

LONDON ASSEMBLY

Driven to distraction

Making London's buses safer



Transport Committee

July 2017

Holding the Mayor to
account and
investigating issues that
matter to Londoners

LONDONASSEMBLY

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Labour

The Transport Committee holds the Mayor and Transport for London to account for their work delivering the capital's transport network. The committee examines all aspects of the transport network and presses for improvements on behalf of Londoners.

Contact

Georgina Wells, Assistant Scrutiny Manager
Email: scrutiny@london.gov.uk
Contact: 020 7983 4000

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Caroline Pidgeon MBE AM

Deputy Chair of the Transport Committee



Over the last two years, 25 people have been killed by buses in London, and a further 12,000 injured. Behind these statistics lie personal stories of suffering and damage to victims, families and friends. We cannot allow this to continue. Through our investigation, we have tried to get to the root causes of these incidents and identify how Transport for London (TfL) can prevent them in the future.

In many ways, it is clear that the bus service in London has improved dramatically in recent years. TfL and the operators have worked hard to design and deliver a bus network that passengers can rely on. But attention seems to have slipped away from safety during this time and TfL's mantra 'safety is our top priority' appears not to be the reality. Instead, TfL encourages bus operators to make punctuality their top priority. Through their contractual agreements with TfL, operators are under great financial pressure to meet tight time targets, with the strain ultimately borne by bus drivers.

If TfL wants to instil a culture of safety in the operation of the bus network it has to give operators the right kinds of incentives. Prioritising safety might mean buses are driven more slowly and journeys may take longer. It could also mean more drivers are needed to allow for shorter shifts and longer breaks. It is for the Mayor and TfL's board to decide if this is worth the additional cost.

During this investigation, it has become clear that London's bus drivers do a tough job, and work in conditions that other Londoners probably don't appreciate. Shifts are long and drivers can be working for up to 16 hours at a time, with short breaks planned that can't always be taken when buses run behind schedule. Long periods of intense concentration and a system run on stressful, barely achievable time targets inevitably have consequences for safety.

The Mayor has already committed to improving conditions for bus drivers and working towards a Vision Zero ambition for road safety. The targets for bus safety in the draft Transport Strategy are welcome, but it will require determination on all sides if they are to be achieved. TfL can, and must, refocus its resources on making the network safer.

This has been a fascinating and timely investigation. Whilst there is good practice and innovation across the bus industry and TfL, it must go further. The current situation is just not acceptable and we urge TfL to consider our recommendations and act quickly to improve the safety of London's buses. On behalf of the committee I would like to extend my thanks to all those who have contributed to this report: to TfL, those involved in bus collisions, the bus operators, controllers, and not forgetting the drivers of London's buses.

Summary

Millions of people rely on London's buses every day, and TfL has made great progress in improving the reliability and punctuality of the service over the last decade. But TfL needs to do more to improve the safety of the bus network. Depending on which statistics you use, injury and collision rates on London's buses are not improving and may actually be getting worse. This is hugely concerning, and we conclude that TfL's focus on journey time reliability is a major factor. While we applaud TfL's efforts to improve reliability and attract more people to use buses, this must not be at the expense of safety. We are pleased that the draft Transport Strategy proposes bus safety targets for the first time, with the ultimate aim of eliminating bus fatalities by 2030. But our investigation has revealed weaknesses in TfL's approach to bus safety that need to be addressed if significant improvement is to be made.

Incentivising safety

TfL contracts out its bus services to a number of operators, and the financial incentives in those contracts are the key driver for how operators work. This, in turn, dictates the behaviour of bus drivers. At present, much of the operators' profits depend on their ability to meet the performance targets set by TfL. Recent improvements in bus reliability are proof that these financial incentives work. Yet there are no safety targets in these contracts. TfL cannot realistically expect bus operators to give safety the priority it deserves without financial reward. If anything, the current system incentivises operators to prioritise speed over safety. This has to change. TfL also needs to look inwards. At the moment, TfL's senior management bonuses are not linked to safety metrics, though they are linked to other metrics like profit and reliability. We want TfL to change this, and give safety an appropriate weighting in its performance bonus system.

Contracts to operate London's bus routes are tendered on a route-by-route basis, with TfL awarding route contracts based on the bids they receive and its own analysis of each operator's performance. This keeps operation competitive, which is likely to help keep performance standards up. But it also fosters variation within key elements of the service, as operators make their own decisions about things like incident management, control centre operations and staff training. It is conceivable that this lack of consistency has safety implications. Competition for route contracts means operators outbid one another in order to provide TfL with the most competitive offer. There is some evidence that operators' feel the need to make unrealistic (and potentially unsafe) cuts to their services in order to win route contracts. While TfL needs to remain competitive and secure a good price for these contractual services, it must not be at the expense of safe operation.

In order to set appropriate incentives, TfL needs to improve the data it uses to measure bus safety. It currently uses a number of data sets, which don't

always align. TfL needs to combine the data sets in a way that makes this information more useful as a performance measure, and easier for the public to understand. This isn't a straightforward task and we appreciate the complexity involved. Nevertheless, improving safety data is vital if TfL is to be held properly to account, and for bus operators to be incentivised to make safety a priority.

Supporting bus drivers

London bus drivers have a very challenging job, and juggle a wide range of tasks during the course of their day. We are concerned that the working day for drivers is too long and that drivers do not get the rest breaks they need. This is leading to high levels of stress and fatigue that increase the risk of collisions. We do not think that either TfL or bus operators are doing enough to support bus drivers. While the operators are directly responsible for drivers' working conditions, we think TfL needs to take a much more proactive role to determine how to improve conditions.

The safety training provided to bus drivers is inconsistent and insufficient. Operators remain largely responsible for driver safety training, and training standards are inconsistent across London and even within individual companies and garages. Furthermore, the classroom training and official guidance doesn't prepare drivers for the real-world conditions they experience on the road. While safety training that is route or area specific is best conducted by operators, TfL should introduce London-wide safety training that is delivered to all bus drivers. TfL also needs to commit to delivering all driver safety training on a rolling basis, so that standards are maintained.

Making buses safer

TfL is developing a new Bus Safety Standard (BSS) to use technology to make buses safer. This is welcome, and many have told us how significant an impact they expect new safety technology like Intelligent Speed Adaptation and Automatic Electronic Braking to have. But the BSS has been delayed and buses will not be fitted with the new technology until winter 2018. While we understand TfL's desire to get the BSS right, this is a significant delay that is having serious consequences on our roads. TfL needs to work faster to introduce these potentially life-saving technologies and bring down the injury and collision rates as quickly as possible. It also needs to consider the benefits of retro-fitting the standard's requirements on the entire fleet.

Many drivers told us about their concerns regarding the maintenance standards across London's bus fleet. They feel their vehicles are kept in an unacceptable state of repair, and blame it on 'belt tightening' and a shortage of engineers. TfL needs to assess the scale of this problem and, if necessary, come up with a strategy to tackle it.

Incident reporting and investigations

Bus drivers need to feel they can raise health and safety issues with management and their concerns will be properly addressed. Any public transport network needs a good reporting process for all employees, but many of London's bus drivers are not comfortable raising concerns with their employers. For the last year, bus drivers have had access to an incident reporting process in the form of the Confidential Incident Reporting and Analysis System (CIRAS). But many bus drivers don't know how to use this system yet, and some are put off using it because they believe they have to raise concerns with operators first.

Improvements need to be made to the way that incidents involving injuries or fatalities are investigated. TfL has recently made a number of improvements to the way that serious incidents are investigated, and we welcome this progress. However, it's still the case that when a person dies as a result of a London bus incident, there is no impartial transport body to investigate what happened. This must change. When a rail incident occurs in the UK, such as the devastating tram derailment in Croydon last year, two impartial bodies – the Rail Accident Investigation Branch and the Office of Rail and Road – set up their own investigations (alongside those of the British Transport Police and others). Public transport on the road must have the same impartial investigation procedures as it has on rails.

The Bus Safety Programme

TfL started the Bus Safety Programme (BSP) in 2016, with the intention to 'drive major improvements in safety across London's bus network'. While we welcome any effort to improve safety, we do not think that the BSP will achieve major safety improvements in its current form. It does not tackle many of the key safety issues we have identified in this investigation and it needs to be significantly strengthened. We call for the BSP to be revised in light of this report.

It is in TfL's power to put bus safety firmly at the top of its agenda. Prioritising safety might mean services running more slowly. It might mean hiring more bus drivers. Both of these might mean additional costs, and we recognise the difficult financial situation facing TfL. But the bus service is the backbone of London's transport system, carrying millions of Londoners every day. These journeys must be safe, above all else.

Recommendations

<p>Incentivising safety</p>	<p>Recommendation 1</p> <p>TfL should set safety targets for bus operators. We suggest the best way to do this is to integrate safety targets in the QICs performance target structure as soon as possible. If safety performance targets are adopted, the proposed safety scorecard may be redundant and TfL could consider ceasing work to develop it. TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p> <p>Recommendation 2</p> <p>TfL should revise its senior staff bonus scheme to introduce a direct link between bus safety and performance-related payments. TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p> <p>Recommendation 3</p> <p>By the end of October 2017, TfL should set out the steps it will take to improve the data it uses for bus safety analysis and trend reporting, in response to this report. This should include:</p> <ul style="list-style-type: none"> • amalgamation of STATS19 and IRIS data sets • more accurate reporting of long-term bus collision and injury trends
<p>Under pressure</p>	<p>Recommendation 4</p> <p>TfL should commission a comprehensive and independent investigation or piece of research into London bus drivers' working conditions (with a focus on the causes of fatigue) in order to determine the scale of the problem. This should involve setting up working groups and surveying drivers as well as others who can offer different perspectives, such as controllers, mechanics and other operational staff.</p> <p>The report should be made public and any findings should feed into the proposed revision of the Bus Safety Programme.</p>

<p>Under pressure</p>	<p>Recommendation 5*</p> <p>TfL should undertake additional work with the operators to try and reduce the number of distractions facing drivers. This could include:</p> <ul style="list-style-type: none"> • work to understand the extent to which distracting maintenance issues go unresolved (such as faulty wing mirrors or wipers) and consideration of how to speed up maintenance works in garages. • a commitment to deliver a toilet on each bus route (available at all times that the bus is in service) by the end of 2018 • a review of radio contact procedures and development of guidelines or best practice principles • a review of best practice for bus infrastructure and design. This should include bus lane installation, bus stop siting and consideration of the impact other infrastructure, like parking bays, has on the driver's ability to navigate the route safely <p>TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p>
<p>Driver training</p>	<p>Recommendation 6</p> <p>TfL should take responsibility for delivering driver safety training, as it has for customer service training. TfL should develop a new safety training package, based on close consultation with the operators and bus drivers. This training should be delivered on a rolling basis and could form part of the mandatory 35 training hours that drivers must complete every 5 years.</p>
<p>Vehicle safety</p>	<p>Recommendation 7</p> <p>TfL should commit to a publication date for the Bus Safety Standard. TfL should also undertake a cost/benefit analysis for retrofitting the entire bus fleet with BSS technology.</p> <p>Recommendation 8</p> <p>TfL should conduct a review of bus maintenance practices in garages. It should also carry out work to understand the scale of the bus engineer shortage in</p>

	<p>London and develop measures to tackle it.</p> <p>TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p>
<p>Incident reporting and investigations</p>	<p>Recommendation 9</p> <p>TfL should tackle the barriers drivers face accessing CIRAS – the confidential incident reporting service. TfL should communicate information about CIRAS to all drivers by embedding it in safety training and monitor its use through driver surveys.</p> <p>TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p> <p>Recommendation 10</p> <p>TfL should carry out a review into how bus incidents are investigated in London. In particular, it should consider:</p> <ul style="list-style-type: none"> • whether serious incidents should be investigated by an independent body, as occurs in the rail industry • how to make incident reporting more consistent between operators • how to ensure that lessons are learned from all incident investigations and shared between all operators <p>TfL should write to the committee, setting out how it will take this forward by the end of October 2017.</p>
<p>The Bus Safety Programme</p>	<p>Recommendation 11</p> <p>TfL should publish an update on the Bus Safety Programme in January 2018. This should draw on learnings from the first two years of the BSP and address the issues and recommendations contained in this report.</p>

* David Kurten AM, UKIP, would like to note the following:

It is my view that the review of best practice for bus infrastructure and design called for in Recommendation 5 should be expanded to include consideration of the impact of cycle lanes and cycle superhighways.

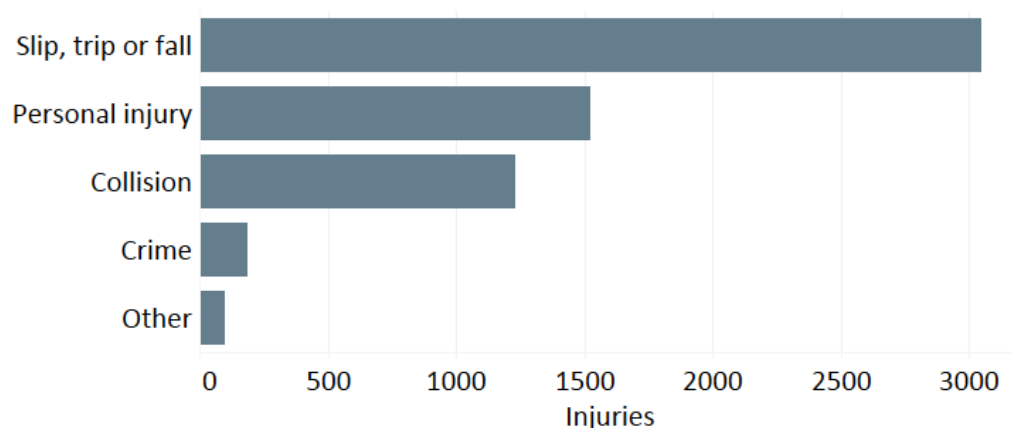
1. Introduction

Key findings

- Millions of people rely on London's buses every day, though passenger numbers have fallen recently.
- TfL provides London with an excellent bus service which has improved in many ways in recent years.
- By some measures, injury and collision rates are not improving and may be worsening.
- Our investigation has examined the causes of injuries and collisions and identified potential solutions.

- 1.1 After walking, buses are the most heavily used form of transport in London. In 2016, buses took passengers on 2.3 billion journeys and travelled 492 million kilometres in London.^{1&2} TfL provides London with an excellent bus service that has improved in many ways in recent years – it carries more passengers, at a higher frequency, and more reliably than 10 years ago – despite worsening congestion on the roads. But TfL needs to do more to improve the safety of the bus network. During the course of our investigation, a man was killed on Oxford Street after being hit by a bus.³ In 2015 and 2016, 25 people were killed on, or by, buses. Two thirds of those killed were pedestrians.⁴ Nearly 12,000 others were injured on-board or in incidents with buses during this period: 5,700 in 2015 and 6,100 in 2016.⁵
- 1.2 Bus passengers are more likely to be injured in a bus incident than any other road user. The most common cause of injury is “slips, trips or falls” (Figure 1).⁶ Sharp braking and other poor driving practices are likely to cause these injuries. The passenger survey we undertook reflects this – 55 per cent of respondents said they had experienced sharp braking on their bus in the last month.⁷ Nearly as many had experienced acceleration that they considered to be too sharp.

Figure 1: Most injuries in 2016 were from slips, trips and falls



Source: TfL data from bus operators (IRIS), 2016

- 1.3 London does not compare well with other major cities on its record for bus safety. Of the 15 world cities measured by the International Bus Benchmarking Group (IBBG), London was one of only five not to have improved since 2007, and was ranked fifth-worst for safety in 2014.⁸
- 1.4 In carrying out this investigation we have looked at the causes of bus collisions and injuries. We have examined a wide range of factors, including contractual arrangements between TfL and the bus operators, performance targets, driver training, working conditions, bus maintenance, vehicle technology and incident reporting processes. We have also assessed the first year of TfL’s new Bus Safety Programme (BSP), launched in February 2016.
- 1.5 The Committee has engaged with many individuals and organisations as part of this investigation, including TfL, bus operators, bus drivers, safety campaigners and passengers. We are very grateful for their contributions, and

expect TfL to respond to this report constructively to improve bus safety for everyone in London.

2. Incentivising safety

Key findings

- TfL needs to introduce headline injury and collision reduction targets so that operator progress can be measured.
- TfL's contracts with bus operators do not incentivise safety and should be revised.
- TfL's senior management bonuses should be linked to safety, as they already are for other metrics like reliability and profit.
- TfL should improve bus safety data by combining different data sets to more accurately identify trends.

Setting safety targets

- 2.1 The Mayor sets TfL targets for improving general road safety. However, until the recent publication of the Mayor's draft Transport Strategy, there were no specific targets for bus safety in London. The Mayor has now proposed a target in his draft strategy to eliminate deaths on, or caused by, buses by 2030 and an interim target to reduce the number of people killed or seriously injured in, or on, London buses by 70 per cent against 2005-09 levels, by 2022.⁹
- 2.2 Injury and collision targets could be used to provide TfL and operators with clear incentives to improve London's bus safety record. They have a clear role in improving performance for many private and public services. As we explore in this chapter, performance targets have helped TfL drive up the reliability of the bus network in recent years. We believe that a similar approach could also be applied to bus safety by directly linking safety performance to profits for all bus operators working in London, and to the pay of senior TfL management.
- 2.3 TfL has told us that it intends to introduce bus safety targets, but there is no indication that they would be linked to financial incentives. In November 2016, TfL's Safety, Sustainability and Human Resources Panel was asked to agree a bus customer major injury target for 2017/18.¹⁰ TfL also told us in February that it would aim to set bus safety targets by the end of the year.¹¹ We are waiting for TfL to publish these targets, but we think that they need to be linked to financial incentives if they are to be effective.

Bus operator contracts

- 2.4 TfL pays private bus companies to operate bus services in London. The amount each operator receives is determined by its ability to meet the performance criteria set by TfL in its Quality Incentive Contract (QIC) – in particular, bus reliability. According to the operators, these QIC bonuses are critical to their ability to make a profit.¹² The incentive to keep buses running on time is therefore clearly high.
- 2.5 QICs – and the priority they give to bus reliability – are credited with helping drive up bus performance in London over the last decade. TfL has designed these QICs with the passenger in mind: surveys have repeatedly shown that passengers are most concerned with service reliability. We agree that, in order to attract people out of cars, public transport has to provide a reliable alternative. However, during the course of this investigation, we became increasingly concerned that the contractual focus on reliability may be putting the safety of Londoners at risk.

Improving bus performance through Quality Incentive Contracts

Quality Incentive Contracts were introduced by TfL in 2001 and have been credited with delivering significant improvements in service quality and passenger numbers. They contain incentives for bus operators in the form of reliability performance payment bonuses and deductions, together with the option of a two-year contract extension from five to seven years.

For each bus route, operators receive an annual reliability performance payment which is calculated by comparing the reliability level achieved against the Minimum Performance Standard set out in the contract.

- 2.6 TfL has previously explained its decision not to set safety targets for the operators by stating that:

[safety] is not directly related to payments/deductions due to the importance of avoiding the suggestion that safety of operation is in any way a negotiable trade off against cost.¹³

While we understand TfL's argument, we fundamentally disagree with it. Operators will behave in line with the incentives (particularly the financial ones) that are set by TfL – their shareholders would expect nothing less. By not factoring safety into the payment structure of contracts, TfL is failing to direct operators to provide the safe service we think London needs. As the case study below illustrates, financial payments have been successfully linked to safety in transport contracts in other countries.

Case study – using financial incentives to make Spanish roads safer¹⁴

Contractual incentives relating to safety have been used in public-private partnerships used to manage road infrastructure on some Spanish highways for more than a decade. These incentives take two forms – either an extension to the contract period, or a financial payment to the road operator. According to research:

The implementation of safety incentives in public private partnerships has a positive influence in the reduction of fatalities, injuries and accidents.¹⁵

Highways managed through contracts including these incentives had 65 per cent fewer collisions per million vehicle-kilometres than highways without those incentives.

- 2.7 If TfL wants to take positive steps to reduce injury and collision rates, it must introduce meaningful incentives for operators to make their services safer. Londoners agree with us: of the 1,662 Londoners we surveyed, 88 per cent thought it was important that TfL incentivised safety as well as punctuality.¹⁶
- 2.8 In response to this report, we expect TfL will point to the future introduction of a new safety scorecard. This will measure operator performance and contribute to the awarding or denying of route contract extensions and

subsequent new contracts. It will also provide information that TfL will use in review meetings with bus operators. We welcome this development and the scorecard will be some improvement on the current situation. However, TfL has not proposed that the scorecard will be linked in any way to financial reward for the operators, who we expect will continue to prioritise their contractual obligations (and financial rewards) in terms of bus reliability.

- 2.9 TfL therefore needs to go a step further, and incentivise safety in its bus contracts *alongside* reliability. We are not in a position to recommend exactly *how* TfL should introduce safety-related payments into its contracts – that is for TfL to consider in conjunction with its other incentives.

Recommendation 1

TfL should set safety targets for bus operators. We suggest the best way to do this is to integrate safety targets in the QICs performance target structure as soon as possible. If safety performance targets are adopted, the proposed safety scorecard may be redundant and TfL could consider ceasing work to develop it. TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

Incentivising senior staff

- 2.10 One way of focusing minds at the very top of an organisation is through performance-related pay. TfL already uses this approach for the pay of its senior staff, who can earn large bonuses if they meet agreed performance standards: up to 50 per cent of base pay for the Commissioner, up to 30 per cent for Managing Directors and up to 20 per cent for Directors. Bonuses are calculated with reference to performance against a matrix of TfL-wide objectives, business group objectives and personal objectives.
- 2.11 TfL's current bonus scheme does not effectively reward improvements in bus safety.¹⁷ The bonus scheme for TfL's Surface Transport directorate (which includes buses) has a set of 17 measures which are weighted to make up the business group element of the bonus payment.¹⁸ These measures include five most relevant to buses (such as bus customer satisfaction, bus excess wait time and KSIs on London's roads across all transport modes), but we think that these do not provide sufficient incentive for senior managers to focus on bus safety.
- 2.12 As with the bus operator contracts, TfL's staff bonus scheme therefore fails to give bus safety the priority it needs. In view of the fact that the bonus scheme for London Underground includes a metric for 'significant injuries per million hours on rail and underground', the bonus scheme for the Surface Transport directorate and the Commissioner needs to be updated to include a specific measure for bus safety.¹⁹

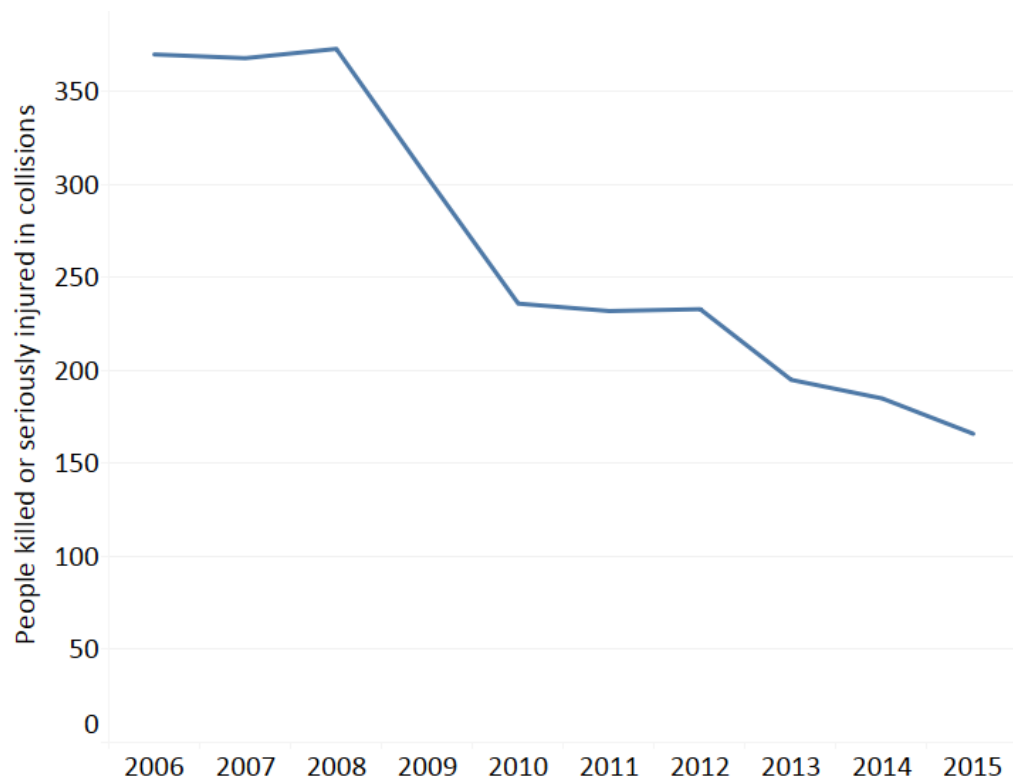
Recommendation 2

TfL should revise its senior staff bonus scheme to introduce a direct link between bus safety and performance-related payments. TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

Safety data

- 2.13 If TfL is to link bus safety to operator contracts or its own performance-related pay, it will need better data than it currently has. It is worth noting that TfL has committed to improving the information it publishes about bus collisions and making it more accessible, and it has already made commendable improvements like the London Collisions Map.²⁰ TfL also now publishes much more raw data and analysis of bus injuries and collisions than in the past. But the data that TfL uses to measure bus safety is, in our view, inadequate, and is being used to present an overly-positive image of the situation in London.
- 2.14 TfL may be overstating claims that the bus network has got significantly safer in the past ten years.²¹ It publishes a ‘bus and coach long term safety trends’ paper which uses Metropolitan Police Service data (shown in Figure 2 overleaf) to show a 55 per cent reduction in KSIs in the past decade. We have some issues with using this data on its own, as it paints a different picture to other data sources. In addition, the Met’s data does not cover all aspects of bus safety, only collisions, which cause less than a quarter of injuries (see Figure 1). It also combines figures for buses and coaches and therefore does not show TfL’s performance on its own. Furthermore, the long-term trend of improving safety shown by this data set is not supported by other data collected by hospitals and bus operators. The picture is far less clear-cut than TfL has portrayed.

Figure 2: Police data shows a significant fall in the number of people killed or seriously injured by collisions involving buses



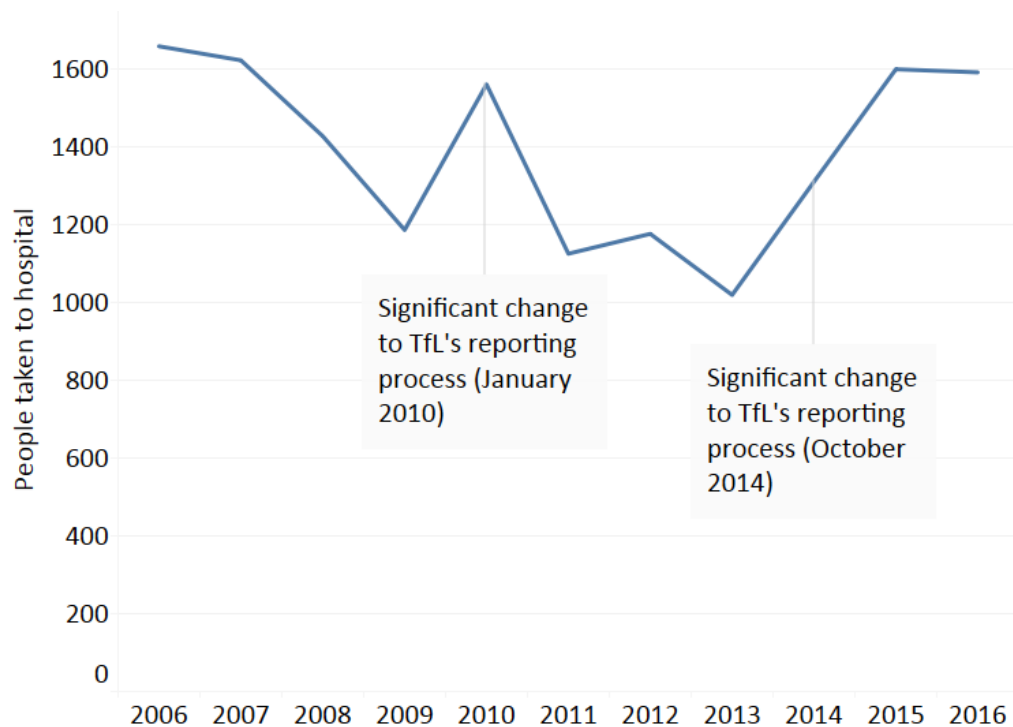
Source: Police data on bus and coach collisions in London (STATS19)

2.15 Police data has previously shown a significant decline in fatalities and serious injuries from vehicle collisions, but has been contradicted by hospital data, which showed an increase.²² There may be a number of reasons behind this, such as:

- fewer people reporting road traffic incidents to the police
- the police categorising more injuries as 'slight' rather than 'serious'
- more of the people being injured in road traffic incidents being taken to hospital
- hospitals reporting more road traffic casualties due to changes in their administrative practices

2.16 TfL's own data, now collected from bus operators using the Incident Reporting and Investigation System (IRIS), does not show a clear trend regarding bus safety – as shown in Figure 3 below. This is because the methodology has changed over the last ten years, making the data difficult to interpret. The most significant changes were in 2009, when TfL introduced a new reporting system, and 2014, when TfL carried out a major system upgrade and changed some of the categorisations.

Figure 3: But TfL's own data does not show a clear pattern in the number of serious incidents



Source: TfL data from bus operators (IRIS)

- 2.17 It seems clear that TfL should not rely solely on police data in assessing and publishing its bus safety performance. It needs to carry out further, more detailed work to link police data, hospital data and its own data from bus operators to understand how safe buses are, and improve its understanding of trends in injuries and collisions.
- 2.18 We have already called on TfL to speed up work to link hospital episode statistics (HES) to London incident data. In June 2016 the Commissioner wrote to the committee, confirming that TfL had commissioned the Transport Research Laboratory to carry out a study investigating hospital data that has then been linked to STATS 19 casualty data.²³ The study was due for completion in August last year. TfL should therefore be in a position to say whether hospital data can be used in conjunction with other data sets to further its understanding and analysis of road incidents.

Recommendation 3

By the end of October 2017, TfL should set out the steps it will take to improve the data it uses for bus safety analysis and trend reporting, in response to this report. This should include:

- amalgamation of STATS19 and IRIS data sets
- more accurate reporting of long-term bus collision and injury trends

3. Under pressure

Key findings

- London bus drivers have a very challenging job, and must manage a multitude of risks while out on the road. They need more support to do this as safely as possible.
- We are concerned that drivers are working excessive hours, with inadequate time for breaks, leading to high levels of stress and fatigue.
- Drivers also face unnecessary distractions while on the road, such as needing the toilet or unnecessary radio contact from control centres, which makes driving safely harder.
- Operators are primarily responsible for drivers' working conditions, but we believe TfL needs to take a much more pro-active role to determine how to improve conditions.

A day in the life of a bus driver

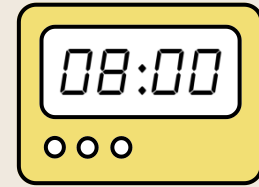
This story is based on testimony given to us during this investigation.

Your day starts with safety checks. Are you happy to take this bus out on the road? You have concerns about one of the wing mirror brackets but a mechanic persuades you to leave it – they’re really busy today and don’t have a replacement vehicle to offer you.

The discussion about the mirror means you barely have time to check the rest of the bus, or to have some breakfast. Frustrating, because you’ll probably only have a 40 minute meal break today (though depending on traffic you’ll probably get a few pit stops throughout the day). You know if you can’t make the time up before your meal break, it will mean rushing your food and running to get back to your bus on time. You get going and immediately hit rush hour traffic. Commuters scramble on board. CentreComm is radioing things that do not concern you and the iBus controllers are reworking the headway between you and the other buses on your route. Your phone rings. It’s your child’s nursery but you can’t take the call.

You’re on a 14 hour shift today and you were on late shifts last week. On top of that, you worked your rest day at the start of the week when they needed someone to cover. You’re pretty tired and it’s only 9am. Demands on your attention stack up, as they do most days. At 10am you find yourself trying to advise a confused passenger where to get off for the hospital, while keeping an eye on other road users so you can prepare to pull out, and trying to work out when you can call the nursery back.

You know you are 2 hours away from a toilet at this stage of the route and you have your period this week. You’re having a hard time using the mirrors on this vehicle because they’re dirty and pitted with limescale. Perhaps the cleaners didn’t have time to do their job properly.



As you pull out, a cyclist zooms past through the wide blind spot on your nearside. You brake sharply to avoid a collision and several people on the lower deck stumble. An older man falls to one knee, and gets up again slowly. No one approaches you, so you decide (with some relief) not to radio CentreComm about the near miss.



At the next stop a woman in a wheelchair wants to board but there's a buggy in the way. You ask the man with the buggy to fold it down. He makes a rude comment but eventually complies. This takes a few minutes because you've had to get out of your cab and mediate. Getting out to speak to passengers makes you nervous anyway, partly because you don't do it often but also because you're always told 'never get out of the cab'.



While this is going on, behind you there's a loud and aggressive voice on your cab radio asking why you don't get a move on and telling you you're causing a problem for the whole route. You finally get on the move again but you don't know when you'll finish; there are new roadworks this week on part of your route and traffic is as bad as ever. Your break was halved because of all the delays; you barely had time to find a bathroom and grab a sandwich. Luckily, your partner was able to call the nursery back and pick up your child, who has a temperature.



As you're finishing your shift, you see new notices have been posted on the walls in the garage. One asks "*Are you getting enough sleep?*" which at least gives you a laugh. Another informs you of a new diversion planned for your route while they put in a bus lane. You worry about this on the way home. It's hard work sharing the lane with cyclists (and they will slow you down in the bus lane too). You got back to the garage at 10pm and now have an hour journey home now. Your partner and child are fast asleep when you get back. You'd like to have asked how bad the temperature is, but it will wait for the morning. You're asleep in seconds, aware you have a full day of driving tomorrow.



- 3.1 Nobody involved in operating buses in London would want to make the drivers' job difficult. But a pressure-cooker situation, with its roots in competition for road space and a focus on making buses run on time, has created a stressful and tiring working culture for drivers. They spend long days and nights responsible for driving large vehicles with up to 90 people on board alongside cyclists, pedestrians and other road users. The Mayor has recently made improvements to bus driver pay. During the course of our investigation, it has become increasingly clear that the working conditions for drivers also needs to improve – shifts are irregular, the working day is long and the breaks are short. This needs to change, both for the wellbeing of the drivers and for the safety of all passengers and road users.

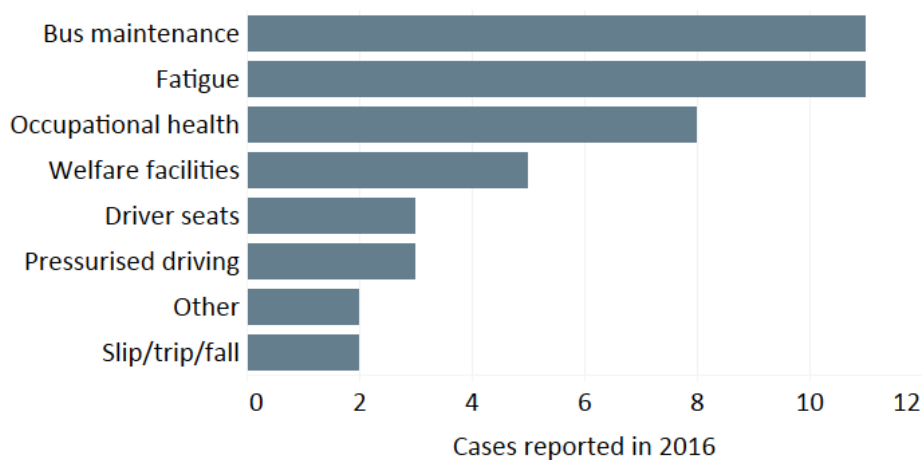
"It is an unbelievably stressful and demanding job. The hours are relentless with early starts and late finishes. Scheduling is a continual problem across all of London. You end up in a continual cycle of pressure and it all ends up in one place, which is with the driver."

Wayne King, Unite

Driving tired

- 3.2 It is now well-known that driving performance deteriorates over time as fatigue sets in. Drivers become less able to concentrate, and slower to react to hazards. Research shows that the effects of driving while tired are similar to driving under the influence of drugs or alcohol.²⁴ Furthermore, the longer you drive, the more rest you need to recover. The government's "Think fatigue" campaign therefore encourages all vehicle drivers to take a 15-minute break every two hours of driving.²⁵
- 3.3 Drivers know how tiring their jobs are, and are worried about the impact this has on safety. Alongside maintenance (discussed in Chapter 5), fatigue is the health and safety concern most frequently reported to the Confidential Incident Reporting and Analysis System (CIRAS), see Figure 4.

Figure 4: The most common issues bus drivers reported to CIRAS related to bus maintenance and fatigue



Source: CIRAS

- 3.4 Reports about fatigue include concerns about the effect of roster patterns, the impact of long night shifts and inadequate rest periods. Chris Langer, Scheme Intelligence Manager at CIRAS, has written about the implications of a fatigued workforce, and has argued that fatigue is likely to be under-reported internally, in comparison to other health and safety issues.²⁶ Regarding the situation in the rail industry, he has said:

*Confidential reporting provides a window on the largely hidden world of fatigued railway staff. Fatigue is often as pervasive as it is under-reported. Fortunately, when they talk confidentially in a blame-free atmosphere, staff are able to admit to how fatigued they really are. This information is rarely conveyed completely honestly through internal reporting channels.*²⁷

Although he was talking here about the rail industry, his wider point has direct relevance to the bus industry – that the extent and severity of fatigue among the workforce is likely to be underestimated by management.

- 3.5 Allegations have recently been made about fatigued tram drivers, brought to light during the investigations into the fatal tram derailment at Sandilands Junction, Croydon, in November 2016. Tram Operations Ltd and First Group (which operates the tram network) have stated that they have an “appropriate fatigue management system” in place. The Rail Accident Investigation Branch, which is investigating the incident, will no doubt make its own assessment as to whether the existing fatigue management system is adequate. TfL needs to apply any relevant lessons from this investigation across its whole transport network.

Shift patterns and breaks

- 3.6 We are concerned that London’s bus drivers are not getting the rest they need to drive safely. EU drivers’ hours rules state:

*A break of no less than 45 minutes must be taken after no more than 4.5 hours of driving. The break can be divided into 2 periods - the rest at least 15 minutes long and the second at least 30 minutes - taken over the 4.5 hours.*²⁸

- 3.7 These guidelines do not tally with the evidence we have received from bus drivers and bus operators. We heard that drivers can work up to 16 hours per day, which includes up to 10 hours driving time. Breaks are taken sporadically, depending on service timings, but we also heard that delays on the route can make it impossible for drivers to take even the legal minimum break time.
- 3.8 The 45-minute break does not always give drivers the opportunity to have a proper rest. Breaks are planned by operators to be near amenities, so drivers can buy some lunch and stretch their legs. But drivers have told us it doesn’t always work out this way, and they can end up spending most of their break trying to find a toilet or a sandwich. This is not proper rest.

- 3.9 Drivers are frequently asked to work beyond their scheduled hours. Both drivers and operators told us that, over the past two years, late finishing has become increasingly regular and service scheduling increasingly challenging. The increase in congestion has made buses less reliable as they are caught up with other traffic in delays and jams across the city. Drivers cannot simply end their shift when their hours are up; they are suffering with other road users from London's worsening congestion.
- 3.10 Working on allocated rest-days is another cause of driver fatigue, and the operators told us this practice is becoming more frequent. People need rest days, time to recuperate and recover, whatever work they do. Clearly this is especially important when your work requires intense concentration and responsibility for other people's safety. We have received no evidence to suggest that any actions are being carried out to reduce rest-day working.
- 3.11 TfL needs to take more responsibility for the working conditions of London's bus drivers. TfL maintains that the bus operators make decisions about shifts and breaks, but we would argue that contractual incentives mean that operators have to prioritise bus performance over driver welfare. While TfL does not employ bus drivers, it does more or less control their employer's operations in London. TfL could contractually oblige operators to make changes to breaks, shifts and rostering. The evidence we have collected suggests that the current system is flawed and needs to be overhauled to protect drivers and make buses safer.

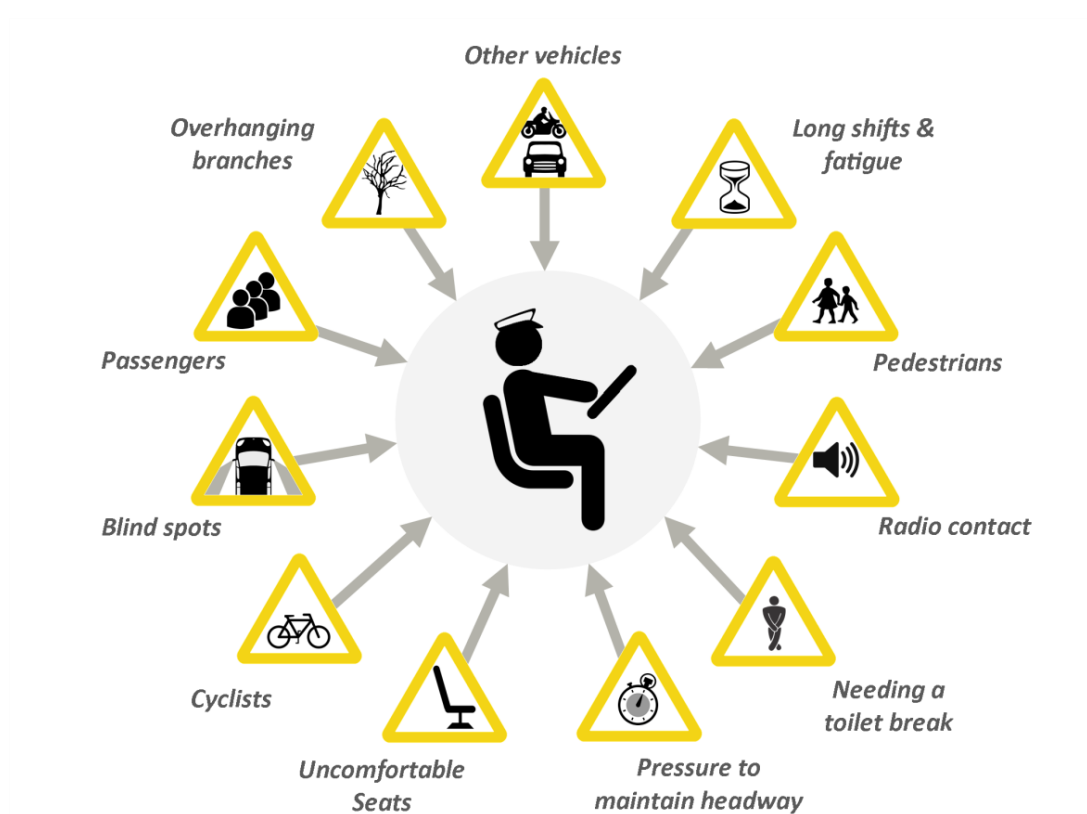
"TfL are the root cause of the problem in the way they tender the bus routes. By undercutting other companies to get these routes the companies themselves have no option but to attack drivers' pay, terms and conditions to make their required profits. This onslaught against the driver is what creates the accident situation in London, stress being the main factor."

Bus driver, Putney Bus Garage

Distractions

- 3.12 Even for drivers who are fully rested, driving a bus is not easy and requires great concentration. Driving any large vehicle through London's busy roads is difficult, but dealing with the needs of up to 90 passengers at a time makes the task even more complicated. As the graphic below shows, bus drivers have a wide range of distractions to deal with.

Figure 5: Bus drivers face a wide range of distractions which may affect their ability to drive a bus safely



- 3.13 Drivers may need to answer questions from passengers or deal with disruptions – for example to resolve disputes between wheelchair users and buggy owners. They are also in touch with their control centres more often than before; bus operators told us that their control centres are speaking to drivers more frequently to request they speed up or slow down, or to communicate adjustments to the service.
- 3.14 As we discuss further in Chapter 5, drivers have technical and mechanical issues to deal with. Visibility is often difficult – buses have wide blind-spots and many have inadequate mirrors. The problem worsens in bad weather (we heard that windscreen wipers on buses are often faulty, but that this will only become apparent when it starts to rain).
- 3.15 Bus drivers also have to negotiate a difficult road network and the safety implications of good road and infrastructure design and maintenance should not be underestimated. There is some evidence to suggest that bus lanes do not always allow for the real size of the bus, forcing drivers into other lanes. Greenery overhanging roads also causes problems and can be particularly dangerous when bus lanes are tight.
- 3.16 Buses also need to be able to safely pull in and out of each stop. This can be difficult when parked cars force drivers to approach at a steep angle, overhanging the bus onto the pavement or into other traffic lanes in order to meet the stop. When bus stops have been indented into the pavement or

other off-road area, it is important that the indentation is as gentle a gradient as possible. Otherwise, drivers have a tough job to navigate safely around other infrastructure and the bus stop.

- 3.17 The lack of toilet facilities is a well-known problem that has been an issue ‘for decades’ and, according to the evidence we received, is a serious problem for drivers.²⁹ Some routes are very long, taking over an hour each way, sometimes more due to congestion, so drivers can find themselves two hours from a toilet. As John Traynor, Managing Director of GoAhead London told us,

In the honest answer to your question on whether there are enough toilets out on all of our routes, absolutely not. People are closing them down and cannot afford to keep running them or they are not open for the whole traffic day. We have issues certainly late at night with getting access. It certainly is a bigger issue for women.

- 3.18 Needing the toilet is distracting. For female bus drivers who may be menstruating, it is an even bigger problem. We heard that, despite lobbying, TfL has still not made toilet facilities at many Tube stations available to bus drivers. TfL has started a pilot giving taxi drivers access to Tube station staff toilets at Oxford Circus and Warwick Avenue.³⁰ We would like to see TfL expand the number of Tube station toilets that bus drivers can use, and work with bus drivers to identify where they are most needed.

Recommendation 4

TfL should commission a comprehensive and independent investigation or piece of research into London bus drivers’ working conditions (with a focus on the causes of fatigue) in order to determine the scale of the problem. This should involve setting up working groups and surveying drivers as well as others who can offer different perspectives, such as controllers, mechanics and other operational staff.

The report should be made public and any findings should feed into the proposed revision of the Bus Safety Programme.

Recommendation 5

TfL should undertake additional work with the operators to try and reduce the number of distractions facing drivers. This could include:

- work to understand the extent to which distracting maintenance issues go unresolved (such as faulty wing mirrors or wipers) and consideration of how to speed up maintenance works in garages.
- a commitment to deliver a toilet on each bus route (available at all times that the bus is in service) by the end of 2018
- a review of radio contact procedures and development of guidelines or best practice principles
- a review of best practice for bus infrastructure and design. This should include bus lane installation, bus stop siting and consideration of the impact other infrastructure, like parking bays, has on the driver's ability to navigate the route safely

TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

4. Driver training

Key findings

- Operators are largely responsible for driver safety training, creating inconsistency in standards across London.
- The level of top-up training required for drivers is low (1 day a year) and doesn't specify content.
- Classroom training and the Big Red Book don't reflect real-world conditions, and therefore don't prepare drivers properly.
- While some 'route and area' safety training is best conducted by operators, TfL should introduce London-wide safety training that is delivered to all bus drivers.

- 4.1 We agree with this submission we received to our investigation:

London's buses and bus drivers, whose employers are licensed by TfL, should be a beacon of good practice and behaviour for all road users in London.³¹

However, we think that driver training is insufficient and inconsistent, and that driving skills and standards could be improved. Most of it is provided by bus operators, who approach it in different ways.

Bus operator training

- 4.2 As the direct employers of all bus drivers in London, bus operators are responsible for most of their training. New drivers are required to pass the national professional driving qualification (the Driver Certificate of Professional Competence, or CPC), which must then kept up to date by completing 35 hours of periodic training every 5 years – roughly one day a year.³² Many operators are working hard to ensure their drivers are equipped to do their jobs – the box below shows some examples of the training initiatives currently underway. However, the operators do not all prioritise safety training to the same extent and we are concerned that safety training is not consistent across London.

Bus operators told us about a variety of driver training schemes³³

Operator A: “We provide an advanced driver training programme called “Visual Vanguard”, training anything between 500 and 1,000 drivers a year. Cameras are fitted onto a vehicle and it is driven under instruction and then they replay all of the information afterwards. There is a strong coaching element and picking up how drivers are performing on that particular drive.”

Operator B: “We provide safety training in terms of driver first-use checks and how to check the vehicle before they go out for the day.”

Operator C: “We provide a route-specific training package called “Master Your Route”. Any driver who comes to the garage is taught their first route using this course. When they are ready to move on to another route, they have to apply to learn the route and then they are placed on a voluntary course, which will be a four-hour session or half-day session.”

Operator D: “We provide cyclist awareness training.”

- 4.3 As these examples show, the safety training provided by operators varies widely. Some operators appear to be innovative; the “Visual Vanguard” programme was cited as one that works well for drivers. But this seems to be one of the exceptions to the rule: bus drivers told us that the training they receive in the classroom does not reflect the realities of London's roads. They feel they are often required to put aside the best practice they have learnt, due to pressure from controllers to prioritise good headway and wait times. They also said that training was easily forgotten, given that it was not

delivered regularly, and the daily grind made it easy to slip back into old habits.

TfL training

- 4.4 TfL does provide some training elements to all London bus drivers, and there is some evidence that a similar approach would work for safety training. Since 2015, TfL has provided a two-day customer service training course to all bus drivers.³⁴ This course – Hello London – seems to have worked well: the drivers we spoke to were familiar with the content and broadly positive about it. The success of Hello London provides a good argument for TfL taking safety training in-house. Safety training deserves as much attention and focus as customer service training.
- 4.5 TfL has created a new defensive driving safety training module called “In the Zone”. Because it lasts only half a day, the operators told us they filled the second half of the training day with different training modules of their choosing. Drivers have since reported being unclear whether they had received ‘In the Zone’ training, perhaps because it was often packaged up with different things. Nevertheless, ‘In the Zone’ could be considered as the first step towards a London-wide bus driver safety training package.
- 4.6 There is a challenge in ensuring that training is consistent and offered to all drivers. TfL has worked through part of this by developing in-house courses like Hello London and In the Zone. But TfL does not plan to deliver these courses on a rolling basis, which we think is a mistake, given the high staff turnover. Due to staff turnover, it is important that TfL commits to delivering all training courses on a rolling basis:

“As we all have probably 20% turnover, very quickly we will have a workforce that has never been on Hello London. Now that we have started it, it is almost like we cannot stop it. That is seriously challenging for TfL in terms of financing it, I am sure.”³⁵

Problems with consultation

- 4.7 For TfL to improve the standard of safety training available to drivers it needs to get better at listening to drivers and operators. Some of the operators we spoke to have criticised the way TfL consults with them on new training methods and plans. For example, they told us of a number of concerns with TfL’s Big Red Book (a general guidance book issued to all bus drivers).³⁶ Some operators feel that the book is an example of style over substance; some feel that it ‘talks down’ to drivers. We were told that the book describes situations that bear little relation to reality, and offers little support or guidance on the genuinely challenging situations drivers find themselves in. These concerns, although apparently raised during a consultation period, seem not to have affected TfL’s final decisions about the publication.

Recommendation 6

TfL should take responsibility for delivering driver safety training, as it has for customer service training. TfL should develop a new safety training package, based on close consultation with the operators and bus drivers. This training should be delivered on a rolling basis and could form part of the mandatory 35 training hours that drivers must complete every 5 years.

5. Vehicle safety

Key findings

- TfL is developing a new Bus Safety Standard (BSS) to make buses safer through technology. This includes high-tech developments such as Intelligent Speed Adaptation and Automatic Electronic Braking, as well as low-tech solutions like mirror improvements.
- But progress is slow, and the BSS will only take effect for new contracts, limiting its impact.
- Poorly-maintained buses present another safety risk that drivers are worried about.
- We are concerned that a shortage of engineers is affecting the safety of London's buses, and is increasing pressure on drivers.

Technology

- 5.1 TfL is developing a Bus Safety Standard (BSS), which will define technical safety requirements that all new bus models purchased for use in London must adhere to. Technologies for detecting vulnerable road users, speed-limiting and speed adaptation (Intelligent Speed Adaptation – ISA) and Automatic Electronic Braking are being considered. TfL plans to complement these hi-tech innovations with more simple improvements, like updating mirrors, to make buses safer. Changes to seat and grab pole materials are also planned, alongside measures to improve visibility for drivers.
- 5.2 We agree with TfL that technology has an important part to play in improving bus safety, and we are therefore disappointed that the BSS has still not been finalised. In July 2016, TfL claimed the BSS would be introduced into bus contracts in December 2017.³⁷ It has since told us that the BSS will not be ready until mid-2018 and it expects new buses to meet the BSS from winter 2018. Furthermore, since the BSS will only apply to new buses, it will take many years before the whole bus fleet benefits from these improvements. ISA technology in particular has been shown to significantly improve vehicle safety and we urge TfL and the Mayor to ensure there are no further delays to the introduction of this technology. We call on TfL to speed up the publication of the BSS and examine whether it should be applied to the whole bus fleet in London.

Recommendation 7

TfL should commit to a publication date for the Bus Safety Standard. TfL should also undertake a cost/benefit analysis for retrofitting the entire bus fleet with BSS technology.

Maintenance

- 5.3 Proper maintenance is vital to keep buses operating safely, but we are concerned that this is not always happening. Maintenance concerns were a significant issue for the drivers we spoke to and it is the most frequent complaint (alongside ‘fatigue’) received by CIRAS.
- 5.4 Spotting vehicle maintenance issues is primarily the driver’s responsibility. At the start of the day, drivers do a first-use check in the garage before they take the vehicle out on the road. If they spot a safety-critical defect, the bus must remain in the garage. Some issues are passed as safe to travel with as long as the driver ensures they are seen to at the earliest possible opportunity. There is some debate about what is safe to drive on the road with. Drivers told us they are sometimes asked to leave the garage with issues they are not comfortable with, such as faulty mirror arms, windscreen wipers and headlights.

- 5.5 In light of the high number of maintenance concerns reported to CIRAS, we asked drivers to provide examples of the kind of day-to-day maintenance challenges they face:

Driver A: *"The driver's screen is always scratched up so when the sun hits it, with the reflection, you cannot see out of it. The other day I was driving a bus and it was raining. The window wipers would not go to the end of the screen. I had to keep getting out and wiping the window. When I left to go on the journey it was not raining so I had missed it. I could not even see out of it. Every time I got to a stop I had to keep wiping the window."*

Driver B: *"There was a bus in our garage yesterday, the driver went to take it over. He did his pre-service check and there were no side lights and no headlights. The engineer said, 'It is perfectly fine to go out as long as it comes back in off the road before it gets dark'. They did not have any spare buses."*

Driver C: *"Things to do with driving - mirrors and things like that - you could get on any bus in our garage and you could probably find at least three or four minor faults that they tend to pressure you to go out with on the bus."*

- 5.6 A shortage of engineers may be contributing to the high levels of concern about bus maintenance. In April 2015, Ian Warr, Arriva London's Engineering Director, told Transport Engineer magazine that they were "struggling to recruit good people" due to the national shortage of technicians.³⁸ This assessment was backed up by the bus operators we met, who told us that they have trouble recruiting and retaining engineers. This, together with the high number of maintenance concerns reported by drivers, raises questions about whether there are enough engineers to keep London's buses in safe working condition.
- 5.7 We don't know the scale of the engineer shortage in London but the Automotive Council has conducted research on the national situation. Its survey of employers in the automotive sector found that the majority of vacancies highlighted by the employers as being 'difficult to fill' were for engineering roles. Since no research has been undertaken on the scale of the shortage of transport engineers in London, TfL should carry out this work as part of a review of bus maintenance practices and procedures in London's bus garages.

Recommendation 8

TfL should conduct a review of bus maintenance practices in garages. It should also carry out work to understand the scale of the bus engineer shortage in London and develop measures to tackle it.

TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

6. Incident reporting and investigations

Key findings

- Drivers must be able to raise concerns to management and have them properly addressed.
- And there should be a way of reporting concerns confidentially – since 2016 this has been available through CIRAS.
- But drivers aren't aware of how to use CIRAS, and may not be reporting problems because of concerns around confidentiality.
- When an incident does occur, the incident investigation processes are flawed.
- Operators investigate minor incidents – the lack of TfL involvement or review is a concern.
- TfL investigates incidents involving a death or serious injury, but the quality of information it considers is variable, and there is no independent review as in the rail industry.

Incident reporting

- 6.1 There is general agreement that, in order to be safe, complex transportation systems need independent, anonymous reporting processes – usually known as whistleblowing. The main reason for this is that front-line workers observe things their managers cannot. London’s bus network did not have a confidential employee reporting system until 2016. In contrast, workers in the rail industry have had this facility since the late 1990s. It is striking that the British rail industry celebrated a decade without a single passenger or staff fatality for the first time ever this year.³⁹

Confidential Incident Reporting and Analysis System (CIRAS)

- 6.2 Workers in London’s bus companies can now report health and safety concerns to CIRAS – the organisation that London Underground and National Rail staff have been using. CIRAS will log all reports and make its own investigations before writing to the bus operator with its findings. Bus operators are not obliged to engage formally with CIRAS, but CIRAS does not consider a report closed until both parties are satisfied.
- 6.3 Whereas London Underground has an established system for dealing with CIRAS reports, this does not appear to be true among London’s bus operators. Because of this, there appears to be a lack of uniformity in the way issues raised by bus drivers are dealt with. Access to CIRAS for the bus network is new, and these things will take time to iron out. TfL, the bus operators and CIRAS should work together to bring the process for confidential reporting up to the same standard as exists for London Underground staff.
- 6.4 We’ve also found that some bus drivers are simply unlikely to approach CIRAS with their concerns. CIRAS undertook a survey of those reporting issues, and highlighted key findings in its submission to this investigation:

...although 79% of reporters said they were clear on what safety issues could be reported, 70% disagreed with the statement “If I report a safety issue, I get good feedback”. In addition, 70% also disagreed with the statement “If I raise a health and safety issue, it is taken seriously by managers”. This suggests reporters are conscientious and understand what they should in theory report, but have little faith in the ability of management to address the underlying safety issue.

- 6.5 Some bus drivers report that they are not aware they have access to CIRAS, and are not clear how and when they can use it. Drivers also report being told they must raise issues internally before they can approach CIRAS.⁴⁰ This makes it impossible to raise issues confidentially, and may make it less likely that concerns ever reach CIRAS. Again, the newness of the service may be a factor here and TfL should be working to improve the CIRAS experience for bus drivers until it matches that of Tube drivers.

Recommendation 9

TfL should tackle the barriers drivers face accessing CIRAS – the confidential incident reporting service. TfL should communicate information about CIRAS to all drivers by embedding it in safety training and monitor its use through driver surveys

TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

Incident investigation

- 6.6 When a serious bus incident happens (involving a fatality or a serious injury), TfL collates information from operators, police agencies, boroughs, coroners, the Driver and Vehicle Standards Agency and others. On these occasions, the bus operator must provide TfL with a full collision investigation report, known as a Notification and Investigation of Major Incidents (NIMI). It is worth noting the difference between this process and a police investigation, which seeks to determine whether a crime has been committed.
- 6.7 NIMI reports vary in thoroughness, in part depending on the operator involved.⁴¹ According to TfL, each NIMI report should include a report of visits to the site, study of road layouts and lines of sight, positioning of infrastructure like bus stops and potential blockages such as hedges. TfL has admitted that not all operators submit accurate and complete information via the NIMI process.
- 6.8 To evaluate and improve the investigation process for serious incidents, TfL has set up the Network Incident Review Group. This group has a remit to peer review the investigation of bus-related fatalities and other significant incidents. It is also tasked with ensuring that the causes of incidents are understood and that the proposed actions are appropriate to prevent recurrence.
- 6.9 TfL wrote to us in April to outline some improvements to the NIMI process that are underway, and gave an update on the work and remit of the Network Incident Review Group. The most significant development so far is that TfL safety managers will now be responsible for the NIMI process and the collation of information when an incident occurs. This should help to reduce the variation in the amount and quality of information supplied by the operators. TfL's safety managers will take over responsibility for carrying out site visits, information reviews and collecting evidence on road design, traffic light phasing, traffic volumes and speeds.
- 6.10 While these changes represent a very positive step-change in TfL's approach to bus incident processes, it does not change the fact that the investigation is not truly impartial, in the sense that no external independent body is involved. This contrasts with the system in place for investigating fatalities on

the rail network. Compared with bus incidents, rail incidents in the UK are investigated extremely thoroughly. One reason for this thoroughness may be that rail incidents can cause extensive harm. Serious rail, Tube and tram incidents are investigated by the British Transport Police (BTP), the Rail Accident Investigation Branch (RAIB) and the Office of Rail and Road (ORR).

- 6.11 Thorough investigations are clearly time consuming and expensive. But the treatment of the Croydon tram incident highlights a serious disparity between rail and road incident processes. The tram, being a rail vehicle, is subject to rail investigation procedures. But trams also travel on the road, alongside other public transport vehicles like buses. In this context, the difference in investigative standards for the two transport modes seems hard to justify.
- 6.12 It is important that bus investigations are brought up to the standard set by the rail industry. A fatality on the bus network should be investigated no less than a fatality on the rail network. Yet, while the Croydon tram incident will be scrutinised by BTP, the RAIB and the ORR, there will be no independent safety inquiry into the bus incident on Oxford Street in April this year, when a man died. TfL and the operator will investigate the incident, and while both organisations have genuine reasons to want to make the bus network safer, neither is independent.

Investigating other (less serious) incidents

- 6.13 Less serious incidents that don't involve a fatality or serious injury are investigated by the bus operator involved and their insurer(s). These investigations work differently and are less scrutinised than the processes for major incidents. This seems reasonable, and yet these incidents may still involve injuries and may result in assigning culpability or blame to someone involved. It's therefore important that all incidents are investigated fairly and consistently and that lessons are learnt.⁴²
- 6.14 In view of the fact that TfL has recognised the inconsistency of serious incident investigations, we are concerned that similar inconsistencies exist in the investigation of less serious incidents. TfL should therefore assess how London's bus operators investigate these less serious incidents to ensure that consistent approaches are being applied and that lessons are being shared between operators.

Recommendation 10

TfL should carry out a review into how bus incidents are investigated in London. In particular, it should consider:

- whether serious incidents should be investigated by an independent body, as occurs in the rail industry
- how to make incident reporting more consistent between operators
- how to ensure that lessons are learned from all incident investigations and shared between all operators

TfL should write to the committee, setting out how it will take this forward by the end of October 2017.

7. The Bus Safety Programme

Key findings

- TfL started the Bus Safety Programme (BSP) in 2016, with the intention to ‘drive major improvements in safety across London’s bus network’.
- We welcome any effort to improve safety, and the BSP is a step in the right direction.
- But the BSP does not tackle many of the issues we have identified in this investigation and it needs to be significantly strengthened.

- 7.1 TfL has committed to improving bus safety via its new Bus Safety Programme (BSP). However, we have doubts about the effectiveness of the BSP, which is limited in scope and progressing slowly.

The Bus Safety Programme deliverables are to:

- develop a world leading 'Bus Safety Standard' (BSS) for London
- update TfL's bus contracts to include new safety incentives
- provide a new safety training module to all 25,000 drivers
- provide a UK-first Incident Support Service for those affected by fatal or serious injuries
- publish additional bus collision data, making it more accessible
- provide greater transparency on bus collision investigations
- deliver safety highway engineering improvements at bus collision hotspots
- utilise iBus to monitor safety performance and bus speeds

- 7.2 TfL says that the BSP will deliver a 14 per cent decrease in bus passengers being taken to hospital in 2017-18, compared with 2016-17, reversing recent increases. As we noted in Chapter 5, TfL is relying heavily on new technology to improve bus safety. It also contains some welcome measures to improve whistleblowing and investigation processes.

- 7.3 However, we are concerned that the BSP will not achieve these objectives, mainly because it does not properly address some of the key safety issues we have identified in this investigation, in particular:

- how Quality Incentive Contracts could be used to encourage bus operators to prioritise safety
- the need to improve working conditions for drivers to reduce stress and fatigue, and to mitigate distractions that affect driver concentration
- how driver training needs to be made more consistent and relevant to real-world driving conditions
- the shortage of engineers that may be affecting maintenance standards
- how much could be learned from a more consistent and independent approach to incident investigation

- 7.4 Ultimately, TfL is responsible for the safety of bus services in London, yet it leaves too much in the hands of the operators. These operators work to the incentives that TfL sets and will follow its lead. We therefore call on TfL to prepare a new Bus Safety Programme that will address the issues we have identified, and implement a broader and more comprehensive approach to making London's buses safer.

Recommendation 11

TfL should publish an update on the Bus Safety Programme in January 2018. This should draw on learnings from the first two years of the BSP and address the issues and recommendations contained in this report.

Appendix 1

The International Bus Benchmarking Group (IBBG) is a comprehensive benchmarking programme for urban bus operations.⁴³ The IBBG is comprised of 15 large and medium size bus consortiums from around the world:

- Brussels
- Barcelona
- Dublin
- Istanbul
- Kuala Lumpur
- Lisbon
- London
- Montreal
- New York (2)
- Paris
- Seattle
- Singapore
- Sydney
- Vancouver



The Railway and Transport Strategy Centre at Imperial College London is responsible for managing the project.

Appendix 2

Bus Safety Standard timeline

On the Transport Committee's request TfL has recently published a timeline setting out key milestones for technological improvements to the bus network:

Bus safety technology - Programme activity	Dates
Invitation to tender sent out	March 2017
Tender awarded	April 2017
Publication of Bus Fatal File Research Report	April/May 2017
Development of the Bus Safety Standard (BSS)	April 2017 – mid-2018
Completion of a 'roadmap' for the BSS	Autumn 2017
Delivery of interim ISA technology on new buses	End of 2017
Publication of alterations to the Bus Specification	Mid-2018
Roll-out of manufactured buses meeting the new BSS	Winter 2018
Delivery of ISA via the new iBus 2 system	2020/21

Our approach

The Transport Committee agreed the following terms and conditions for this investigation:

- To examine recent trends in the performance of London's bus network
- To assess progress with TfL's bus safety programme and identify measures to reduce road collisions involving buses

At its public evidence sessions, the Committee took oral evidence from the following guests:

- Gareth Powell, Director of TfL Strategy and Contracted Services, TfL
- Jane Lupson, Bus Collision Reduction Programme Manager, TfL
- Tony Wilson, Managing Director, London & Surrey, Abellio
- Wayne King, Regional Coordinating Officer, Unite
- Chris Langer, Scheme Intelligence Manager, CIRAS (Confidential Incident Reporting and Analysis System)
- Sarah Hope, Victim's Support Consultant for TfL and Founder of the Sarah Hope Line and Elizabeth's Legacy of Hope

During the investigation, the Committee also received written submissions from the following organisations:

- 20s Plenty for Us
- Age UK Redbridge, Barking and Havering
- Campaign for Better Transport
- Chartered Institute of Logistics and Transport (CILT)
- CIRAS
- City of London Corporation
- Clapham Transport Users Group
- Enfield Town Residents Association
- Enfield Transport User Group

- London Borough of Bromley
- London Borough of Hackney
- London Borough of Redbridge
- London Borough of Richmond
- London Borough of Southwark
- London Borough of Sutton
- London Borough of Waltham Forest
- London Borough of Wandsworth
- London Councils
- London Cycling
- London Cycling Campaign
- London Forum of Amenity & Civic Societies
- London Living Streets
- London Road Safety Council
- Mobileye Vision Technologies Ltd.
- RoadPeace
- South London Partnership
- Sustrans
- The Clapham Society
- Transport for all
- Transport for London
- University of Westminster

Written submissions and transcripts from the series of roundtable meetings are published alongside this report.

References

- ¹ Kilometres travelled figures established using data published by TfL: <http://content.tfl.gov.uk/network-performance-latest-quarter.pdf> (quarter 4 2016/17) and <http://content.tfl.gov.uk/annual-performance-summary.pdf> (financial year 2016/17)
- ² Number of journeys established using data published by TfL: <http://content.tfl.gov.uk/q3-16-17-quarterly-performance-report.pdf> - p8
- ³ <http://www.bbc.co.uk/news/uk-england-london-39543921>
- ⁴ TfL quarterly bus safety publications, based on reporting from bus operators, 2015 and 2016 IRIS data: <https://tfl.gov.uk/corporate/publications-and-reports/bus-safety-data>
- ⁵ TfL quarterly bus safety publications, based on reporting from bus operators, 2015 and 2016 IRIS data: <https://tfl.gov.uk/corporate/publications-and-reports/bus-safety-data>
- ⁶ <http://content.tfl.gov.uk/sasp-20160310-p1-item08-bus-safety-programme.pdf>
- ⁷ Talking Points survey conducted by Talk London on behalf of the Transport Committee, February 2017
- ⁸ International Bus Benchmarking Group, RTSC, Imperial College London, presentation to IIPAG 18th May 2016
- ⁹ https://consultations.tfl.gov.uk/policy/mayors-transport-strategy/user_uploads/pub16_001_mts_online-2.pdf
- ¹⁰ <http://content.tfl.gov.uk/sshr-20161117-item10-bus-safety-programme.pdf>
- ¹¹ Transport Committee 2 February 2017, Transcript Agenda Item 6, Bus Safety
- ¹² Transcript from roundtable with bus operator representatives on bus safety, 14 February 2017
- ¹³ <http://content.tfl.gov.uk/uploads/forms/lbsl-tendering-and-contracting.pdf>
- ¹⁴ Rangel, Vassallo and Arenas, 2012: [http://oa.upm.es/20180/1/INVE MEM_2012_143442.pdf](http://oa.upm.es/20180/1/INVE_MEM_2012_143442.pdf)
- ¹⁵ Ibid.
- ¹⁶ Talking Points survey conducted by Talk London on behalf of the Transport Committee, February 2017
- ¹⁷ TfL, [TfL performance delivery 2015/16 and performance awards](#), report to Remuneration Committee, March 2016
- ¹⁸ TfL, [Health, Safety and Environment Report, 2014/15](#), p.5; TfL, [Health, Safety and Environment Report, 2015/16](#), p.5
- ¹⁹ TfL, [TfL performance delivery 2015/16 and performance awards](#), Appendix 1
- ²⁰ <https://tfl.gov.uk/corporate/safety-and-security/road-safety/london-collision>
- ²¹ In a 'bus and coach long term casualty trends' paper, TfL cites STATS19 data (police data) which shows a 55 per cent reduction in KSIs in the past ten years: <http://content.tfl.gov.uk/long-term-bus-casualty-trends-paper.pdf>

²² Department for Transport, Road accident casualties: a comparison of STATS19 data with Hospital Episode Statistics, 2006

²³ Letter from Mike Brown MVO to the Transport Committee, 15 June 2016

²⁴ For example: Bartlett, 1953; Friswell & Williamson, 2008; Williamson & Feyer, 2000

²⁵ <https://www.gov.uk/government/publications/think-fatigue>

²⁶ CIRAS is the confidential health and safety reporting scheme for transport employees.

²⁷ <http://www.ciras.org.uk/case-studies/case-studies-container/case-study-3-chris-langer-managing-fatigue/>

²⁸ <https://www.gov.uk/guidance/drivers-hours-passenger-vehicles/1-eu-and-aetr-rules-on-drivers-hours>

²⁹ Transcript from roundtable with bus operator representatives on bus safety, 14 February 2017

³⁰ Letter from Mike Brown MVO, Commissioner of Transport, TfL to Caroline Pidgeon MBE AM, Chair of the London Assembly Transport Committee, 24 April 2017

³¹ Submission to the Transport Committee's bus services call for evidence from the London Cycling Campaign, January 2017

³² <https://www.gov.uk/driver-cpc-training/how-much-training-you-need-to-do>

³³ Transcript from roundtable with bus operator representatives on bus safety, 14 February 2017

³⁴ <http://content.tfl.gov.uk/board-20161108-item10-bus-driver-training.pdf>

³⁵ Transcript from roundtable with bus operator representatives on bus safety, 14 February 2017

³⁶ A copy of the Big Red Book can be found here:
<https://www.transportforall.org.uk/files/bigredbook2014.pdf>

³⁷ http://questions.london.gov.uk/QuestionSearch/searchclient/questions/question_288662

³⁸ <http://www.transportengineer.org.uk/transport-engineer-features/independently-assessed/75287>

³⁹ There have been fatalities as a result of other causes including suicide and trespass at level crossings.

⁴⁰ CIRAS provided the following statement on this to the committee: "CIRAS advises reporters to try their own reporting channels first before being in contact. However, if a reporter has made a report internally and still feels their concern remains unaddressed, it will be processed by CIRAS if deemed valid. Additionally, if a reporter feels unable to report internally and there is a valid reason - for example, if they fear the consequences - the concern can be processed provided it meets the appropriate criteria."

⁴¹ Transport Committee 2 February 2017, Transcript Agenda Item 6, Bus Safety

⁴² This may include near miss incidents which tend not to be reported. TfL does gather complaints from road users about encounters with buses and, following a Mayor's Question from Caroline Russell AM, the complaint handling system has been updated to include a specific category for incidents when buses pass too close to cyclists.
http://questions.london.gov.uk/QuestionSearch/searchclient/questions/question_293840

⁴³ Information about the International Bus Benchmarking Group can be found at:
<http://busbenchmarking.org/>

Other formats and languages

If you, or someone you know, needs a copy of 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 दस्तावेज 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 একটি সারাংশ নিজের ভাষায় পেতে চান, তাহলে দয়া করে ফো করবেন অথবা উল্লেখিত ডাক ঠিকানায় বা ই-মেইল ঠিকানায় আমাদের সাথে যোগাযোগ করবেন।

Urdu

اگر آپ کو اس دستاویز کا خلاصہ اپنی زبان میں درکار ہو تو، براہ کرم نمبر پر فون کریں یا مذکورہ بالا ڈاک کے پتے یا ای میل پتے پر ہم سے رابطہ کریں۔

Arabic

الحصول على ملخص لهذا المستند بلغة،
فرجاء الاتصال برقم الهاتف أو الاتصال على
العنوان البريدي العادي أو عنوان البريدي
الالكتروني أعلاه.

Gujarati

જો તમારે આ દસ્તાવેજનો સાર તમારી ભાષામાં જોડતો હોય તો ઉપર આપેલ નંબર પર ફોન કરો અથવા ઉપર આપેલ ટપાલ અથવા ઈ-મેઇલ સરનામા પર અમારો સંપર્ક કરો.



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City Hall
The Queen's Walk
More London
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Enquiries 020 7983 4100
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