



Department  
for Transport

Lord Holmes of Richmond  
House of Lords  
London  
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**Lord Davies of Gower**  
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05 December 2023

Dear Lord Holmes of Richmond,

### **Automated Vehicles Bill 2<sup>nd</sup> Reading – Follow Up Letter**

Following the recent 2<sup>nd</sup> Reading debate on the Automated Vehicles Bill held on 28 November, I am writing to provide further clarity and detail on the points you raised in the debate and address questions where through time constraints and volume of issues, I could not respond directly in my closing speech.

#### **E-Scooters**

You asked for the Government's current position on further e-scooter trials. The Government recognises that people want to take advantage of the opportunities e-scooters can offer. We are committed to encouraging innovation in transport, whilst ensuring new modes of transport are safe and secure by design.

Trials have helped to understand how and why rental e-scooters are used, safety, mode shift, environmental and social impacts. Evidence suggests rental e-scooters provide new transport options for some, including ethnic minority groups and individuals on low incomes. E-scooter trials have been extended to 31 May 2026. Extending the trials will enable us to build on current learning.

Evidence gathered during trials shows that motor vehicles were the second most common mode of transport being replaced by rental e-scooters, after walking. While replacement of walking journeys reduced over time, replacement of private motor vehicle journeys increased over time.

#### **Enforcement Cameras**

You also raised a question around enforcement of cars running red lights. Enforcement of red-light offences, including at pedestrian crossings, is a matter for the police. It is for them to decide at what sites cameras may be most effectively deployed to deal with compliance issues.

Red light enforcement cameras must be type approved by the Home Office before they can be used to ensure they are capable of capturing evidence to the required standard. While many local authorities monitor their traffic signal network through control centres, the CCTV systems used to do so are unlikely to meet these standards. The Department has produced guidance on the use of enforcement cameras in Circular 1/2007, available to download from our website at [Using speed and red-light cameras for traffic enforcement: deployment, visibility and signing - GOV.UK \(www.gov.uk\)](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/102422/Using_speed_and_red-light_cameras_for_traffic_enforcement_deployment_visibility_and_signing_-_GOV.UK.pdf).

## **Learnings from International Examples**

On your question regarding what the Government has made of evidence from examples of self-driving vehicle trials from around the world- including California.

The UK Government is monitoring deployments of self-driving vehicles – and incidents involving them - in other countries to ensure safety learning is fed back into UK policy development.

Government's safety ambition is that self-driving vehicles should have an equivalent level of safety to that of a careful and competent driver. This is safer than the average human driver.

Lord Holmes, raised some of the difficulties self-driving taxis have encountered in interacting with emergency vehicles in San Francisco. Clause 57 of the Bill specifically addresses the powers of the police and others to stop vehicles. Clause 58 provides powers to seize vehicles that are creating a danger or inconvenience to the public.

Many of the problems relate to vehicles failing to make way for emergency vehicles. We will deal with this at each stage of the process. Vehicles will only be authorised if they can recognise emergency vehicles, and NUIC operators will be expected to show how they will deal with the situation. Before granting a passenger permit, clause 87 requires national authorities to consult with the emergency services.

## **Trialing and Data Transparency**

You also raised a question on whether data gathered from trialling will be publicly available. Trials of prototype self-driving vehicles in the UK have safety drivers and must comply with the existing legal framework. Guidance is provided in the Government's 'Code of Practice: automated vehicle trialling', first published in 2015 and updated most recently on 30 November 2023.

The Code of Practice recommends that trialling organisations should engage with relevant organisations (such as the police, landowners, highway authorities), should develop a public communications strategy, and should publish a safety case. Trials that are funded by government are also required to publish learnings.

Government is considering regulatory options to support trials without a safety driver in the vehicle. This would be to provide greater legal clarity for trialling organisations working within the existing legal framework, to provide confidence in their safety, and to maximise learning for both industry and Government.

### **Regularity of Review of Safety Standards**

You asked a question on the regularity of review of safety standards for self-driving vehicles, and what learnings the Government has taken from other industries like the airline industry.

Clause 38 requires the Secretary of State to monitor and assess the performance of self-driving vehicles, including against the Statement of Safety Principles, and must publish a report on an annual basis.

Approval and authorisation of self-driving vehicles will involve detailed consideration of the technology and software used by the self-driving feature. Ongoing approval and authorisation requirements will ensure that the technology and software remain fit for purpose.

The Authorised Self-Driving Entities (ASDEs) will have responsibility for ensuring that the features on an authorised vehicle continue to satisfy the self-driving test. An ASDE will also be required to demonstrate competence. Subject to consultation, it is anticipated that the ASDE, or vehicle manufacturer, will be required to establish a safety management system, consisting of policies, procedures and processes, to monitor and respond to the ongoing safety and cyber-security of their self-driving vehicles.

Both the ASDE and the vehicle will be subject to ongoing safety monitoring under the in-use regulatory scheme, which will hold those responsible for self-driving systems to account while the systems are in-use. New sanctions and penalties will apply if companies fail in their duty. As part of the in-use regulatory framework, provisions have been made to enable the Secretary of State to access the information needed for the in-use investigatory purposes set out in clause 16.

In addition to in-use investigation (for regulatory purposes), the Bill makes provision for the appointment of independent inspectors to investigate incidents. This investigatory capability will respond to incidents involving automated vehicles and begin gathering safety learning that can be fed back into the safety framework. DfT has and will continue to be guided by international standards and precedent, for example the International Civil Aviation Organisation that have been further refined in line with the maturing of safety-critical industries.

## **Self-Driving Vehicles and Congestion**

You also raised a question in relation to congestion and self-driving vehicles. The Government published the Connected and Automated Mobility Paper in August 2022, which outlined the Government's intention to align the introduction of self-driving vehicles with the Future of Mobility principles. These principles include the reduction of congestion through more efficient use of limited road space, for example by enabling more effective mass transit or consolidating freight.

To support these aims, Government has funded trials to prove the use case of mass transit and automated freight. These include automated bus services CAV Forth and MultiCAV – both described in further detail in my answers to Lord Naseby's questions below – and 5G-CAL, a self-driving freight trial in Sunderland.

## **Power usage**

You raised a question in relation to power usage and what analysis the Government has undertaken on the impact of electrification on the grid.

The Government is confident that the grid will be able to cope with increased demand from electric vehicles including self-driving electric vehicles.

Ensuring the electricity networks are able to cope with current and future demand from EVs is the responsibility of electricity network operators, and they are incentivised to do so through the regulatory framework set out by Ofgem, the independent regulator.

The Government recognises the need for investment into the electricity network and has set out its plan in the 2022 Electricity Network Strategic Framework (ENSF). The ENSF contains detailed modelling of the distribution network between 2022 and 2050 under the increased loads caused by higher EV and heat pump uptake, and sets out the steps that will be taken to invest in network infrastructure to accommodate these loads.

The cost of investing in the electricity networks will continue to be regulated under the Revenue = Incentives + Innovation + Outputs (RIIO) price control

mechanism through Ofgem. As stated in the ENSF, the cost of the electricity network per MWh of electricity consumed for households is not expected to increase substantially due to net zero and could be lower for some periods.

## **Battery Production**

On the issue you raised of battery production. As announced in the Advanced Manufacturing Plan last week, over £2 billion is being made available for the automotive sector to support the manufacturing and development of zero emission vehicles, their batteries and supply chain.

The Government has also committed over £500 million to the Faraday Battery Challenge (FBC) to support the research, development, and scale-up of world-leading battery technology in the UK. This is funding research to develop new battery chemistries with reduced percentages of rare materials. It is also funding research to advance battery recycling and reuse in order to promote a more circular economy. Through the Faraday Battery Challenge, the Government is supporting the innovation, infrastructure and a regulatory environment for a UK battery recycling industry.

The Challenge has supported over 140 organisations working across the UK, attracting over £400 million in further private sector investment.

## **Shared Space Schemes**

You asked a question on the Government's position on shared space schemes. All public realm should be inclusive and accessible, regardless of label. Local authorities are responsible for ensuring any infrastructure they install, including shared space schemes, complies with equalities legislation, particularly the Public Sector Equality Duty.

Recognising that some groups have concerns about shared spaces, particularly visually impaired people, in 2018 the Department requested that local authorities pause new shared space schemes that were at the design stage and which incorporated a level surface. We have since been working with Transport Scotland on research into accessible public realm with a view to producing updated guidance. The pause remains in place.

## **Accessibility**

On your points in relation to accessibility of self-driving vehicles. As mentioned in the debate, the granting of authorisations will be subject to the public sector equality duty. Government intends to make equality impact assessments part of the authorisation process, and for the safety principles to include equality and fairness.

Clause 87(3) also provides that in deciding whether to grant an automated passenger permit, the appropriate national authority must consider whether

the permit is 'likely to lead to the improvement in the understanding of how automated passenger services should best be designed for, and provided to, older and disabled people'.

The needs of mobility impaired road users have been a key research theme throughout the Centre for Connected and Autonomous Vehicles (CCAV) Research and Development programmes.

There are already some success stories in this space which we can point to:

- We have funded and supported cutting-edge projects to explore how connected and automated mobility can improve mobility for an ageing population (Project Flourish in Bristol [Project INSIGHT: State-of-the-art autonomous low-speed vehicle designed for city environment | Birmingham City University \(bcu.ac.uk\)](#)) and visually impaired people (Project Insight in Birmingham [FLOURISH Project: Improving Accessibility with CAV Technology - Connected Places Catapult](#)), including the world's first 4D tactile display in an automated vehicle. In 2019, Coventry's Aurrigo partnered with Blind Veterans UK on the world's first trial of self-driving pods with blind veterans (in Brighton)".
- The ServCity project (2020-2023) examined and evaluated human-machine interfaces for self-driving taxis with a range of user-groups, including older populations, wheelchair users, and people who might have specific journey related needs, such as parents and carers travelling with dependents. Insights can inform the design of Mobility as a Service (MaaS) platforms – booking and journey management systems, smartphone apps, in-vehicle displays and so on – to ensure accessibility of interfaces.
- The Great Self Driving Exploration (2023) [Self-driving vehicles: public perceptions and effective communication - GOV.UK \(www.gov.uk\)](#) engaged a wide variety of people, including vulnerable road users, mobility impaired, different socio-economic groups, and regional spread in Manchester, Taunton and Alnwick. Feedback and insights were given from a range of community engagement activities including a journey in a self-driving vehicle. Findings will be useful for designing community engagement actions to inform the public about self-driving technologies.

Human factors research which will be carried out through CCAV over the next year will examine the range of tasks that passengers will need to perform during self-driving transport journeys and during emergency scenarios, in order to identify where targeted support might be needed.

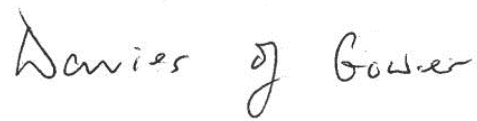
Strict sampling quotas have been defined to ensure participants represent all protected groups, as well as different types of passenger, including rural vs urban dwellers, and those who do not use internet connected devices. Findings will inform the requirements for suppliers of self-driving transport

services to ensure passenger needs are met across the whole journey taskscape.

As mentioned in the debate, my office will be reaching out to you and Baroness Brinton to offer a further discussion around accessibility ahead of Committee Stage.

Once again, I thank you for your interest on these issues and for their participation in the debate. Please do not hesitate to get in touch with my office to request further information.

I will place a copy of this letter in the Library of the House.

A handwritten signature in cursive script that reads "Davies of Gower".

**LORD DAVIES OF GOWER**