

Who's driving the future of autonomous transport in London?

Transport Committee

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LONDONASSEMBLY

Transport Committee



The Transport Committee examines all aspects of the capital's transport system, to press for improvements for Londoners. The Committee pays particular attention to how the Mayor's Transport Strategy is being implemented and looks closely at the work of Transport for London and other transport operators. For more information, [please visit our website](#).

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Foreword



Caroline Russell AM
Chair of the Transport Committee

London's streets are famously old, idiosyncratic and crowded, and before we open them up to a whole new category of vehicles it's essential to question the impact on Londoners.

Our streets are places where people work, live and relax, and must be safe for everyone walking, wheeling, cycling or catching the bus, tube or train, or driving for a living.

It's in the context of growing congestion that the Committee examined the imminent deployment of autonomous passenger services in London. Driverless cars may offer convenience, but could also delay local buses, add pollution outside schools or snarl up a busy junction.

We've identified several areas that Transport for London (TfL) must consider as it produces guidelines for consent for driverless services. The Committee concluded Government should devolve further powers to TfL to regulate and license this new industry.

Private hire drivers told us they are desperately worried for their livelihoods, and TfL should seek a fair transition and funding for this sector.

The autonomous vehicles being trialled are not wheelchair accessible and the current proposal is to operate them without a driver to help older or disabled people access the vehicle safely.

It's unclear how well the driverless technology will work on London's roads. We heard about vehicle hesitancy and unexpected manoeuvres causing risk, raising concerns about increasing congestion and road danger.

We heard further evidence of disjointed interactions with emergency services, and we did not hear convincing proposals to safeguard passengers experiencing assault, medical emergency or coercion. The guidance from TfL must require clear plans for data sharing, accessibility, passenger safety and efficient interactions with emergency services.

Above all, I urge TfL to ensure its guidance for using this emerging technology in London focuses on the public purpose of our streets as places for all Londoners to get around safely, efficiently and conveniently.

Executive Summary

Driverless vehicles are no longer a vision of the future, but potentially a very imminent prospect for London's roads. Several cities in the US and China already have fully autonomous passenger services, but these have yet to be launched in Europe. London could be the first. Various private companies have been testing their driverless vehicles on London's roads with a view to launching passenger services later this year.

The Government gives permission for autonomous vehicle technology to be tested on London's roads. Transport for London (TfL) has no say in this. Under the new framework for licensing autonomous passenger services, the power to grant an operating permit sits with the Government, rather than the local transport authority. This differs from traditional taxi and private hire services, where in London TfL has the power to licence. However, in order for the Government to issue a permit for any autonomous passenger services to operate in London, TfL must provide its consent.

Ultimately, we believe that this power should be transferred back to TfL. But while TfL only has this one consenting opportunity to have a say in the granting of an Automated Passenger Services (APS) permit, it must very carefully consider the application against a number of factors when deciding whether or not to grant consent. TfL has said it will publish its own guidance on this, but has not provided a timeframe for doing so. In this investigation, we set out to consider what factors TfL must consider as part of its decision on whether or not to grant its consent.

The Government has said one of the factors local transport authorities may consider in their decision to grant consent (or not) is the alignment with existing local policies and strategies. In London, that is the Mayor's Transport Strategy (MTS). As such, in this report we have considered whether autonomous passenger services could impact the Mayor's priorities for transport in London and how these services will affect the targets that have been set out in the MTS. For Londoners, this means how these services would impact their journeys to work or school, their access to public transport and how safe it is to walk, wheel and cycle on London's roads.

We have found there to be considerable uncertainty around many of the claimed benefits of autonomous passenger vehicles and their alignment with the Mayor's transport targets. Operators have made bold safety claims, yet evidence we heard from Jeff Tumlin, who was Director of Transportation of the San Francisco Metropolitan Transportation Agency when autonomous passenger vehicles were introduced in San Francisco, questioned these claims. Further, operators' safety claims are based on studies and assessments in US cities, and we remain unconvinced that this will necessarily translate onto London's complex road network. Also, given the public demand for a higher reassurance of safety for driverless vehicles, we feel it is essential that applications to provide autonomous passenger services in London be assessed against a strict 'Vision Zero' safety standard. There are also potential impacts on

congestion and the wider public transport network which are highly uncertain and without a fuller understanding of what an actual rollout would look like in London, we feel TfL must adopt a cautious approach. This must also include careful consideration of accessibility, safeguarding, interaction with emergency services and the impact on the taxi and private hire industry in London.

Ultimately, we believe it is essential that TfL sets out its criteria for consent publicly. If these strict criteria are not met, TfL should withhold its consent. As it stands, we currently have not heard sufficient evidence to persuade us that London should welcome autonomous passenger services.

We focused the bulk of our investigation on the criteria for consent, as it is vital that TfL gets this right given these services are so imminently expected on London's roads. Yet, autonomous passenger services are not the only use case for driverless vehicle technology. We heard very clearly that TfL should be thinking about how this technology could be used to address London's transport challenges. Rather than just accepting the autonomous passenger service model proposed by operators, London should be looking at the transport problems it is trying to solve and then considering what solutions this technology could provide. There may be scope for more innovative thinking from TfL about the application of driverless technology in London.

The impact of the introduction of automation on London's roads is as yet unknown. Much depends on the conditions under which services are deployed and the type of services that are introduced. TfL must ensure that if and/or how this technology is introduced, it is done in a way that works for Londoners and for our transport network.

Recommendations

Recommendation 1

The current Automated Passenger Service (APS) permitting framework should be regarded as transitional, during the initial small-scale pilot phase. When the Government puts in place the full regulations under the Automated Vehicles Act in 2027, it should devolve the power to issue and withdraw APS permits, and to set conditions for operators wishing to deploy autonomous passenger vehicles in London, to Transport for London (TfL).

Recommendation 2

The Government should establish a formal process by which Transport for London (TfL) can request that an Automated Passenger Service (APS) permit be suspended. This should be introduced during the current pilot of the APS permitting framework. If TfL makes such a request, the permit should be immediately suspended, pending a decision by the Secretary of State for Transport.

Recommendation 3

Transport for London (TfL) must consider its consent to any Automated Passenger Service (APS) permit application for operation in London within the context of the Mayor's Transport Strategy and its policies and targets. Any new service that is introduced on London's roads must not reduce TfL's ability to meet these targets.

Recommendation 4

Transport for London (TfL) should adopt a stronger safety baseline than that of the 'careful and competent driver' as a condition for granting consent to an operator being given an Automated Passenger Service (APS) permit. TfL should require operators to provide concrete evidence of how their vehicles and deployment plans could contribute to reducing road danger in London as set out in the Mayor's Vision Zero strategy, taking into account London's unique road network and multiple types of road user. TfL should not grant consent if applications do not meet this definition and should publish its criteria for granting consent.

Recommendation 5

Transport for London (TfL) should establish a definition for safety incidents involving autonomous passenger vehicles. This should include, as a minimum, crashes and near misses. As a condition for granting consent, TfL should require that this information is provided along with the vehicle's decision-making processes that led to the incident within 24 hours. TfL should also establish a consistent and accessible format for data sharing by operators.

Recommendation 6

Transport for London (TfL) should establish 'empty miles driven' as a core reporting metric, as a condition for granting consent to Automated Passenger Service (APS) permits. TfL should continuously monitor and publish this data, alongside data on traffic levels and congestion. TfL should use this data to inform decision making on future requests for consent.

Negative impacts on congestion should be a reason for withdrawal of consent, if TfL is granted full regulatory powers.

Recommendation 7

Transport for London (TfL) must ensure that operators share travel information from passengers using their services as a condition for granting consent to Automated Passenger Service (APS) permits. This should take the form of operators conducting a regular passenger travel survey to understand why passengers chose to use an autonomous passenger vehicle as opposed to another mode of transport, and how they would have made that journey otherwise.

Negative impacts on active travel and public transport reliability should be a reason for withdrawal of consent to operate, if TfL is granted full regulatory powers.

Recommendation 8

Transport for London (TfL) must engage with disabled people during the process of designing its guidance for autonomous passenger services in London. It should publish details of this engagement alongside the guidance document. TfL should stipulate that one of the criteria for its consent for an Automated Passenger Service (APS) permit is evidence that the proposed service has been co-designed with disabled people.

Recommendation 9

Transport for London (TfL) should require operators to meet a passenger personal safety standard, as a condition for granting consent to Automated Passenger Service (APS) permits. TfL must set out what it expects in this context from operators to ensure passenger safety and safeguarding and publish these standards for public scrutiny. As a minimum this should include equivalent standards to current taxi and private hire services, and safeguarding training and DBS checks for remote assistants. These roles should also be UK based.

Recommendation 10

Transport for London (TfL), in partnership with the Metropolitan Police Service (MPS), the London Ambulance Service NHS Trust and the London Fire Brigade (LFB), should establish a standard framework for interaction between autonomous passenger vehicles and emergency services across London. As a condition for granting consent, TfL should require autonomous passenger service operators to demonstrate, as part of their application for a permit, that they will follow this framework.

Operators failing to demonstrate that they are following the standard framework for autonomous passenger vehicles interaction with emergency services across London should be a reason for withdrawal of consent to operate, if TfL is granted full regulatory powers.

Recommendation 11

The Government should give TfL the power to set a cap on the number of autonomous passenger vehicles operators can deploy in London, including across different areas in London, when the full regulations under the Automated Vehicles Act are put in place in 2027. This should happen alongside devolving the power to issue Automated Passenger Services (APS) permits to Transport for London (TfL), as we set out in Recommendation 1.

Recommendation 12

Transport for London (TfL) should work with taxi and private hire drivers, their representatives and autonomous passenger service operators to develop a fair transition plan for the sector, should Automated Passenger Service (APS) permits be issued. This should include management of any job losses, design of re-training and re-deployment opportunities, and a mechanism for funding transition arrangements.

Recommendation 13

During the pilot phase of the Automated Passenger Service (APS) permitting framework, Transport for London (TfL) should commission and publish a research paper on whether and in what ways autonomous vehicle technology could be used to support progress towards the targets set out in the Mayor's Transport Strategy (MTS). TfL should use this research to establish a long-term vision for the use of this technology on London's roads and how this will contribute to London's transport goals.

Introduction: What are autonomous passenger vehicles?

The sight of a white Jaguar I-Pace driverless vehicle, with its unmistakable roof-mounted 360-degree cameras, has become an increasingly familiar feature of London's roads in 2026. This is because Waymo, alongside other operators (including Uber in partnership with British tech start-up Wayve and Freenow in partnership with Chinese technology company Baidu Apollo), has set its sights on launching commercial autonomous passenger services – so-called 'robotaxis' or 'driverless taxis' – in London as soon as this year.

Given the arrival of this new technology on London's streets, we wanted to investigate who will make the decisions about this and how those decisions will be taken. In doing so, we have also examined what a large-scale deployment of autonomous passenger services could mean for Londoners and the targets set out in the Mayor's Transport Strategy (MTS).

We received a high degree of engagement and interest in this investigation, receiving dozens of pieces of written evidence from across the sector, as well as attendance at our public meetings on the topic. This is indicative of the level of public and policy interest in the risks and potential of driverless technology in London, and also the importance for policy makers to understand its consequences. To gauge how Londoners feel about the arrival of autonomous vehicles, we commissioned a YouGov survey of over 1,000 Londoners.¹ This showed Londoners are more likely to oppose (42 per cent) than support (29 per cent) the use of autonomous passenger vehicles in London and only a minority (29 per cent) are likely to use autonomous passenger vehicles if they were available.²

While the US and China are further ahead on this journey, the current trials of autonomous vehicles in London puts our city on the cutting edge for the rollout of this technology in Europe. This means, as Professor Jack Stilgoe, Professor of Science and Technology Policy, UCL, put it, that London has an opportunity "to be the place that helps write those rules to help say this is what a safe and useful rollout of the technology looks like".³ This report is our contribution to the development of those necessary rules.

Yet through this investigation, it has also been made abundantly clear that this commercially driven taxi/private hire model is not the only version of driverless technology possible. Our concern is that the debate around driverless technology will end up being framed entirely around autonomous passenger services, which may not meet London's needs. As such, we have

¹ London Assembly Transport Committee, [YouGov survey finds opposition to the introduction of autonomous passenger vehicles \(APVs\) in the capital](#), 15 July 2026

² London Assembly Transport Committee, [YouGov survey finds opposition to the introduction of autonomous passenger vehicles \(APVs\) in the capital](#), 15 July 2026

³ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026, (p.11)

also set out what we believe would be a better approach towards autonomous vehicles and the role TfL should play in this, namely that of a proactive transport authority, seeking to harness this new technology and automation to address the city's pressing transport challenges, rather than that of a reactive regulator.

How Autonomous Vehicles work

Autonomous vehicles (AVs) rely on a complex system of sensors, cameras and advanced software to make driving decisions. These may include radar sensors to track other vehicles on the road, LiDAR (light detection and ranging) sensors to create a 3D map of the car's surroundings, RADAR (Radio Detection and Ranging) sensors to track other vehicles on the road, and a complex central computer system to bring all features together to make real-time decisions on steering, accelerating and braking.⁴

Vehicles with some degree of automation are commonplace on London's roads. Automation is measured across six different levels, following a widely adopted standard from the Society of Automotive Engineers:

Level zero: refers to vehicles with no automation, where the human driver is fully responsible for all driving tasks.

Levels one and two: include driver assistance systems that support rather than replace the driver. These include lane-centring technology and adaptive cruise control.

Level three: refers to conditional driving automation, sometimes known as 'partial automation', where human attention and input are required but the vehicle can undertake certain tasks autonomously in certain conditions. Examples of these tasks include accelerating past a slow-moving vehicle or coming to a standstill in a car park.

Level four and five: refers to systems where the technology is in control with little need for human intervention.

In level four, the autonomy of the vehicle is still linked to certain conditions, such as a defined route, driving on the highway or in a parking garage.

Level five: refers to systems where the technology is in complete control with no human intervention. A level five vehicle can drive anywhere in road traffic under all conditions without a person in control.^{5 6}

⁴ Evan Halshaw, [What are Self-Driving Cars and How Do They Work](#), 5 November 2024

⁵ Society of Automotive Engineers, [J3016_202104 - Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles](#), 30 April 2021

⁶ ZF Friedrichshafen, [Autonomous Driving: The Steps to Self-Driving Vehicles](#), 29 April 2022

Autonomous passenger vehicles currently in operation in other countries, such as those operated by Waymo in the US, are classified as Level four and have a remote assistant available for emergencies.⁷

A note on terminology

Autonomous vehicles (AVs) are vehicles that can largely drive themselves without human input. How AVs work is set out above. AVs are also often referred to as 'driverless' or 'self-driving' vehicles and we use this terminology interchangeably throughout this report. Since 2015 the Government's *Automated vehicle trialling code of practice* has allowed autonomous vehicle technology to be trialled on any UK road.

Autonomous passenger services are commercial transport operations that carry passengers using AVs. Autonomous passenger services are currently in operation in some countries, for example Waymo operates autonomous passenger services in 11 cities in the US. These services operate like traditional private hire vehicles.

An **Automated Passenger Service (APS) permit** is required in order to operate an autonomous passenger service in the UK. APS permits are issued by the Driver and Vehicle Standards Agency (DVSA) but TfL must give its consent to a permit for operations in London. No permits have yet been granted.

In London, **taxis** are a specific class of vehicle: purpose-built and often also referred to as black cabs. These services can be hailed on the street or from a taxi rank.⁸ Only these official black cabs are considered 'taxis' by TfL.

Private hire vehicles refer to all other passenger service vehicles, including minicabs, chauffeur and executive cars. Private hire vehicles must be pre-booked through a TfL-licensed private hire operator, such as Uber, Freenow and Addison Lee.⁹

Autonomous passenger vehicles are AVs which transport passengers, via autonomous passenger services, in the same way as a private hire vehicle in London. They are sometimes referred to colloquially as driverless taxis, robotaxis or robocabs.

In London TfL is responsible for licensing taxi and private hire vehicles. TfL has granted Uber and Wayve private hire licences to operate **supervised autonomous rides** in London. These are private hire journeys using vehicles that are fitted with driverless

⁷ Waymo, [Waymo's Safety Framework](#), 30 October 2020

⁸ TfL, [Guide to taxis and private hire](#)

⁹ TfL, [Guide to taxis and private hire](#)

technology. These are not defined as autonomous passenger vehicles or autonomous passenger services as the driver is legally in control of the vehicle at all times.

In this report, we sometimes refer to autonomous passenger vehicles as 'driverless taxis' or 'robotaxis' as this is commonly used terminology for these vehicles nationally and internationally.

Autonomous vehicles: what is happening in London now?

The story so far: the current status of driverless vehicles in London

Several organisations have been testing self-driving technology on UK roads under the Government's *Automated vehicle trialling code of practice* (Code of Practice), which was established in 2015. This Code of Practice established a framework for the safe testing of autonomous vehicles on any UK road. Under this framework, local authorities have no formal role in the trials; organisations carrying out trials are not required – but are encouraged to – engage with transport authorities in the areas they are carrying out trials.¹⁰

There are three main companies that have been developing and testing driverless vehicles on London's roads, with a view to introducing autonomous passenger vehicles on London's roads:

- Wayve, a UK company which develops autonomous driving technology, has been trialling its technology on London roads since 2018.¹¹
- Waymo, the US-based commercial ride-hailing company, began testing on London roads earlier this year.¹² The company's test fleet currently comprises just under 100 test vehicles.¹³
- Freenow, a subsidiary of US ride-hailing company Lyft, in partnership with Chinese technology company Baidu Apollo, began testing its vehicles in Brent in July 2026.¹⁴

Waymo and Freenow are currently testing their vehicles with a safety driver behind the steering wheel at all times, and without any passengers on board. Wayve, in partnership with Uber, has been granted a private hire vehicle licence by TfL to operate private hire journeys in London, where the driver is legally in control of the vehicle. However, all three have set out their intentions to launch fully autonomous passenger services in London, this is detailed below.

In some countries, these ambitions for autonomous passenger services have already been realised. Waymo was testing its vehicles in San Francisco and the surrounding Bay Area as far back as 2009. The company began offering paid rides in its vehicles in 2023 and is now offering fully autonomous trips in 11 US cities, averaging more than 400,000 rides every week.¹⁵ In many Chinese cities, too, it is possible to book a ride in a driverless vehicle, most of them

¹⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026; see also DfT, [Automated vehicle trialling code of practice](#)

¹¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Wayve [Ref No. AV043] (p.310)

¹² Techcrunch, [London gets closer to its first robotaxi service as Waymo begins testing](#), 14 April 2026

¹³ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.12)

¹⁴ Freenow, [Freenow by Lyft and Baidu's Apollo Go start autonomous vehicle testing in London with the RT6 vehicles](#), July 2026

¹⁵ Waymo, [Waymo One is now open to everyone in San Francisco](#), 25 June 2024, see also Waymo, [Where Waymo is driving](#) [accessed August 2026]

operated by technology company Baidu Apollo.¹⁶ Evidence received through this investigation has highlighted some potential benefits of the introduction of these services in these cities. But we've also heard some of the challenges and negative impacts, particularly from Jeff Tumlin who was Director of Transportation of the San Francisco Metropolitan Transportation Agency when autonomous passenger vehicles were introduced in San Francisco.

This is not the case across Europe; there are no cities in Europe in which fully driverless cars are currently offering taxi services.¹⁷ While in some European cities, such as Oslo, public transport services are being operated using autonomous vehicles, there remains a safety driver at the wheel at all times.¹⁸

As we finished our investigation, it was reported that Wayve, in partnership with ride-hailing operator Uber, has been granted private hire licences to operate 15 vehicles fitted with driverless technology, with a driver still legally in control of the vehicle at all times.¹⁹ In launching the service, Wayve described the service as a "supervised autonomous ride".²⁰ If Wayve and Uber, Waymo or Freenow, or any other company, get approval (including TfL's consent) to start operating fully autonomous passenger services in London, we could be the first city in Europe to see fully driverless vehicles on our roads. This has implications for Londoner's daily journeys, London's road network, and the Mayor's transport targets. We consider these later in this report.

What are operators planning?

We heard during this investigation that Wayve and Uber, Waymo and Freenow are all planning to take different approaches to deployment, reflecting varying strategies, levels of commercial appetite and technological readiness.

Waymo is preparing to launch fully autonomous passenger services in London (i.e. without a safety driver behind the wheel) soon, with the final roll out date depending on regulatory approval. Ben Loewenstein, Waymo's Head of Policy and Government Affairs for the UK and Europe, confirmed to the Committee that the number of vehicles Waymo expects to make available in London this year for commercial bookings if the company is granted a permit to be "in the low hundreds".²¹

Freenow currently operates a multi-service mobility app in London, which allows users to book taxis, private hire vehicles and other transport options such as e-bikes and e-scooters.²² Danny

¹⁶ Marketplace, [How advanced are China's self-driving taxis](#), 19 November 2024

¹⁷ There are test rides taking place, see for example. Robotics & Automation News, [Pony.ai and Verne begin fully driverless robotaxi passenger trials in Zagreb](#), September 2026

¹⁸ London Assembly Transport Committee, [Appendix 2 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 1](#), 1 July 2026 (p.3)

¹⁹ BBC, [Robotaxis granted licence to operate in London](#), August 2026; see also The Guardian, ['Leicester Square, please guv: Self-driving taxis cleared for London streets 'later this summer'](#), August 2026

²⁰ Wayve, [Wayve and Uber Launch First-Ever Autonomous Rides in the UK](#), 3 September 2026

²¹ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.12)

²² Freenow, [About us](#)

O’Gorman, General Manager for UK and Ireland at Freenow, told us that Freenow has now partnered with Chinese AV manufacturer Baidu Apollo to operate autonomous passenger vehicles in London. Baidu Apollo will provide the vehicles, while Freenow will run the operation of the service.²³

Freenow told us that its approach to deployment will be “deliberately gradual”.²⁴ In written evidence, it outlined plans to begin mapping and testing with a driver behind the wheel before progressing to testing without a driver to validate fully driverless operations. It told us that it intends to launch passenger services in 2027 and that these services “will launch with a small, controlled fleet of vehicles and scale progressively based on operational performance, rider demand, and regulatory feedback.”²⁵ Freenow also stated that its autonomous passenger services would operate alongside the taxi and private hire vehicles which can already be booked via its app.²⁶

Earlier this year Wayve announced it was partnering with US ride hailing company Uber to make autonomous rides available to Londoners through the Uber App. Wayve will provide the driverless technology and Uber will operate the passenger services. Uber and Wayve launched a list for prospective riders to register their interest in June 2026.²⁷ Dr Sarah Gates, Wayve’s Vice President of Global Affairs and Assurance, told the Committee that they were taking a “phased approach”, which would involve deploying the vehicles on Uber’s platform with all vehicles having a licensed private-hire driver behind the wheel at first.²⁸ Wayve and Uber have since been granted a licence by TfL to operate a private hire service using 15 vehicles, as set out above.²⁹

At the Committee’s site visit to Wayve’s headquarters in June 2026, we heard from Wayve that Uber and Wayve have plans to roll out fully autonomous vehicles without a driver, but they did not confirm when.³⁰ In its written evidence, Uber stated that it envisions a hybrid network, where autonomous passenger vehicles and manually driven cars can be booked on the same platform.³¹ This is similar to the model proposed by Freenow.

Before operators are able to deploy any vehicles carrying out passenger services on London’s roads, the vehicles and operations must have regulatory approval. Traditional taxi and private

²³ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (pp.22-23)

²⁴ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Freenow [Ref No. AV012] (p.68)

²⁵ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Freenow [Ref No. AV012] (p.68)

²⁶ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Freenow [Ref No. AV012] (p.69)

²⁷ Uber, [Autonomous Uber rides with Wayve in London, ENG](#) [accessed 23 July 2026]

²⁸ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.2)

²⁹ The Guardian, [‘Leicester Square, please guv: Self-driving taxis cleared for London streets ‘later this summer’](#), August 2026

³⁰ Information provided to the Committee verbally at the Committee’s site visit to Wayve on 15 June 2026

³¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Uber [Ref No. AV037] (p.218)

hire services are currently strictly regulated, and the Government has established a new process for regulating autonomous passenger services. Professor Siddhartha Khastgir, Head of Safe Autonomy, WMC at the University of Warwick, described it as a two-step process, whereby the vehicle and systems first need to be certified to be safe, before the operator can then seek authorisation at a local level by applying for a permit.³² In the next chapter, we look at the legislative context in more detail.

³² London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.2)

The legislative context

Who decides if autonomous passenger vehicles are permitted on London's roads?

TfL's current regulation of taxi and private hire vehicles

London has long held the power to regulate the taxis and private hire vehicles on its roads. Almost 200 years ago, the London Hackney Carriages Act 1843 gave the Metropolitan Police Commissioner the power to license taxis in London. More recently, the Private Hire Vehicles (London) Act 1998 temporarily gave the Secretary of State for Transport the power to license private hire vehicles in London. When TfL was established in 2000, powers to license both taxis and private hire vehicles were transferred to TfL under the GLA Act 1999.³³

The London Hackney Carriages Act 1843 and the Private Hire Vehicles (London) Act 1998 set out the core legal and regulatory framework for licensing taxis and private hire vehicles, including setting certain fundamental licensing requirements. For example, under the Private Hire Vehicles (London) Act 1998 private hire drivers must be over the age of 21 and hold a driving licence.³⁴ These two pieces of legislation give the licensing authority, which in London is now TfL, the power to issue licenses for taxi and private hire drivers, vehicles and operators (all three require separate licenses) and to put conditions on the licenses.

Up to this point, TfL has therefore had a large degree of control over taxi and private hire services operating in London. It can use its licensing agreements to set conditions to support safety and security across the transport network. For example, TfL requires taxis to be wheelchair accessible³⁵, taxi and private hire drivers are required to provide enhanced DBS checks³⁶ and taxis must have a turning circle of 7.62 metres which enables them to make tight manoeuvres at taxi ranks or on London's many narrow streets.³⁷

TfL also has the power to suspend or revoke taxi and private hire driver, vehicle and operator licences, should the licence holder no longer be fit to hold the licence or the vehicle is no longer fit for use.³⁸ This enables TfL to respond to incidents on London's roads or breaches of regulations. For example, in 2024 TfL revoked a total of 673 taxi and private hire driver licences.³⁹

³³ GLA Act 1999, [Schedule 20](#); see also [GLA Act 1999](#), Schedule 21

³⁴ Private Hire Vehicles (London) Act 1998, [Section 13](#)

³⁵ TfL, [Passengers and accessibility](#)

³⁶ TfL, [London taxi and PHV driver policy](#), March 2026 (p.8)

³⁷ TfL, [Construction and licensing of motor taxis for use in London Conditions of Fitness](#), June 2025

³⁸ Private Hire Vehicles (London) Act 1998, [Section 16](#); see also London Hackney Carriages Act 1843, [Section 25](#)

³⁹ TfL, [FOI request detail Taxi and PHV revocations 2024](#), March 2025

Automated Passenger Services permits

In contrast, the power to issue permits for autonomous passenger services is held at a national level. The Department for Transport (DfT) told us that this reflects the recommendation of the Law Commissions and the national structure established by the Automated Vehicles Act 2024 and is based on a need to ensure consistent safety standards nationally with this new type of vehicle.⁴⁰

In May 2026 the Government's Automated Passenger Services (APS) permitting scheme opened for applications.⁴¹ Companies wishing to operate driverless taxis in London must apply to the national Driver and Vehicle Standards Agency (DVSA) for an APS permit for the area in which they intend to deploy.⁴² In our meeting with TfL on 14 July 2026, Christina Calderato, Director of Strategy at TfL, told us that, as far as TfL was aware, no applications had yet been submitted to the DVSA for approval.⁴³

TfL's role within the APS permitting scheme is therefore not the licensing authority, but rather that of a 'consenting authority'. This means that once the DVSA has received an application for an APS permit within London, TfL will be asked to give its consent to the application, TfL can then either consent or withhold its consent. TfL will have six weeks to respond to the request for consent, and if it fails to respond within six weeks, or refuses consent without providing written reasons as to why, consent is deemed to have been granted.⁴⁴ The DVSA ultimately makes the decision on whether to issue a permit. If TfL does not give consent, then the permit cannot be issued. However, TfL's influence is limited as it does not have a formal role which would allow it to put conditions on a permit.⁴⁵ This is a significant step down from the power TfL has to set conditions on taxi and private hire licenses.

Once a permit has been granted, responsibility for monitoring and enforcement falls on the DVSA. The power to vary, suspend or withdraw a permit, for example in response to a traffic violation, collision or safety incident, also sits with the DVSA.⁴⁶

This process is established in Part 5 of the Automated Vehicles Act 2024, which does not set out specific criteria on which consent must be considered. However, the Government has issued guidance on some of the issues that a consenting authority may want to consider. These include: alignment with existing local policies and strategies; operational, vehicle and service details; engagement undertaken by the applicant and views of other stakeholders such as emergency services.⁴⁷

⁴⁰ DfT, [Automated Passenger Services response](#), 23 June 2026

⁴¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Centre for Connected and Autonomous Vehicles [Ref No. AV007] (p.34)

⁴² [Automated Vehicles Act 2024](#), ss.82-90

⁴³ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.4)

⁴⁴ DfT, [Automated passenger service permits: local authority and transport body roles](#) [accessed August 2026]

⁴⁵ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.2)

⁴⁶ DfT, [Automated passenger service permits: local authority and transport body roles](#) [accessed August 2026]

⁴⁷ DfT, [Automated passenger service permits: local authority and transport body roles](#) [accessed August 2026]

It is not yet clear what TfL's basis for granting consent will look like. In our meeting with TfL on 14 July 2026 we heard that TfL is developing its own guidance on its expectations for autonomous passenger services proposed for London, and the basis on which it would grant consent.⁴⁸ This guidance has not yet been published, and TfL did not give us a timeline for publication. Christina Calderato told us the guidelines would not be ready "for some time".⁴⁹ She said, "I do not think we are in a rush to get [the guidelines] out. We are conscious that lots of people want to see what it says; lots of people are looking to us to see what TfL's statement is. There is a huge amount of work going on behind the scenes."⁵⁰

The current APS permitting framework is interim, intended to facilitate small-scale pilot deployments, until the regulations under the Automated Vehicles Act 2024 are fully implemented. The DfT told us that this is expected in the second half of 2027.⁵¹ During this interim period, companies wishing to operate private hire services using a vehicle fitted with driverless technology with a driver behind the wheel can still apply for a private hire licence from TfL under the existing private hire licensing framework. This is the case with Wayve and Uber, who in August 2026 were granted a licence by TfL for 15 vehicles fitted with autonomous technology to operate with a private hire driver.⁵²

When the regulations under the Automated Vehicles Act 2024 have been fully implemented it is expected that the APS permit scheme will be made compulsory for all self-driving passenger services.⁵³ However, it is not clear whether the DVSA will continue to hold the power to issue these permits, or whether this power will be devolved to TfL in the same way it is for taxi and private hire licensing.

TfL as the licensing authority

We heard evidence from taxi and private hire driver representatives that TfL needs more control over the licensing of autonomous passenger vehicles in London. Steve McNamara, General Secretary of the Licensed Taxi Drivers Association, described the current situation as "crazy" and "a most bizarre set of circumstances" where London could have large numbers of autonomous passenger vehicles on its roads and the Mayor and TfL "only says either yes or no."⁵⁴

⁴⁸ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026

⁴⁹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.4)

⁵⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.4)

⁵¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Centre for Connected and Autonomous Vehicles [Ref No. AV007] (p.34)

⁵² The Guardian, [‘Leicester Square, please guv: Self-driving taxis cleared for London streets ‘later this summer’](#), August 2026

⁵³ DfT, [Automated passenger service permits: local authority and transport body roles](#) [accessed August 2026]

⁵⁴ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.7)

Similarly, Steve Garelick, Regional Development Officer at GMB, asked “How can you licence when all you can do is give approval?” and stated that stronger licensing is needed for TfL to be able to carry out its duty to give public protection to the travelling public.⁵⁵

“The reality of it is that any vehicle that is going to be used in London for conveying people around needs to be licensed by TfL. The software needs to be licensed and checked by TfL. The vehicles need to be licensed and checked by TfL. Whoever is operating and controlling it needs to be licensed and checked by TfL.”⁵⁶

**Steve McNamara, General Secretary
Licensed Taxi Drivers Association**

Conversely, Thomas Ableman, Host of the ‘Freewheeling’ Podcast and former Director for Strategy and Innovation at Transport for London, argued that under the current APS framework, while there are certain things that are decided by central Government, TfL does have a lot of say over “whether or not licensing a particular operator’s service is in the interests of London” via the consenting process. He contrasted this with private hire licensing, where TfL must license operators that meet the statutory tests, and argued that TfL should publish a clear definition of a good service so that operators can design to it and TfL only consent to services that meet that definition.⁵⁷

It is true that if TfL does not give consent, then a permit cannot be issued, which gives TfL a blunt instrument to control access to London’s streets. However, it is clear that TfL’s wider influence is limited because it does not have a formal role which would allow it to put conditions on a permit. Indeed, we heard concerns from TfL itself that it considers that its “powers are quite limited” over the licensing of autonomous passenger services.⁵⁸

Furthermore, TfL’s role in the issuing of APS permits is significantly reduced compared to its role as the licensing authority for taxi and private hire in London. This watering down of TfL’s devolved powers limits TfL’s ability to manage and integrate London’s transport network.

Jeff Tumlin told us that giving cities complete regulatory authority does not make sense, but as he put it “there are critical functions that cities must have”.⁵⁹ Examples he gave included cities

⁵⁵ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.14)

⁵⁶ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.6)

⁵⁷ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026, (p.14)

⁵⁸ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.2)

⁵⁹ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.5)

being able to geofence emergency response scenes and managing kerb side access for drop off and pick up.⁶⁰ Having authority over these areas enables cities to plan and manage their road and street networks and ensure the safety of other road users. If TfL had the power to issue APS permits, and put conditions on these permits, in the same way it is able to issue taxi and private hire licences, it would have the authority it needs over these critical functions in our city.

Christina Calderato, Director of Strategy at TfL, acknowledged that “at the outset there is a need for consistency at a safety level”.⁶¹ However, she stated that in the long-term licensing power for autonomous passenger vehicles should be transferred to TfL.⁶²

We agree that the power to issue APS permits must be devolved to TfL as soon as reasonably practicable, in line with its devolved power to licence traditional taxi and private hire services in London. This would give TfL the capacity to set and enforce standards. The issues we address in the following chapter of this report, criteria for consenting to autonomous passenger services, are also issues that TfL should look to address in a licensing scenario.

Responding to incidents and safety concerns

In this interim period, while the DVSA has the power to issue APS permits, it also continues to hold responsibility for monitoring and enforcement, as well as powers to vary, suspend or withdraw permits. As this power does not sit with TfL, it limits TfL's ability to respond to events and issues that are unexpected or unpredictable. This is of particular concern when TfL is not able to respond to safety critical incidents. Christina Calderato described the situation as follows: “We have this stop-go decision at the point of consent, but after that consent has been given and permit has been issued, we have no further ongoing role once vehicles are out on the street.”⁶³

As companies have been testing their autonomous vehicles on London's roads without passengers over the past year, we have seen reports of incidents that raise safety concerns. For example, in April it was reported that an autonomous vehicle had driven into a police crime scene cordon, in June an autonomous vehicle was filmed turning the wrong way into a one-way street and in July it was reported that an autonomous car had collided with a motorbike.⁶⁴ We heard that incidents like these have caused significant public concern in London already.⁶⁵

⁶⁰ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.5)

⁶¹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.3)

⁶² London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.3)

⁶³ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.2)

⁶⁴ See: BBC, [Taxi from driverless firm veers into crime scene](#); X, [Taxi Judge](#); X, [Rowland Manthorpe](#)

⁶⁵ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Cllr Gallagher and Cllr Alexandre [Ref No. AV009] (p.48-49)

TfL did not have any power to respond to these incidents as it does not have any authority over the current testing being undertaken on London's roads. Christina Calderato told us that:

"The vehicles that are out there trialling now, we have no role in that trialling. They do not need to tell us that they are doing it. We are not able to affect that. What we have seen is a number of incidents, that is one of them, and there is no obligation on the operators to tell us that those incidents have happened."⁶⁶

We note in this context that there have been safety incidents elsewhere, where driverless vehicles have been deployed. In April this year, a mass malfunction of robotaxis reportedly halted cars mid-traffic in the Chinese city of Wuhan.⁶⁷ In June, Waymo reportedly suspended some services after its cars drove into flooded streets in US cities.⁶⁸ At present, if malfunctions like these happened with automated passenger vehicles in London, TfL would have no powers to respond or withdraw its consent to their operation.

Christina Calderato confirmed that TfL would like the power to suspend operations in the case that there is a safety issue, and to be able to investigate each incident to understand what has happened. She said: "if we see something that is concerning or unsafe, we need to take action on that."⁶⁹ Similarly, in written evidence to the Committee, the Parliamentary Advisory Council for Transport Safety (PACTS) stated: "Where deployment becomes unsafe, authorities must be able to act quickly to vary, suspend or withdraw permits."⁷⁰

TfL must be able to respond to any safety and critical incidents that occur on London's roads. This includes any incidents that occur from the introduction of autonomous passenger vehicles. If TfL is granted power to issue permits in the long-term, it will be able to take immediate action on any incidents. In the interim period, during the pilot phase, to be able to respond to safety and critical incidents on London's roads, TfL needs to be able to suspend or withdraw its consent for permits.

For 25 years TfL has held the power to issue taxi and private hire licences in London. The current APS framework strips it of the equivalent power to licence automated private hire services on London's roads. In 2027, when the full implementation of the regulations in the Automated Vehicles Act 2024 takes place, the Government should transfer powers to issue APS permits to TfL. In the interim, TfL should have the power to suspend or withdraw its consent for APS permits when a critical incident occurs, to ensure the safety and security of London's roads.

⁶⁶ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.9)

⁶⁷ BBC News, [Mass robotaxi malfunction halts traffic in Chinese city](#), April 2026

⁶⁸ See, for example: CNN, ['Driving like teenagers': Waymo robotaxis have run red lights and nearly hit pedestrians, CNN finds](#), June 2026

⁶⁹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.10)

⁷⁰ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Parliamentary Advisory Council for Transport Safety, [Ref No. AV027] (p.151)

Recommendation 1

The current Automated Passenger Service (APS) permitting framework should be regarded as transitional, during the initial small-scale pilot phase. When the Government puts in place the full regulations under the Automated Vehicles Act in 2027, it should devolve the power to issue and withdraw APS permits, and to set conditions for operators wishing to deploy autonomous passenger vehicles in London, to Transport for London (TfL).

Recommendation 2

The Government should establish a formal process by which Transport for London (TfL) can request that an Automated Passenger Service (APS) permit be suspended. This should be introduced during the current pilot of the APS permitting framework. If TfL makes such a request, the permit should be immediately suspended, pending a decision by the Secretary of State for Transport.

Given that, currently, TfL has only one opportunity to have a say on the roll out of autonomous passenger services on London's roads it is vital that it takes a cautious approach and considers any applications against strict criteria. We set out to examine the key issues that TfL must consider when deciding whether to give consent. In the next chapter, we set out some of the criteria TfL must base its consent on.

Criteria for consenting to autonomous passenger services

Several companies have made clear their intention to launch autonomous passenger services (also known as driverless taxis) in London as soon as this year. As TfL has a role in the permitting process for these services as a consenting authority, we set out to examine what factors TfL should consider as part of its decision on whether or not to grant its consent.

The Government has not set out specific criteria on which consent must be considered, but the DfT has set out guidance for consenting authorities. One of the issues the DfT says consenting authorities might want to consider is alignment with existing local policies and strategies, including whether a proposed service supports local priorities or runs counter to them. This includes considering local transport plans, actions plans and targets or existing taxi and private hire driver policy.⁷¹

Mayor's Transport Strategy

In London, the most important existing local strategy, set out in the GLA Act 1999, is the Mayor's Transport Strategy (MTS) in which the Mayor sets out his vision for transport in London.⁷² The current MTS, published in 2018, looks ahead and sets targets for the next 20 years. The plan sets out "to transform London's streets, improve public transport and create opportunities for new homes and jobs."⁷³

For Londoners this means having access to reliable, affordable and accessible public transport and to feel safe to make journeys by walking, wheeling or on a bike. Autonomous passenger vehicles must not impact Londoners ability to make their everyday journeys to school, work, the shops or to visit family and friends.

As the integrated transport authority in London, TfL is responsible for meeting the MTS commitments on transport in London. TfL's work is therefore determined by the targets set out in the MTS.⁷⁴

The MTS adopts the Healthy Streets Approach, which prioritises walking, cycling and public transport and encourages people to use private cars less. TfL states that the Healthy Streets Approach focuses on "creating streets that are pleasant, safe and attractive" and removing barriers that prevent people from getting out and about.⁷⁵ This approach supports the central aim of the MTS which is focused on enabling more people to walk, cycle and use public

⁷¹ DfT, [Automated passenger service permits: local authority and transport body roles](#) [accessed August 2026]

⁷² Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁷³ TfL, [The Mayor's Transport Strategy](#)

⁷⁴ TfL, [What we do](#)

⁷⁵ TfL, [Healthy Streets](#)

transport; specifically for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041.⁷⁶

Each year TfL publishes a report detailing trends and developments in transport in London, as well as progress towards implementing the MTS. The latest report, published in December 2025, stated that the proportion of trips in London made by walking, cycling and public transport in 2024 was estimated at 63.4 per cent, a small increase from 63.0 per cent in 2023.⁷⁷ The MTS reported that in 2015 the figure was also 63 per cent.⁷⁸ The Mayor and TfL therefore still have a long way to go to reach the 80 per cent target set for 2041.

The MTS includes several other targets relating to all aspects of London's transport network, for example around improving air quality, safety, accessibility and access to public transport. The other key targets that are particularly relevant in the context of driverless vehicles are those around creating a safer road network and reducing traffic.

To reduce road danger, the MTS sets out an aim for all deaths and serious injuries from road collisions to be eliminated from London's streets by 2041.⁷⁹ This target is referred to as Vision Zero. The MTS states that "minimising road danger is fundamental to the creation of streets where everyone feels safe walking, cycling and using public transport."⁸⁰ TfL has set an interim target of a 70 per cent reduction in people killed or seriously injured on London's roads by 2030, compared to the 2010-2014 baseline. However, its latest reporting showed that in 2024 26 (19 per cent) fewer people were killed and 1,162 (24 per cent) fewer people were killed or seriously injured.⁸¹

London is Europe's most congested city.⁸² To reduce traffic and congestion the MTS includes an aim to reduce total London traffic by 10 to 15 per cent by 2041.⁸³ The strategy states that this target "is required to keep congestion in check, while also achieving the aims of this strategy."⁸⁴ Yet, following a significant dip in traffic in 2020 as a result of the COVID pandemic, TfL's reporting shows that since then traffic in London has steadily been increasing. In 2024, overall traffic across Greater London grew by 1.2 per cent relative to 2023.⁸⁵

To support the implementation of the MTS, TfL has published various action plans relating to different aspects of London's transport system. For example, it has published plans on walking and wheeling, cycling, freight, Vision Zero and accessibility and inclusion. It also has published action plans on taxi and private hire. It published the first taxi and private hire action plan in

⁷⁶ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁷⁷ TfL, [Travel in London 2025 Annual Overview](#), December 2025

⁷⁸ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁷⁹ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁸⁰ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁸¹ TfL, [Travel in London 2025 Annual Overview](#), December 2025 (p.29)

⁸² INRIX, [2025 Global Traffic Scorecard](#)

⁸³ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁸⁴ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁸⁵ TfL, [Travel in London 2025 Annual Overview](#), December 2025 (p.42)

2016,⁸⁶ and has since published an updated plan in 2025.⁸⁷ The 2025 Taxi and Private Hire Action Plan sets out TfL's plan and actions to support the taxi and private hire industry in London in line with the aim set out in the MTS "to ensure London has a safe, secure, accessible, world-class taxi and private hire service."⁸⁸

We support the ambitious targets set out in the MTS, which sets out a vision for making London's streets pleasant, safe, and attractive. However, it is clear there is still a long way to go in order to meet some of these key targets. The Mayor and TfL must therefore ensure that any new scheme proposed for London's roads is contributing towards achieving the targets set out in the MTS. In light of this, TfL's consent to any APS permit application for operation in London must be considered within the context of these strategies, policies and targets.

Recommendation 3

Transport for London (TfL) must consider its consent to any Automated Passenger Service (APS) permit application for operation in London within the context of the Mayor's Transport Strategy and its policies and targets. Any new service that is introduced on London's roads must not reduce TfL's ability to meet these targets.

TfL has told us that it is developing its own guidance on its expectations for autonomous passenger services proposed for London, and the basis on which it would grant consent. Below we set out some of the key issues and requirements TfL must consider when asked to give consent. If an operator's APS permit application does not meet these requirements, we believe TfL's consent should be withheld.

Reducing road danger

The Automated Vehicles Act 2024 establishes the framework for liability in the event of an incident associated with an AV. The Act requires each vehicle to have a designated Authorised Self-Driving Entity (ASDE), which is the vehicle manufacturer or software developer who puts the AV forward for authorisation as having self-driving features. The ASDE is the body responsible for meeting and complying with regulations relating to the vehicle and is legally responsible for the vehicle when it is driving autonomously. The Act also establishes that criminal liability for any road traffic offences lies with the ASDE.⁸⁹

Operators have been keen to assure us that their vehicles are safe. In fact, we heard from them that autonomous vehicles are significantly safer than manually driven vehicles. Dr Sarah Gates told us that unlike some human drivers, autonomous vehicles will not be distracted, tired, intoxicated, or their driving style adversely affected by their emotional state.⁹⁰ Similarly, Ben

⁸⁶ TfL, [Taxi and Private Hire Action Plan 2016](#), September 2016

⁸⁷ TfL, [Taxi and private hire action plan 2025](#), March 2025

⁸⁸ Mayor of London, [Mayor's Transport Strategy](#), March 2018

⁸⁹ [Automated Vehicles Act 2024](#) s.6

⁹⁰ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.2)

Loewenstein told us that “The vehicles do not get distracted. The vehicles do not get tired.” He also said that they “are programmed to follow the speed limit.”⁹¹

Ben Loewenstein cited results from Waymo research which used simulation testing to analyse collision data collected in Arizona. The research found that Waymo vehicles would have avoided 100 per cent of all documented collisions if they were the initiator, and 82 per cent of collisions if they were the responder to the crash. In the remaining 18 per cent, Waymo vehicles would have either mitigated the severity of the incident or they stood still and were ‘t-boned’ or rear ended by another vehicle.^{92 93} In written evidence submitted to the Committee, Waymo stated that it “consistently avoids more injury-related crashes than human drivers” and that “Waymo’s safety record is significantly better than that of human drivers in the areas that we operate.”⁹⁴

We are conscious that this is Waymo’s own safety data, which as Professor Jack Stilgoe said “is not the same thing as an independent evaluation of the technology.”⁹⁵

TfL acknowledged that there are potential safety benefits to autonomous passenger vehicles.⁹⁶ Dr Nick Reed, Founder of Reed Mobility and a member of DfT’s Science Advisory Council, told us that driverless vehicles will have no blind spots due to 360-degree camera vision and are going to be programmed to strictly comply with traffic laws, which in turn could have a calming effect on other road users.⁹⁷ But, he caveated this last point by saying that there is a possibility that other road users might get frustrated by the compliance of autonomous vehicles to road rules and “adopt more risky behaviours in trying to overtake”.⁹⁸

⁹¹ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026

⁹² London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.6)

⁹³ Waymo, [Replaying real life: how the Waymo Driver avoids fatal human crashes](#), 8 March 2021

⁹⁴ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Waymo [Ref No. AV042] (p.295)

⁹⁵ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.4)

⁹⁶ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026

⁹⁷ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.6)

⁹⁸ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.6)

*"These vehicles are by their very nature very hesitant drivers. If you watch them in town and see them, they have to be because they are terrified of anything going wrong. There is a plethora of videos online, but you can just go and watch them for yourself when you see them in town. If the safety driver does not take control of the vehicle, what happens a lot - and there was a brilliant video a few weeks ago in Charing Cross Road - the car pulls to the junction and wants to pull out, and it sits there because the traffic is coming up Charing Cross Road like it does all day long. If you sit and wait for a gap in the traffic, you are going to be sitting there until Christmas Day. You know how it works. You edge out and you look at a driver and someone lets you out. The autonomous cars cannot do that. They sit there waiting for somebody to allow it. Then replicate this at every junction across London where you have these cars that are so hesitant."*⁹⁹

**Steve McNamara, General Secretary
Licensed Taxi Drivers Association**

Crucially, we heard that much of the safety evidence comes from the deployment of these vehicles in the US and London's roads are very different. Thomas Ableman told us that the two aren't really comparable as London already has a much stronger safety record. He said that the vast majority of deaths and injuries that have been avoided on US roads as a result of the introduction of driverless vehicles "have already been saved in London through complete multi-decade projects on [...] redesigning our streets."¹⁰⁰

In written evidence to the Committee, Road Safety GB also said that London's streets are different from US streets, emphasising the difference in terms of layout as London has several specific challenges, including narrow, historic streets, large numbers of pedestrians, cycle traffic, roadworks, bus usage and complex junction layouts.¹⁰¹ The London Borough of Ealing emphasised that London "is not an environment in which vehicles have unquestioned priority and right of way, unlike the American cities in which Waymo and Uber already operate".¹⁰² Similarly, Living Streets expressed concerns that operators' road danger reduction claims were based on performance in environments that are much less complex than London, and London Cycling Campaign noted for example that "jaywalking" is illegal in many parts of the US, so driverless vehicles may be unprepared for significantly different pedestrian behaviour in London, where there are no "Jaywalking" laws.¹⁰³

⁹⁹ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.9)

¹⁰⁰ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.6)

¹⁰¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Road Safety GB [Ref No. AV029] (p.162)

¹⁰² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), London Borough of Ealing [Ref No. AV018] (p.94)

¹⁰³ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Living Streets [Ref No. AV016] (p.86); London Cycling Campaign [Ref No. AV019] (p.98)

We also heard that basing safety claims on comparisons between human driven vehicles and autonomous passenger vehicles is not entirely fair, as it is based on an assumption that all autonomous passenger vehicle journeys will replace equivalent trips in vehicles driven by humans. Instead, we heard from Jeff Tumlin that autonomous passenger vehicles can make roads on the whole less safe by substituting for public transport and active travel trips, which are typically safer than driving.¹⁰⁴

It is important that any new vehicles operating in London contribute towards the Mayor's ambition to make London's roads safer. In our assessment the operators hoping to launch their services haven't yet demonstrated this, given much of the evidence in support of their safety claims comes from the US where baseline safety standards are so different. When paired with the complexity of London's road network and reports of several safety incidents during this trial and testing phase, at the very least more independent safety testing and verification in the context of London's streets is required.

Adopting a strong safety standard

To ensure that autonomous passenger vehicles are contributing to the Mayor's Vision Zero target, TfL needs to consider any APS permit applications against strong safety criteria.

The DfT has set out that the safety level for driverless vehicles must be "at least the same as (or higher than) a competent and careful human driver."¹⁰⁵ This definition is in line with the United Nations Economic Commission for Europe (UNECE) Automated Driving Systems (ADS) regulations, which sets global unified provisions for the safety of driverless vehicles.¹⁰⁶

The public has a higher need for reassurance of safety for driverless vehicles. We specifically heard that public expectations of safety are much stronger when they are not in control of the vehicle. Thomas Ableman told us that "there is a very clear revealed preference human requirement that services become safer if they feel less control."¹⁰⁷ He gave the example of the "exceptionally high expectations of safety" people have for trains and planes, where passengers do not feel they have much control. In contrast he said "Driving your own car, you feel like you have quite a lot [of control]. An AV is much more analogous to the lack of control you feel when in a train or a bus or a plane than driving your own car."¹⁰⁸

¹⁰⁴ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.4)

¹⁰⁵ Centre for Connected and Autonomous Vehicles & Department for Transport, [Self-driving vehicle pilot scheme: information for applicants](#), March 2026

¹⁰⁶ United Nations Economic and Social Council, [Proposal for a new United Nations Global Technical Regulation on Automated Driving Systems \(ADS\)](#), 23–26 June 2026

¹⁰⁷ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.10)

¹⁰⁸ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.11)

*"When it comes to trains or planes, we have maybe as much as 100 times higher expectations of safety for those modes of transport. Just telling the public that they are too risk-averse in those areas will not wash."*¹⁰⁹

Prof Jack Stilgoe

Professor of Science and Technology Policy, UCL

The definition that driverless vehicles must be at least as safe as a 'careful and competent human driver' facilitates a comparison to individuals driving their own cars. This does not align with the stronger definitions of safety we apply to public transport, where individuals have less control over the vehicles in which they travel.

The innovation consultancy DG cities told us that its research indicates that people expect the performance of driverless vehicles to surpass human driving ability.¹¹⁰ As part of this investigation we commissioned a YouGov survey of over 1000 Londoners which found that 42 per cent of Londoners oppose the use of autonomous passenger vehicles in London, compared to 29 per cent who support it. The most common concerns cited were around the ability of the vehicle to respond in unexpected situations, road danger and risk of collisions and system failure.¹¹¹

The PACTS also told us that the careful and competent standard is not strong enough as it does not align with the ambition to limit collision severity so that people are not killed or seriously injured. It said: "AVs should perform significantly more safely than a careful and competent human driver; simply matching human performance should not be treated as sufficient."¹¹²

We heard from Jeff Tumlin that in the US, the federal government defined safety as "collision avoidance".¹¹³ He argued that this is a very narrow definition of safety and said that "as a transit operator, we understand that safety is a lot more than merely reducing collisions."¹¹⁴ He gave the example that, under the US federal government's definition of safety, when an autonomous passenger vehicle does its pick-up and drop-off in the bicycle lane, that is not

¹⁰⁹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.10)

¹¹⁰ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), DG Cities [Ref No. AV011] (p.64)

¹¹¹ London Assembly Transport Committee, [YouGov survey finds opposition to the introduction of autonomous passenger vehicles \(APVs\) in the capital](#), 15 July 2026

¹¹² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Parliamentary Advisory Council for Transport Safety [Ref No. AV027] (p.150)

¹¹³ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.3)

¹¹⁴ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.3)

considered a safety issue.¹¹⁵ In London, this would raise serious concerns around safe practices for vehicles, and compatibility with Vision Zero targets. Jeff Tumlin encouraged other countries to “pay careful attention to how you define safety” and “to take cues from the public transport or the aviation industry”.¹¹⁶

In light of this evidence, we feel the ‘careful and competent human driver’ definition of safety is not strong enough for driverless cars to operate in London. It was therefore encouraging to hear from Christina Calderato that TfL believes “we need to go further than careful and competent; that is not quite enough.”¹¹⁷ She told us that “we think there should be a Vision Zero standard of safety, which means reducing both the frequency and severity of collisions.”¹¹⁸ She said that TfL will look for evidence of better safety outcomes when considering an operator’s application for an APS permit, and that one key aspect TfL will be looking for in this evidence is autonomous vehicles not being stated as a cause of an incident, either directly or as a cause of an incident between other parties.¹¹⁹

It is clear that the ‘careful and competent’ definition does not go far enough as a definition of safety for a service that is carrying passengers, or to be compatible with the Mayor’s Vision Zero target. A baseline definition of safety that is closer to safety expectations for the public transport network would be more appropriate to these vehicles.

It is reassuring that TfL agrees with this conclusion and has told us that the definition should be strengthened. We would like to see TfL establish a stronger definition of safety that is in line with Vision Zero and use this as a baseline against which to evaluate applications for APS permits.

Recommendation 4

Transport for London (TfL) should adopt a stronger safety baseline than that of the ‘careful and competent driver’ as a condition for granting consent to an operator being given an Automated Passenger Service (APS) permit. TfL should require operators to provide concrete evidence of how their vehicles and deployment plans could contribute to reducing road danger in London as set out in the Mayor’s Vision Zero strategy, taking into account London’s unique road network and multiple types of road user. TfL should not grant consent if applications do not meet this definition and should publish its criteria for granting consent.

¹¹⁵ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.3)

¹¹⁶ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.3)

¹¹⁷ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.17)

¹¹⁸ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.17)

¹¹⁹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026

Sharing safety data

With a large number of sensors, cameras and monitoring, driverless vehicles have the capability to collect a huge amount of data on the street environment in which they are driving. However, under the current licensing and permitting regime, operators are only required to share data with the Government, not with TfL.¹²⁰

In order to gain approval and a permit to operate, operators will be required to share data on safety incidents with the Government. As part of this, operators must provide the Government with notification about “critical incidents” including injuries, collisions or safety critical components failures within 24 hours of knowledge of the incident.¹²¹ However, there is currently no requirement to share any data on ‘near misses’.

During the current testing of vehicles being carried out by operators in London, with no passengers on board, TfL told us that operators have been sharing their data with TfL when an incident occurs. TfL described this as being done on the basis of “goodwill and transparency and honesty”.¹²² We heard from Wayve that due to autonomous vehicle technology, it has “the ability to look into exactly what happened at the time and, from the level of information we get from a vehicle, we would have a lot more information to look into a near miss or an incident than you would get from a traditional vehicle.”¹²³ Dr Sarah Gates also told the Committee that Wayve has had conversations with TfL around sharing this type of information related to an incident.¹²⁴

Glenn Lyons, Mott McDonald Professor of Future Mobility at the University of the West of England, told us that given the large amount of data being gathered by autonomous vehicles, there is an opportunity for regulators to access more data than is currently legally required.¹²⁵ We heard from several organisations that operators should be required to share data on ‘near misses’, not just incidents.¹²⁶ Professor Jack Stilgoe also told us that sharing data on “edge cases and near misses”¹²⁷ is important from the point of view of learning and improving safety

¹²⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026

¹²¹ Centre for Connected and Autonomous Vehicles, [Self-driving vehicle pilot scheme: information for applicants](#), 31 March 2026

¹²² London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.18)

¹²³ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.4)

¹²⁴ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.4)

¹²⁵ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026

¹²⁶ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Addison Lee [Ref No. AV001] (p.8); ADCU [Ref No. AV003] (p.17); London Cycling Campaign [Ref No. AV019] (p.102); Parliamentary Advisory Council for Transport Safety [Ref No. AV027] (p.149); Thomas Pocklington Trust [Ref No. AV035] (p.195)

¹²⁷ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.4)

standards, not just for a single operator but entire fleets of autonomous vehicles. He argued that: "this learning needs to be social, not just privatised to a particular operator"¹²⁸ and again provided a comparison to the standards required in the aviation industry. He said: "It is the reason why air transport has become so much safer over the decades, is that when something happens, everybody is forced to share data and everybody is forced to learn from those mistakes."¹²⁹

Similarly, Christina Calderato told us that it is important that operators share data beyond that relating to collisions and incidents to comply with the Mayor's Vision Zero approach. She said: "It is not just about if there is a collision; we also need to be thinking about Vision Zero, thinking about all those near misses, what about the sudden acceleration, what about the sudden braking."¹³⁰ We welcome this holistic thinking from TfL and agree that data sharing around near misses and vehicle behaviour, as well as collisions and incidents, will be needed to ensure autonomous passenger services are contributing towards Vision Zero.

Christina Calderato also told us that TfL will be looking for continuous improvements in safety. She said that "the baseline for safety should get more stringent as general levels of safety improve."¹³¹ We believe that learning from mistakes will be a vital part of this continuous improvement. This can only take place if there are strict requirements on operators to share their data on collisions, incidents, near misses and edge cases and for this to be used by all autonomous vehicle technology developers to improve the safety of their vehicles.

We heard concerns from Syselek, a developer of automated technology, that "The release of recorded data from existing ride-hailing AV operators has been limited" and that the sharing of incident data has "often been delayed" or is "sometimes incomplete or uninterpretable by public agencies or third parties."¹³² Similarly, we heard from Professor Jack Stilgoe that when companies share their data it is "sometimes uninterpretable" and that "it is a feature of a lot of these AI systems, especially deep learning systems, that we can know what they did but we cannot know why they did it."¹³³

Given this, it would be prudent to ensure that clear data sharing requirements are set out as a condition for issuing an APS permit. These include the timescale for operators to share data; that data must be shared with TfL as well as the Government; what data must be shared, such as data on near misses as well as incidents and why the vehicle acted in the way that it did, and

¹²⁸ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.5)

¹²⁹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.5)

¹³⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.10)

¹³¹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.22)

¹³² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Syselek [Ref No. AV033] (p.182)

¹³³ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.25)

that data must be shared in an accessible format. As TfL is not able to set conditions on an APS permit, it must ensure that this is set out as a condition on the permit by the DVSA before granting consent. This is too important to rely on operators' goodwill alone.

Recommendation 5

Transport for London (TfL) should establish a definition for safety incidents involving autonomous passenger vehicles. This should include, as a minimum, crashes and near misses. As a condition for granting consent, TfL should require that this information is provided along with the vehicle's decision-making processes that led to the incident within 24 hours. TfL should also establish a consistent and accessible format for data sharing by operators.

Traffic and congestion

Impact on traffic

London has been reported as Europe's most congested city for four years in a row, and last year was ranked the seventh most congested city in the world.¹³⁴ As set out above, traffic reduction is a key priority for the Mayor and TfL as part of the aims set out in the MTS.

However, we heard that there is a significant risk that autonomous passenger vehicles could add to existing traffic volumes and worsen congestion. We heard from Jeff Tumlin that when autonomous passenger vehicles were first introduced in San Francisco the city saw increases in congestion.¹³⁵ We also heard concerns from taxi and private hire drivers in London that introducing autonomous passenger vehicles would add to traffic levels and congestion. Steve Garelick told us that "It is fanciful to believe that these vehicles are going to be just driving around London [...] and not adding to the pre-existing congestion that exists."¹³⁶

We heard that certain characteristics of autonomous passenger vehicles and their business model may make them more likely to cause an increase in congestion. Dr Nick Reed told us that cars generally represent a relatively inefficient use of road space compared with walking, cycling and public transport. Autonomous passenger vehicles may also make journeys without passengers, for example when repositioning or travelling to collect a customer. This is often referred to as 'deadheading' and adds vehicle movement without directly transporting passengers.¹³⁷

¹³⁴ BBC, [London's roads still the most congested in Europe](#), January 2025; see also Inrix, [Inrix 2025 Global Traffic Scorecard](#), 2025

¹³⁵ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.2)

¹³⁶ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.11)

¹³⁷ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Dr Nick Reed [Ref No. AV028] (p.156)

Taxi and private hire driver representatives told us that this doesn't typically happen with traditional taxi and private hire vehicles. Steve McNamara, General Secretary of the Licensed Taxi Drivers Association (LTDA), told us that at quiet times taxis typically drive to the nearest taxi rank, park there and wait for customers. However, as this is not an option for autonomous passenger vehicles, he said there was a risk they would continue to drive around London empty in search for customers.¹³⁸ We also heard from the UK Private Hire Drivers Union (UKPHD) that private hire drivers usually begin their shift close to where they live, gradually moving across the city by accepting nearby bookings. As autonomous passenger vehicles would be despatched from a depot, they could generate additional empty miles by driving into central areas empty to find customers. UKPHD said this pattern would be replicated in the other direction at the end of the day, further adding to traffic levels.¹³⁹

Operators were keen to tell us that deadheading is unlikely to create additional traffic on London's roads. Ben Loewenstein told us that driving empty miles is not an economical practice for Waymo as the vehicles degrade the longer they are driving so it is in the company's interest to minimise deadheading.¹⁴⁰ Freenow also told us that it does not want to be driving empty miles and intends to reduce deadheading by combining both drivers and autonomous passenger vehicles on the same platform to enable the company to respond to demand flexibly, only deploying vehicles as they are needed.¹⁴¹

However, we also received evidence to suggest that operator's ambitions to reduce deadheading may not work in practice. In written evidence to the Committee, the campaign group Clean Cities cited results from a 2026 study analysing more than 86 million total vehicle miles travelled over approximately 14 million Waymo trips between August 2023 and December 2025. It said that the results show that nearly half, 46 per cent, of all miles travelled by Waymo's autonomous passenger vehicles are driven without a passenger on board.^{142 143}

We also heard that autonomous passenger vehicles could increase congestion from the way that they behave in certain situations. We heard from Jeff Tumlin that the increase in congestion in US cities has largely been a result of vehicle disengagement, where the vehicle stops in the road and blocks traffic. He said "the congestion that they cause is largely a result of disengagements, where they brick in a complex intersection and shut down traffic, or in the incident we had last December [2025] when the entire fleet bricked as a result of a power

¹³⁸ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.9)

¹³⁹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), UK Private Hire Drivers Union [Ref No. AV038] (p.225)

¹⁴⁰ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.12)

¹⁴¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Freenow [Ref No. AV012] (p.69-70)

¹⁴² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Clean Cities [Ref No. AV008] (p.41)

¹⁴³ Abdelhalim, A. (2026) [Millions of Trips, 'Waymo' Empty Miles: California's First Thousand Days of Commercial Robotaxi Service. Findings](#), May 18

outage in the city.”¹⁴⁴ When a driverless car ‘bricks’ this means that its systems have been disabled rendering it completely inoperable.

There is clearly a risk that the introduction of autonomous passenger services in London could increase traffic and congestion in our city, particularly if these vehicles are driving a significant number of empty miles. This could work against the Mayor’s traffic reduction targets. As such, the impact of autonomous passenger services on traffic levels in London must be carefully monitored and operators should be able to show that they are not adding to existing traffic levels by driving empty for long periods of time.

Recommendation 6

Transport for London (TfL) should establish ‘empty miles driven’ as a core reporting metric, as a condition for granting consent to Automated Passenger Service (APS) permits. TfL should continuously monitor and publish this data, alongside data on traffic levels and congestion. TfL should use this data to inform decision making on future requests for consent.

Negative impacts on congestion should be a reason for withdrawal of consent, if TfL is granted full regulatory powers.

Impact on Londoners’ travel choices

The arrival of autonomous passenger services is likely to affect Londoner’s travel choices by providing a new option. It has the potential to directly affect London’s progress towards the target set in the MTS for 80 per cent of all trips to be made on foot, by cycle or using public transport by 2041. It could also affect the target to reduce car traffic. The effect could be negative: if the introduction of autonomous passenger vehicles encourages more people to travel by car over walking, cycling and using public transport, it could slow progress towards this target. Conversely, if autonomous passenger vehicles reduce private car use, their arrival could contribute positively towards the target.

From operators, we heard that autonomous passenger services could reduce car journeys by reducing the need for private car ownership. In written evidence to the Committee, Wayve said that ride hailing services in general have contributed to a 2.2 per cent reduction in private vehicle ownership in London, and 28 per cent of former car owners cited the availability of ride hailing services as a reason to give up their vehicle.¹⁴⁵ Waymo also said it has “designed our service to minimise network disruption and incentivise the use of our service instead of a private vehicle.”¹⁴⁶ Yet, in written evidence to the Committee CoMoUK cited a study which

¹⁴⁴ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.2)

¹⁴⁵ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Wayve [Ref No. AV043] (p.313)

¹⁴⁶ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Waymo [Ref No. AV042] (p.299-300)

found that that if ride-hailing options didn't exist in California, 47 per cent of Uber and Lyft trips would have been made by public transport, active travel, or not at all.¹⁴⁷

At the moment, we do not yet know the exact effect the introduction of autonomous passenger services will have on London's roads. Tom Bogdanowicz, Senior Policy Officer at the London Cycling Campaign, told us that "If these cars are to replace unnecessary vehicle journeys or some vehicle journeys, then that would be a step forward. If on the other hand, they simply add an additional fleet of vehicles to increase congestion, then we would be moving a step backwards."¹⁴⁸

*"You could have a safer network with fewer cars, less traffic, more pleasant conditions for walking and cycling, and a faster, more efficient transport network or, if we get it wrong, you can have more vehicles that do not necessarily make your network safer and makes public transport less attractive and sustainable."*¹⁴⁹

Christina Calderato
Director of Strategy, Transport for London

In written evidence to the Committee London TravelWatch highlighted the slow progress so far towards the MTS target for 80 per cent of all trips to be made on foot, by cycle or using public transport by 2041, with the estimated figure for 2024 of 63.4 per cent and said that "any significant use of APVs may well hit this further."¹⁵⁰ Christina Calderato seemed to agree, telling us that there is a risk that autonomous passenger services could replace walking and cycling and public transport journeys, resulting in increased congestion. We also heard from TfL that there is a risk that there will be an increasing number of people using cars, but this outcome is not certain.

London TravelWatch, TfL and Clean Cities highlighted a potential knock-on impacts on buses. London TravelWatch said that bus ridership could be particularly affected if autonomous passenger vehicles lead to increased congestion, which could slow down buses, making them less attractive to use and reducing bus ridership. We have previously heard from London TravelWatch that for every ten per cent reduction in journey speeds, there is a six per cent reduction in demand.¹⁵¹ This is reflected in TfL's data, which shows that bus speeds and bus

¹⁴⁷ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), CoMoUK [Ref No. AV010] (p.59)

¹⁴⁸ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.3)

¹⁴⁹ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.26)

¹⁵⁰ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), London Travel Watch [Ref No. AV020] (p.105)

¹⁵¹ London Assembly Transport Committee, [Transcript of Agenda Item 6 – Bus Journey Times](#), 9 December 2025

patronage have been on the decline over the last decade.¹⁵² Christina Calderato agreed that this could have a particular impact on bus use, making “buses slower and less attractive.”¹⁵³

As bus ridership is already on the decline, we are wary of the effect autonomous passenger vehicles could have of reducing this further.

While ultimately the impact of the introduction of autonomous passenger vehicles on Londoners' travel choices is far from certain, we have serious concerns about the risk that they could increase the number of people travelling by car, rather than walking, cycling and using public transport. TfL needs to be able to understand exactly how, if introduced, these services affect the travel behaviour of Londoners and to monitor the impact on walking, cycling and public transport use. As part of our evidence gathering, we heard informally from some operators that they survey customers on journey purpose and other modes used. We believe this information should be shared in order for TfL to form a full picture of how automated passenger services are impacting Londoners' travel.

Recommendation 7

Transport for London (TfL) must ensure that operators share travel information from passengers using their services as a condition for granting consent to Automated Passenger Service (APS) permits. This should take the form of operators conducting a regular passenger travel survey to understand why passengers chose to use an autonomous passenger vehicle as opposed to another mode of transport, and how they would have made that journey otherwise.

Negative impacts on active travel and public transport reliability should be a reason for withdrawal of consent to operate, if TfL is granted full regulatory powers.

Accessibility

Ensuring that transport is accessible is a core part of the MTS, which includes an ambition to expand access to travel and reduce journey times for people with accessibility needs.¹⁵⁴

We understand that none of the vehicles being tested in London are fully accessible for wheelchair users. In this investigation, we explored the evidence of whether autonomous passenger services could ever offer an accessible door-to-door transport option for disabled people. Rebecca Posner, Director of Inclusive Research at the Research Institute for Disabled Consumers, told us that some of the benefits of autonomous passenger services could include

¹⁵² TfL, [Travel in London 2025 Annual overview](#), December 2025

¹⁵³ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.26)

¹⁵⁴ Mayor of London, [Mayor's Transport Strategy](#), March 2018 (p.142)

“improved independence, improved access to transport, improved integration with public transport and to active travel”.¹⁵⁵

We heard from Navi Sunnia, Senior Engagement Officer for London at Transport for All, that disabled people frequently experience a lot of barriers to accessing public transport and taxi and private hire services in London, and autonomous passenger vehicles could provide an alternative that removes these barriers. They said:

“AVs would provide that degree of independence, but also a more positive experience and also just a degree of not feeling like a burden and being judged by others. We are talking about also buses here and all other modes of public transport, including PHVs and taxis.”¹⁵⁶

However, on the other hand Navi Sunnia acknowledged that:

“[D]rivers do provide assistance, are able to help disabled people get on vehicles, on cars, and they are able to also provide guidance to blind or visually impaired people on locating where they need to be and guiding things, but also when things go wrong they are able to respond.”¹⁵⁷

We heard how a driver's role goes beyond that of just simply driving, from several guests. Professor Jack Stilgoe told us that drivers' responsibilities go well beyond just driving and include assistance for people with accessibility needs and public safety.¹⁵⁸ Age UK London told us that drivers are regarded as a source of additional and necessary support.¹⁵⁹ Taxi and private hire driver representatives also told us that drivers do far more than just driving: Steve Garelick told us that around one third of customers have mobility issues, and that drivers routinely help passengers with luggage, or with entering and exiting the vehicle. He stressed that drivers, as part of obtaining their licence, are required by TfL to undergo mandatory training to be able to deal with passenger emergencies.¹⁶⁰

In written evidence, the Royal National Institute of Blind People (RNIB) shared results from its 2026 survey into the attitudes of blind and partially sighted people, which show that more than half (53 per cent) would prefer a human-operated vehicle while 27 per cent stated that they

¹⁵⁵ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.5)

¹⁵⁶ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.11)

¹⁵⁷ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.11)

¹⁵⁸ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026

¹⁵⁹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Age UK London [Ref No. AV002] (p.13)

¹⁶⁰ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.18-19)

were 'very likely' to use an autonomous passenger vehicle. The survey found that the main reason for this preference was the support and reassurance provided by a human driver.¹⁶¹

The potential accessibility benefits that autonomous passenger services could provide clearly very much depends upon how the services are designed. Several organisations submitted evidence saying that accessibility must be embedded from the outset.¹⁶² We heard from Rebecca Posner that "the benefits only materialise, if not just the vehicles, but the entire service is designed to be inclusive by design".¹⁶³ London TravelWatch also said services must be co-designed through meaningful engagement with people with additional requirements from the outset.¹⁶⁴

Co-design, also known as co-production, is a way of designing and delivering public services in an equal and reciprocal relationship between policy makers and individuals which results in shared strategic policy objectives and includes joint working to design and develop solutions to address inequality.¹⁶⁵ In our earlier report *Accessibility and Inclusion in Transport Planning*, published in February 2026, we recommended that TfL develop a new engagement policy that follows the co-production model, with particular emphasis on early involvement.¹⁶⁶

During this investigation we continued to hear evidence in support of a co-production approach in relation to the development of autonomous passenger services. Navi Sunnia told us that disabled people's organisations "need to be part of trials, of conversations around design, of improvement when things go wrong."¹⁶⁷ The Motability Foundation also gave evidence that accessibility should be a "core requirement" of all trials and pilots, and that co-design with disabled people should be required throughout testing, evaluation and iteration.¹⁶⁸

¹⁶¹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), RNIB [Ref No. AV030] p.165

¹⁶² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Business LDN [Ref No. AV005] (p.28); Clean Cities [Ref No. AV008] (p.42); London TravelWatch [Ref No. AV020] (p.105); Thomas Pocklington Trust [Ref No. AV035] (p.190); Transport for All [Ref No. AV036] (p.205); Motability Foundation [Ref No. AV022] (p.128)

¹⁶³ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.4)

¹⁶⁴ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), London TravelWatch [Ref No. AV020] (p.105)

¹⁶⁵ Local Government Association, [Co-production](#), accessed August 2026; see also Department for Environment, Food & Rural Affairs, [What we mean by "co-design"](#), 11 December 2020

¹⁶⁶ London Assembly Transport Committee, [Accessibility and Inclusion in Transport Planning](#), February 2026

¹⁶⁷ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.8)

¹⁶⁸ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Motability Foundation [Ref No. AV022] (p.129)

*"Disabled people need to be part of co-production. It is not just a small group of disabled people but also a broad group of disabled people."*¹⁶⁹

Navi Sunnia

Senior Engagement Officer for London, Transport for All

TfL told us that it plans to set out a "two-pronged approach" with regard to accessibility in its future guidance on its expectations for autonomous passenger services proposed for London. Christina Calderato told us that TfL will set out what its accessibility requirements are, for example requiring operators to set out how they:

"will support disabled, older and neurodivergent users, accommodate wheelchair users, assistance dogs and mobility aids, provide accessible booking channels, taking a whole journey approach, how you book it, how you access the vehicle, including alternatives to the app-only models, providing access to a staffed call centre throughout the journey, delivering accessible information and communications, and explaining how the assistance that is currently provided by drivers will be replicated where necessary."¹⁷⁰

She added that TfL:

"will expect people to have engaged and operators to have engaged with accessibility groups ahead of going to the DVSA for their permit or for that application making its way to us for consent. That will be stated explicitly that we expect that to happen."¹⁷¹

We heard clearly from disabled people's organisations that accessibility needs to be considered from the outset, and that any services should be co-designed with disabled people. It is therefore welcome that TfL plans to include accessibility requirements in its guidance for autonomous passenger services in London and that it will require operators to have conducted early engagement with disabled people's organisations. Yet, regarding the development of TfL's own guidance, Christina Calderato told us that TfL plans to publish the guidance and then subsequently engage with disabled people on the published document. She said: "what we would like to do is get this guidance together so that we have something tangible to talk to people about and then we will be engaging people to make sure that we have feedback on that."¹⁷² Concerningly, when pressed about TfL's own practices regarding early engagement with its guidance document, Christina Calderato said "We think it is more useful if we have

¹⁶⁹ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.8)

¹⁷⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.32-33)

¹⁷¹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.35)

¹⁷² London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.32)

something to show people and to engage on.”¹⁷³ This seems to go against the fundamental principles of co-design, and we encourage TfL to think again about this approach.

We heard from Navi Sunnia that Transport for All has been approached by operators to discuss accessibility of their vehicles for disabled people but that “so far, we have not been part of any conversations with TfL or the Mayor of London around what AVs look like for disabled people.”¹⁷⁴ We recognise that this is one disabled people’s organisation, and may not be representative of a wider trend. Yet, coupled with what TfL told us regarding its plans to engage on its guidance for autonomous passenger services it points to a concerning theme.

TfL should be following a co-production approach, with a particular emphasis on early engagement. It has told us that it will expect operators to be taking an approach to accessibility that includes early engagement, but does not appear to be following this approach itself. To ensure the potential accessibility benefits of autonomous passenger services can be realised, and that TfL does not allow services with accessibility barriers built in to be introduced on London’s roads, it is important that TfL engages with disabled people in the process of developing its guidance for autonomous passenger services in London and not merely to receive feedback on the text afterwards. As part of its guidance, TfL must stipulate that operators should show evidence of how disabled people were involved in the design of its services as one of its criteria for providing consent.

Recommendation 8

Transport for London (TfL) must engage with disabled people during the process of designing its guidance for autonomous passenger services in London. It should publish details of this engagement alongside the guidance document. TfL should stipulate that one of the criteria for its consent for an Automated Passenger Service (APS) permit is evidence that the proposed service has been co-designed with disabled people.

Passenger safety and safeguarding

The experience of passengers travelling inside a driverless vehicle will be different from those with a human driver. Assuring passengers’ personal safety will require new thinking and measures to suit the new circumstances of travelling alone in a vehicle one does not control.

Earlier this year, the DfT published guidance for operators wishing to apply for an APS permit. This guidance states that the applicant will need to “satisfactorily demonstrate that sufficient

¹⁷³ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.33)

¹⁷⁴ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026 (p.12)

safeguards are in place to ensure passenger safety for all potential users of the APS service.”¹⁷⁵ It lists different ways operators could do this, which includes in-vehicle video monitoring and recording, a panic button, remote assistance and staff training.¹⁷⁶ The guidance also states that staff involved in supporting driverless services, including remote assistance operators and call centre staff, must undergo “appropriate background checks”.¹⁷⁷

We heard from operators proposing services in London that they plan to use a variety of these methods, with a focus on remote assistance. Waymo told us that “passengers have access to 24/7 remote assistance via the internal interface, connecting them to our dedicated support team.”¹⁷⁸ We heard from Wayve that currently there is a safety driver in the vehicle that can provide assistance, but as it looks to develop a fully driverless operation there will be a ‘support button’. Dr Sarah Gates said “If someone was unresponsive, the customer service agents that would be on the other side of that button would have training to help them make that decision” around how to respond.¹⁷⁹ The Committee subsequently wrote to Wayve to request further clarifications. We were informed by Wayve that passengers will also be able to access support through the vehicle or the app, and that support teams can intervene if the rider is unresponsive.¹⁸⁰ This response fails to understand the complexity and seriousness of the varied emergency situations that could occur, and the level of support that can be provided by human drivers.

Just as drivers can support passengers with accessibility needs, we heard they can also play an important role in safeguarding passengers. Lindsay Jane Wright, Press and Communications Officer for the App Drivers & Couriers Union, told us that drivers are trained to manage a variety of unusual or dangerous situations and are able to spot signs of domestic abuse or human trafficking.¹⁸¹

“The absence of a human driver removes a key point of oversight from within the vehicle. From a policing perspective, there is uncertainty around how operators will identify and respond to incidents occurring within vehicles. These incidents may range from medical emergencies, such as a passenger becoming unresponsive, to Violence Against Women and Girls offences (VAWG), and are particularly concerning where a passenger is unable to raise the alarm

¹⁷⁵ Centre for Connected and Autonomous Vehicles, [Self-driving vehicle pilot scheme: information for applicants](#), 31 March 2026

¹⁷⁶ Centre for Connected and Autonomous Vehicles, [Self-driving vehicle pilot scheme: information for applicants](#), 31 March 2026

¹⁷⁷ Centre for Connected and Autonomous Vehicles, [Self-driving vehicle pilot scheme: information for applicants](#), 31 March 2026

¹⁷⁸ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Waymo [Ref No. AV042] (p.298)

¹⁷⁹ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.21)

¹⁸⁰ London Assembly Transport Committee, [Appendix 3 – Transport Committee questions – Wayve answers](#), September 2026 (p.2-3)

¹⁸¹ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.17-18)

*themselves.*¹⁸²

Metropolitan Police Service

The transport consultancy Reed Mobility submitted evidence highlighting several situations where currently a human driver can intervene, including passengers experiencing medical emergencies, harassment or antisocial behaviour.¹⁸³ Operators of driverless passenger vehicles will need to demonstrate how they will respond to these situations, as well as other safeguarding risks including exploitation and criminal activity, such as county lines activity. Evidence from the Metropolitan Police Service (MPS) submitted to this investigation said that with a human driver present these situations are more likely to be identified and acted upon more quickly. The MPS said that evidence from US deployments suggests that there are limitations with the monitoring systems of autonomous passenger vehicles where incidents, such as passengers being unresponsive, are not identified until the end of the journey.¹⁸⁴

Despite the DfT guidance that remote assistants must have appropriate background checks, some of the evidence we heard expressed doubts that these requirements are strict enough. Jack Stilgoe argued that there is a lack of transparency from operators about their remote assistants.¹⁸⁵ Ben Loewenstein told us that Waymo's remote assistants "go through extensive training and qualifications" and that incidents can be triaged and go to an "emergency team", but it is not clear what training is undertaken.¹⁸⁶ This raises questions around who they are, where they are based and how they are trained. Neither the Government nor TfL have currently set standard requirements for remote assistants, leaving this up to the operator.

We heard from Rebecca Posner that minimum requirements for remote assistants should include clear protocols that have simulated situations and detail how to respond with clear and consistent communication with passengers within the vehicles.¹⁸⁷ The charity Living Streets told us that autonomous passenger services should be required to demonstrate equivalent or improved safeguarding standards compared with existing services.¹⁸⁸ Similarly, Reed Mobility said that safeguarding standards that are at least equivalent to those currently expected of taxi and private hire services are needed in order to maintain public trust.¹⁸⁹

¹⁸² London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Metropolitan Police Service [Ref No. AV021] (p.111)

¹⁸³ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Reed Mobility [Ref No. AV028] (p.158)

¹⁸⁴ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Metropolitan Police Service [Ref No. AV021] (p.111)

¹⁸⁵ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026

¹⁸⁶ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.20)

¹⁸⁷ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026

¹⁸⁸ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Living Streets [Ref No. AV016] (p.87)

¹⁸⁹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Reed Mobility [Ref No. AV028] (p.158)

Christina Calderato told us that TfL will require APS permit applicants to be able to demonstrate they can ensure passenger safety, including safeguarding, personal security and emergency response. She said that to satisfy this, as part of its work to establish guidance for autonomous passenger vehicle operators, TfL is expecting to see remote assistants receive safeguarding training, have DBS checks and be UK based.¹⁹⁰

We agree with TfL that operators of autonomous passenger services must demonstrate that they can ensure passenger safety. Passenger safety is of critical importance, and is one of the elements most significantly impacted by the driverless nature of these services. It is the responsibility of the regulators to ensure that requirements and processes are in place to protect individual users, and there are clearly complex consequences to consider.

In situations where passengers are unresponsive, coerced or in danger from other passengers, remote assistance is simply not going to be enough. We do not believe that the DfT guidelines provide criteria that are strict enough for remote assistance to replicate the actions of a driver in an emergency situation. We welcome TfL's work to establish stronger guidelines. TfL must set a clear common standard for ensuring passenger safety and safeguarding that operators need to meet in order for TfL to grant consent, and it must do so swiftly in order to be ready for imminent applications.

Recommendation 9

Transport for London (TfL) should require operators to meet a passenger personal safety standard, as a condition for granting consent to Automated Passenger Service (APS) permits. TfL must set out what it expects in this context from operators to ensure passenger safety and safeguarding and publish these standards for public scrutiny. As a minimum this should include equivalent standards to current taxi and private hire services, and safeguarding training and DBS checks for remote assistants. These roles should also be UK based.

Interaction with emergency services

The DfT guidance for operators applying for an (APS) permit says that it is "strongly recommended" that operators engage with emergency services. This includes the police, fire and ambulance services. It also states that the views of emergency services will be considered during the assessment of a permit application.¹⁹¹

¹⁹⁰ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.36-37)

¹⁹¹ Centre for Connected and Autonomous Vehicles, [Self-driving vehicle pilot scheme: information for applicants](#), 31 March 2026

We heard from Wayve that while there remains a safety driver in Wayve vehicles they will be expected to engage with emergency services.¹⁹² However, Dr Sarah Gates told us that Wayve is “already doing a lot of engagement with lots of emergency services” including “looking at lots of different scenarios to get them comfortable with what they are going to be operating with.”¹⁹³

We heard from Waymo that it has former first responders working at Waymo and has “trained over 35,000 first responders around the world, in the US, Japan and in the UK, on what to do if they encounter our vehicles.”¹⁹⁴ Ben Loewenstein told us that Waymo “vehicles are trained to yield to emergency vehicles” and, in terms of engagement with human emergency service personnel that vehicles may encounter on the roads, he said they will be able to interact with a Waymo representative via the vehicle.¹⁹⁵

However, Jeff Tumlin told us that autonomous passenger vehicles interaction with emergency services might not be as seamless as operators have claimed. He said that in the US “emergency services interactions are really problematic” and that driverless taxis in the US “continue to intrude on emergency response scenes”.¹⁹⁶ He gave the example of a vehicle driving into a fire scene and driving over a fire hose in an active emergency response scene because it did not recognise it as an emergency response scene.

Jeff Tumlin told us that there is not a standardised approach to driverless vehicles interaction with emergency services in the US, instead he said: “They [AV companies] have expected all emergency service personnel to get trained in the unique approach that each company has for extricating the vehicle from a problematic location.”¹⁹⁷

When we questioned TfL on this point, it said that “Emergency services should not have to change their approaches to adapt to bespoke requirements. That is simply not good enough. The vehicles will have to work with existing practices.”¹⁹⁸

We found broad consensus on this point among emergency services responding to our investigation. The MPS told us that the introduction of automated vehicles is expected to have a number of operational impacts on policing and, in particular, consideration needs to be given to how vehicles interact with police officers and respond in dynamic environments. The MPS

¹⁹² London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.11)

¹⁹³ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.11)

¹⁹⁴ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.10)

¹⁹⁵ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.10)

¹⁹⁶ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.4)

¹⁹⁷ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.4)

¹⁹⁸ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.42)

also said that “the absence of a single, consistent framework across operators and manufacturers may result in variations in how the systems operate.”¹⁹⁹ Similarly, the London Ambulance Service NHS Trust told us it would “support the development of common operational standards covering emergency vehicle interaction, methods of vehicle access, emergency override procedures, communication protocols and information sharing.”²⁰⁰ This would prevent variations in how vehicles respond to emergency services.

To support the consistent and safe interaction and engagement of autonomous passenger vehicles with emergency services in London, a standard framework needs to be established that all operators are required to follow. The framework should be developed by TfL in consultation with emergency services in London, including the MPS, the London Ambulance Service NHS Trust and the London Fire Brigade. If an operator cannot demonstrate that it will follow this framework in its application for an APS permit, TfL should not grant consent.

Recommendation 10

Transport for London (TfL), in partnership with the Metropolitan Police Service (MPS), the London Ambulance Service NHS Trust and the London Fire Brigade (LFB), should establish a standard framework for interaction between autonomous passenger vehicles and emergency services across London. As a condition for granting consent, TfL should require autonomous passenger service operators to demonstrate, as part of their application for a permit, that they will follow this framework.

Operators failing to demonstrate that they are following the standard framework for autonomous passenger vehicles interaction with emergency services across London should be a reason for withdrawal of consent to operate, if TfL is granted full regulatory powers.

¹⁹⁹ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Metropolitan Police Service [Ref No. AV021] (p.110)

²⁰⁰ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), London Ambulance Service NHS Trust [Ref No. AV017] (p.91)

London's taxi and private hire industry

There are currently around 16,000 taxi (black cab) drivers and 105,000 private hire drivers licenced in London.²⁰¹ The MTS sets out support for the taxi and private hire industry in London with an aim "to ensure London has a safe, secure, accessible, world-class taxi and private hire service."²⁰² Last year, TfL published its *Taxi and Private Hire Action Plan 2025*, outlining TfL's plan and actions to support the taxi and private hire industry in London, including drivers.²⁰³ The plan includes a key goal that "being a London taxi or private hire driver is an attractive career for current and future drivers."²⁰⁴

Job losses

One of the key concerns we heard during this investigation was the impact autonomous passenger services would have on taxi and private hire drivers. At our taxi and private hire roundtable driver representatives expressed fears that the introduction of autonomous passenger services could lead to significant jobs losses. Steve Garelick told the Committee that his union's "number one question" for TfL with regard to autonomous passenger vehicles is around "how you are going to protect workers in London and what you will do to mitigate job losses."²⁰⁵ We heard from Rez Kamyabi, a private hire driver in London, that this is an "existential matter" to private hire drivers in London.²⁰⁶

"The question they should be asking is whether this is an innovation or managed redundancy for hundreds of thousands of workers without any potential redeployment plans?"²⁰⁷

Lindsay Jane Wright, Press and Communications Officer App Drivers & Couriers Union

We also heard from Thomas Ableman that "clearly, it is possible that a very large number of private hire jobs will cease to exist."²⁰⁸ However, several guests gave evidence that the impact may be felt less in the taxi industry, than in private hire. Nick Reed told us that:

²⁰¹ TfL, [Licensing information](#)

²⁰² Mayor of London, [Mayor's Transport Strategy](#), March 2018

²⁰³ TfL, [Taxi and private hire action plan 2025](#), March 2025

²⁰⁴ TfL, [Taxi and private hire action plan 2025](#), March 2025

²⁰⁵ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.21)

²⁰⁶ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.18)

²⁰⁷ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.7)

²⁰⁸ London Assembly Transport Committee, [Transcript of Item 10 – Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.33)

"I do not think there is a threat to black cabs. They are already a premium service, and they have advantages that private hire does not have, which the Robotaxis will not have either. The change will be more in the private hire market and that will be where there will be a reduction in provision from human-driven vehicles rather than black cabs."²⁰⁹

Several features make taxis unique in London. For example, taxi drivers must pass the Knowledge of London before becoming licenced, taxis must all be wheelchair accessible and have a range of additional accessibility features, they can also be hailed on the street.²¹⁰

However, the taxi industry in London is in decline. In 2015-16, there were 21,759 taxis licensed to operate on London's roads, this fell by 37 per cent over the ten years to 2025-26.²¹¹ There is no indication of a halt in this decline and so we have real concerns about the impact the introduction of autonomous passenger vehicles on London's roads will have on taxi numbers, as well as private hire, and what this means for the future service Londoners can expect. Lindsay Jane Wright told us there needs to be an economic impact assessment on the impact autonomous passenger services will have on London, Londoners, the London economy and on unemployment.²¹²

When asked about support and protections for taxi and private hire drivers Christina Calderato told us that "there is definitely a wider conversation to have about workforce."²¹³ In previous investigations, we have heard of problems with TfL's engagement with the taxi and private hire industry.²¹⁴ So, this conversation about workforce impacts must take place urgently and be conducted in a way that is meaningful and transparent.

We heard from Wayve, Freenow and Waymo that the introduction of autonomous passenger vehicles to London's roads will be gradual, so the impact on drivers will not be immediate. Freenow told us that "We are talking about tens of vehicles on the road this year, moving to hundreds by the end of the decade."²¹⁵ Wayve was very clear that "there will not be 100,000 PHV driver jobs lost this year. That is not happening."²¹⁶ This will provide no consolation to taxi and private hire drivers who told us they feel their skills and professionalism are under threat.

²⁰⁹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.32)

²¹⁰ TfL, [Taxi and Private Hire Action Plan 2025](#), 2025

²¹¹ There were 14,800 licensed taxis in 2023/24; TfL, [Licensing information](#)

²¹² London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.7)

²¹³ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026, (p.15)

²¹⁴ London Assembly Transport Committee, [Letters to the Government and TfL about the taxi and private hire industry](#), October 2025

²¹⁵ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026, (p.17)

²¹⁶ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026, (p.7)

We also heard from others that the impact on drivers will be long-term. Christina Calderato said that the impact on “overall driver workforce is likely to be minimal” at first when the introduction of autonomous passenger vehicles is small-scale, but that this is “likely to scale up over time”.²¹⁷ We heard from Thomas Ableman that driverless technology at the moment is still very expensive, so numbers will only grow if it “becomes a much lower cost proposition” giving London “more time than we think to get this right.”²¹⁸

We did, however, hear that there is a risk of autonomous passenger vehicles flooding London's roads in years to come. Thomas Ableman told us that if driverless technology becomes cheaper and more readily available, there is a risk that operators could “flood a city like London with unconstrained robotaxis.”²¹⁹ Aside from the risk that this poses in terms of congestion, it highlights the scale of the risk to the livelihoods of taxi and private hire drivers. Professor Jack Stilgoe said that as the numbers of vehicles scale up having “levers to control the number of vehicles will be absolutely crucial.”²²⁰

As set out in the previous chapter in this report, the role of drivers goes well beyond that of simply driving the vehicle. Drivers perform a vital role in terms of safeguarding, accessibility and assistance. We have concerns about the potential long-term increase in the number of autonomous passenger vehicles on London's roads and the impact this will have on the number of manually driven taxi and private hire vehicles. This is concerning from the perspective of drivers' jobs, but also for those passengers that require additional assistance from the driver, or who do not want to travel in autonomous vehicles, and particularly for those passengers who face barriers to using other forms of transport. We therefore believe there needs to continue to be a thriving traditional taxi and private hire industry in London, alongside any new autonomous passenger services that may be granted consent.

A fair transition

Nevertheless, the introduction of autonomous passenger vehicles on London's roads would undoubtably result in the loss of some taxi and private hire jobs in London in the long-term. TfL has acknowledged that there needs to be a conversation around the impact on that workforce. We believe that conversation needs to be happening now, while these vehicles are still being proposed on a small scale and there is time to put in place adequate protections, support and opportunities for drivers. As Jeff Tumlin put it: “as a city you have a responsibility to ensure that as any technology enters the market, you have a strategy for a dignified future for labour.

²¹⁷ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.15)

²¹⁸ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026, (p.16)

²¹⁹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.16)

²²⁰ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.16)

All technology is disruptive, but you can have a strategy to make sure that the social consequences are net positive.”²²¹

Currently, taxi and private hire drivers in London are responsible for their vehicles, including ensuring the car is licensed, insured and has passed its MOT as well as cleaning, maintenance and repairs.²²² With autonomous passenger vehicles this responsibility will sit with operators. We heard from operators that this model will create new job opportunities in the UK in fleet maintenance, in addition to the roles required for operators to provide remote assistance within vehicles. These roles are not comparable to the job of a taxi or private hire driver; they do not require the customer-facing skills and professional experience that are needed in order to drive a taxi or private hire vehicle.

At our taxi and private hire roundtable we heard that not all drivers will be in a position to transition to another role. Lindsay Jane Wright told us that “Many of our drivers – in fact, a majority of them – are over 40. A lot of them are migrant workers. Many do not speak English as a first language. It is going to make redeployment harder for them”.²²³ Similarly, we heard from IWGB that a third of private hire drivers in London are over 50 and would find it difficult to retrain into another skill.²²⁴ We also heard from Unite and GMB union that there needs to be retraining and redeployment pathways for drivers.²²⁵ Lindsay Jane Wright told us the ADCU is also calling for a “legally enforceable, just transition” for drivers.²²⁶

We heard from Waymo that the discussion around transition of jobs “is certainly a conversation that we are willing to be a part of” and that “in the US, we offer training courses at community colleges, and we are part of education and career coaching as well. These are all things that we are very willing to look at.”²²⁷ Similarly, Freenow told us that in the most recent fleet depot it has opened in the US over a third of employees were previously rideshare drivers, which is something they “want to build on” in the UK.²²⁸

There will always be a need for taxi and private hire drivers in London, for those trips where passengers prefer a driver and/or want the additional support that can be offered by a human driver. To preserve choice for customers, to prevent the unconstrained proliferation of

²²¹ London Assembly Transport Committee, [Appendix 3 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 2](#), 1 July 2026 (p.10)

²²² London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.2)

²²³ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.3)

²²⁴ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), IWGB [Ref No. AV014] (p.83)

²²⁵ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Unite [Ref No. X]; GMB Union [Ref No. AV040] (p.282)

²²⁶ London Assembly Transport Committee, [Appendix 1 – Transcript of Autonomous Passenger Vehicles – Taxi and Private Hire Informal Roundtable](#), 19 June 2026 (p.3)

²²⁷ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.17)

²²⁸ London Assembly Transport Committee, [Transcript of Item 4 – Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.17)

autonomous passenger vehicles, and protect the manually driven taxi and private hire industries in London, we believe TfL should have the power in the long-term to cap the number of autonomous passenger vehicles on London's roads. There also needs to be support in place for drivers who are able to and wish to take on new roles. To support a fair transition, TfL should work with taxi and private hire drivers, their representatives and autonomous passenger service operators to develop a just transition plan for the sector.

Recommendation 11

The Government should give TfL the power to set a cap on the number of autonomous passenger vehicles that operators can deploy in London, including across different areas in London, when the full regulations under the Automated Vehicles Act are put in place in 2027. This should happen alongside devolving the power to issue Automated Passenger Services (APS) permits to Transport for London (TfL), as we set out in Recommendation 1.

Recommendation 12

Transport for London (TfL) should work with taxi and private hire drivers, their representatives and autonomous passenger service operators to develop a fair transition plan for the sector, should Automated Passenger Service (APS) permits be issued. This should include management of any job losses, design of re-training and re-deployment opportunities, and a mechanism for funding transition arrangements.

London's long-term vision

The majority of our investigation and this report have focused on the autonomous passenger service model, as this is the model that is imminently expected to be introduced on London's roads.

However, autonomous passenger services are just one potential use case for driverless technology, which could be used in a variety of different vehicles and services, including public transport, freight or privately owned vehicles. We heard throughout this investigation that there are other ways in which TfL should be thinking about the application of this technology. The final section of this report is dedicated to considering this long-term vision.

Using driverless technology to address London's transport challenges

The MTS sets out the Mayor's vision for London's streets and public transport spanning the next 20 years. As set out earlier in this report, this includes targets to improve safety, reduce congestion, encourage shifts to public transport, walking, wheeling and cycling, and improve accessibility. Any transport service proposed for London's streets must demonstrate that it can support these aims. But, we heard that rather than simply taking what is being proposed and seeing how this fits into London's transport system, the Mayor and TfL should be thinking more innovatively about how this technology could be harnessed to achieve the aims set out in the MTS.

Nick Reed told us that "we should be setting out how we want the city to behave and then seeing how this new technology can help us achieve those outcomes rather than taking what we are given."²²⁹ Similarly, Glenn Lyons said TfL should be asking "what is the problem we are looking to address here, and then considering what solution options do we have."²³⁰

²²⁹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.34)

²³⁰ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.5)

*"There is no requirement that AVs need to be delivered by a private company operating commercially to its own interest. They can be operated by and for a public service in the public sector as part of a fully integrated transport network."*²³¹

Thomas Ableman

Host of the Freewheeling podcast and former Director of Strategy and Innovation at TfL

Tom Bogdanowicz told us that thinking about autonomous vehicle technology "ought to be something that we are proactive about doing", so that we are "introducing vehicles that serve London and make London a better place from the perspective of transport."²³² CoMoUK said that there appears to be an assumption that autonomous passenger services is the model that will be introduced to London's roads, but that it would be "more beneficial for policymakers to first define the transport challenges that most need solving, and then seek autonomous solutions for these challenges."²³³

We heard from Navi Sunnia that there needs to be leadership in defining how we want driverless vehicles to operate in London and how these vehicles will fit into London's transport strategy.²³⁴ Thomas Ableman told us "My gold standard is that TfL shows leadership, define what it wants, and we have something that is fully integrated into the public transport network."²³⁵

Integrating driverless vehicles into the public transport network

Our investigation indicates that driverless vehicle technology could be used to support sustainable journeys in London and achieve the MTS target for 80 per cent of all trips in London to be made by walking, cycling or public transport by 2041. One of the key ways we heard this could be achieved is through integrating driverless vehicles into the public transport network and using them to plug gaps in the existing public transport network.²³⁶

Outer London's comparative lack of public transport options has been well documented. TfL's Public Transport Accessibility Level (PTAL) measures the accessibility of a point to the public transport network, taking into account walk access times and service availability. Each area is graded between 1a and 6b, where 1a is a very poor access to public transport and 6b is

²³¹ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.3)

²³² London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026

²³³ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), CoMoUK [Ref No. AV010] (p.58)

²³⁴ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel One\)](#), 24 June 2026

²³⁵ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.13)

²³⁶ Mayor of London, [Mayor's Transport Strategy](#), March 2018

excellent access.²³⁷ ²³⁸ Outer London areas typically have lower PTAL scores, with scores generally increasing closer into central London.²³⁹

Thomas Ableman told us that in areas with “low density housing and comparatively limited public transport”, such as parts of outer London, small autonomous shuttles that can connect to transport hubs might be “an interesting model”.²⁴⁰ With some innovative thinking, driverless vehicles could be used to provide more people with access to London’s public transport network, particularly in areas of outer London where connections are scant.

Case study: autonomous shuttles in Oslo

Ruter, the public transport authority for the Norwegian capital of Oslo, has been piloting autonomous vehicles as part of the city’s public transport offering. The pilot is currently running with 10 to 15 vehicles from point to point within the operating area, with 125 pick-up and drop-off points. It is fully integrated into Ruter’s travelling app.

As part of this investigation the Committee heard from Christian Willoch, Executive Advisor and Autonomous Mobility Lead at Ruter. He told us that Ruter had concerns around the autonomous passenger service model: “We see that these cheap taxi services, which will even be more inexpensive with large fleets of robotaxis, are taking the market share of public transportation, which is a development we believe is not sustainable for our region.”²⁴¹ The city of Oslo has set a goal for “zero growth in car traffic” in its region.

Christian Willoch told us that an urban mobility review in 2025 concluded that “conventional public transportation alone will not hit the targets in Oslo”, which meant Ruter had to “come with other tools to address that challenge.”²⁴² One of these tools is the autonomous vehicles pilot. Christian Willoch described the service as small-scale “shuttles” with vehicles that seat a maximum of eight passengers. He said he believes this is the way to “optimise a service that can compete with a private car”.²⁴³

The pilot has not been running in the city centre, it is operating in suburban areas that already have established public transport services, which mostly operate into the city centre and back. Christian Willoch said the aim is for the pilot to provide a public

²³⁷ London Datastore, [Public Transport Accessibility Levels](#)

²³⁸ TfL, [PTAL Dashboard](#)

²³⁹ TfL, [PTAL Dashboard](#)

²⁴⁰ London Assembly Transport Committee, [Transcript of Item 10 - Autonomous Passenger Vehicles in London](#), 9 June 2026 (p.3)

²⁴¹ London Assembly Transport Committee, [Appendix 2 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 1](#), 1 July 2026 (p.1)

²⁴² London Assembly Transport Committee, [Appendix 2 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 1](#), 1 July 2026 (p.1)

²⁴³ London Assembly Transport Committee, [Appendix 2 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 1](#), 1 July 2026 (p.2)

transport option to move within and between the different suburban areas, as well as provide “first-mile/last-mile or mobility gap fillers.”²⁴⁴

Ruter does not believe that a pilot at this small scale will result in a decrease in private cars in Oslo. Its aim is to learn from the pilot, get confirmation it is on track to support Oslo's transport aims and scale up from there.

We heard from CoMoUK that London can learn from the “positive case study” of Oslo as:

“a transport authority that has first set a clear vision for AVs, has identified the problems that they want AVs to address, and then set about defining and procuring solutions for these problems. This is in some ways the reverse of the worst-case scenario we could be seeing in the UK, where operators are largely defining the “solution”, and the transport authorities appear to be on the back foot.”²⁴⁵

In written evidence to the Committee Motability also gave examples of Germany and Singapore where autonomous vehicles are being integrated into the public transport network. It said that in Germany, autonomous shuttles are being used as a last-mile link with public transport to final destinations, specifically designed to complement existing services in low-density areas where fixed route buses are inefficient. Similarly, in Singapore Motability said that there have been trials of autonomous shuttles linking light railway stations to local amenities to augment the public transport network.²⁴⁶

In our meeting on 14 July 2026, TfL made it clear that it is not considering alternative use cases for autonomous vehicle technology at the moment. TfL's focus appears to be entirely on the private autonomous passenger service model, which is being proposed by operators. Christina Calderato told us that “There is a lot of focus on these types of services now because they are what is coming forward most quickly” and that a different long-term approach “is not something [TfL] are planning for now”. She said that TfL needs to be “really careful that [TfL] put the right energy and effort into making sure that this unfolds in the right way when these private operators come to London, which they are doing.”²⁴⁷ Christina Calderato said it is “really important” for TfL to “learn from these pilots” and then think about what this technology could do.²⁴⁸

When we asked autonomous vehicle technology developer Wayve, about using its technology for other purposes and its interactions with TfL, Wayve told us that the focus of its work at the

²⁴⁴ London Assembly Transport Committee, [Appendix 2 – Transcript Informal Meeting – Autonomous Passenger Vehicles International Session – Panel 1](#), 1 July 2026 (p.3)

²⁴⁵ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), CoMoUK [Ref No. AV010] (p.61)

²⁴⁶ London Assembly Transport Committee, [Autonomous Passenger Vehicles – Written evidence](#), Motability [Ref No. AV022] (p.123)

²⁴⁷ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026

²⁴⁸ London Assembly Transport Committee, [Transcript of Agenda Item 5 – Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.28-30)

moment is on autonomous passenger vehicles because there is currently the demand from operators to introduce these vehicles in London. However, Dr Sarah Gates told us that Wayve is “building AI that can be integrated into any vehicle type” and they “absolutely hope to deploy into more vehicle types”.²⁴⁹ She told the Committee that Wayve has been engaging with TfL on safety assurance of the technology but described having “a much stronger relationship” with its operator, Uber.²⁵⁰

It is disappointing that TfL has not had conversations with Wayve, a UK software developer of this technology based in London, around integrating this technology into London's public transport network to solve city-wide problems already identified. TfL should be examining whether development in driverless vehicle technology could be used to address the challenges of meeting the targets set out in the MTS. Commenting on the trials taking place in Oslo, Christina Calderato said that the “London context is very different” as London has “a very comprehensive transport network and so there is probably less of a need for a formalised [...] gap-filling service.”²⁵¹ While this may be the case in central London, at 58 per cent active, efficient and sustainable mode share, outer London is still a long way from the Mayor's target for 80 per cent of all trips in London to be made by walking, cycling or public transport by 2041. Supporting greater connectivity in these areas could help London achieve the MTS aims.

The Committee would like to see TfL take a more bold and proactive approach on managing the use of its public space. Rather than letting private companies take the lead and accepting the autonomous passenger services model being proposed by operators, TfL should start by thinking about the problems it is trying to address on London's transport network and then consider what type of solutions this technology could provide.

TfL should be actively investigating how this technology can be put to use in order to best serve London, and whether this new and innovative autonomous technology can be used to help address the issues facing London's transport network, and help achieve the aims set out in the MTS.

Recommendation 13

During the pilot phase of the Automated Passenger Service (APS) permitting framework, Transport for London (TfL) should commission and publish a research paper on whether and in what ways autonomous vehicle technology could be used to support progress towards the targets set out in the Mayor's Transport Strategy (MTS). TfL should use this research to establish a long-term vision for the use of this

²⁴⁹ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.8)

²⁵⁰ London Assembly Transport Committee, [Transcript of Item 4 - Autonomous Passenger Vehicles in London \(Panel Two\)](#), 24 June 2026 (p.8)

²⁵¹ London Assembly Transport Committee, [Transcript of Agenda Item 5 - Autonomous Passenger Vehicles in London](#), 14 July 2026 (p.29)

technology on London's roads and how this will contribute to London's transport goals.

Finally, we note that TfL is yet to run any public consultations on the use of autonomous passenger vehicles in London to understand what the public want and need from this new technology in our city. This is an issue on which there are also numerous expert voices with information and experience to share. We have benefitted enormously from these in our own investigation, which received over 300 pages of written evidence on the benefits and challenges that policy makers should consider when contemplating the arrival of autonomous passenger vehicles in London. We are therefore directly submitting the written evidence we received to TfL alongside this report, for its use and review as it develops its new guidance for autonomous passenger services, and approach to autonomous vehicles in the London transport system more broadly.

Committee Activity

The Transport Committee held three formal meetings to inform this investigation. The first took place on 9 June 2026 with:

- Dr Nick Reed, Founder of Reed Mobility and member of the Department for Transport's Science Advisory Council
- Thomas Ableman, Host of the Freewheeling podcast and former Director of Strategy and Innovation at Transport for London
- Professor Jack Stilgoe, Professor of Science and Technology Policy, University College London
- Professor Glenn Lyons, Mott McDonald Professor of Future Mobility, University of the West of England, Bristol

The second took place on 24 June 2026 with:

- Professor Siddhartha Khastgir, Head of Safe Autonomy, WMG, University of Warwick and member of the Department for Transport's Science Advisory Council
- Rebecca Posner, Director of Inclusive Research, Research Institute for Disabled Consumers
- Tom Bogdanowicz, Senior Policy Officer, London Cycling Campaign
- Navi Sunnia, Senior Engagement Officer for London, Transport for All
- Dr Sarah Gates, Vice President of Global Affairs and Assurance, Wayve
- Danny O'Gorman, General Manager – UK and Ireland, Freenow
- Ben Loewenstein, Head of Policy and Government Affairs – UK and Europe, Waymo

The third took place on 14 July 2026 with:

- Christina Calderato, Director of Strategy, Transport for London
- Danny Price, Director of Sponsored Services and Regulatory Compliance, Transport for London

The Committee also held two informal meetings as part of this investigation. The first took place on 19 June 2026 with:

- Steve McNamara, General Secretary, Licensed Taxi Drivers' Association
- Lindsay Jane Wright, Press and Communications Officer, App Drivers and Couriers Union
- Helio Santos, Branch Support Officer, Independent Workers of Great Britain
- Steve Garelick, Regional Development Officer, GMB Union

The second took place on 1 July 2026 with:

- Christian Willoch, Executive Advisor and Autonomous Mobility Lead, Ruter
- Lars Gunnar Lundestad, Programme Manager, Autonomous Vehicles, Ruter
- Jeff Tumlin, Former Director of Transportation, San Francisco Municipal Transportation Agency

The Committee also opened a call for evidence between 22 May 2026 and 26 June 2026, which received 44 responses from the following organisations:

- Addison Lee
- Age UK London
- App Drivers' and Couriers Union (ADCU)
- Bolt
- BusinessLDN
- California Bicycle Coalition
- Centre for Connected and Autonomous Vehicles
- Clean Cities Campaign
- Cllr Gallagher and Cllr Alexandre
- Collaborative Mobility UK (CoMoUK)
- DG Cities
- Freenow
- GMB London
- Independent Workers' Union of Great Britain (IWGB)
- LightHouse for the Blind and Visually Impaired (San Francisco)
- Living Streets
- London Ambulance Service NHS Trust
- London Borough of Ealing
- London Cycling Campaign (LCC)
- London TravelWatch
- Metropolitan Police Service (MPS)
- Motability Foundation
- Motor Cycle Industry Association (MCIA)
- Odysse
- Omnia
- ONE Community & ONE Community Foundation
- Parliamentary Advisory Council for Transport Safety (PACTS)
- Reed Mobility
- Road Safety GB
- Royal National Institute of Blind People (RNIB)
- Society of Motor Manufacturers and Traders (SMMT)
- Swansea University
- Syselek
- techUK
- Thomas Pocklington Trust
- Transport for All
- Uber
- UK Private Hire Drivers Union
- Unite the Union, London Cab Section
- Unite the Union
- University College London
- Waymo

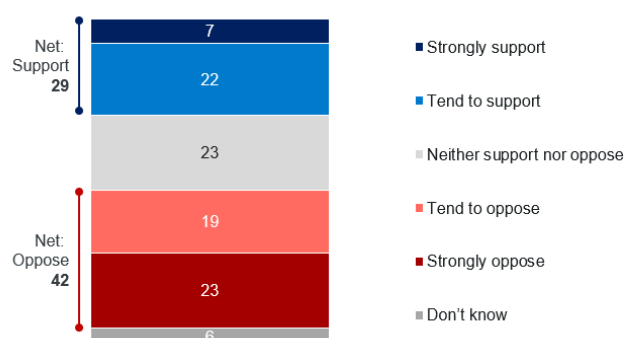
-
- Wayve
 - Women in Transport

The Committee commissioned a YouGov survey which ran between 12 and 19 June 2026 and received responses from 1,053 Londoners aged 18+. The Committee conducted two site visits to Wayve and Waymo.

Appendix: YouGov survey results

Londoners are more likely to oppose (42%) than support (29%) the use of autonomous passenger vehicles in London.

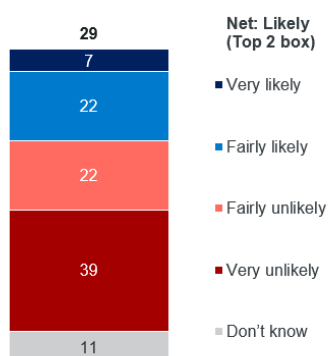
Support for use of autonomous passenger vehicles in London (%)



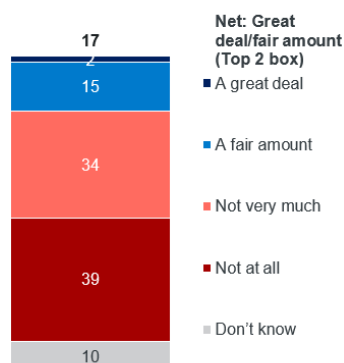
Men, Londoners aged **35 to 49**, **ABC1** Londoners, **Asian** Londoners, **inner** Londoners, and **private renters** are more likely to support the use of autonomous passenger vehicles.

Three in ten Londoners (29%) say they are likely to use autonomous passenger vehicles if they were available, and only 17% trust these companies a great deal or a fair amount to collect and analyse personal data.

Likelihood to use autonomous passenger vehicles (%)



Trust companies to collect and analyse personal data (%)

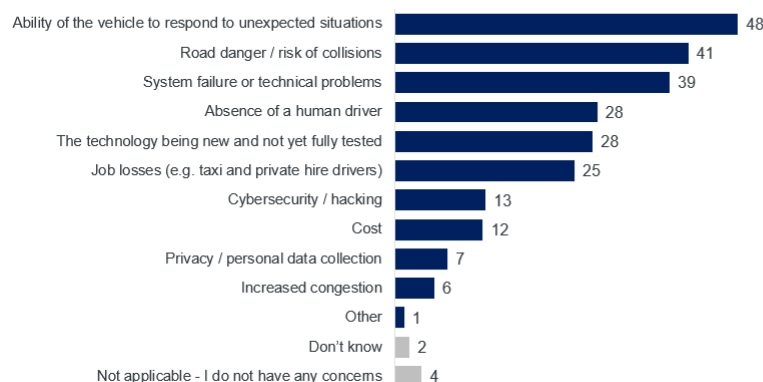


Men, Londoners aged **35 to 49**, **Asian** Londoners, **inner** Londoners, and **private renters** are more likely to say they would use autonomous passenger vehicles.

Men, Londoners aged **35 to 49**, and **inner** Londoners are more likely to trust autonomous passenger vehicle companies with their data.

The most common concerns about using autonomous passenger vehicles are about their ability to respond to unexpected situations such as emergencies (48%), road danger (41%), and system or technical failure (39%).

Concerns about autonomous passenger vehicles (% up to 3 chosen)



Concern about a vehicle's ability to respond to unexpected situations is higher among **White** Londoners and **disabled** Londoners.

Road danger was a higher concern among **women**, and there are no demographic differences for the proportion who picked system failure.

Methodology



This survey was carried out by YouGov for the GLA between 12th and 19th Jun 2026, with a response of 1,053 London residents aged 18+.



The figures have been weighted to be representative of all London adults.



Respondents completed the surveys online from an email link.



Data is analysed by gender, age, ethnicity, social grade, home ownership, disability, and inner/outer London. Where these are not mentioned there are no significant differences.

Other formats and languages

If you, or someone you know needs this report in large print or braille, or a copy of the summary and main findings in another language, then please call us on: 020 7983 4100 or email assembly.translations@london.gov.uk

Chinese

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Vietnamese

Nếu ông (bà) muốn nội dung văn bản này được dịch sang tiếng Việt, xin vui lòng liên hệ với chúng tôi bằng điện thoại, thư hoặc thư điện tử theo địa chỉ ở trên.

Greek

Εάν επιθυμείτε περίληψη αυτού του κειμένου στην γλώσσα σας, παρακαλώ καλέστε τον αριθμό ή επικοινωνήστε μαζί μας στην ανωτέρω ταχυδρομική ή την ηλεκτρονική διεύθυνση.

Turkish

Bu belgenin kendi dilinize çevrilmiş bir özetini okumak isterseniz, lütfen yukarıdaki telefon numarasını arayın, veya posta ya da e-posta adresi aracılığıyla bizimle temasa geçin.

Punjabi

ਜੇ ਤੁਸੀਂ ਇਸ ਦਸਤਾਵੇਜ਼ ਦਾ ਸੰਖੇਪ ਅਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਲੈਣਾ ਚਾਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਇਸ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਉਪਰ ਦਿੱਤੇ ਡਾਕ ਜਾਂ ਈਮੇਲ ਪਤੇ 'ਤੇ ਸਾਨੂੰ ਸੰਪਰਕ ਕਰੋ।

Hindi

यदि आपको इस दस्तावेज़ का सारांश अपनी भाषा में चाहिए तो उपर दिये हुए नंबर पर फोन करें या उपर दिये गये डाक पते या ई मेल पते पर हम से संपर्क करें।

Bengali

আপনি যদি এই দলিলের একটা সারাংশ নিজের ভাষায় পেতে চান, তাহলে দয়া করে ফো করবেন অথবা উল্লিখিত ডাক ঠিকানায় বা ই-মেইল ঠিকানায় আমাদের সাথে যোগাযোগ করবেন।

Urdu

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Arabic

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Gujarati

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