



**Law
Commission**
Reforming the law

Remote driving

An overview of the Law Commission's
advice to Government

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Remote driving: an overview of the Law Commission's advice to Government

- 1.1 The Law Commission is publishing a 134-page paper on the law of remote driving, advising the Government on possible reform, together with a 20-page summary. Here we provide an overview of our conclusions. For more details of the project, see our website: <https://www.lawcom.gov.uk/project/remote-driving/>.
- 1.2 Our advice follows the joint report between the Law Commission and Scottish Law Commission on Automated Vehicles, published in January 2022. Remote driving is not the same as automated driving and has its own unique challenges. However, some of the issues are similar. We therefore drew on the Automated Vehicles report in our work.
- 1.3 We published an Issues Paper on remote driving in June 2022, seeking views. We received 41 written responses. A full analysis of responses is available on our [website](#).

THE USES OF REMOTE DRIVING

- 1.4 Technology already exists to enable an individual to drive a vehicle from a remote location. It is currently used in controlled environments such as mines, ports and farms. Until now, its use on public roads has been limited to low speed and short range, for remote control parking and steering vehicles carrying abnormal loads. However, its use is set to expand, for two main reasons:
 - (1) Remote driving can be used as an adjunct to automated driving, both in trials and in the longer term.
 - (2) There is increasing interest in delivering rental vehicles to the customer's door. Remote drivers could deliver vehicles more cheaply and efficiently, as (unlike in-vehicle drivers) they do not need transport back to base. The service could be part of a move away from car ownership, bringing social benefits.

WHAT IS A REMOTE DRIVER?

- 1.5 There is little agreement over how to define a remote driver. Confusion may arise when an individual carries out only part of the normal driving task. For example, driving automation may steer the vehicle, but a remote human driver may be required to monitor the driving environment and apply an emergency brake if a hazard arises. In our view, performing part of the driving task in this way would be driving.
- 1.6 For the purposes of this project, we use the following definitions:
 - (1) A driver is an individual who performs one or more of the following tasks: steering; braking, releasing a brake, or accelerating; or monitoring the vehicle or

driving environment with a view to immediate and safety-critical intervention in the way the vehicle drives.

- (2) A “beyond line-of-sight” remote driver is a driver who is outside the vehicle or its trailer and relies on external aids (other than corrective spectacles) to see some or all safety-critical elements of the driving environment.

THE SAFETY CHALLENGES

- 1.7 Most stakeholders accepted that remote driving may be a helpful add-on to automated driving, both in trials and thereafter. However, some expressed concern about whether remote driving could ever be conducted safely if it were used independently of automated driving.
- 1.8 There are significant safety challenges to overcome, particularly where the driver is beyond line-of-sight and relies on screens to see the driving environment. These include:
 - (1) **Loss of connectivity.** Remote driving relies on connectivity – in most cases mobile networks. These are inherently problematic, with potential for latency (delay), “jitter” (inconsistency in latency) and loss of contact with the vehicle.
 - (2) **Lack of situational awareness.** Drivers may find it difficult to judge depth from a two-dimensional image projected onto a screen. They may also be deprived of information from other senses, such as the sensation of acceleration.
 - (3) **Detachment.** A driver who is not at risk from a collision may have less instinctive understanding that what they do matters in the “real world”.
 - (4) **Cybersecurity** leads to concerns that vehicles could be used by bad actors, such as terrorists.
- 1.9 In our view, beyond line-of-sight driving requires robust regulation. It should only be permitted if the organisation behind remote driving shows how the safety challenges have been overcome.

SHORT TERM REFORM

The current law

- 1.10 At present, there is no express legal requirement for a driver to be in the vehicle. Nor do any provisions completely prevent remote driving. However, some rules were written on the assumption that the driver is in the vehicle and are difficult to apply to remote driving.
- 1.11 This makes the current law unsatisfactory. At present there is no clear legal requirement to prevent a risk-tolerant organisation from setting up a remote driving centre, provided that the vehicles are not clearly unsafe. At the same time, uncertainties in the existing law may have a chilling effect, deterring some worthwhile remote driving projects.

A new prohibition and exemption

- 1.12 A full system of regulation requires a new Act of Parliament. However, safety groups pointed to an urgent need to regulate, which may arise before new primary legislation can be passed. We therefore looked carefully at the Government's existing powers to change secondary legislation.
- 1.13 We have concluded that the Road Vehicles (Construction and Use) Regulations 1986 should be amended to include a new prohibition. Beyond line-of-sight remote driving should only be allowed with an in-vehicle safety driver.
- 1.14 Those wishing to use beyond line-of-sight driving without a safety driver would need to submit a safety case and apply for a Vehicle Special Order (VSO). Where a VSO is granted, a remote driving organisation which complies with its terms would be assured that their operation is lawful. The VSO would provide exemptions from, or modifications of, those construction and use regulations which developers highlighted as problematic.

LONGER TERM REGULATION

- 1.15 Our proposed short-term measures provide some external scrutiny of remote driving. However, they are less than ideal. There would be few sanctions or inspection powers. Without primary legislation, the only sanction for a breach of conditions would be a prosecution under section 42 of the Road Traffic Act 1988, which has very low penalties. If early trials show that remote driving is viable, we believe that a new statutory scheme is needed to license beyond line-of-sight remote driving.

Licensing companies deploying remote drivers

- 1.16 We suggest two tracks for licensing companies that wish to deploy remote drivers beyond line-of-sight:
- (1) If the remote driving is an add-on to a vehicle with self-driving capabilities, the company would need to obtain a licence under the regulatory scheme for automated vehicles. This would also expressly cover the remote driving elements of their business; and
 - (2) If remote driving is independent of any self-driving capability, the company would need to obtain a separate licence as an "Entity for Remote Driving Operation" (ERDO).

REMOTE DRIVING FROM ABROAD

- 1.17 Given difficulties in enforcement, we have concluded that remote driving from abroad should be prohibited until appropriate international agreements are in place.

NO-FAULT COMPENSATION FOR VICTIMS

- 1.18 The strong arguments put by stakeholders have convinced us that a person injured by beyond line-of-sight driving should not be required to prove fault to obtain compensation. Instead, beyond line-of-sight driving should be subject to provisions similar to those applying to automated driving under the Automated and Electric

Vehicles Act 2018. These would require compulsory insurance under which the insurer is liable for any damage caused by a remotely driven vehicle. The insurer would have rights of recourse against third parties.

CRIMINAL LIABILITY OF THE INDIVIDUAL DRIVER

- 1.19 Individual drivers face considerable criminal liability – ranging from causing death by dangerous driving, through careless driving, to a wide range of strict liability offences.
- 1.20 This has the potential to be unfair to remote drivers. It is clearly right that a remote driver should face prosecution for driving under the influence of drink or drugs, or for behaving negligently. However, a remote driver might have little control over problems caused by failures of connectivity, broken sensors or poor workstation design.
- 1.21 In our view, responsibility for maintaining safety in areas beyond the driver's knowledge or control should lie with the organisation, not the individual. We have concluded that a beyond line-of-sight remote driver acting for a company licensed to deploy remote drivers should be given a new statutory defence where their behaviour did not fall below the standard of a competent and careful driver placed in the same circumstances.