage is minor, but later find out repairs are more expensive expected or that there was unseen damage.

There may be an argument for retaining data on a tiered basis to avoid data bottlenecks, with full audio-visual data retained for 24 hours, full sensor data retained for one month, and basic geographic and speed data retained for three months.

Once an ADSE has been notified of a collision or the vehicles internal sensor determine one has occurred the vehicle should automatically retain data for a longer period, or until the ADSE informs it to destroy the data. Legislation should also be clear that storing of this data is a legal obligation under the 'right to erasure' contained within GDPR to avoid legal challenges.

CIHT would note that little attention is being paid to how road safety investigators, police officers and researchers obtain this data and would encourage regulations be made which make the process as simple as possible. The European Union has proposed standardising the format of the data, to ensure that it covers a minimum dataset and that it can be downloaded using a standardised tool and it will be useful for users and manufacturers to have similar systems in place.

The availability of road accident data is a prerequisite for each efficient road safety management system. Reliable and relevant data enable us to identify the contributory factors of individual accidents and offers the best way to implement preventative measures.

Consultation Question 18 (Paragraphs 6.61 - 6.116)

Is there a need to review the way in which product liability under the Consumer Protection Act 1987 applies to defective software installed into automated vehicles?

The consultation identifies that the issues are similar to those facing 'the internet of things' - whether the vehicles is a product or software. CIHT would argue that the ADSE should be liable for software defects that result in harm to other users and that End User Licence Agreements and non-enforceable contractual terms should not be permitted. It is unlikely the purchasers will read or understand complex legal contracts before enabling automated features, and even less so that they will do so for multiple models of vehicle before choosing to purchase one.

Consultation Question 19 (Paragraphs 6.61 - 6.116)

Do any other issues concerned with the law of product or retailer liability need to be addressed to ensure the safe deployment of driving automation?

CIHT argues that the product liability should also consider the network impacts of these vehicles and the impact on local highways authorities. Section 137 of the Highways Act 1980 says that "if a person, without lawful authority or excuse, in any way wilfully obstructs the free passage along a highway he is guilty of an offence". The retailer liability if the automated driving system suffers from a poor update or causes undue congestion through poor decision making.

Highways England in particular has targets on journey reliability and journey time for journeys which take place on the strategic road network. There is an argument for large automated fleet operators to bear some responsibility for overall network management as train operating companies do with Network Rail.

Consultation Question 20 (Paragraphs 7.5 - 7.11)

We seek views on whether regulation 107 of the Road Vehicles (Construction and Use) Regulations 1986 should be amended, to exempt vehicles which are controlled by an authorised automated driving system.

Regulation 107 prevents leaving a running vehicle unattended by a licensed person, and whilst the consultation points out that there is no technical requirement for an 'attending person' to be physically present this is likely to cause confusion and should be amended.

Consultation Question 21 (Paragraphs 7.5 - 7.11)

Do other offences need amendment because they are incompatible with automated driving?

CIHT would question how legislation impacts other actions taken by users-in-charge such as littering or opening a door dangerously where legislation currently refers to drivers. We also question how offences that currently result in driving bans due to being classed as careless rather than dangerous will be charged and prosecuted.

Consultation Question 22 (Paragraphs 7.14 - 7.19)

Do you agree that where a vehicle is: listed as capable of driving itself under section 1 of the Automated and Electric Vehicles Act 2018; and has its automated driving system correctly engaged; the law should provide that the human user is not a driver for the purposes of criminal offences arising from the dynamic driving task?

CIHT agrees that where a human is not performing the dynamic driving task they should not be liable for it.

Consultation Question 23 (Paragraph 7.21)

Do you agree that, rather than being considered to be a driver, a user-in-charge should be subject to specific criminal offences? (These offences might include, for example, the requirement to take reasonable steps to avoid an accident, where the user-in-charge is subjectively aware of the risk of serious injury (as discussed in paragraphs 3.47 to 3.57)).

CIHT has no further comment

Consultation Question 24 (Paragraphs 7.23 - 7.35)

Do you agree that:

- (1) a registered keeper who receives a notice of intended prosecution should be required to state if the vehicle was driving itself at the time and (if so) to authorise data to be provided to the police?*
- (2) where the problem appears to lie with the automated driving system (ADS) the police should refer the matter to the regulatory authority for investigation?*
- (3) where the ADS has acted in a way which would be a criminal offence if done by a human driver, the regulatory authority should be able to apply a range of regulatory sanctions to the entity behind the ADS?*
- (4) the regulatory sanctions should include improvement notices, fines and suspension or withdrawal of ADS approval?*

CIHT agrees with statements 1, 3 and 4. With regards to statement 2 it may not be appropriate to solely refer the matter to a regulatory authority unless it is clear what investigatory power and resources they have, there is a democratic element of interaction with local police forces, local councils and Police & Crime Commissioners (including elected Mayors) who have a duty to their residents and voters.

CIHT notes that one of the examples given in the consultation document as a reason for an automated vehicle breaching the speed limit was the "the highway authority may have failed to

inform the software provider of a change to the speed limit or may have indicated it in an unclear way". We would like to re-iterate that highways authorities continue to have the flexibility to set local speed limits that are appropriate for the individual road, reflecting local needs and taking account of all local considerations. They are not obliged to provide information to software providers about any changes, and they should not have any further obligations to do so outside of current practice. Automated Vehicles and ADSE's should be able to work within existing frameworks rather than expecting them to be adapted to their needs.

Consultation Question 25 (Paragraphs 7.37 - 7.45)

Do you agree that where a vehicle is listed as only safe to drive itself with a user-in-charge, it should be a criminal offence for the person able to operate the controls ("the user-in-charge"):

- (1) not to hold a driving licence for the vehicle;*
- (2) to be disqualified from driving;*
- (3) to have eyesight which fails to comply with the prescribed requirements for driving;*
- (4) to hold a licence where the application included a declaration regarding a disability which the user knew to be false;*
- (5) to be unfit to drive through drink or drugs; or*
- (6) to have alcohol levels over the prescribed limits?*

CIHT agrees with the above list of requirements for the user-in-charge however is keen to understand the impact on enforcement and highways professionals. Currently drivers can be stopped for any reason but can only be breath tested under suspicion of driving under the influence, this leaves a gap in how blood alcohol limits will be enforced.

Consultation Question 26 (Paragraphs 7.37 - 7.45)

Where a vehicle is listed as only safe to drive itself with a user-in-charge, should it be a criminal offence to be carried in the vehicle if there is no person able to operate the controls?

CIHT agrees that this is a way of avoiding passengers using a vehicle without a user-in-charge despite one being required, however we would urge vehicle legislation include features which prevent a vehicle being driven without an identified user-in-charge in the first place.

Consultation Question 27 (Paragraphs 7.48 - 7.65)

Do you agree that legislation should be amended to clarify that users-in-charge:

- (1) Are "users" for the purposes of insurance and roadworthiness offences; and*
- (2) Are responsible for removing vehicles that are stopped in prohibited places, and would commit a criminal offence if they fail to do so?*

CIHT questions whether legislation should refer to the keeper of the vehicle which is an existing term in legislation and would cover many of the relevant offences.

CIHT agrees that (2) is correct in terms of vehicles unexpectedly stopping in emergency stopping lanes or in the case of collisions. However, CIHT would like specific mention of the impact on footways in urban environments. In jurisdictions where footway parking is legal there is a duty to leave sufficient space for pedestrians, including wheelchair users, and not to block the carriageway. Automated vehicles should be able to obey both these restrictions or should refuse to park. If the user-in-charge chooses to override that decision they are taking over the dynamic driving task and are therefore the driver.

There are questions as to how both clauses would interact with legislation that places further responsibilities on the driver, such as littering offences where the vehicle owner can be charged for passenger activity or dangerously opening doors into pedestrian or cycle paths while the vehicle is parked but still running. Currently if a taxi driver does not give permission for the door to be opened the taxi insurance company refuses liability and therefore the victim must pursue a civil claim against the passenger. The duty of the user-in-charge to passengers must be clear.

The complexity of highway infrastructure and legislation at the local level ranges from the colour of cycletracks to footway parking will need to be understood for automated vehicles before users-in-charge are not responsible.

Consultation Question 28 (Paragraphs 7.59 - 7.61)

We seek views on whether the offences of driving in a prohibited place should be extended to those who set the controls and thus require an automated vehicle to undertake the route.

CIHT agrees that where a user-in-charge has decided to enable an automated vehicle in a prohibited place they should be considered to have committed an offence. Geofencing will inevitably be imprecise (GPS has a 5m error range) and it will be unlikely for a vehicle to determine whether it has been pointed down a segregated cycle lane, or into a prohibited area once the relevant signs have been passed.

The complexity of the local highway network makes this a greater issue than if automated vehicles are restricted to the strategic road network.

Consultation Question 29 (Paragraphs 7.71 - 7.88)

Do you agree that legislation should be amended to state that the user-in-charge is responsible for:

- (1) duties following an accident;*
- (2) complying with the directions of a police or traffic officer; and*
- (3) ensuring that children wear appropriate restraints?*

CIHT agrees that a user-in-charge is responsible for existing duties following an accident however query how this would work in practice. The consultation document gives the example of a collision with a small dog - which is not sufficient for the vehicle to recognise as a reason to stop - it is likely then unreasonable to expect the user in charge to notice, particularly if they are permitted to undertake other activities (as we mention above, it's inevitable this will occur). Therefore, it would breach principles of fairness to charge a user-in-charge in circumstances where they are set up to fail.

Consultation Question 30 (Paragraphs 7.71 - 7.88)

In the absence of a user-in-charge, we welcome views on how the following duties might be complied with:

- (1) duties following an accident;*
- (2) complying with the directions of a police or traffic officer; and*
- (3) ensuring that children wear appropriate restraints*

CIHT does not believe that vehicles without a user in charge are currently viable and therefore these questions, while important, can be safely left until we have a greater understanding of the impact and use of highly automated vehicles.

Consultation Question 31 (Paragraphs 7.71 - 7.88)

We seek views on whether there is a need to reform the law in these areas as part of this review

CIHT has no further comment

Consultation Question 32 (Paragraphs 7.92 - 7.123)

We seek views on whether there should be a new offence of causing death or serious injury by wrongful interference with vehicles, roads or traffic equipment, contrary to section 22A of the Road Traffic Act 1988, where the chain of causation involves an automated vehicle.

CIHT has no further comment

Consultation Question 33 (Paragraphs 7.113 - 7.123)

We seek views on whether the Law Commissions should review the possibility of one or more new corporate offences, where wrongs by a developer of automated driving systems result in death or serious injury.

CIHT agrees that sanctions should match the severity of the actions and that will likely mean new corporate offences.

CIHT further notes that most of the circumstances discussed in the consultation response refer to collisions that occur in abnormal circumstances, we are interested in responsibility for deaths that occur during the normal functioning of an automated vehicle. It is inevitable that an incorrect decision will take place at a certain point which may have been avoided if software had taken alternate actions.

Given that, the family members of those involved will expect someone to be held accountable and the possible offences listed here do not discuss that possibility.

Consultation Question 34 (Paragraphs 8.1 - 8.58)

We seek views on whether the criminal law is adequate to deter interference with automated vehicles. In particular:

- (1) Are any new criminal offences required to cover interference with automated vehicles?*
- (2) Even if behaviours are already criminal, are there any advantages to re-enacting the law, so as to clearly label offences of interfering with automated vehicles?*

CIHT does not agree that there needs to be any re-enacting of existing laws to assist autonomous vehicles and suggests that concerns around non-vehicle users deliberately impeding or risking death because they 'know' vehicles will stop is somewhat exaggerated. Our recent advice on Creating Better Streets emphasised that all streets are shared streets, to a greater or lesser extent, and we should not de-emphasise the rights that pedestrians, cyclists and other users have to road space.

Consultation Question 35 (Paragraphs 8.28 - 8.31)

Under section 25 of the Road Traffic Act 1988, it is an offence to tamper with a vehicle's

brakes “or other mechanism” without lawful authority or reasonable cause. Is it necessary to clarify that “other mechanism” includes sensors?

CIHT has no further comment

Consultation Question 36 (Paragraphs 8.32 - 8.39)

In England and Wales, section 12 of the Theft Act 1968 covers “joyriding” or taking a conveyance without authority, but does not apply to vehicles which cannot carry a person. This contrasts with the law in Scotland, where the offence of taking and driving away without consent applies to any motor vehicle. Should section 12 of the Theft Act 1968 be extended to any motor vehicle, even those without driving seats?

CIHT has no further comment

Consultation Question 37 (Paragraphs 8.6 - 8.12)

In England and Wales, section 22A(1) of the Road Traffic Act 1988 covers a broad range of interference with vehicles or traffic signs in a way which is obviously dangerous. In Scotland, section 100 of the Roads (Scotland) Act 1984 covers depositing anything on a road, or inscribing or affixing something on a traffic sign. However, it does not cover interfering with other vehicles or moving traffic signs, even if this would raise safety concerns. Should section 22A of the Road Traffic Act 1988 be extended to Scotland?

CIHT agrees that maliciously moving traffic signs is dangerous, however we are aware of numerous incidents where those performing road works do not use best practice and obstruct footways and cycle paths with traffic signage. This can result in pedestrians and cyclists moving signs to make access easier and we feel that they shouldn't be unduly punished for doing so. If autonomous vehicles are relying on these signs to be alerted to changes in road conditions (e.g. warnings for unsurfaced roads) then there is a liability chain which must be made clear.

Consultation Question 38 (Paragraphs 9.6 - 9.27)

We seek views on how regulators can best collaborate with developers to create road rules which are sufficiently determinate to be formulated in digital code.

CIHT strongly believes that automated vehicles should be designed to work with the roads we have and that greater responsibilities should not be enforced on a hard-pressed highways sector. Particular concern has been over temporary traffic management and road maintenance requirements that may be of greater importance to automated vehicles.

Consultation Question 39 (Paragraphs 9.6 - 9.37)

We seek views on whether a highly automated vehicle should be programmed so as to allow it to mount the pavement if necessary:

- (1) to avoid collisions;*
- (2) to allow emergency vehicles to pass;*
- (3) to enable traffic flow;*
- (4) in any other circumstances?*

CIHT argues that for vehicles that require a user-in-charge both (2) and (3) should be decisions passed to the user as they would take place at low speeds and in manageable circumstances. For (1) best practices is often to brake firmly and effectively and the vast

majority of road users will not need to swerve on to a pavement to avoid collisions in their driving lifetimes. Therefore, a highly automated vehicle should not be programmed to mount the pavement.

A related question is in what circumstances an automated vehicle is allowed to enter a mandatory cycle lane indicated by an unbroken white line which may be more permissible.

Consultation Question 40 (Paragraphs 9.6 - 9.37)

We seek views on whether it would be acceptable for a highly automated vehicle to be programmed never to mount the pavement.

CIHT believes that highly automated vehicles being programmed to never mount the pavement should be both permitted and desirable.

Consultation Question 41 (Paragraphs 9.40 - 9.47)

We seek views on whether there are any circumstances in which an automated driving system should be permitted to exceed the speed limit within current accepted tolerances.

CIHT points out that in the UK speed limits are not set arbitrarily and are linked to the design tolerances of the road. Driving over that set limit will create danger, will reduce vehicle capacity and reduce journey reliability. The idea that other road users will become angered by slower moving vehicles is also a misnomer, with many other vehicles from tractors, caravans and HGV's using roads below the speed limit.

For short distances to avoid collisions it may be necessary, but key will be the ability to log and understand these decisions as they're made and to be able to address trends if some manufacturers are needing to take high speed evasive action more often than others.

Different parts of the network may require different approaches once the full network effects are known.

Consultation Question 42 (Paragraphs 9.49 - 9.55)

We seek views on whether it would ever be acceptable for a highly automated vehicle to be programmed to "edge through" pedestrians, so that a pedestrian who does not move faces some chance of being injured. If so, what could be done to ensure that this is done only in appropriate circumstances?

CIHT does not agree automated vehicles should ever have the ability to 'edge through' pedestrians, and the concept has raised questions as to its permissibility by drivers as well. In our recent guidelines we make the point that 'all streets are shared streets' and automated vehicles must be able to deal with that concept to be permitted on urban roads.

Further, highly automated vehicles (level 4) should be able to detect pedestrians on the carriageway and request hand over to the user-in-charge. Fully automated vehicles (level 5) are sufficiently far away that the question of vehicles without driving interfaces can be left to a later date.

CIHT believes that the most likely situations for this encounter are outside major events such as concerts, protests, marathons etc and that local highway authorities have a traffic management duty. We are keen to ensure that no further liabilities are put upon LHA as a

result of automated vehicles requiring more signage or being unable to understand the context of road usage.

Consultation Question 43 (Paragraphs 9.68 - 9.74)

To reduce the risk of bias in the behaviours of automated driving systems, should there be audits of datasets used to train automated driving systems

CIHT has no further comment on this question

Consultation Question 44 (Paragraphs 9.76 - 9.88)

We seek views on whether there should be a requirement for developers to publish their ethics policies (including any value allocated to human lives)?

CIHT believes that this should be fundamental to the ability of permitting automated vehicles on UK roads.

Consultation Question 45 (Paragraphs 9.76 - 9.88)

What other information should be made available?

CIHT believes that explanations of the decision-making processes and models used by automated vehicles should be publicly accessible to increase user understanding and acceptance of the technology.

Consultation Question 46 (Paragraphs 9.91 - 9.93)

Is there any other issue within our terms of reference which we should be considering in the course of this review?

CIHT argues that the review needs to consider the legal and civil liabilities of highways authorities, highways engineers and other transport professionals. It is plausible that the amount of data collected and connectivity of these vehicles will greatly change the relationship between road users and providers and this needs to be addressed.

We need to consider; Asset management, network management, paying for tolls and congestion charges, impact on procurement and delivery which all have specific legal duties which are embedded within the highways network.

CIHT also promotes an integrated approach to our highways and recognises their multi-functional role as both places and corridors for pedestrians, cyclists and motorists. Autonomous vehicles will have an impact on those roles when it comes to permitting pedestrians to cross, ability to 'make-eye-contact' with zebra crossing users.

Two distinct gaps in legislation are the distance that must be kept when overtaking cyclists (a legal minimum is being consulted on) and the definition of 'obstruction' when parking on the pavement. Automated vehicles must not rely on bare minimums to be considered safe.

CIHT believes that connected and automated vehicles provide a large-scale opportunity to change the way vehicles interact with the highways network through the collection and sharing of data. We need to ensure that the proper legal framework is available to promote and require the sharing of data between highways authorities and vehicle providers to provide the best experience to all users of the network.