

# London Assembly Transport Committee

## Submissions to Bus Safety investigation – from organisations

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## **GLA Transport Committee: Call for evidence: bus services December 2016. Response from 20's Plenty for Us**

20's Plenty for Us is a community based organisation that campaigns for a default 20mph speed limit in urban environments in order to create a fairer balance between motor vehicles and people. We will focus our comments on the section of the Call for Evidence on Bus Safety and in particular question 13 - Would expanding 20mph zones be a good way of reducing collisions?

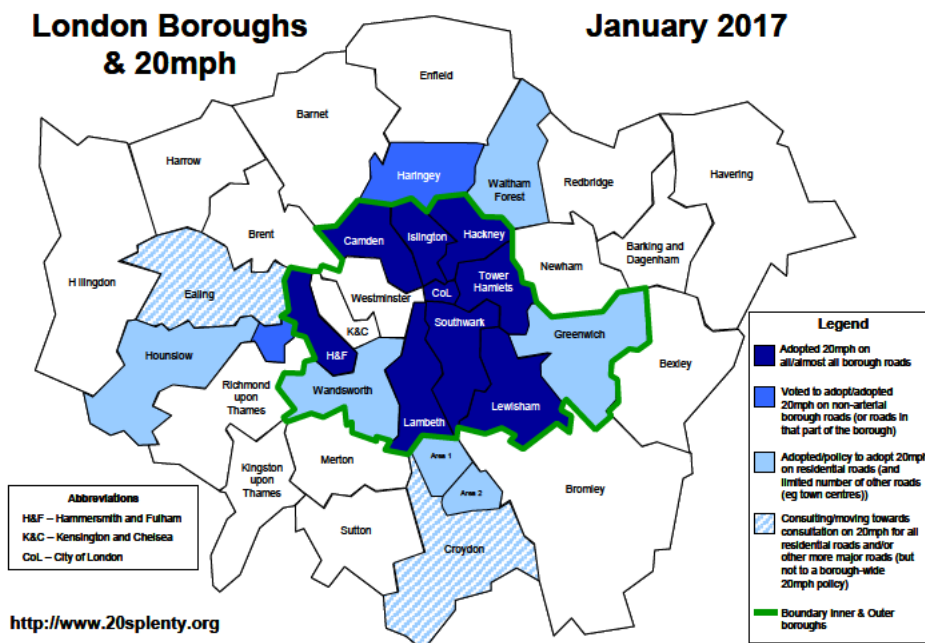
We note overall that buses are very much the lifeblood of the surface public transport in London and we are of course extremely supportive of the role that they play. Like the committee, we share concerns at the recent reduction in passenger journey numbers and we believe that wider use of 20mph speed limits can have a small but valuable role to play in helping reverse this decline. We believe that an expansion of 20mph speed limits (backed up measures to improve compliance with them by drivers) can help bus services by a) encouraging a smoother flow of vehicles and deliver greater levels of efficiency in the use of the existing road capacity, b) reduce casualty numbers in collisions that involve buses and c) encourage people to feel safer so that they take part in active forms of travel such as walking, cycling and using public transport. This will help bus services by reducing the numbers of people who feel that they prefer to travel by private vehicle and thus help reduce congestion. There is a significant body of evidence that 20mph limits encourage more people to walk and cycle and travel by public transport.

We believe that wider use of 20mph speed limits in London, and in particular on appropriate roads and streets in the Outer Boroughs can be beneficial for bus services and bus safety. Although there are a number of factors at play and collisions involving buses can often occur at speeds below 20mph, buses are over-represented in casualties involving personal injury in London. As we have seen in many studies and most particularly in the study of the London School of Hygiene and Tropical Medicine<sup>1</sup>, restricting motor vehicles to a maximum of 20mph in urban settings will result in a 42% reduction in the numbers of road casualties. In the urban parts of London (and with the obvious exception of arterial roads) we feel that the default speed should be 20mph in order to reduce casualties and encourage more people to walk, cycle and travel by public transport.

We are extremely encouraged by the initial findings of the bus ISA trial from 2015 and note that the resulting press release from TfL found that compliance was particularly good for buses in 20mph speed limit areas; in addition there was support for 20mph limits from drivers and passengers alike. We fully support the rapid roll out of the mandatory ISA across the bus fleet but feel that this needs to be backed up with the wider use of 20mph limits in the urban locations of London where they are not currently in place.

<sup>1</sup> <http://www.tfl.gov.uk/assets/downloads/corporate/20-mph-zones-and-road-safety-in-london.pdf>

The map below shows the take up by boroughs of 20mph limits. There are a number of boroughs with highly dense roads and street networks with little take up of 20mph limits and zones (eg LB Newham, Brent and the City of Westminster).



Irrespective of casualties we find we frequently receive comments from residents in London that the speeds at which buses travel are intimidating; owing to their size buses can have a disproportionate impact on how comfortable people feel in our London's high streets and town centres.

More generally we feel that there are a number of advantages for buses to operate in a 20mph speed limit environment in London:

- 1 Bus passengers benefit.** Every bus journey starts and ends with a pedestrian journey. 20mph speed limits make it safer, easier and more pleasant for bus users, particularly older people and those who are less mobile, to get to the bus stop.
- 2 Little effect on bus journey times.** Buses spend relatively little time travelling at more than 20mph, particularly in urban areas. Even on main bus routes a recent study found that less than 25% of the time was spent above 30km/h (18.5mph). At peak times this proportion is even less.
- 3 Easier for buses to re-join traffic.** Lower traffic speeds mean it is easier for buses to pull out into traffic after stopping.
- 4 More comfortable riding.** Bus passengers can often find speeds above 20mph uncomfortable whilst on the bus, especially in tight residential roads or town centres.
- 5 Less acceleration – less fuel.** The energy used to take a bus from 0 to 30mph is more than double that required to get up to 20mph. 20mph limits also encourage smoother driving with less acceleration and braking helping to reduce fuel consumption which is a large and ever increasing cost for bus companies.

**6 Closer journey times to motor cars.** 20mph speed limits affect higher speed vehicles proportionately more than lower speed vehicles. Hence 20mph limits cut any difference between bus and car journey times, making buses increasingly competitive time-wise.

**7 Lower crash costs.** When motor vehicles are travelling slower then everyone has more time to avoid collisions. Bus operators benefit from fewer crash repairs, less time with vehicles off road and lower insurance costs when operating in Total 20 towns.

**8 Less fear from buses.** Buses can be seen as a real risk to pedestrians if travelling fast within a residential area or town centre. Responsible driving will ensure the safety of existing bus users and the wider community, encouraging buses to be seen as an asset and perhaps increasing custom.

**9 Less stressful for drivers.** There can be no doubt that driving a large bus on our roads is a heavy responsibility. Slowing down traffic can create a far less stressful environment for drivers leading to better job satisfaction and better health.

**10 Society benefits.** Bus operators can play their role in making their communities better places to live by supporting and complying with 20mph speed limits.

Jeremy Leach London Campaign Co-ordinator 20's Plenty for Us  
29<sup>th</sup> January 2017

# 20's Plenty for Us

...making your place a better place to be

**From:** [James Monger](#)  
**To:** [Transport Committee](#)  
**Subject:** submission on call for evidence re bus services  
**Date:** 31 January 2017 16:54:19

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Hi,

I'm pleased that the London Assembly is conducting the current enquiry into bus services, which are so important to older people. As someone who has turned 60 himself, in addition to working with older people, buses have become important to me again in a way they have not been since I bought my first car aged 18. I now use bus, rail or underground whenever possible as I find driving in London extremely stressful.

I have 2 general and one specific observation:-

- 1) I do not know if it is caused by design or is still a matter of drivers in a hurry, but braking and pulling away are still much too sharp, despite complaints about this over many years. Drivers tend to keep going at the fastest possible speed (usually up to 30 mph) until the last possible minute then brake sharply. And they accelerate too rapidly. As someone who is still very fit and able, I nevertheless remain seated until the bus stops because I find I have to hang on very tightly not to be thrown over when the driver brakes. And woe betide you if you are not seated when the bus pulls away, especially if you are still climbing the stairs because the rate of acceleration will mean you are having to hold on for all you are worth in order to complete your journey to a safe seat
- 2) I have a number of experiences of a) bus drivers ignoring people signalling at bus stops they wish to catch the bus, despite being at the correct bus stop and there being room on the bus – is this because the driver is trying to make up lost time or is not being alert enough? And of b) drivers forgetting someone has pressed the bell to stop, sailing past their stop, then refusing to stop until the next bus stop, even though it is the driver's own fault and it is perfectly clear the bell had been pressed
- 3) The 145 service from Dagenham to Leytonstone is still very unreliable and has been for years. Some buses are cancelled completely – where it is supposed to arrive approx. every 12 minutes I have waited up to 35 minutes for one with all other bus services going at their usual regularity (indicating traffic problems are not a cause). And it is quite a common occurrence for the destination to be changed without warning and for the bus to terminate at Redbridge station or at Wanstead station, requiring passengers to get off and wait for the next one. This is totally unacceptable and I am not surprised that bus journeys are falling when services are so unreliable.

Thank you.

**James Monger**

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### General questions

#### 1. Is London's bus network fit for purpose?

It is far and away the best in the country but improvements could be made to facilitate interchange with other public transport modes or other buses. The reverse has recently happened at Archway and is threatened at Vauxhall and Highbury Corner. In some areas there are insufficient bus stops and being stuck in traffic for several minutes, yards from a stop while two trains go by, is frustrating. More generally, there has been a gradual movement of bus stops away from junctions to facilitate journeys in private vehicles to the detriment of bus users with poor mobility.

Many Opportunity Areas are not well connected and TfL is often slow to catch up with changing requirements.

#### 2. How does the bus system compare in inner and outer London?

Inner London: There is generally a choice of routes so that if information is provided on Countdown delays can be avoided. In outer London, we are dependent on there being no cancellations but reliability is better than it was 30 years ago. Outer London's bus services do not connect well enough areas of living, entertainment, sport, leisure, health facilities, retail, libraries, etc.

#### 3. What different challenges do the inner and outer networks face?

Designing the bus network. There are countless irregular visitors to central and inner London who rely on past knowledge of routes for whom major changes are a problem. New developments require changes which are slow to be implemented – local authorities should be more proactive in securing funding via s.106 agreements. Planning frameworks for Opportunity Areas should reflect the changes to the bus network needed. Connections with rail and tube stations are critical to travel in outer London.

#### 4. How well do TfL currently plan bus routes?

This is difficult to answer, because there is no adequate document setting out the criteria by which routes are planned and how a balance is drawn between conflicting desires. People campaigning for new routes feel that this balance is arbitrarily drawn, or else used as an excuse to resist change. We think the Assembly should insist on this being provided and kept up to date.

As noted above we feel TfL is slow to respond to new developments, but it needs to focus more on dealing with disruption to services and less on changing routes. The impact of Night Tube on buses must be reviewed and changes made where necessary.

#### 5. Does TfL take account of the London Plan and housing developments when planning bus routes?

Could they improve the way they make these decisions? Yes, but local authorities need to be more proactive as set out in (3) above.

#### 6. What bus priority measures has TfL already introduced and how successful are they?

There has been a dearth of new measures in recent years and some have been undermined by schemes to improve access for cyclists and pedestrians. Contra flow bus lanes are highly effective, e.g. Pentonville Road, Piccadilly; priority signals (e.g. Angel southbound) and bus gates. Other bus lanes require enforcement, too often they are negated by parked cars or drivers who cannot quite keep to their own lane. Bus priority signals are also highly effective, and self enforcing.

#### 7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?

It should have no effect on the route, but facilities for interchange should be reviewed.. Paying twice is not the only drawback to changing buses. Older people and those with disabilities do not pay but are seriously inconvenienced by having to change and wheelchair users add to dwell times which affects all users.

#### 8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?

Just to respond. There is nothing wrong with this. As London grows demand should be stimulated and it is necessary and sufficient to discourage car use. However, regular disruption from construction work suppresses demand, and more needs to be done to counter this.

#### 9. What tools does TfL have to monitor and forecast demand?

Alternative models and approaches. There is plenty of data about absolute numbers but it is only by experiencing a particular journey that the causes of delay/frustration that lead people away from bus use become apparent. There should be more

use made of user experience, e.g. passenger surveys.

10. What other approaches to network design should T/L be considering? As appropriate, please make reference to these or others:

- orbital routes•
- through routes•
- bus rapid transit systems•
- shuttles and hubs•

Many orbital journeys are unnecessarily difficult, e.g. the old 347A route from Uxbridge to Hemel Hempstead. People are forced to travel via zone 1 when a direct bus route would be as quick and remove pressure on overcrowded rail routes. Similarly, through routes will attract people, if they can be run reliably. There needs to be adequate means of limiting congestion, either with new CGZs or some other form of road pricing in order to make these longer orbital routes reliable. It is possible to work on a bus, but less so if you have to change. Shuttle services rarely see well filled buses – even in central London very few Red Arrow routes stood the test of time and quite rightly only two survive.

11. Is it a good idea for T/L to consider different types of network for different areas of London? How could this work in practice? There may well be scope for the introduction of intermediate modes (between bus and tube), particularly if the City in the East is to be effective and sustainable.

12. How successful have existing express routes been, such as X26 and 607? The X26 is a valuable orbital route. The 607 seems to be more successful at peak periods when a longer walk occasioned by having fewer stops still gives a net saving in time.

#### Making changes to the network

13. What can we learn from others cities about successful/unsuccessful bus network redesign?

Nottingham, York and Oxford have made significant improvements to their buses but they are so different to London I am not sure how relevant they are.

14. What are the challenges associated with this kind of large-scale change to the bus system?

Getting the information to regular but infrequent visitors. There is over-reliance on technology and an assumption that everyone

goes around with a “smart” portable telephone. They are easy to use to track buses that run, but inadequate when bus routes are being curtailed, as was happening at the time of writing with all Holloway Road routes. There was no explanation on bus stops around Bank for the lack of 43 buses beyond the alteration of the disc displaying the number to a blue background and the legend “nights only”, and no indication of their revised starting point.

15. Could T/L improve the way it consults the public on proposed changes to bus routes? You can always improve. How? The economic appraisal of bus routes needs to be far more transparent, it is not good enough to dismiss consultee’s ideas without explanation. Some users have expressed surprise to be consulted by e-mail about a change that does not affect them, because it relates to a different section of a route to that which they use. Others are caught out by changes such as re-routing the 9 away from Piccadilly Circus because they are very occasional users of the 9. It should be made clear why people are being consulted, and consultation should be widened to include everyone who has used any bus on the relevant street.

#### Safety: General questions

1. What should T/L’s priorities be for delivering a safe bus network? All contracts should place greater incentive on safety than on meeting journey time targets. In particular, the full length of the bus should pull right up to the kerb and right up to the stop when there is a queue of buses.

2. Are you aware of any particular accident blackspots? Not recently. Use of diversionary routes not normally home to buses has resulted in more accidents. The solution is not to abandon these routes but to ensure they are designed and signed appropriately.

3. What are the particular safety concerns for:

- Passengers on buses• Behaviour of other passengers, in the absence of a conductor; lack of accessible seats in the lower saloon
- Other road users

We welcome the recent judgement asserting the greater rights of a wheelchair user over someone with a foldable buggy. We believe the notices on London’s Buses are clearer than that in use in the test case.

There is some evidence that in the absence of conductors bus passengers are less considerate than tube passengers, because it is easier to use a portable telephone on a bus. This particularly applies in making room for others to board or alight.

4. How are operators and drivers incentivised to prioritise safety? Should be through the award of contracts.

5. Should operators face contractual financial penalties for poor safety records? Yes, or loss of contracts.

6. Are drivers provided with adequate 'driving skills' training? Don't know

7. How effective is this training (which is delivered by individual operators)?

8. Should there be a 'London standard' for driving skills training (which would likely result in T/L managing the training)? It is one way of potentially raising standards.

9. How are incidents managed by T/L and by the operators? What kind of support is available to those involved in bus collisions and incidents?

#### Technology

10. Has T/L taken advantage of new technologies to make buses safer?

11. What other technology advances should T/L consider piloting? Infrastructure and design

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved? Yes. I would prefer to see cycle routes on parallel roads not used by buses, but cyclists will not use routes that involve a significant lengthening of their journey time.

13. Would expanding 20mph zones be a good way of reducing collisions? It would reduce their severity, not their number.

14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions? Yes, but there are more pressing reasons for bus lanes. Narrow lanes can add to danger for cyclists.

**EVIDENCE FOR THE LONDON ASSEMBLY TRANSPORT COMMITTEE**  
**INVESTIGATION OF BUS SERVICES**  
on behalf of  
**THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT (CILT)**  
**LONDON AND SOUTH EAST REGIONS**

**Part 2: Bus Safety**

1. The Chartered Institute of Logistics and Transport (CILT) is a professional body with more than 18000 members in the Transport and Logistics Industries. We welcome the opportunity to respond to the call by the London Assembly's Transport Committee for evidence in relation to its current investigation into Bus Services, specifically how Transport for London (TfL) plans the bus network and how TfL is trying to improve bus safety. This paper has been assembled by a group representing CILT's London and South East Regions together with its Bus & Coach Forum. The team reflects a wide spectrum of professional views of members involved in planning, procuring and operating bus and coach services both within and beyond London together with the experiences of many of them as frequent users of London Bus Services. This part of CILT's response considers aspects of safety and making the network safer for buses, their passengers and their drivers. Part 1 deals with the Committee's questions on bus network planning.

**Summary of responses to the Committee's Questions**

**Introduction**

- i. There are five aspects of safety in the bus network can be specifically identified:
  - Harmful health effects that may arise, whether for the public at large, bus staff, passengers or other road users.
  - Safety of the buses as vehicles, including design features and operational characteristics.
  - The driver's role and attributes including factors to be considered in selection and training.
  - Safety of passengers within the vehicle, waiting at bus stops or stations, boarding and alighting.
  - The roles of the operating companies and TfL & LBSL as network planners and managers.
- ii. There are other harmful effects on health apart from accidents causing physical injury. These include stress and other mental harms which can also lead to associated physical conditions. Bus drivers and their passengers may experience significant stress as a result of pressures from late running and unreliable services and other adverse effects can occur as a result of disturbances to the work-life balance.

**S1: What should TfL's priorities be for delivering a safe bus network?**

- iii. Safety should be an overarching priority, embedded in all the organisation's policies and programmes. If safety cannot be assured there will be a real public trust problem.
- iv. Constant vigilance is required through regular monitoring of all available data.

**S2. Are you aware of any particular accident blackspots?**

- v. There is a danger that directing treatment to 'blackspots' may distort analysis of the effectiveness of safety measures.
- vi. Blackspots may be identified geographically from local knowledge and cross analysis of different datasets. As well as statistical datasets, less formal data from drivers' feedback, passenger and public comments or social media may give warning of incipient problems.

**S3: What are the particular safety concerns for:**

- a. Passengers on buses?
- b. Other road users?
- vii. For both passengers on buses and other road users, safety concerns largely arise from the way the bus is driven. Bus drivers should have a broad skill set. Appropriate recruitment and training procedures will ensure as far as possible that the corps of drivers is well suited to the profession.
- viii. For other road users, there are specific concerns for the interaction of cyclists with large vehicles and pedestrian behaviour.
- ix. TfL is a leader in promoting the development both of vehicle design modifications and of safe driving techniques to enhance safety, particularly for cyclists, and the contracted bus operators will be well aware of such developments. Bus driver training naturally emphasises awareness of pedestrians so, all things being equal, we would expect that bus drivers are amongst the best equipped on the roads to deal with interactions with the “slow modes” of walking and cycling.

#### **Operators and drivers**

**S4: How are operators and drivers incentivised to prioritise safety?**

**S5: Should operators face contractual financial penalties for poor safety records?**

*(NB: Questions 4 and 5 have been considered together).*

- x. As far as we are aware there is no provision in bus service contracts to reward or, conversely, penalise operators for their safety records. We do not believe it would be appropriate to do this. A record of failing to manage safety appropriately should debar an operator from holding TfL contracts so would be dealt with in pre-qualification procedures, whilst evidence of consistent disregard of safety (for example through deteriorating maintenance or driving standards) should result in immediate suspension or termination of contracts.
- xi. This needs to be assured through high quality, ongoing training and performance monitoring of maintenance and driving staff so that problems are detected and rectified as early as possible.

**S6: Are drivers provided with adequate ‘driving skills’ training?**

**S7: How effective is this training (which is delivered by individual operators)?**

**S8: Should there be a ‘London standard’ for driving skills training (which would likely result in TfL managing the training)?**

*(NB: Questions 6, 7 and 8 have been considered together).*

- xii. We understand that all contractors are independently responsible for their driver recruitment and training and this should be the case. Drivers need a broad skill set which includes not only safe and smooth driving but customer awareness and incident management.
- xiii. We believe that all contractors deliver effective training. There is no reason why companies should not use the programmes they use across the UK but TfL should benchmark driving standards and enforce the transfer of good practice.
- xiv. There should in fact be a UK standard although a city like London may need a stronger monitoring and enforcement regime due to its sheer size and traffic levels. There may still be a London minimum standard (operators might still add customer care enhancements for example but safety would be common across all). This doesn't necessarily mean TfL has to manage delivery of the training.
- xv. Practical and ongoing support for professional drivers is needed. Drivers should be encouraged to feedback on matters that “bug” them and they should be told directly of action taken. Situations where frustrations build and safety may potentially then move to the margins are to be avoided.

**S9: How are incidents managed by TfL and the operators? What kind of support is available to those involved in bus collisions and incidents?**

- xvi. We have no detailed knowledge of incident management procedures although we observe faster response and quicker communication with users (for example through iBus signs) than elsewhere. We believe the close relationships (at least centrally) between TfL and the Metropolitan Police facilitate incident management “on the street”.
- xvii. An important, and hitherto under-appreciated, aspect of incident management is support to those affected, both victims and witnesses, and staff involved. In addition to physical injury and treatment, trauma and stress may result. The Sarah Hope Line offers practical support including financial, visiting and counselling.
- xviii. The use of the Sarah Hope Line effectively separates the human and legal procedures necessary in the aftermath of incidents that the Sarah Hope Line describes as “life changing”.

## Technology

**S10: Has TfL taken advantage of new technologies to make buses safer?**

- xix. Automation of vehicles is advancing and many systems with other prime functions can also be used to assist safer operation. We understand that TfL and the operators incorporate the latest aids to safety within specifications for new buses and, where appropriate, roadside equipment.

**S11: What other technology advances should TfL consider piloting?**

- xx. There is considerable interest in driverless technology and driverless buses are on trial in controlled environments in several countries. The control algorithms, particularly for collision avoidance, used in driverless vehicles can be incorporated in vehicles under human control. They can also assist in improving driving techniques and we would expect that TfL will be considering their use as the technology matures.

## Infrastructure and Design

**S12: Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?**

- xxi. Unfortunately recent emphasis on cycling may have over-compensated at the expense of buses - there is dangerous conflict at bus stops when there are many cyclists and the speed in shared bus and cycle lanes can reduce to that of the most sedate cyclist.
- xxii. Reallocation of road space is an essential tool in congestion management and improvement of bus performance. The design philosophy for both buses and cyclists in traffic needs to be rethought with appropriate standards.

**S13: Would expanding 20mph zones be a good way of reducing collisions?**

- xxiii. We believe 20mph zones to be a useful tool in residential areas rather than main road corridors where slow traffic can be detrimental to service reliability. Over or blanket use of 20mph limits may devalue the overall benefit of what can be a very beneficial tool.

**S14: Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

- xxiv. It is not generally appreciated that by imposing greater discipline on traffic flows bus priorities are good for safety also. Bus lanes are not the only fruit, there are other examples of tools that can improve both bus performance and safety.

## Introduction

2. It used to be a maxim of the syllabuses leading to professional qualifications awarded by the Chartered Institute of Transport (a predecessor of CILT) that “safe arrival is all”. Safety has to be the first and foremost consideration of all those involved in the design and management of London’s traffic and bus networks and their suppliers and contractors. An uncompromising approach is needed to safety in all forms of transport.
3. Inherently public transport in London is safe. Inevitably major incidents involving buses are widely reported in the media, as much because of their relative rarity as for the harms caused, whereas unfortunately most incidents involving cars only go unnoticed leading to public misconceptions that buses might be less safe than cars. Unfortunately, the bus industry generally is slow to promote its positive aspects.
4. Whilst traffic accidents involving buses and accidents to passengers in moving vehicles or boarding and alighting command most public attention, we suggest that **five aspects of safety in the bus network can be specifically identified:**
  - **Harmful health effects that may arise, whether for the public at large, bus staff, passengers or other road users.**
  - **Safety of the buses as vehicles, including design features and operational characteristics.**
  - **The driver’s role and attributes including factors to be considered in selection and training.**
  - **Safety of passengers within the vehicle, waiting at bus stops or stations, boarding and alighting.**
  - **The roles of the operating companies and TfL & LBSL as network planners and managers.**
5. The relationship of transport to health is a large topic. The Mayor and TfL are addressing harmful pollution effects through Low Emission Zones, Air Quality targets and the introduction of electric, hybrid and other low emission buses and taxis. However, **there are other harmful effects on health apart from accidents causing physical injury. These include stress and other mental harms which can also lead to associated physical conditions. Bus drivers and their passengers may experience significant stress as a result of pressures from late running and unreliable services and other adverse effects can occur as a result of disturbances to the work-life balance.**
6. In this response we follow the Transport Committee’s questions that are directed mainly to the relationships between TfL and its bus service contractors; driving skills, standards and training; the use of technology to improve safety; and infrastructure.

## Bus Safety: General Questions

1. **What should TfL’s priorities be for delivering a safe bus network?**
7. In any transport organisation **safety should be an overarching priority, embedded in all the organisation’s policies and programmes. If safety cannot be assured there will be a real public trust problem.**
8. Although an aim of eliminating safety risks may be adopted (so called “zero tolerance”), it is never realisable in practice. Even if the system operates perfectly, external events may threaten safety and even in the best designed systems it is impossible to be certain that all eventualities have been considered. **Constant vigilance is required through regular monitoring of all available data.** In the delivery chain for London bus services TfL themselves have established a web-database of safety statistics and should be ensuring that their operators are monitoring other sources of data such as cctv recordings (which are normally not permanently retained but

are overwritten after a period). Customer comments and complaints received through various channels including social media may help identify previously unrevealed safety threats.

**2. Are you aware of any particular accident blackspots?**

9. Since most road accidents are thankfully relatively rare, **there is a danger that directing treatment to 'blackspots' may distort analysis of the effectiveness of safety measures**, as can be seen in the regression to the mean (RTM) effect in analysing the outcomes of safety (commonly termed 'speed') cameras for road casualties in general.
10. **Blackspots may be identified geographically from local knowledge and cross analysis of different datasets** (for example operator and Police reports). **As well as statistical datasets, less formal data from drivers' feedback, passenger and public comments or social media may give warning of incipient problems.** It is important to identify particular types of incidents (for example internal injury from sharp braking for collision avoidance or at traffic lights). Blackspots tend to be at junctions where there are particular problems, for example between drivers of large vehicles and cyclists as at Bow Roundabout which has since been redesigned and is contained within a Cycle Superhighway.

**3. What are the particular safety concerns for:**

- a. **Passengers on buses?**
- b. **Other road users?**

11. **For both passengers on buses and other road users, safety concerns largely arise from the way the bus is driven. Bus drivers should have a broad skill set** encompassing not simply control of vehicle, but good spatial awareness, anticipation and reaction; the ability to remain calm and take control in the event of an incident, empathy and appropriate interpersonal skills. **Appropriate recruitment and training procedures will ensure as far as possible that the corps of drivers is well suited to the profession.**
12. Smooth driving techniques including acceleration and braking are very important to bus passengers as the majority of incidents causing injury or conflict arise on the bus and in the vicinity of bus stops where the driver needs to supervise boarding and alighting as well as ensure passes and permits are checked and payment taken if necessary.
13. **For other road users, there are specific concerns for the interaction of cyclists with large vehicles – buses, lorries and vans.** In some positions, particularly turning at junctions, the drivers' visibility of cycles may temporarily be reduced at a time where the driver has to evaluate the positions of other vehicles ahead of, alongside and behind the bus.
14. Another problem area is **pedestrian behaviour** including running (from all directions!) to attempt to board buses whilst the doors are still open (or have recently closed!); crossing roads weaving through vehicles in heavy, slow moving traffic streams or crossing in unexpected locations. Such problems affect not only the main arterial routes but also suburban streets and rural lanes.
15. **TfL is a leader in promoting the development both of vehicle design modifications and of safe driving techniques to enhance safety, particularly for cyclists,** and the contracted bus operators will be well aware of such developments. **Bus driver training naturally emphasises awareness of pedestrians so, all things being equal, we would expect that bus drivers are amongst the best equipped on the roads to deal with interactions with the "slow modes" of walking and cycling.**
16. We shall cover later the potential use of technology to improve safety in general.

**Operators and drivers**

4. **How are operators and drivers incentivised to prioritise safety?**
5. **Should operators face contractual financial penalties for poor safety records?**

*(NB: Questions 4 and 5 have been considered together).*

17. **As far as we are aware there is no provision in bus service contracts to reward or, conversely, penalise operators for their safety records. We do not believe it would be appropriate to do this. A record of**

failing to manage safety appropriately should debar an operator from holding TfL contracts so would be dealt with in pre-qualification procedures, whilst evidence of consistent disregard of safety (for example through deteriorating maintenance or driving standards) should result in immediate suspension or termination of contracts.

18. As safe operation should be a prime objective of any provider of transport services all contractors should ensure safety and comfort of passengers as well as have regard to the safety of other road users and pedestrians. **This needs to be assured through high quality, ongoing training and performance monitoring of maintenance and driving staff so that problems are detected and rectified as early as possible.**

6. Are drivers provided with adequate 'driving skills' training?

7. How effective is this training (which is delivered by individual operators)?

8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?

*(NB: Questions 6, 7 and 8 have been considered together).*

19. We understand that all contractors are independently responsible for their driver recruitment and training and this should be the case. As previously noted, drivers need a broad skill set which includes not only safe and smooth driving but customer awareness and incident management. Good driving skills also aid the environment.

20. We believe that all contractors deliver effective training but anecdotal evidence has been received that suggests that some company's (or maybe some garage's) drivers are consistently better than others. **There is no reason why companies should not use the methods they use across the UK but TfL should benchmark driving standards and enforce the transfer of good practice.**

21. There should in fact be a UK standard although a city like London may need a stronger monitoring and enforcement regime due to its sheer size and traffic levels. There may still be a London minimum standard (operators might still add customer care enhancements for example but safety would be common across all). **This doesn't necessarily mean TfL has to manage delivery of the training.**

22. There is still a need for better **practical and ongoing support for professional drivers**. Constant monitoring, especially if intrusive, or well-intended but abstract training initiatives can lead to cynicism that management is "ticking boxes". Conversely "down to earth" briefings, talks, sharing experiences and correctly addressing issues faced by front line staff are appreciated. **Drivers should be encouraged to feed back on matters that "bug" them and they should be told directly of action taken** (or the reasons why it was not possible to act). **Situations where frustrations build and safety may potentially then move to the margins are to be avoided.**

9. How are incidents managed by TfL and the operators? What kind of support is available to those involved in bus collisions and incidents?

23. We have no detailed knowledge of incident management procedures although we observe faster response and quicker communication with users (for example through iBus signs) than elsewhere probably because of the greater control resources available to TfL and operators in London. We believe the close relationships (at least centrally) between TfL and the Metropolitan Police facilitate incident management "on the street".

24. **An important, and hitherto under-appreciated, aspect of incident management is support to those affected, both victims and witnesses, and staff involved. In addition to physical injury and treatment, trauma and stress may result.** Historically the fear of legal action and the consequences of any suggestion of acceptance of liability aided and abetted by the imported cultures of blame attribution and ambulance chasing meant that an institutional blackout was imposed on contact between TfL and the operators with those affected by incidents.

25. Following good practice established in the rail industry, **the Sarah Hope Line offers practical support including financial, visiting and counselling.** For staff, counselling and support from operators is much

improved in recent years. The use of an independent, but fully recognised and assisted, support agency in the Sarah Hope Line effectively separates the human and legal procedures necessary in the aftermath of incidents that the Sarah Hope Line describes as “life changing” – possibly “life affecting” would be a better term.

## Technology

10. Has TfL taken advantage of new technologies to make buses safer?
26. Automation of vehicles is advancing and systems such as speed limiters, automatic fault monitoring and reporting, improved radio communication and automatic vehicle location or on vehicle cctv all can be used to assist safer operation. We understand that TfL and the operators incorporate the latest aids to safety within specifications for new buses and, where appropriate, roadside equipment.
11. What other technology advances should TfL consider piloting?
27. There is considerable interest in driverless technology and driverless buses are on trial in controlled environments in several countries. The control algorithms, particularly for collision avoidance, used in driverless vehicles can be incorporated in vehicles under human control. They can also assist in improving driving techniques and we would expect that TfL will be considering their use as the technology matures.

## Infrastructure and Design

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?
28. Buses and Pedal Cycles are conventionally treated as modes that require to use the kerbside lane (“share the gutter” as disparagingly termed by some motorists) and consequently to interact with other traffic servicing residential or commercial frontages, building and maintenance operations and the like.
29. Unfortunately recent emphasis on cycling may have over-compensated at the expense of buses - there is dangerous conflict at bus stops when there are many cyclists and the speed in shared bus and cycle lanes can reduce to that of the most sedate cyclist. “Floating bus stops” can be a particular problem where both pedestrian and cycle flows are high, with prospective bus passengers running to catch an approaching bus, cyclists speeding to get through a junction on the next green phase, each group temporarily oblivious to the other with consequent collision dangers.
30. Reallocation of road space is an essential tool in congestion management and improvement of bus performance. The design philosophy for both buses and cyclists in traffic needs to be rethought with appropriate standards.
13. Would expanding 20mph zones be a good way of reducing collisions?
31. We have no reliable evidence but we believe 20mph zones to be a useful tool in residential areas rather than main road corridors where slow traffic can be detrimental to service reliability. The tool is very much a “horses for courses” measure that can have a good general safety impact where appropriately used, but where applied on blanket basis can adversely affect performance and revenue. Over use of 20mph limits may devalue the overall benefit from a potentially highly beneficial tool. Over use of 20mph limits may devalue the overall benefit from a potentially highly beneficial tool.
14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?
32. It is not generally appreciated that by imposing greater discipline on traffic flows bus priorities are good for safety as well as improving service reliability and journey speeds. Bus lanes are not the only fruit, bus advance signals and priority pedestrian crossings at busy bus stops are other examples of tools that can improve both bus performance and safety.

**From:** Paul Russell - Head of CIRAS; Chris Langer – Scheme Intelligence Manager, CIRAS

**To:** The London Assembly – Call for Evidence

**Date:** 26<sup>th</sup> January 2017

**Subject:** Confidential reporting in Transport for London bus operators

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## **Summary of Findings: A Year of Confidential Reporting in the Bus Sector**

### **Background to CIRAS**

CIRAS is a confidential incident reporting and analysis service, operating since 1996 and today delivering assurance for member organisations across all transport modes in the UK. Its roots are in the mainline railway, and after the catastrophic incident at Ladbroke Grove, (also known as the Paddington train crash) which occurred on 5 October 1999 in London, United Kingdom, when 31 people were killed and more than 520 injured, CIRAS was embraced by the rail industry.

Twenty years later, the scheme now has circa 1800 member organisations from all forms of transport, supply chain. Since 2014, it has opened its services to other transport operators such as bus, HGV and marine. CIRAS is now open to all transport operators, infrastructure organisations and their supply chain. It became a private company on 6<sup>th</sup> December 2016, remains a “Not for Profit” organisation governed by its members.

The service offers members a corporate safety net that ensures safety, health or other concerns are captured internally and with CIRAS help, investigated to a successful and satisfactory conclusion. The scheme expertly facilitates a resolution. We also collect information about factors that persuade staff to use a confidential reporting scheme in the first place. This information may help provide our members with insight into the potential culture within their organisation.

For the staff of member organisations, CIRAS offers an alternative truly independent confidential reporting line. Staff can speak in confidence with us, knowing their identity will never be shared.

CIRAS also exploits opportunities for sharing member solutions, solutions that have themselves been implemented by members in response to reports raised to CIRAS. The sharing of learning from potential incidents is critical to accident/incident prevention.

On 4<sup>th</sup> January 2016, CIRAS began providing its confidential reporting service for health and safety issues to Transport for London bus operators.

### **Contacts, reports and redirects**

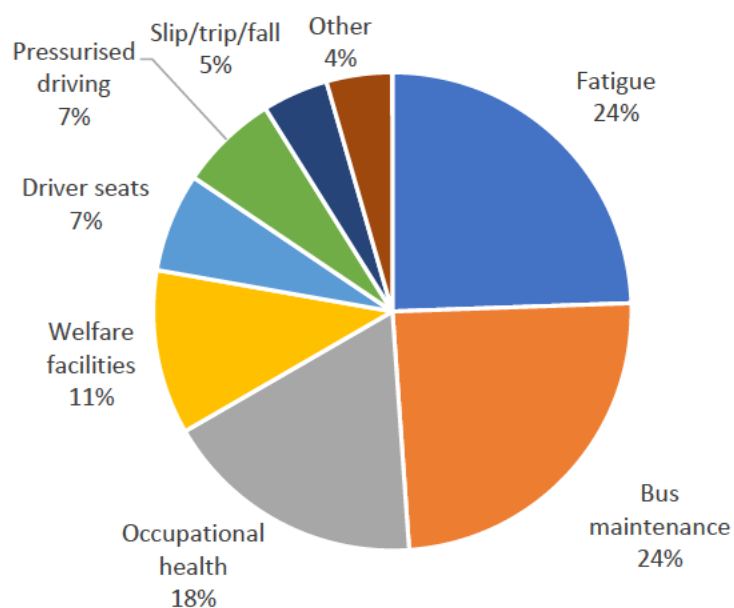
In this period running from 4<sup>th</sup> January to 31<sup>st</sup> December 2016, CIRAS received a total of 72 contacts from employees in the bus sector. Of these 72 contacts, 45 became CIRAS reports and 27 were categorised as redirects. Re-directs are events that CIRAS cannot guarantee the confidentiality of the person making the report, or may be a real-time event – for example, where someone reports someone else who may be under the influence of alcohol or drugs.

The summary below provides an insight into the nature of the reports that were treated as confidential. In addition, some very interesting findings on the perceived safety culture at the reporters' workplaces are presented.

CIRAS took 45 reports with employees who work in the bus sector in 2016. The issues they reported are listed in table 1 below. These issues are also represented as percentages in pie chart 1. The two most reported categories were *Fatigue* and *Bus maintenance*, each with a 24% share of the total.

| Issue               | No. of reports |
|---------------------|----------------|
| Fatigue             | 11             |
| Bus maintenance     | 11             |
| Occupational health | 8              |
| Welfare facilities  | 5              |
| Driver seats        | 3              |
| Pressurised driving | 3              |
| Slip/trip/fall      | 2              |
| Other               | 2              |
| <b>Total</b>        | <b>45</b>      |

Table 1: Main issues of bus reports to CIRAS 2016



Pie Chart 1: Main issues of bus reports to CIRAS 2016 (%)

### Risk profiling

The risk of having a collision whilst fatigued has been highlighted by reports in this subject area. There were 11 confidential reports in this area. The risk is potentially increased through long hours associated with particular shift patterns and breaks perceived as inadequate. In this connection, some drivers felt that the poor condition of the driver's seats could exacerbate the problem, as well as contribute to long-term health problems.

In terms of the maintenance of buses, some reporters did not feel long standing defects were being effectively addressed, resulting in a lack of confidence in the bus they were driving and in the reporting process in general. In one case, a concern was raised about brakes and a lack of faith was expressed in the company's internal reporting system to address the issue. The risk is that other serious defects could potentially go unreported in these circumstances.

Occupational health risks experienced by some drivers - in one case exposure to diesel fumes within the cab - have also been cited as a potential factor that can affect drivers' ability to concentrate effectively whilst driving, adding an additional risk.

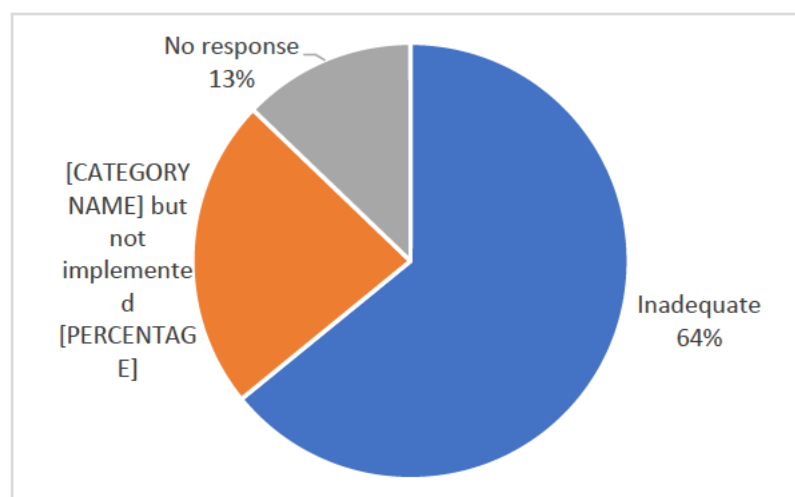
It is also worth noting that some drivers specifically reported the pressure they were under whilst driving as a safety risk, which could lead to feeling stressed out, unable to concentrate effectively, and liable to take risks in order to meet tight scheduling demands.

The 45 reports may be indicative of wider trend, but some caution must be applied in extrapolating too much from a relatively small sample.

### Internal reporting before CIRAS

CIRAS interviewers also ask a specific question on 'if the concern they are raising has been reported internally or not'. In total, 91% of the concerns had been raised internally. The reporters' perceptions of the internal response in these cases is shown in pie chart 2.

In 64% of cases, the response was perceived as 'inadequate' and failed to address the reporter's concern. In 23% of cases, the response was perceived as 'adequate but not implemented'. In other words, the response seemed reasonable to the reporter, but nothing had changed in practice. In 13% of cases, no response at all had been received in relation to a health or safety concern raised.

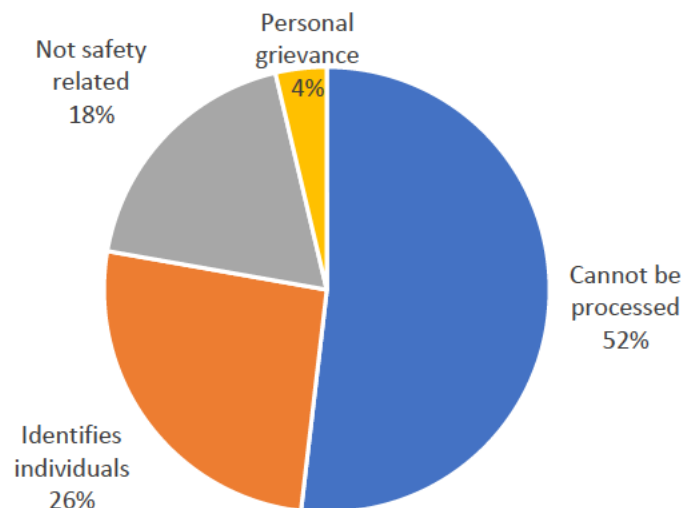


*Pie Chart 2: Why internal reporting is bypassed and/or CIRAS used (%)*

### Redirects

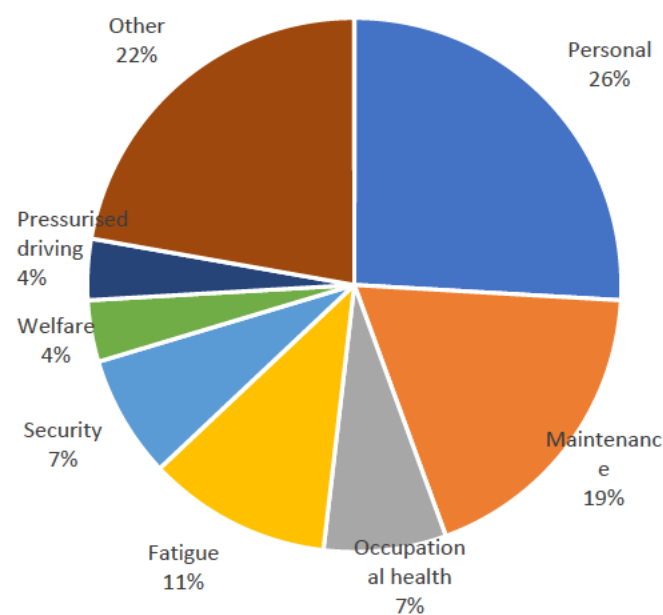
In 2016, CIRAS took 27 calls which did not become CIRAS reports, but were instead categorised as 'redirects'. The reasons these calls were redirected are shown in the pie chart. In 52% of cases, it

was not possible to take the concern forward as a CIRAS report (usually because the reporter declined to be interviewed or did not provide contact details). This is shown in pie chart 3.



*Pie Chart 3: Breakdown of redirects by reason for redirection (%)*

Pie chart 4 provides some context for the content of the contacts which ended up being redirected for the reasons cited in pie chart 3.



*Pie Chart 4: Breakdown of redirects by content of issue (%)*

## Results from safety reporting and culture questions

In 2016, CIRAS developed a series of safety related questions to gain further insight into the safety and reporting cultures that exist across the transport industry. During the interview, reporters are asked to agree or disagree with specific statements and are given the opportunity to provide additional comments.

The 2016 responses for the bus sector, which have been divided into 'work reporting practices' and 'attitudes towards safety reporting', are presented below. Please note that 2017 has seen the addition of a further two questions regarding safety briefings and approaching colleagues who may be undertaking unsafe behaviour.

*Table 1 Safety culture questions relating to health and safety reporting practices (n=33)*

|                                                 | % Agree | % Disagree | Sometimes |
|-------------------------------------------------|---------|------------|-----------|
| If I report a safety issue, I get good feedback | 24      | 70         | 6         |
| I'm clear on what safety issues can be reported | 79      | 21         | 0         |
| I will always report a near miss or close call  | 61      | 33         | 6         |

*Table 2 Safety culture questions relating to building a positive attitude towards safety reporting (n=33)*

|                                                                         | % Agree | % Disagree | Sometimes |
|-------------------------------------------------------------------------|---------|------------|-----------|
| Safety reporting is encouraged in my company                            | 45      | 52         | 3         |
| If I raise a health and safety issue, it is taken seriously by managers | 24      | 70         | 6         |
| Managers praise staff who report safety issues                          | 18      | 76         | 6         |
| My company promotes the value of reporting systems                      | 33      | 61         | 6         |

It is worth highlighting that 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.

There were 57 additional comments provided by reporters across all the safety culture questions. These comments highlighted two main themes to arise.

The first theme was that reporters were concerned that their safety issue would be overlooked and therefore not progressed any further.

The second was that reporters were concerned about the impact safety reporting may have on their employment conditions (e.g. submitting a safety report may result in criticism, disciplinary actions and/or job loss). These themes, support, and may provide further insight into why the three items “If I report a safety issue, I get good feedback”, “If I raise a health and safety issue, it is taken seriously by managers” and “Managers acknowledge staff who report safety issues” had the lowest levels of agreement amongst the reporters interviewed.

### **Human Factors activities: Fatigue roadshow events**

Fatigue was one of the more regular issues raised by bus drivers. In CIRAS events, it became apparent that this was also of concern to those responsible for safety within the bus companies. The rail industry members have also been tackling the issue of fatigue for many years and CIRAS continues to receive reports from the rail industry, mainly from the supply chain. However, the solutions that rail organisations had implemented we recognised would benefit TfL bus members and since the summer, CIRAS has worked with bus companies to share solutions that have previously been worked on and shown to improve the management of fatigue.

Chris Langer, Scheme Intelligence Manager at CIRAS, and Monica Monti, HSQE Manager at Abellio Bus, worked together to create and deliver a series of fatigue management roadshows for bus drivers at six Abellio depots. When bus drivers were booking on, they were asked if they would like to see a short video presentation called 'fatigue management for shift workers'.

Monica Monti, HSQE Manager at Abellio London & Surrey, provided some very positive feedback: “We aim to educate employees on the risks posed by fatigue. To achieve this, we enlisted the CIRAS and through collaborating, we raised the profile of fatigue amongst our staff, thus continuously improving on our safety record.”

The fatigue video covers what fatigue is, the risks of driving when fatigue, and how to manage it. The emphasis is on the responsibility both employers and employees share for managing fatigue. The content also covers the influence of sleep, food, diet, lifestyle and the strategic use of napping.

In addition to the Abellio workshops, there have been two drop-in sessions for Go-Ahead Bus organised by the CIRAS membership team. One was based on the fatigue video and the second was around improving safety reporting. This second event was in conjunction with their inter-garage annual risk competition aimed at increasing close call reporting, and raising awareness around health and Safety issues. Another session is being planned for 31 January 2017.

Though designed with the bus sector in mind, the fatigue video has been posted widely on company intranet sites in different transport sectors and can be streamed from the CIRAS website.

### **Continuous engagement**

In November 2016, CIRAS hosted a round-table discussion forum for the TfL London bus operators. The aim of this forum was to review the first 10 months of their CIRAS membership, review how

CIRAS could better support the bus members and answer any questions. The forum was a success and feedback was extremely positive. The operators valued the opportunity to review how the scheme was working for them. Several suggestions were made to improve ways of working together which are now being implemented, and another forum is planned for June 2017.

### **Mindfulness work in development**

Chris Langer is working with Abellio Bus to produce a series of workshops on reducing safety incidents such as bus collisions through training mindfulness in bus drivers. This work can later be extended into the rail industry and will be available to all our members. This is linked to research which suggests mindfulness training can greatly reduce the potential for operational incidents such as SPADs which typically cost £29,000 to investigate.

### **Conclusion**

CIRAS has been in operation for more than 20 years. Since those early days, CIRAS has evolved to cover other transports sectors beyond its original remit of just rail. Most recently, this has involved the extension of the scheme to TfL bus operators (from 4<sup>th</sup> January 2016 onwards).

During the last year, some significant safety risks have been addressed, with both CIRAS and bus operators working together to seek resolution to the issues raised. The 45 reports taken by CIRAS have often contained significant safety risks, enabling the operators to make safety improvements. They also provided an important source of information on the local safety and reporting culture.

Where significant issues, such as fatigue, have been highlighted by the reporting process, CIRAS has engaged proactively with bus operators to further reduce the risk – for example, by holding workshops and creating video content.

In the bus community, the scheme is still in its infancy, but the results to date suggest that it could have an even greater impact on bus safety with further support and endorsement.

## **Summary of Evidence**

### **Bus Network Planning**

- Limited data has been made available to the City of London Corporation regarding bus loading density. Accordingly, our ability to answer the questions empirically and with specific examples is limited. However the City Corporation is extremely enthusiastic about the prospect of radical improvements in bus scheduling and route planning.
- The Perception of officers and elected Members is that the network has mixed successes in efficiency across City. However, there is no doubt that far too many buses are observed across the City with low, often very low, numbers of passengers. This in turn causes TfL unnecessary costs and contributes to City congestion and pollution.
- The City of London Corporation is aware of the 'Central London Bus Priority Network' work stream and extends an invitation to TfL to share knowledge and work together to improve efficiency of the network through this channel. Delivering an effective bus network is critical to the success of the business City.
- The City is an epicentre of development and would like to work closely with TfL on ensuring suitable service alignment and provision for the City of today and tomorrow. Furthermore the City would welcome working with TfL to review the appropriateness of historic routes to ensure they still meet passenger needs.
- The City Corporation would suggest that the process of how route contracts are awarded be reviewed to ensure maximum flexibility in the contracts such that routes can readily be amended where demand changes, without costly penalties.
- The City of London Corporation would welcome a review of the effectiveness of the bus hopper ticket and what impact it could have on network planning, in particular the opportunities that this initiative may present to reduce total bus movements.
- The City of London Corporation seeks a review of bus frequencies, especially off peak, and size.

### **Bus Safety**

- The City has no discernable pattern of bus accidents or accident black spots.
- Available data for 2016 shows 65% of all accidents involving buses were slips, trips or falls by passengers on the buses.
- The City of London Corporation would like the effectiveness of the Bus Safety Programme published to show the improvements it has delivered in this context.
- The City of London Corporation would like TfL to consider safety incentivised contracting rather than simply performance incentivised to address this.
- The continuation of GPS geofencing speed trials is strongly encouraged with a view for roll out across the network.

To whom it may concern,

I am writing on behalf of the City of London's Planning and Transportation Committee.

The City of London Corporation welcomes the London Assembly's call for evidence regarding bus services and bus safety, and appreciate the opportunity to provide evidence on the network within its area. This is an initiative that is long overdue and we would be delighted for our transportation officers to work closely with TfL to optimise routes. The City of London Corporation supports buses and sees them as a key part of sustainable public transport that must become more efficient and accessible to all Londoners.

Not all questions upon which evidence is sought are pertinent to the network within our borders. Therefore, we have split our response across the two sections of the request rather than for individual questions.

### **Bus network planning**

#### **Questions answered;**

- Is London's bus network fit for purpose?
- How well do TfL currently plan bus routes?
- What tools does TfL have to monitor and forecast demand?

The City has a significant number of bus movements relative to its size. The network has 36 bus routes within our boundary, with most streets that have bus movements operating with more than 60 buses per hour. A large proportion of these buses run on the City of London Corporation's road network, rather than on the TLRN. We recognise that buses are a heavily used, economic and important mode of public transport in London and wish to see this continue and flourish.

On 23/11/2016 City of London officers and the Chairman of our Planning and Transportation Committee met with Transport for London to discuss the network within the City area. We requested data in advance of that meeting covering aspects of network distribution, frequencies and boarding/loading data. Unfortunately, TfL were only able to supply us with a frequency map covering the City area, as shown in **Appendix 1**. Whilst a useful illustration of the flow of buses across the City, the City of London Corporation were disappointed by the lack of information provided, specifically on loading. TfL has a significant amount of information regarding demand, including BODS (Bus Origin/Destination Surveys) and Oyster card data. It is important that the City Corporation understands why so much of the City's limited physical space is required for bus infrastructure and why capacity of movement should be prioritised for buses. We therefore consider greater transparency and data sharing with us and London Boroughs in general to be essential.

Through our own observations at both a Member and officer level we do believe that the performance of the network in terms of loading density is mixed. This is not just a peak and off peak distinction, but within the peaks at different locations across the network. There are many reasons for why this may be, including nearing the start/end of routes and taking into account the tidal flow of the peak. However, the City of London Corporation believes that this is indicative of a general inefficiency of bus use resulting in unnecessary costs to TfL as well as contributing to both

congestion and pollution. Therefore, we assert that the bus network in the City could be better organised with greater efficiency in both vehicle use and utilisation of road space.

An on-going work stream with regards to a “Central London Bus Priority Network” is currently underway at TfL. We would like to use this opportunity to extend an invitation to TfL and other local authorities to come together and deliver an efficient bus network suitable for London in 2017 and beyond.

The City is a key centre of development in London. For example, 1 Undershaft and 22 Bishopsgate have both recently been given planning approvals and will have almost 1,000,000sqft of office space each. We also have major development at London Wall coming to completion, with potentially a Centre for Music in the same location which is served by only one route. This route, the 100 will terminate at the Rotunda in the near future, rather than continuing to Elephant and Castle, giving limited bus access. Therefore, the City of London Corporation would like to work closely with TfL to understand how developments are assessed and given the correct level of service provision. This review should also consider how other developments have impacted demand and whether routes and frequencies are still suitable or are simply historic in nature. The opportunity should also be taken to review bus frequencies, especially off peak, and bus sizes.

To facilitate future change found to be necessary it is considered important that contracts for service provision be drafted to ensure route flexibility can be delivered without penalties being triggered.

### **Bus Safety**

#### **Questions answered;**

- What should TfL’s priorities be for delivering a safe bus network?
- Are you aware of any particular accident blackspots?
- What are the particular safety concerns for passengers on buses and other road users?
- Has TfL taken advantage of new technologies to make buses safer?
- What other technology advances should TfL consider piloting?

The City has no discernable pattern of accidents involving buses. In fact, compared to the rest of London, the City has very few bus accidents. However, the City of London Corporation is concerned regarding the nature of accidents involving buses that do occur.

A review of the available online data for bus accidents shows that between January and September 2016 there were 17 casualties involving buses in the City. We have found 11 casualties were slight and resulted from incidents of slips, trips or falls on vehicles. The City of London Corporation views safety as a priority and our Road Danger Reduction Strategy seeks to halve the number of slight injuries.

It is assumed that most of these will be incidences of forces of acceleration or deceleration on passengers. Accordingly, the City of London Corporation would like a review of the bus safety data in the context of the work undertaken in the Bus Safety Programme to evaluate its benefit. If these types of accidents have not been significantly improved by the programme, the City of London Corporation would like this investigation to consider safety incentives in operator contracts and a better balance between safety incentives and performance indicators within contracts.

Vehicle related technology is an escalating industry at present, with exciting innovations commonplace in the media. We are aware of technology trials undertaken by TfL of speed limiting with GPS tracking for different locations. The City of London Corporation welcomes TfL's innovation and awaits the results of the trial and next steps in potential roll out and would be enthusiastic about supporting further trials of such speed limiting of buses in the City.

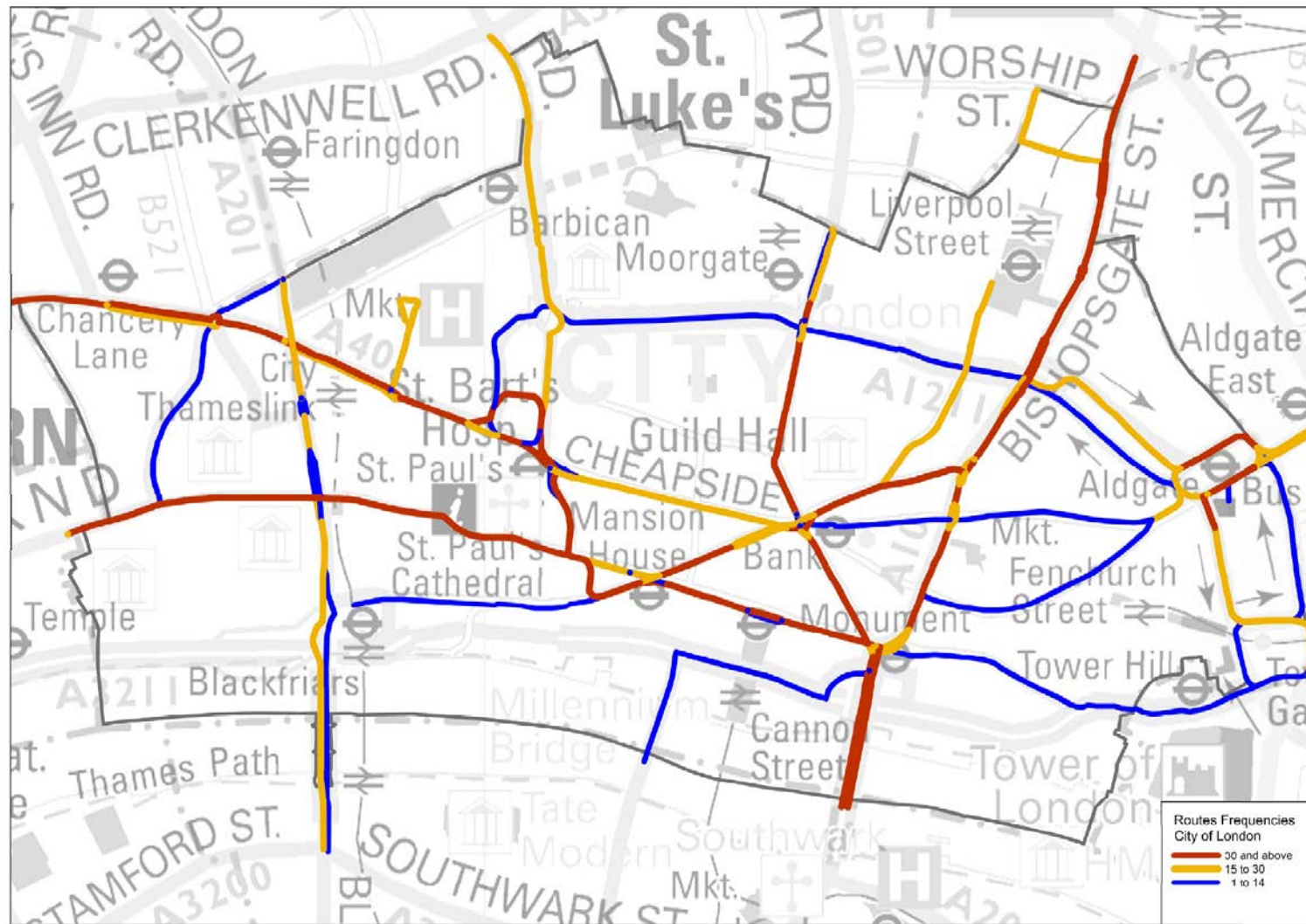
The City of London Corporation welcomes the London Assembly's request for evidence and looks forward to working closely with all parties as part of this investigation.

Your sincerely,

Carolyn Dwyer,

Director of the Built Environment, City of London Corporation.

## Appendix 1: Bus Frequencies in the City of London



## **CLAPHAM TRANSPORT USERS GROUP RESPONSE TO LONDON ASSEMBLY CALL FOR EVIDENCE ON BUS SERVICES**

The Clapham Transport Users Group (CTUG) is a voluntary stakeholder body advocating on behalf of all public transport users in the Clapham area across all modes. Our area of Clapham is defined as mainly the Lambeth part of Clapham with Wandsworth Road as an adjunct. We do not represent the neighbouring but separate areas such as Clapham Junction or Clapham Park both of which are essentially parts of other regions: Clapham Junction is Battersea and Clapham Park Streatham.

We welcome the London Assembly Transport Committee investigation into bus services as we consider an examination of how the bus network is performing to well overdue.

The investigation has posed a number of questions which we feel can be best answered by collating our views under the various headings.

### **NETWORK DESIGN**

#### **The TfL Bus Network & The Clapham Context**

The bus network has a critical role in the life of Londoners. It is the most popular form of public transport in London and crucially it is the only network that is fully accessible by dint of low floor vehicles alongside the capacity of the bus network to reach deep into residential areas that might not be adjacent to a rail or Tube station. The bus takes people to work, to shops, to hospitals and to leisure. It plays an equally crucial role in enabling commuters to avoid using the Tube which is severely congested in Clapham, which has two narrow island platforms at Clapham Common and Clapham North. Commuters often have to wait for several trains to pass before cramming on.

The nearby Clapham High Street Overground station has the East London Line to the City (Shoreditch High Street) and Docklands (Canada Water) but this has been at the expense of the old South London Line service to Victoria and London Bridge. We have been campaigning for a re-instatement of the Victoria peak hour service which can be done by adding Clapham High Street and Wandsworth Road as stops to the Victoria-Dartford service. Rebuilding of the outer platforms of both stations would also enable Victoria-Orpington services to call so providing Clapham High Street/Wandsworth Road with 4 trains an hour to Victoria in addition to the East London Line.

But in the meantime it is the bus in Clapham that is key to providing the major alternative to the Tube for many residents heading to Zone 1 for work in the morning.

The Clapham context therefore captures many of the generic features of the TfL bus network:

- Buses are used to take commuters along orbital routes to Central London (particularly Whitehall) taking some pressure off the Northern Line.
- Commuters take buses from Clapham to Stockwell to change onto the Victoria Line because of overcrowding at Clapham Common and Clapham North
- Commuters from Clapham may change buses at key interchanges (Clapham Junction, Stockwell, Elephant & Castle, Vauxhall) for onward travel. This is

particularly the case for elderly or reduced mobility passengers using Vauxhall Bus Station to change for buses to/from Guys and St. Thomas's Hospitals.

- However much of the key bus commuting from Clapham as an alternative to using the Tube is dependent on being able to use one bus rather than changing.
- Clapham bus users take the bus when commuting to orbital destinations across South East and South West London.
- Clapham bus passengers use routes such as the 88 and 137 for leisure trips to Central London and Oxford Street for shopping.
- Clapham has a limited spread of 'radial' bus routes (35, 77, 87, 88, 137, 155 and 345). Only one route goes to the City (the 35) but this is via a very indirect routeing.
- Clapham has strong suburban coverage of South West and South London with links to Croydon, Crystal Palace, Peckham, Stockwell, Brixton, Clapham Junction, Anerley, Tooting and Putney. Several South London destinations (Brixton, Stockwell, Clapham Junction and Crystal Palace) have many different bus links from Clapham creating 'trunk routes'
- Clapham has a mixture of 24 hour and Night Bus routes. The Night Bus route N155 is a key parallel route to the Northern Line, running from Morden via Clapham up to Aldwych.
- However Clapham lacks many routes to South East London.

## **Challenges and Issues**

### **Lack of Route Development on Orbital and Radial Routes**

#### **Radial**

Despite the importance of buses in Clapham and efforts made to modernize the fleet, we feel that the service has deteriorated considerably in reliability whilst also being insufficient to deal with the rising population of Clapham which has put an ever growing strain on the severely overcrowded Northern Line. Clapham lost a large number of radial routes in the late 1980s early 1990s (such as the 45) when routes were either cut from Clapham or heavily truncated. The consequence has been an excess reliance on the Northern Line.

This underdevelopment of the route network in Clapham also puts it at odds with other areas. Brixton for example has an accessible Tube station which has no crowding issues, being the terminus of the Victoria Line. Clapham has three inaccessible Tube stations, two of which have narrow island platforms which have to periodically close. Yet Brixton has far more direct buses to Central London and the City.

This can be seen as follows:

- Brixton has 3 bus routes serving the City (35, 45, 133 ): Clapham has just one the indirect 35.

- Brixton has direct bus routes to 8 major rail termini (Kings Cross, St. Pancras, Liverpool Street, Marylebone, Waterloo, Victoria, London Bridge ), Clapham has direct buses just to Liverpool Street and London Bridge (via the indirect route 35).
- Brixton has no fewer than 7 bus routes to Central London, Clapham just 4.
- Clapham also lacks direct buses to St. Thomas's Hospital despite it being a key catchment hospital for Clapham residents. CTUG is busy lobbying TfL to extend the 155 beyond the limited usefulness of Elephant & Castle to Whitehall via Westminster Bridge Road to order to provide this direct link.

Ten years ago as a result of repeated representations, TfL at a meeting with CTUG 2007 outlined plans to extend the 155 bus in Clapham to Moorgate via Blackfriars; yet this badly needed extension was scrapped as (apparently) the tenders for the route were too high. In the intervening period this need has grown hugely yet no effort has been made to re-institute this extension which would have given Clapham a badly needed directly aligned City bus link. In the same period TfL extended the 159 bus which serves Brixton to Paddington only to later cut this back. Consequently money which could have been used to invest in a Clapham bus link was redirected to a superfluous extension for Brixton which made no economic sense and itself was scrapped. TfL have tried to justify the discrepancy in the radial bus network between Clapham and Brixton by citing the fact that the Brixton Tube acts as an interchange magnet for surrounding areas without a Tube - hence the greater number of bus routes. However that does not explain why TfL have planned for Brixton to have so many more direct routes to Zone 1 in comparison to Clapham whose Tube stations are inaccessible and grossly overcrowded.

We understand that Oxford Street will be pedestrianized and thus the Route 137 will be cut back to Marble Arch. However we do not understand why TfL wish to do this before pedestrianisation has been done and why the 159 (serving Brixton) has been kept. This is another example of irrational transport policy taking away capacity from where it is most needed.

## Orbital

On orbital routes, Clapham's network has improved with the creation of a direct bus to Croydon from Clapham providing links to a swathe of South London destinations. This is supplemented by routes such as the 37, 322 and 249 which provide strong networks between Clapham and South/South West London, with 'trunk' routes created with key destinations such as Crystal Palace and Peckham.

However there is a gap concerning lack of route links to South East London and in particular links to schools and hospitals. We believe there is a need for a direct bus link from Clapham to Lewisham via Lordship Lane and the South Circular Road in order to provide bus links to a range of schools and thereby remove 'school run traffic'

## Next Steps and Recommendations

Taken in the round, Clapham's bus network is not fit for purpose and although TfL have acknowledged our concerns, there is an aversion to investing in route network development.; this itself is reflected in the current imbalanced route provision between Clapham and other suburbs with fewer acute demands.

Ironically the prioritisation of Brixton as a bus hub has now begun to draw criticism

from Lambeth Council because the concentration of buses has caused congestion and pollution. It is therefore desirable that bus planning becomes more objective, looking at the principals of current/future demand and using the bus to relieve pressure on the Tube. The solution to Clapham's overcrowding crisis on the Northern Line can only be seriously addressed by major investment on the bus network as well as providing greater convenience for disabled passengers. Properly planned bus design - for example a directly aligned City bus route can provide an alternative to the Northern Line. For though the Northern Line is nominally 'faster', the amount of time expended waiting for several trains to pass before cramming on means that point-to-point Clapham-Zone 1 bus routes can be competitive.

Indeed in 2014 TfL launched a publicity campaign in South London to discourage passengers from using the Tube at peak hours and instead consider walking or cycling. This campaign faced a degree of ridicule because passengers use the Tube owing to the lack of proper modal alternatives. TfL cannot on the one hand refuse to invest in non-Tube public transport alternatives yet ask passengers not to use the Tube. Nor are people persuaded that cycling is a proper alternative.

We therefore feel that TfL have to face the situation head on and redesign the Clapham bus network as part of the re-orientation of bus priorities post-Crossrail. We call for the following:

- TfL to create a new route '335' from Clapham Common to Moorgate via Stockwell, Oval, Kennington, Southwark and Blackfriars
- TfL to extend the 155 from Elephant & Castle up to Whitehall via Westminster Bridge Road, so providing a direct bus link for Clapham residents accessing St. Thomas's Hospital as well as Waterloo Station.
- TfL to redirect the 137 only when pedestrianisation of Oxford Street commences and extend it from Marble Arch to Paddington and Marylebone.
- TfL to consider redirecting the 88 from Camden Town to Euston, St. Pancras and King's Cross, truncating the Route 45 to Holborn in its place.
- TfL to develop new bus routes from Clapham via the South Circular Road to Lewisham via Dulwich and Forest Hill or alternatively by rerouting the P4 bus.
- TfL to expand Clapham Night Buses in order to encourage dispersal of crowds from the area (and prevent anti-social behaviour arising from loitering) by extending the N155 to Sutton and creating the N337 from Stockwell to Hounslow via Clapham, Clapham Junction, Putney, Richmond and Twickenham.

## **Poor Infrastructure Planning**

Short-term political considerations have led to TfL implementing poorly thought out schemes which have undermined bus operations in Clapham and beyond.

### **Clapham Old Town**

In 2012 plans were mooted by Lambeth Council to develop a square in Clapham Old Town, part of which involved removing buses from Clapham Old Town which had been a terminus for buses for over a century. We advocated that the terminus be redeveloped into a fit-for-purpose facility with seating, attractive shelters and

platforms within a design that fitted within the overall objectives of the Old Town square. A highly divisive negative campaign by the Council and its supporters followed with false claims that a 'bus garage' or large 'bus station' was going to be built. Despite senior TfL staff agreeing with our suggestions, political pressure from Lambeth Council led to a deeply unsatisfactory outcome where buses 'dead-stand' in Clapham Old Town but then have to pick up passengers elsewhere on a narrow stretch of road causing congestion. An absurd contra-flow cycle lane (which includes a pointless protrusion) directly into the path of oncoming buses is totally unused and has been agreed by TfL on site visits as being unsafe. The net result is that buses in Clapham increasingly have no space to terminate in, resulting in some buses parking outside residential homes. We have advocated the greater use of 'short-working' terminal alighting points on Clapham High Street as an alternative.

However there is a silver lining in that Rookery Road by Clapham Common has been identified as being available for 'dead-standing' buses, so this would provide much needed alternative capacity to launch new routes into Central London and South East London from Clapham Common.

#### Vauxhall Bus Station

Vauxhall Bus Station is a new facility, having been opened in 2005. It is the second busiest bus station in London and is a well-lit, clean and comfortable interchange, providing seating and shelter for passengers replacing the previous dysfunctional system of dispersed bus stops across poorly-lit side streets. The Vauxhall Bus Station has key importance as an interchange for passengers changing on to the 77 to go to/from St. Thomas's Hospitals - a factor of great importance to elderly and reduced mobility residents. Another major factor is the much enhanced security ambience this Bus Station provides.

Lambeth Council has long had plans to remove the gyratory which posed risks to cyclists and pedestrians. Yet this goal became iterative and turned into a wholesale plan to demolish the Bus Station to sell the site to developers. Under pressure from the Vauxhall Society, Kate Hoey MP and other campaign groups, TfL amended some of the plans yet the finalized scheme will mean that the Bus Station is still dramatically reduced and many bus stops dispersed. For Clapham residents this will mean crossing a road to change from the 77 to the 88 bus which will negatively impact upon elderly and reduced mobility passengers. This increases the risk to such passengers as well as directly removing the convenience and comfort provided by the current facility. There is no good transport rationale for such a move and it is gratuitous given how new the Bus Station is and the fact it is delivering a worse outcome for all passengers. It is at best only 'nominally' accessible yet accessibility should be convenient for reduced mobility passengers. The dispersal of bus stops down side streets also represents a downgrade of security for passengers at night.

This was a scheme by Lambeth Council to some degree approved not so much by TfL but City Hall under the previous Mayor and his Deputy Mayor for transport. Yet the new Mayor has approved it and he is therefore responsible for the Bus Station's downgrading. This is a dispiriting example of how transport policy is secondary to political relations with councils rather than prioritising the key stakeholders for TfL - passengers. Downgrades to facilities such as bus stations also mean TfL is not future-proofing capacity long-term when demands might increase, thereby making the same mistakes as the botched Clapham Old Town scheme of restricting the ability of the bus network to expand to take ever mounting pressures off the Tube in South London.

## **Deteriorating Reliability: the scrapping of Bus Prioritisation**

The creation of Cycle Superhighways and Segregated Cycle Lanes may have had laudable aims to improve cycling safety, coming after a spate of appalling tragedies. But the unavoidable truth is that these schemes have had a significant negative impact upon bus services. The removal of road capacity for buses - either by the scrapping of some bus lanes or the general constriction of traffic lanes which buses use has led to much greater journey times and overcrowding. This result is deteriorating passenger satisfaction with bus services (after years of rising satisfaction) as reliability has fallen: the passenger watchdog London TravelWatch has cited this in its report of 2016 and remains a major concern. This has led to passenger numbers falling after nearly 20 years. Yet that has not translated into modal shift from buses to bikes but rather more commuters forced to use the Northern and Victoria Lines. Buses stuck in traffic have led to worsening pollution levels - a factor not vitiated by the introduction of electric buses. This is also caused by the un-coordinated approach to building consent that has made large swathes of London a building site worsening an already deteriorating situation. Redevelopment in Vauxhall, Elephant & Castle and Victoria has severely aggravated congestions in Clapham and the resultant effect upon buses. Yet whilst building works may be temporary, the loss of space for buses caused by segregated cycle lanes is not.

Cycling groups live in denial of the issue, insisting that provided the cycling infrastructure is built, buses will be less important and that cycling is essential to resolving traffic congestion in Central London. But any observer will note that whilst buses are stuck in traffic - such as on Vauxhall Bridge the adjacent cycle lanes are underused at peak hours and almost empty all other times. Most people do not take the car to Central London- those non-bus vehicles tend to be delivery vans (which cannot be substituted by bikes) or taxis.

CTUG supports aims to improve cycling safety but not at the expense of bus users who represent the largest single block of non-car commuters. We feel that cycling policy has turned from moves to encourage cycling into a disproportionate and indeed obsessive focus. Good rational transport policy is about shifting people from cars onto mass transport which is safe and efficient. It is not about prioritising cycling above everything and everyone else.

We understand the risks to cyclists. But conversely nobody is 'forced' to cycle in dangerous roads: a cyclist has the option of using public transport. Just because a road is too dangerous to cycle in does not mean that a cyclist is deprived of all means to getting to a destination just because he/she cannot cycle. It is this context - of irrationally refusing to use any other form of transport - that means that cycling policy is geared to placating ideology as much as it is about encouraging non-car use. Why should people who refuse to use public transport be more of a priority than wheelchair users who take the bus?

The old binary of cycling versus motorist no longer applies: the uncomfortable truth is that cycling prioritization of lane segregation can only come at the expense of public transport users who are also not using cars. A wide network of segregated cycle lanes across suburban and central London and an efficient bus system is not possible - that is the reality. The Mayor has to decide which is more important.

Cycling despite rises in popularity is no more than 2% of all commuting: walking, Tube use and buses all remain far more popular. One bus takes up the same amount of road space as 12 cycles but carries 5 times as many people. Cycling is not a

public transport mode but a private individual form of transport. Bus users are far more societal representative of London. Public investment must therefore prioritize the transport which takes the most amount of people out of cars and which is the most accessible. That is the bus - not the bicycle.

When cycling was expanded under Boris Johnson, the arrival of Andrew Gilligan as Cycling Commissioner heralded large recruitment of cycling campaigners to TfL. This meant that cycling policy was not nuanced or integrated into wider consideration but reflected the point of view that cycling was more important than any other form of transport. This was seen in TfL being used to promote propaganda material such as urging bus users to 'release their inner cyclist' reflecting the conviction of the cycling lobby that a bus passenger or pedestrian deep down was really just a frustrated cyclist and that with the right infrastructure in place everyone would abandon the bus and get on their bikes. The reality instead is worse bus services, more overcrowded Tube, narrower pavements for pedestrians and largely empty cycle lanes, flanked by the loss-making Cycle Hire Scheme.

Whilst cycling advocates point to Amsterdam the fact is that this is a spurious comparison: Amsterdam is a great city but a small one. You cannot assume that a city with a population of 800,000 can be compared to a metropolis of over 8 million. Indeed there is no example of Dutch-style cycling infrastructure taking precedence over bus space in any major large European city. Policy transplants do not work where the local needs and conditions are not considered. This is why the road to cycling Utopia in London has instead led to gridlock.

We therefore feel that a review be undertaken of segregated Cycle Superhighways and changes made to allow buses and cyclists to use a dedicated lane. This would remove buses from the general traffic stream whilst also maintaining a degree of dedicated space for cyclists.

But what this also represents is a deeper issue: the incremental transformation of TfL from a transport body into a political vehicle of the Mayor.

### **TfL: A Political Vehicle or Transport Body?**

The politicisation of transport has accelerated since the creation of TfL in 2000. Though transport has always been a political issue, never to the same extent has the central transport body been so overtly politicised. Even in the early 1980s when there were battles between the GLC under Ken Livingstone and the Government over 'Fares Fare, the campaigning used GLC material rather than London Transport to promote GLC views. Today the situation is markedly different with the TfL logo and resources used explicitly to promote Mayoral propaganda or non-transport objectives. This happened under Boris Johnson but has not ceased with Sadiq Khan.

This politicisation has meant that TfL relations with local councils have been at the expense of relations with (ironically) Members of Parliament alongside passenger and local stakeholder groups. CTUG has excellent relations with TfL stakeholder officers and some good work has come of this: but we cannot ignore the fact that City Hall is using TfL to push through schemes with negative transport impact at the behest of local authorities. Such politicisation does not serve TfL or passengers at all and by definition it is against the interest of London. We have seen how political conflicts have set back key longer-term objectives - such as devolution to TfL of suburban rail services (for which CTUG prepared a pan-London strategy).

The Mayor and City Hall are both elected and therefore have a mandate to make decisions. However where these are not specifically transport related but have an impact upon public transport, there should be greater separation so that such decisions are clearly by the 'Mayor of London' and not Transport for London. We do not believe that TfL professionals genuinely support or believe in the truncation of Vauxhall Bus Station, nor the scrapping of bus prioritisation in favour of segregated cycle lanes. These are political decisions and therefore it is for City Hall and the Mayor to take full ownership for them.

We believe TfL must return to a more London Transport type of operation where it is a transport body overseen by the Mayor rather than a de facto political subsidiary. In tandem there must be a strengthening of stakeholder engagement at a local level at both an overt and discreet way to gain understanding of commuter needs which can shape and inform network planning. Commuters are the real transport experts: their knowledge should be the architect of network planning, not short-term political objectives.

### **Neglect of Bus Stops**

TfL improved bus shelters from the Spartan installations of the 1970s and 1980s, with Countdown and in some places electronic displays giving real-time information. However, TfL now no longer directly fund Countdown and in Clapham this has seen many Countdown signs being removed. Money to replace ageing bus shelters has ceased. This means commuters are not sure when their bus will arrive or whether there are network problems. It is another dispiriting indication of how buses have since 2008 and continuing today become downgraded in transport policy.

### **Bus Contracts**

TfL operates a tight system of specification of routes, frequencies and vehicles over a 5 year period (with a two year extension). This ensure some stability but can also lead to complacency if an operator thinks it 'owns' a particular route and will always win the contract with a competitive bid. The system also prevents innovation and the ability of bus operators to launch new routes where there is a gap.

We propose that the TfL model remains but also allow bus companies to introduce new routes where they feel there is a business case, subject to being Oyster/contact less payment compatibility.

## **NETWORK DESIGN: CONCLUSIONS AND RECOMMENDATIONS**

Our headline conclusions are:

- TfL's bus network is deteriorating, contributing to longer journeys, more overcrowding which impacts upon reduced mobility and disabled passengers in particular. The greater congestion in Central London resulting from constriction of road space is having a marked effect upon pollution. Strikes on the Tube and Southern Rail also mean that the bus cannot act efficiently as a fall-back option. Yet London needs a transport policy where the major modes (Bus, Rail and Tube) act to assist one another in relieving pressure point and providing operational resilience.
- Lack of sufficient direct bus links to Zone 1 is a major contributor to passengers having to use the Northern Line in Clapham, in particular the lack of direct bus routes to the City and Central London rail termini

- The erosion of bus infrastructure and lack of future proofing capacity such as the scaling down of Vauxhall Bus Station will harm the bus network longer-term by preventing it having the ability to expand in future where there is insufficient space to terminate buses or launch new bus routes. The consequence is over-reliance upon Tube services and congested suburban rail. This is not sustainable. Nor is the TfL bus network substitutable by encouraging cycling.
- Transport policy has been too politicised leading to imbalances in bus provision; over concentration of buses in Brixton has caused pollution whilst Clapham has a need for more bus services.
- The introduction of Crossrail will mean number of east-west bus routes will be axed; this means that bus resources should be re-orientated to South London in order to relieve pressure on the Northern Line in Clapham whilst boosting orbital bus routes.
- TfL to examine the creation of more 'Express' radial and orbital bus routes in South London which would act to boost buses as an alternative to rail and Tube lines and improve bus journey times.
- TfL to focus bus planning to passenger needs and potential demand rather than political relations with councils. In particular planning should champion the bus as an alternative to the Northern Line. TfL to focus on direct bus links to employment zones, hospitals and major Central London rail termini.
- Bus prioritisation must be re-introduced and a review of all segregated cycle lanes undertaken: where it is shown that such lanes have led to serious congestion problems for buses, then the return to 'mixed mode' use be introduced where buses and cycles share a dedicated lane.
- TfL look at greater use of sites to act as 'short-working' terminuses to enable key part of a bus route to run rather than just cancelling buses or reducing frequencies across a whole route. This will embed greater operational resilience and recovery into bus operations.
- TfL to safeguard space for 'dead-standing' buses to preserve the basis to launch new bus routes. Rookey Road in Clapham is one example.
- TfL to improve stakeholder engagement with passengers and passenger/community groups at both a local level and in greater involvement at City Hall and conferences.
- TfL to cancel plans to truncate Vauxhall Bus Station
- TfL to review Clapham Old Town and consider building a small terminus with shelters, accessible boarding platforms and seating.
- TfL to allow bus operators to launch new routes if there is demand.
- TfL to invest in bus stop shelters, with Countdown restored and digital displays increased at key locations.

## NETWORK SAFETY

Our final part of the submission concerns network safety. TfL has made efforts to standardize pay and conditions across all contracts to counter driver shortage in some areas and for some operators. Allied to this has been a long-standing drive by TfL to benchmark standards of driving across the network via BTEC training courses. However we have concerns about safety relating not just to drivers but the infrastructure around accessibility beyond the bus itself.

### Access to Bus Stops

Bus service accessibility is not simply a matter of buses being low floor. It is important to distinguish between what is 'nominally' accessible (but in practice only marginally so) and what is conveniently accessible to wheelchair users. The proliferation of street clutter means that wheelchair users cannot always access the bus stop. In Clapham there is a problem with lack of 'dipped kerbs' at non-traffic light crossings, so that wheelchair users (or those pushing the wheelchairs) cannot easily get on to the pavement from the kerb. To its credit, TfL has investigated and remedied some of those kerbs adjoining pavements near bus stops, but many roads are not TfL roads but those of councils. Wheelchair users may also be blocked by inappropriate citing of bins, salt containers or rubbish bags near bus stops.

We call on TfL then to understand the need for convenient rather than just nominal accessibility. TfL and local councils should work with campaign groups such as Transport for All and community groups alongside London TravelWatch to improve 'Access to Bus Stops' with a benchmark standard to ensure all bus stops are kept free of nearby clutter and that all pavement/road crossings have dipped kerbs for wheelchair users.

### Bus Position by Bus Stops

A recurrent issue we have found talking to passengers is where there is a cluster of buses at a stop and buses at the back of the cluster are some distance from the stop yet pull out so that passengers sitting at the bus stop end up missing that bus. TfL must ensure that where there is a cluster all buses move slowly along so that no bus passenger is left behind at the stop

### 'Floating Bus Stops'

We are strongly opposed to the floating bus stop schemes being promoted by cycling groups and Lambeth Council (in turn approved by the Mayor through TfL). Floating bus stops are a scheme whereby a cycle path runs between a bus stop and the pavement. This forces bus users, which will include many elderly and mobility/sensory impaired passengers into the path of speeding cyclists.

Such a move thereby directly increases the danger to the most vulnerable users. Astonishingly this move has been proposed by Lambeth Council outside St. Thomas's Hospital bus stops. The hospital trust has not surprisingly launched legal action to prevent such a move, alongside widespread concerns raised by community groups and Transport for All.

Similar plans are being proposed by TfL in Clapham Common Southside.

It says a great deal about how bus passengers and pedestrians have been

marginalised in recent years that such dangerous and ill-thought out proposals are being pushed through and another indication of policy being dovetailed to meet the vested interests of council and the cycling lobby groups.

Cycling groups argue that floating bus stops protect cyclists from pollution and the dangers of heavy traffic. But that is not a justification or reason to worsen the safety of pedestrians and the most vulnerable bus users.

Again this returns us to the central fact that whilst bus usage and use of pavements is a critical activity for people, cycling is simply an optional pursuit. A disabled passenger deprived of a safe means of alighting./boarding a bus has no other feasible means of travel. A cyclist who finds a road polluted is not deprived of other forms of transport and can use a bus or rail/Tube: he/she only encounters the pollution and danger if that individual chooses only to cycle and refuse those other options available. Even if we take the assertion that people 'must' cycle for health reasons, this is to take the supposed health dis-benefit of public transport use to an irrational and absurd level. A cyclist who wishes to avoid dangerous or polluted roads should use public transport or walk. A cyclist who wishes to stay fit but finds a road polluted or dangerous can use public transport and walk/run in the evenings or weekends or go to gym. The health and safety arguments which underpin cycling demands for floating bus stop are derived from a false 'exclusivity'. Policy must meet the safety and priority of those in the greatest need. That must mean bus passengers and pedestrians.

Cycling lobby groups argue that cyclists do not pose the same threat as vehicles. Whilst factually true this is contextually false and used to promote the notion that cyclist cannot pose any threat to pedestrians. Pavement space for pedestrians has narrowed severely in Vauxhall - both at Vauxhall Bridge Road and Harleyford Road where a serious incident took place where a pedestrian was critically injured. From our experience, though TfL has introduced a zebra crossing across one cycle lane, cyclists often charge at speed and do not stop.

Poor cycling behaviour has been a taboo subject across political circle, the media and the London Assembly. Cycling groups are opposed to cycling number plates or increased enforcement of the law against dangerous cycling by falsely claiming that cyclists are 'forced' to cycle on pavements and that stronger enforcement will discourage cycling. The popularity or otherwise of cycling should not hold greater priority than the safety of Londoners engaged in critical activities. The political culture of the cycling lobby seems geared against acknowledging the concerns of pedestrians and bus users with at times a visceral indifference. We therefore do not have confidence that the cycling culture in London has sufficient respect for other users for schemes such as floating bus stops to be safe particularly where there is a climate of political correctness around cycling that eschews enforcing the law.

## **Conclusion**

The TfL Bus Network is an evolved heritage that makes London possible with a history of pioneering iconic design based on the belief the system must be 'fit for purpose' designed around the needs of the user. It is the bus that represents the totality of public transport for many reduced mobility passengers and provides the access to careers and education. It also the bus that takes sufficient people away from the Tube or Rail to enable those other modes to function. Without the bus, London cannot function.

In 2014 London celebrated the history of the bus; yet in 2017 TfL seems to be

dismantling its future against a backdrop of deteriorating reliability, cuts and downgrading of infrastructure. This has an onward impact in that bus passengers and pedestrians are feeling downgraded, seemingly having been ignored by City Hall and the London Assembly over several years in comparison to cycling lobby groups.

Perhaps it is the very ordinariness of the bus that disinclines journalists to regard the bus passenger as a cause celebre in comparison to the self-proclaimed virtues of cycling which extols the attributes of athleticism with a glamorised 'environmental concern'. It is an identity badge of virtue and modishness which explains perhaps why so many journalists like to preface any comments about London and transport with this self-reference. Cycling athletes grace magazine covers: Mrs Jones the bus passenger does not. Yet ultimately we are all to some extent Mrs Jones rather than Victoria Pendleton or Sir Bradley Wiggins. There has been in the press and other circle an insidious attempt to devalue the importance of buses, perhaps because they are a reminder of day to day life in comparison to the illusion of adventure or implication of athletic youth cycling inculcates. The disapproval of the 'selfish motorist' who once held up buses has shifted to a less overt but real disapproval of the 'selfish bus user' forcing the operation of buses taking up space that could be used by cycle lanes.

It is recognised that Dr Richard Beeching's report of 1963 was an exemplar of short-term thinking about railways that did great harm and increased traffic congestion. Yet the ghost of Beeching has resurrected and simply swapped targeting trains for cutting buses and cited the cycle (as opposed to the car) as the future and the bus (rather than trains) as the past.

The London Assembly and TfL need to recognise the folly of making the same mistakes. By slashing the bus network and scrapping bus infrastructure congestion will get worse in London's roads and overcrowding still worse on London's Tube and rail systems. Future demands on public transport will not be abated by web technology or working from home. It is time to re-champion the bus user: after all the legal definition of reasonableness is the person on the 'Clapham Omnibus'.

## **CLAPHAM TRANSPORT USERS GROUP**

# London Assembly Transport Committee Call for evidence: bus services

## Response from Enfield Town Residents Association

Enfield Town Residents Association (ETRA) is a membership organisation representing residents in Enfield Town. We work closely with our local councillors and our MP Mr David Burrowes to improve community facilities and services for residents.

Our members are extremely concerned at many of the policies currently being pursued by Transport for London (TfL) which will lead to a deterioration in bus services and bus accessibility. We submit our responses to a subset of your questions below and append a timeline based on information gained through Freedom of Information requests by ourselves and our councillors. All the FOI information referred to in this submission is in the public domain, but you are welcome to contact us if any further clarification is needed.

### Question 6. What bus priority measures has TfL already introduced and how successful are they?

**6. Bus Lanes.** In the London Borough of Enfield bus lanes are the main priority measure and until now they have been a great success. What is needed is for TfL to recognise their value and retain them. It is with real alarm that residents have been told that, under TfL funded proposals for cycle lanes, these are to be removed at key points around the borough, leading to a severe deterioration in bus journey times.

Instead of reviewing the impact on buses and revising the plans accordingly, TfL have attempted to find ways to conceal this impact. There is evidence for this:

6.1 A northbound bus lane operates along the A105 between Bush Hill and the Dugdale Centre (ending just before the junction with Cecil Road) Monday to Friday at peak times, and all day on Saturdays. It does not operate on Sundays. Proof of the success of the bus lane can be seen from comparing journey times of buses on days when it operates, with Sunday, when it does not. On Sundays, the bus lane is filled with parked cars meaning that buses have to wait in the main traffic lane. This leads to severe delays and significantly lengthened bus journey times.

This on its own is very strong evidence indeed for the success of bus lanes as a priority measure. The bus that is particularly affected is the 329 – the one bus route that joins all the shopping centres along the A105, running from Palmers Green, through Winchmore Hill and Bush Hill Park to Enfield Town – four major shopping (and therefore employment) hubs.

It is therefore of extreme concern that LB Enfield, with funding from TfL, intends to remove this, and other, bus lanes across the borough in order to install cycle lanes (as part of the Mini-Holland initiative) that will operate 24/7 in future. The situation that is currently in force on Sundays is therefore a very accurate simulation of what the situation will be once the bus lane is removed in favour of cycle. Consequently, journey times will be longer.

However, firstly, data from Sundays were not used in modelling the impact of this bus lane removal. TfL – and boroughs that receive funding from TfL for road re-engineering - should not be allowed to 'cherry pick' the data used in modelling impact.

6.2 FOI requests reveal that TfL suggested to the Cycle Enfield team that changes might be made in the Haringey section of the 329 route to speed up bus journeys in that borough and therefore minimise the impact on journey times overall. While this would serve to reduce any increase in journey times that show up in TfL/GLA data, it will not help Enfield residents who will be subject to slower journeys.

- 6.3 The bus operator for the 329 bus was – and remains - alarmed at the impact of the road changes to the route and submitted an objection to LBE during the Statutory Consultation. This should normally trigger a Public Inquiry, and he subsequently wrote to TfL seeking advice on this issue. Instead of endorsing his concerns for the impact of the plans on this service and supporting a public inquiry, TfL instead required the bus operator to remove its objections and therefore avoid a public inquiry. A timeline of these events is provided at Appendix A. This information is in the public domain and therefore accessible, but details can be provided if required.
- 6.4 This would perhaps be less serious were it not for the fact that the bus companies were not directly consulted about the proposals for the A105, and when one of our Councillors submitted an FOI request to TfL asking what consultation they themselves had undertaken with the bus companies, their response was that they did not consult with the bus companies. Surely discussions with bus companies should be an essential first stage to any proposals likely to impact on bus services, rather than to keep them out of the loop and to then frustrate any opportunity for the likely problems to be publicly aired?

As one of our councillors has said, the seriousness of these issues cannot be overstated, especially given that these schemes are being rolled out using public money and it is far from clear that it is being spent with due regard to achieving value for money, or indeed with any real regard for public safety or concern for impact on public transport.

## **Infrastructure and design**

### **12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?**

**12.1 Bus bypasses and bus boarder arrangements.** ETRA is a corporate member of Transport for All (TfA), the organisation that campaigns for accessible transport. We are aware of the concerns that many elderly, frail, mobility and sight-impaired people have about the 'bus bypass' (floating) and 'bus boarder' bus stop arrangements. As a member of TfA we are also aware that one part of TfL is currently exploring potential ways in which these bus stop arrangements might be made safer for vulnerable pedestrians and passengers, as a member of TfA is involved in that study.

It is therefore of extreme concern to our members and to residents across the borough that, as part of the Mini Holland scheme funded by Transport for London, London Borough of Enfield plans to install at least 12 bus 'bypass' bus stops and more than 30 bus boarder bus stop arrangements along the A105 and Enfield Town sections of the scheme, and a three bus-stops long 'bus bypass' (floating) bus stop outside one of the busiest supermarkets in Enfield Town, along with further 'bus boarders'. They are planned elsewhere, too, along the A1010 South and North.

Given the fact that one part of TfL is currently attempting to find ways to make these arrangements safe, it is with some level of incredulity that we find TfL involved in the design and planning, and funding their installation in the London Borough of Enfield, and apparently happy for London Borough of Enfield to claim that these arrangements are perfectly safe.

Given that TfL is currently still undertaking research to try to find ways to improve the safety of the bus bypass arrangements and (we understand) have now agreed to also investigate the issue of bus boarder bus stops too, it simply **cannot** be claimed that these arrangements are safe. Indeed there is much evidence from blind and elderly people of the risks these arrangements pose to bus passengers and we have first-hand accounts from local residents of just how dangerous and frightening these arrangements can be.

A local elderly resident told us of her experience when making her way with her daughter to hospital (for cancer treatment) by bus. They were about to alight from the bus using a 'bus boarder' when a cyclist came straight through the 'boarder' area, neither slowing nor stopping for the bus as TfL are keen to claim is the case.

These bus stop arrangements are accidents waiting to happen. Transport for All and all of the organisations representing blind and visually impaired people are against their installation. The people who were nearly involved in the incident while leaving the bus are not blind but are elderly, and were very much alarmed by their experience. Buses should have absolute priority over cyclists and should **always pull into the kerb**.

We note that the Design Guidelines for Cycle Lanes states that bus boarders should **not be used** on busy main roads with many bus services – yet this is exactly what TfL is funding councils to install. Enfield have also stated in a public meeting that the designs are fully compliant with the cycle lane design guidelines when they are not.

In a further recent development, the Mayor has now stated publicly that cycle lanes should **not** run along busy main roads but should make more use of quiet ways. We fully endorse this. Not only would this provide more pleasant conditions for cyclists, but it would remove at a stroke the need for any conflict between bus passengers and cyclists.

However, rather than calling immediately for a review of all of these schemes to determine whether the routes are appropriate, instead 'City Hall' appears to have sought to brief against anyone criticising the safety – or sense - of these schemes. We show below the Mayor's exact words, followed by an extract sent by a policy officer at 'City Hall' to officers at LBE.

The Mayor's exact words (transcribed from the broadcast) were:

*"We are making sure we speak to the councils and try and divert cyclists away from main roads onto what I call quiet ways in order to encourage people particularly in outer London to cycle rather than have all our eggs in the Embankment cycle superhighway previous generation basket.... the bad news is that as a consequence of the congestion not only is it leading to worse air quality but people are stopping using certain buses because they can't rely on getting from A to B, so it is in everyone's interest to sort out congestion in London". (SADIQ KHAN, LBC December 2016)*

And again, a month later:

*"Congestion is one of the major issues facing us, with the best of intentions you can inadvertently cause additional problems so the construction of a permanent segregated cycle lane in itself causes pollution. I've got no powers over construction but what we can do is learn the lessons from previous constructions of segregated superhighways, we're got to make sure that we divert cyclists to quiet roads so that they are not breathing in poisonous fumes but also it leads to less congestion so you are absolutely right we've got to learn the lessons from mistakes made in the past".*

**(SADIQ KHAN LBC January 2017)**

However, unnamed 'policy officer at City Hall' (according to London Borough of Enfield) has apparently claimed that the Mayor said:

In his interview the Mayor stated that he wants to work with Councils to build Quietway routes - which do not follow main roads - "where they can". Quietways are an important part of our overall strategy for encouraging more people to walk and cycle. However, Quietways are not the only type of cycle route that we are pursuing. A mixture of routes both on main roads and quieter roads is required to create a comprehensive cycling network. We are therefore also continuing to build Superhighway style cycle routes, on main roads, segregating cyclists from traffic.

The phrase 'Where they can' was subsequently cited by LBE as reason to continue with the TfL-funded cycle lanes plans that will negatively impact buses across the borough and required the introduction of dozens of bus boarders and bus bypass arrangements.

Our view remains that bus boarders and bypasses should be banned from use in London. We need the London Assembly to order TfL to review these schemes with immediate effect. We urge you to impose a moratorium on any further installation of such arrangements and to cease forthwith the funding of such arrangements until and

unless ways can be made to make them safe for vulnerable people. It is beyond belief that TfL is allowed to continue to fund councils to install such arrangements and to allow them to claim (as is the case in Enfield) that they are completely safe, when they are anything but.

**12.2. 'Armadillos' and 'Orcas'.** In Enfield the TfL-funded scheme includes installation of armadillos (often also referred to as 'orcas') along all of the cycle lanes, all of which run along busy main roads. It now emerges that – as residents have claimed from the outset – that these constitute a serious trip hazard. We have now discovered that these have been reported (in Local Transport Today, May 2016) as creating significant trip hazards for pedestrians. Indeed, the City of London decided to remove them from Aldgate High Street after just four weeks as they were such a hazard to pedestrians.

In Enfield the majority of central refuges and some crossing points are being removed along all the A105 (and along other routes), where people previously conveniently crossed. However, people are likely to continue to use the location of their previous convenient crossing places and therefore to find themselves tripping over these bumps, particularly so in the dark. This is especially problematic for limited sighted and mobility impaired people.

Again, it is difficult to understand how TfL can be allowed to continue to encourage and fund councils to install such arrangements when there is significant evidence of the risks they present to pedestrians.

**12.3 Shared bus lanes.** We not see any problem with cyclists being allowed to use bus lanes.

## Enfield Town Residents Association

31 January 2017



## APPENDIX A

### Timeline for events leading to the withdrawal of Arriva's objections

| Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| A105 statutory consultation on 'Cycle Enfield' proposals starts                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6 July 2016  |
| £2million purchase order issued to Jacobs for A105 works, for "initial phase for mobilisation and construction of A105 Scheme during the performance period 8/07/16 - 31/03/17, ie commencing two days after the council had commenced the statutory consultation.                                                                                                                                                                                                                                   | 8 July 2016  |
| Commercial Planning manager at Arriva buses lodges objection, pointing to the following issues: <ul style="list-style-type: none"> <li>- that parts of the A105 are sufficiently narrow that reduction in carriageway width will delay buses;</li> <li>- the introduction of speed tables or other vertical deflections will have a disproportionate impact on buses and their passengers;</li> <li>- that bus lanes are essential to help give some predictability to journey times, and</li> </ul> | 28 July 2016 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <p>therefore objecting to their proposed removal;</p> <ul style="list-style-type: none"> <li>- and lastly, seeking clear and specific assurance that the bus stands on, or adjacent to, Green Lanes at Green Dragon Lane, Fords Grove and Hedge Lane would be protected for continued use by buses.</li> </ul> <p>He continued by saying “Until such time as we can resolve these issues, I have no option but to raise a formal objection to the proposals.”</p>                                                                                                                                                                                                                                                                                                                                       |                              |
| A105 Statutory consultation closes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 29 July 2016                 |
| <b>Cabinet member for environment Cllr Daniel Anderson signs off on plans for the A105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>17th August 2016</b>      |
| <p>Commercial Planning Manager at Arriva buses writes to Cllr Terry Neville to say that he had met council officers to discuss this scheme and that “nothing from that meeting has eased my concerns over the impact on bus services”<br/> <i>(Note that not one of the issues raised by him in his letter of objection dated 28 July 2016 has subsequently been altered in the final plans currently being implemented).</i></p>                                                                                                                                                                                                                                                                                                                                                                       | 24 <sup>th</sup> August 2016 |
| <p>Cllr Terry Neville writes to Leader of Enfield Council and Cllr Anderson (and copies to Arriva Commercial Planning Manager) to say that “there is, on the face of the report, an error of law occurring in that we have clearly received objections from interested parties about:<br/> (a) The restriction of loading and unloading of vehicles along this route and (b) From the relevant bus company about what they see as a restriction of the passage of buses along the route.<br/> Both of these issues are specifically dealt with in Regulation 9(1) of the Local Authorities Traffic Orders (Procedure) (England and Wales) Regulations 1996, which requires the order making authority to cause a Public Inquiry to be held before making an order to which regulation 9(3) applies.</p> | 24 <sup>th</sup> August 2016 |
| <p>Cllr Terry Neville informs Commercial Planning Manager at Arriva buses that the Cabinet Member for Environment has approved the implementation of the scheme with only minor amendments which did not affect his concerns, and suggesting he should now formally write asking that a Local Public Enquiry be held.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 24 August 2016               |
| <p>Email from Commercial Planning Manager at Arriva buses to London Buses saying “We act as contractor to London Buses so we would be</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 24 August 2016               |

|                                                                                                                                                                                                                                                                                                                    |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| uncomfortable about ploughing our own furrow here. What is London Buses' formal position, please?"                                                                                                                                                                                                                 |                           |
| Emails from Lester Scott at Surface Transport (TfL) to Commercial Planning Manager at Arriva buses stating:<br><b>"It would be unwise to request a local public inquiry as a contractor of London Buses"</b>                                                                                                       | 30 <sup>th</sup> August   |
| Email from Peter Reucroft (Surface Transport, TfL) to Commercial Planning Manager at Arriva buses asking:<br><b>"Are you able to respond to Scott what your intention is please. Scott is hopeful that you will be able to advise him that you do not intend to request a local public inquiry"</b>                | 31 <sup>st</sup> August   |
| Email from Commercial Planning Manager at Arriva buses to Peter Reucroft (ST, TfL), stating:<br><b>"I am in the course of responding to Scott. We will, of course, take his advice regarding the public inquiry but I will register with London Buses our concerns over the scheme's impact on our operations"</b> | 31 <sup>st</sup> August   |
| <b>Arriva buses withdraw their objections</b>                                                                                                                                                                                                                                                                      | 1 <sup>st</sup> September |

## **London Assembly Transport Committee Call for evidence: bus services**

### **Response from the Committee of the Enfield Transport User Group.**

Please find below the joint response from the Committee of the Enfield Transport User Group to **selected questions** from the London Assembly Transport Committee Call for evidence on bus services.

Enfield Transport User Group (ETUG) is an organisation run by residents and open to all residents in the London Borough of Enfield with an interest in improving local transport.

#### **4 How well do TFL Plan the Network?**

*4.1 An Ad Hoc and fragmented approach to bus planning.* In the outer Boroughs there appears to be no holistic approach to planning for areas as a whole, but instead ad hoc individual changes are made in response to a particular problem, issue or change in demand. The result is that changes often meet only the minimum, immediately presenting requirements and opportunities are missed to integrate the change with the wider network. There is also much delay in the process. For example in late 2014 ETUG, with support from London Borough of Enfield, presented exactly such a holistic strategic vision to TfL, setting out proposals for improving bus services. No meaningful reply was received until early 2016 when TfL gave an initial response. This was focussed on one isolated section of the proposals which was reported to be under consideration. It is now 2017 and still no proper response has been received.

In the outer boroughs there is opportunity and need for a holistic and comprehensive approach to transport planning that takes into account all sustainable transport modes. The relatively high usage of buses in the outer boroughs needs to be acknowledged in transport planning, in particular because the lack of an holistic approach is currently leading to detrimental impacts on bus services. As an example, cycle lane proposals are being implemented in Enfield (the Mini-Holland/Cycle Enfield scheme) that will serve to increase bus journey times. Perversely, the negative impacts these proposals will have on bus journey times conflict with the efforts of the Mayor to reduce bus journey times in the new LEZs. Bus journey time improvements in the LEZ between Edmonton Green and Seven Sisters section of one of the local LEZs will be off-set by increased bus journey times arising from the A1010 Cycle Enfield scheme. Similarly, bus journey time improvements at the new LEZ running through Wood Green (where the 'Mini-Holland' scheme will not operate) will contrast with increased bus journey times within Enfield arising from the A105 Mini-Holland/Cycle Enfield scheme.

Opportunities to enhance bus / rail interchange are also not being exploited, even for stations that have recently entered into London Overground. In particular, bus interchange and pedestrian access is very poor at Silver Street Station, Edmonton Green lacks a southbound bus stop, Southbury Station could have bus stops outside the station and Turkey Street Station is very poorly served. There is also very poor bus access to a number of West Anglia Mainline railway stations. We give more detail of these problems later in this submission.

The lack of holistic bus route planning in the outer Boroughs is a particular concern. For example, north of Edmonton Green, the 259, 149 and N149 were curtailed from Enfield Highway to Edmonton Green over a decade ago. The 349 service (the Stamford Hill allocation of the previous iteration of the 149) was bolstered and introduced to replace the 149 north of Edmonton Green, yet was subsequently reduced in frequency at all times. Bus ridership shows that buses suffer circa 50% more loadings north of Edmonton Green Bus Station than they do to the south subsequent to these

changes, but no review has been carried out to balance services in relation to rapidly increasing populations and changing patterns of transportation.

*4.3 Inadequate planning for new developments.* Regarding the need for more comprehensive bus reviews to take into account of changing patterns of ridership and development, it is of particular concern that no comprehensive bus review appears to have been carried out to take into account new developments at White Hart Lane or the new Edmonton Heartlands Housing Zone. At White Hart Lane, a 63,000 seat stadium is to be constructed along with circa 11,000 new homes and a 38 storey sky-scraper that will likely result in a tall buildings cluster. Edmonton Heartlands Housing Zone is likely to deliver a similar scale of housing. Meridian Water also delivers opportunities that have not been considered, such as linking the new Angel Road railway station to residents living north of the station by bus, both towards Ponders End High Street and Enfield Lock.

There are concerns about bus services that operate in the Greenbelt sections of outer London boroughs. For example, ETUG has campaigned for a long period of time for the W10 to be extended to Crews Hill Railway Station and to be increased to more than the current four buses per day service. This bus in particular serves one of Europe's largest concentrations of garden centres at Crews Hill, a popular destination for shoppers at weekends. Buses such as this route and those serving other Greenbelt locations such as Forty Hall and Epping Forest could provide significant additional access for Londoners to the countryside and also support rural businesses. However, at present there appears to be no appetite for or willingness to consider improvement to such services.

*4.3 More meaningful involvement and consultation with bus users is essential.* The organisation of bus planning and consultation needs to be reviewed. Real involvement with actual bus passengers (service users) is required. We note that TfL is currently consulting on changes to routes that run through central London but this is primarily online. This is inadequate and ignores the fact that surveys reveal that very many older people still do not have access to online facilities.

To ensure that bus service users are properly involved, TfL should send survey staff to speak with actual bus passengers (users of those routes) and local organisations representing public transport users and prioritise their views over and above those from outside the area. Before moving to wider consultation all proposed changes should include a full equality impact assessment, involving engagement with Transport for All, RNIB, AgeUK and Disability Rights UK, as a minimum, to assess the impact (in particular) on passengers with disabilities and visual impairments, and on elderly and frail passengers.

We understand that TfL Buses liaise with Borough Councils but there appears to be no real involvement of actual bus passengers nor a serious evaluation of what is happening in an area as a whole. Planning changes must be seen as a priority and sufficient expertise and budget should be made available.

When residents and bus passengers are consulted they must be listened to. The recent decision of TfL to ignore the views of the great majority of residents in Archway is a particularly worrying development

([http://www.islingtongazette.co.uk/news/tfl\\_snubs\\_popular\\_opinion\\_to\\_drive\\_through\\_archway\\_bus\\_changes\\_1\\_4802607](http://www.islingtongazette.co.uk/news/tfl_snubs_popular_opinion_to_drive_through_archway_bus_changes_1_4802607))

## **6. What bus priority measures has TfL already introduced and how successful are they?**

*6.1. Bus lanes.* Bus lanes are the main priority measure that we are aware of. In the London Borough of Enfield they have been a great success. As an example, a northbound bus lane operates between

Bush Hill and the Dugdale Centre (ending just before the junction with Cecil Road) Monday to Friday at peak times, and all day on Saturdays. It does not operate on Sundays. Proof of its success during the week can be seen from the impact on journey times when it does not operate. On Sundays, what is normally the bus lane is filled with parked cars. Buses have to wait in the main traffic lane, leading to severe delays and significantly lengthened bus journey times.

This is very strong evidence indeed for the success of bus lanes as a priority measure. We recommend you compare and contrast bus journey times across the day on Sundays with journey times on other days. The bus that is particularly affected is the 329 – the one bus route that joins all the shopping centres along the A105, running from Palmers Green, through Winchmore Hill and Bush Hill Park to Enfield Town – four major shopping (and therefore employment) hubs.

It is therefore of extreme concern that LB Enfield, with funding from TfL, intends to remove this, and other, bus lanes across the borough in order to install cycle lanes (as part of the Mini-Holland initiative) that will operate 24/7 in future. This will lead to the same situation as is currently in force on Sundays - buses will be excluded from this lane and will be confined to the main traffic stream. Consequently, journey times will be longer. However, data from Sundays were not used in modelling the impact of this bus lane removal.

There are also bus lanes north of White Hart Lane, without which bus journeys would be far more difficult. These bus lanes also do not operate Sundays and also finish (cease to operate) earlier than ebbing of the strongest peak traffic flows. Longer operation of these bus lanes should be considered in view of heavy traffic continuing late into the night, particularly in and north of Tottenham. These lanes too should certainly not be removed.

Both the A105 bus lane mentioned and some of the bus lanes north of White Hart Lane are being removed to provide space for dedicated cycle lanes, despite a) the bus lanes already being available to cyclists and b) bus drivers being trained in how to safely drive behind a cyclist. Furthermore, removal of the bus lanes is in direct conflict with the new LEZs being introduced on both roads where the Mayor is currently seeking to reduce bus journey times.

We would prefer to see TfL retain bus lanes across London. Before any funding is considered for schemes that seek their scrapping there should be an accurate cost-benefit analysis focussed on identification of the scheme that provides the benefit for the greater number of public transport users. For example, cyclist represent circa 0.7% of journeys in Enfield (predicted to rise to 5% if the scheme achieves its goals) while bus journeys constitute over 60% of journeys; it is difficult to see how a policy that will impair bus journey times and reliability can be viewed as sustainable, especially when cyclists are able to use bus lanes and when fully viable alternatives for cyclists exist such as quiet ways. However, this is what the lack of joined-up planning has resulted in being implemented in Cycle Enfield. Regarding the issue of quiet ways, we note that while the Mayor has recently spoken out in favour of these (and we fully endorse this approach) and said that it is not necessarily optimal to put cycle lanes along main roads, this does not appear to have resulted in any review of ongoing schemes.

*6.2. Data used in calculating the need for priority measures.* The example of the northbound bus lane on the A105 demonstrates that, for the need for priority measures to be accurately gauged, it is vital that any modelling conducted is accurate and based on **all** relevant data. In Enfield the impact of removal of the bus lanes was modelled based on current **weekday** traffic. However, this gives a significantly more optimistic view than what would have been arrived at based on the true simulation of the likely impact of bus lane removal, based on data for Sundays when the bus lane is

effectively ‘removed’ from use. As we have noted above, the experience on Sundays provides a much more accurate simulation of the likely impact of removal of the bus lanes – and indicates that it will be far worse than the local authority and TfL have claimed. Note that the bus operator agrees with our views, but was required by TfL to remove its objections: this information is in the public domain and therefore accessible, but we can provide copies if required.

*6.3 Bus priority at traffic lights.* The other priority measure we are aware of, but have no evidence of it being used in practice locally, is giving buses priority at traffic light-controlled. Used carefully and in the right locations this could produce positive results. However what we have observed in Enfield is that TfL gives priority to the A10, a major trunk road which bisects the Borough. This often results in congestion on local roads, delaying buses on other routes. This policy needs to be reviewed and any prioritisation must be managed more carefully in future in order to ensure that other local bus routes do not suffer as they do at present.

## **7. What impact could the introduction and development of the hopper ticket have on the design of London’s bus network?**

The 149 and 279 routes in Enfield are already amongst the top 20 most popular hopper bus routes in London. Further use of the Hopper ticket would be popular and have real utility, allowing for the planning of shorter routes and the creation of easy to use interchange points. The advantage is that shorter routes could be serviced more reliably. It would remove the need to turn buses around short of their destination or take buses out of service when the driver has reached his maximum drive time. In particular it would allow a fresh look at single deck bus routes.

One such route currently operates in Enfield. It runs from Waltham cross to North Middlesex Hospital, is low frequency and often does not reach Waltham Cross because of congestion. It is the only bus which serves the main entrance to the Hospital from the north. This is clearly an unsatisfactory situation.

Introduction and development of the hopper ticket would enable this route to be split at Edmonton Green Bus Station and a more frequent shuttle service could then service the Hospital. This is an example of where the hopper ticket would enable introduction of short routes which would achieve a better service.

Conversely, data should also be utilised from hopper patterns to potentially link up routes that are presently split and do not reflect major passenger flows, to provide bus users more direct routes.

## **8 Does TFL plan to stimulate demand?**

In our experience the answer is no.

*8.1 Proof first.* In Enfield we have been trying to extend the W10 route in such a way that would potentially increase the number of passengers (by extension of the route to Crews Hill Railway Station and by increasing frequency to more than the current four buses per day service ) but our efforts have been met with a ‘catch 22’. Crews Hill contains one of Europe’s largest concentrations of garden centres and is a popular destination for shoppers at weekends. We are told that there has to be proven demand for the bus service before TfL will even consider any changes.

*8.2 Conflicting policies should assess benefits to the most people.* In Enfield we are confronted with one particularly poor piece of planning. Edmonton Green is one of London’s busiest train stations. Again, this is a location in which bus stops were moved in 2004 in order to accommodate the ‘bendy

buses'. As a result of these changes, passengers wishing to catch southbound buses have the choice of two bus stops – one is a 250m walk from the rail station, and the other a 300m walk from the rail station. The distance between the two stops is 420m – in excess of TfL's "Accessible Bus Stop Guidance" which states:

*An ideal spacing for bus stops is approximately 300m - 400m, although a closer spacing in town centres and residential areas may be required to meet passenger requirements.*

***Consideration should be given to improving spacing, and reviewing locations, particularly where interchange is an issue.*** (TfL Accessible Bus Stop Guidance, p.9, emphasis added)

A member of ETUG has been in touch with the Deputy Mayor for Transport, Val Shawcross. He wrote:

*This is Enfield's busiest rail station by a long margin with 3.5 million entries and exits last year, making it as busy as Swindon. As such, the existing 250m to 300m walk to the station from existing bus stops is clearly unacceptable.*

Our member has previously been advised by TfL that this arrangement severely suppresses demand for Overground and bus services, and also fails to support the station's accessible status as one of the only West Anglia stations with step free access to platform level. In addition, and as we have already noted, the 149 and 279 which serve this station are amongst the top 20 most popular hopper bus routes.

He therefore asked for the Deputy Mayor, and TfL, to consider reinstatement of the Station's previous south bound bus stop. Instead of giving proper consideration to the suggestion the Deputy Mayor instead asked the senior officer responsible for working with the boroughs on the Mini-Hollands cycle lanes programme to respond. He wrote:

*We have considered your suggestion regarding converting the lay-by into a bus stop by Edmonton Green roundabout. An additional stop in this location is currently not seen as beneficial due to the proximity of the bus station, extra time onto timetables as well as the previously mentioned potential difficulties with buses getting back into carriageway which would increase journey times.*

Note that the 'additional' stop that he views as 'not beneficial' is in fact the stop that was removed solely to facilitate use of the bendy buses. There is no reason to conclude the changes would bring any difficulties for buses (indeed, our member is professionally qualified in spatial planning). Instead, this is another example of 'silo' planning – the officer is in charge of the cycle lane planning and as such appears to have little interest in planning for the benefit of users of public (rather than private) transport. It is true that he goes on to say that

*However, we will look to conduct a bus accessibility audit around Edmonton Green Bus Station area in conjunction with looking at the Mini-Holland designs*

However, this is scant comfort and we have real concerns that the cycle lane planning will take precedence over bus accessibility, when bus accessibility for thousands of people – and in particular the less able in the population - should surely be the priority? (And note that we report our concerns at the implications of bus bypass and boarder bus stop arrangements at [question 12](#)). It is also of some concern that the senior officer for cycle lanes was asked to respond to a question about

improvements to buses – and gives some idea of the way in which the relative importance of these transport modes is viewed in TfL planning at present.

### **Alternative models and approaches**

Under this section we have responded only to Q10, ‘other approaches to network design’, but we have provided a large amount of detail. We believe it is essential that, in considering network design, TfL focusses on the issue of improvements to connectivity wherever possible. We believe that this is a slightly different issue from that of ‘hubs’ – in outer London boroughs (with their more disperse, often suburban, populations) a focus on improved connectivity between bus and rails services and locations is likely to bring more benefits than a focus on hubs.

We draw on experiences in, and examples from, Enfield to illustrate our recommendations. Where bus routes pass stations priority should be given to locating bus stops as near as possible to the station to minimise interchange walking routes. Good examples can be found at Elstree, Cuffley and Potters Bar (all located in Hertfordshire).

We recommend that, to facilitate such improvements, TfL be instructed to maintain a register of a) essential and b) desirable works that would improve future rail/bus interchange connectivity. ‘Essential’ works should be those identified for work as soon as funding is available; ‘desirable’ works should be recorded in a system so that as soon as any other work is planned in the area the ‘desirable’ work is incorporated as a part of that development. Details are given below.

#### **Q10. What other approaches to network design should TfL be considering?**

*10.1 Improving Connectivity.* We consider it essential that connectivity with overground services is taken into account when designing bus services. Our experience in Enfield is that, while in general connectivity between buses and the Borough of Enfield’s eighteen National Rail stations is reasonably good, there are some notable exceptions. These are listed below:-

a. Route 313 Chingford - Potters Bar. This is a key East - West route. It currently does not serve Ponders End station. In a few years’ time when Ponders End is served by Cross Rail a bus interchange will be important. Route 313 could easily be altered to serve Ponders End station by being routed via Wharf Road and Meridian Way, given a slight road alteration at the cul-de-sac end of Wharf Road to link the two roads. It is essential that this issue is addressed now, before Cross Rail comes into operation and it would be desirable to implement the interchange by May 2019 when new nine-car Aventura trains are introduced to this route and off-peak service frequency is increased by 50% to 3 trains per hour. An improved interchange could also spur additional routes, for example providing Chingford Mount residents with access to the Lea Valley Line at Ponders End. (‘Essential’)

b. At one time Routes 307 and 191 used to finish and start their journeys adjacent to Brimsdown station. However, the stop was moved around one hundred metres away to Enstone Road worsening the interchange for passengers. At a date in the future the Green Street Level Crossing will be permanently closed. This would provide an opportunity to relocate the bus terminus adjacent to Brimsdown station. We urge TfL to plan for this improvement now (‘Essential’).

c. A similar situation exists at Enfield Lock station. As above (point 2), the Ordnance Road Level Crossing will be permanently closed in the near future and the opportunity should be taken to create a bus terminus adjacent to the station. (‘Desirable’).

d. Silver Street Station experienced a 56% increase in ridership since entering the London Overground network, on May 2015, recording 1,389,866 entries and exits last year. However, bus interchange is very poor and there is no pedestrian crossing to the south side of Sterling Way, resulting in many pedestrians risking an informal crossing. The walk from bus stops to the rail station are as follows: Stop A: 300m, Stop B: 150m, Stop Q: 200m. Bus stops should be moved significantly closer with a formal crossing provided outside the Station to the south side of Sterling Way to enhance rail / bus interchange and improve pedestrian safety. ('Essential')

e. Edmonton Green - Edmonton Green Rail Station is Enfield's busiest. It has experienced 20% increase in usage since joining the London Overground network in May 2015, recording 3,440,938 entries and exits last year, similar to Swindon. Its southbound bus stop was removed in 2004 to make way for bendy buses that are no longer used. Removal of that stop resulted in a 250m walk to/from southbound stop at Hertford Road or a 300m walk to/from the alternate southbound bus stop at Edmonton Police Station. The distance between the two bus stops is 430m, more than recommended by TFL's Accessible Bus Stops guidance bus station location guidance, which recommends an a maximum of 400m distance between bus stops of 400m, less in urban settings. There is both a need and an opportunity to reinstate this bus stop, which could be done as part of Cycle Enfield, but this is currently being resisted by TfL and London Borough of Enfield. We consider the improved siting of these bus stops to be 'essential'.

f. The interchange demand at Southbury Station is high because it is on the key East - West route, served by several bus routes. Ridership was up 57% in the past year since the station joined the London Overground network with 833,988 entries and exits recorded. However, the bus stops to the west are 200m and bus stops to the east are 300m from the railway station. These stops are 500m apart. This is greater than the standard maximum distance between bus stops stated in TFL's bus stop location guidance, which recommends an a maximum of 400m distance between bus stops. New bus stops should therefore be implemented as close as possible to Southbury railway station. This opportunity could be enhanced by replacing the traffic island opposite the rail station with a traffic light operated crossing to improve bus overtaking opportunities ('Essential').

g. Turkey Street Station had over 600,000 entries and exits last year. It is only served by one bus, the 327, which delivers just two buses per hour. This is not of a sufficient frequency or late enough running to be co-ordinated with the two trains per hour service at Turkey Street. This bus service should be enhanced and synchronised with rail services. The station is over 500m walk from bus stops on both the A10 and Hertford Road. This great asset of a railway station is as a result isolated and should be properly integrated into the bus network. ('Essential')

h. Enfield Chase. While the Westbound bus stop is located immediately in front of the station the Eastbound stop was moved some eighty metres away from the station some time ago. This was because the pavement was assessed as being too narrow for a new design of bus shelter. If possible TfL should plan now to relocate the Eastbound bus stop to a position either directly opposite, or as close as possible to, the station. Again, we believe that future planning for improved connectivity with railways, and convenience for passengers, would be best served by TfL and the local authority (in this case, Enfield) planning for this improvement to be instituted when any other road developments are planned for this area ('Desirable').

i. At Crews Hill station the former train company First Capital Connect ignored the need for the W10 bus to turn round in the station approach. Consequently a car park enlargement scheme was undertaken which led to obstruction of the W10 bus turning circle on the station approach. The current train Operator has stated that they would be prepared to surrender two car parking spaces to enable the W10 to return to its natural Crews Hill terminus and would also serve numerous retail outlets en route. We would very much encourage TfL to work with Go Ahead to reinstate the W10 turning circle. ('Desirable')

In addition to these interchanges within the borough, our train lines run to the following two stations in neighbouring boroughs that have similar issues:

- i. Just outside Enfield, White Hart Lane Station is between 150m and 175m from its bus stops on White Hart Lane. The distance will increase when the new station concourse is opened on Love Lane. There is ample opportunity for creation of closer rail station bus stops. ('Desirable')
- ii. Further away from Enfield, but on the same West Anglia London Overground Route, Rectory Road Station's closest bus stops are 270m from the station, making it prohibitive for many journeys. It is hoped that this can be enhanced with the gyratory is removed. ('Desirable')

*10.2 End 'Silo' planning.* In addition, it is essential that TfL jettisons its 'silo' approach to planning. In Enfield our bus services are being blighted by the impact of cycle lanes that have been planned with no consideration of the impact on bus services until after the proposals are in place. Indeed, FOI requests reveal that planning and modelling was undertaken in such a way as to enable concealment of the real impact and, once one of the main bus operating companies in the area raised concerns, he was told by TfL not to request a Public Inquiry (which in law should have been the outcome of an objection being lodged by a bus operating company). Note that this information is in the public domain and therefore accessible, but we can provide copies if required.

It is essential that TfL properly engages with assessment of the combined impact of its various different policies on bus usage in future, rather than pursuing silo planning irrespective of whatever is revealed in the longer term regarding the impact on bus services. It is certainly not in residents' or London's interests to have sections of TfL threatening bus operators who raise concerns about the impact of plans on the services they operate.

## **Infrastructure and design**

### **12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?**

Note that we have already commented on the negative impact on bus services of the removal of bus lanes in favour of cycle lanes; see our response to your questions 6 and 10.

*12.1 Bus bypasses and bus boarder arrangements.* It is of extreme concern to us that, as part of the Mini Holland scheme funded by Transport for London, London Borough of Enfield plans to install at least 12 bus 'bypass' bus stops and more than 30 bus boarder bus stop arrangements (this is just in the A105 and Enfield Town sections of the scheme; many other sections are planned).

London Borough of Enfield claims these arrangements are safe, and TfL has guided the planning and is funding their installation.

Yet it is the case that TfL is currently still undertaking research to try to find ways to improve the safety of the bus bypass arrangements and (we understand) have now agreed to also investigate the issue of bus boarder bus stops too. It therefore cannot be stated that these arrangements are safe, and indeed there is much evidence from blind and elderly people of the risks these arrangements pose to bus passengers.

Given that TfL is seeking ways to improve the safety of these arrangements we would urge you to impose a moratorium on any further installation of such arrangements – and to cease forthwith the funding of such arrangements. It is beyond belief that TfL is allowing councils to install such arrangements and claim that they are completely safe (as is the case in Enfield) when they are anything but safe.

We have been told by a local elderly resident of her experience when making her way with her daughter to hospital by bus, and who were about to alight from the bus using a ‘boarder’ when a cyclist came straight through the ‘boarder’ area, neither slowing nor stopping for the bus as TfL are keen to claim is the case.

These bus stop arrangements are accidents waiting to happen. Transport for All and all of the organisations representing blind and visually impaired people are against their installation. The people who were nearly involved in the incident while leaving the bus are not blind but are elderly, and were very much alarmed by their experience. Buses should have absolute priority over cyclists and should always be allowed to pull into the kerb. Bus boarders and bypasses should be banned from use in London

*12.2. Shared bus lanes.* We not see any problem with cyclists being allowed to use bus lanes.

### **13. Would expanding 20mph zones be a good way of reducing collisions?**

Any decisions regarding the impact of 20mph zones on collisions needs to be based on analysis of data – comparing collision rates in 20mph zones with rates in other, demographically and geographically matched areas – not on opinion.

However, we have one observation to make regarding 20mph zones. That is, that any decisions should be tempered by the fact that emissions are higher at low speeds than at moderate speeds. This is for two reasons: 1, because engine efficiency roughly describes a parabola – they are **less efficient** at both low and high speeds than at middling speeds; and 2, because travelling between any two points takes 50% as long as at 30mph, or twice as long than at 40mph, meaning that the engine (already working less efficiently, hence producing relatively high emissions) is in the area for longer and therefore polluting for 50% as long or twice as long.

Therefore any decisions to introduce 20mph zones should only be taken where there is a proven need to reduce collision rates, based on existing collision rate data. Elsewhere, the need to manage air quality should be paramount and policies should reflect the relevant scientific principles that govern engine efficiency.

**Submitted by:**

**Enfield Transport User Group Committee**

**30.01.17**

[REDACTED]

## London Assembly Transport Committee - Call for evidence: bus services

### Response from the London Borough of Bromley

#### General questions

##### *1. Is London's bus network fit for purpose?*

The evidence, and hence the reason for the debate, it would appear that it is not.

##### *2. How does the bus system compare in inner and outer London*

An outer London Borough like Bromley, a significant proportion of which is very rural, has to be realistic in terms of network size and frequency and, overall, we feel that the network is good and, in the main, reliable with a very good frequency on most routes.

##### *3. What different challenges do the inner and outer networks face?*

Clearly traffic levels are going to have a more significant impact in the more urban areas outside the congestion zones and road space is more limited in Central London, particularly as a result of the competing needs amongst modes, most notably cycling which has seen huge growth in recent years no doubt aided by major infra-structure with the Cycle Super Highways likely to see cycle use growing even further. Growth in Uber, private hire and mail order deliveries will all add to the adverse impact on road capacity. This inevitably has a greater impact on reliability, factors that aren't as prevalent in outer London.

#### Designing the bus network

##### *4. How well do TfL plan bus routes?*

We believe very well although there is a belief that it does appear to be very much a one size fits all approach irrespective of demographics, geography and land use. By this, for example, we mean services with high off-peak frequencies which we would argue don't warrant it and very fixed routes which do not appear to take account of different users from different areas that could be catered for by slight route variants.

##### *5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?*

It is hard to say whether there is a consistent policy here. Whilst we are aware of S106 sums being gained and used for boosting frequencies on existing routes close to a new development, it does supplement the comments made in item 4, that we believe that as the type and demographics of any development vary it is not necessarily the correct approach to merely supplement the existing bus service which seems to be TfL's standard approach, when they should be looking at providing, say, higher quality vehicles on more direct routes to key points more relevant to those particular residents which may not necessarily mean at high frequency.

*6. What bus priority measures has TfL already introduced and how successful are they?*

There is little doubt that the measures that have been introduced across Bromley have proved essential in helping buses maintain reliability and attract and retain users.

*7. What impact could **(has)** the introduction and development of the Hopper ticket have **(had)** on the design of London's bus network?*

This ticket has been widely applauded as it offers the opportunity to better connect between services without suffering a fares penalty. We also believe that in certain circumstances, eg, whether it could enable the shortening of some routes that suffer from major reliability issues. Providing that connecting services remain of a high frequency then the Hoper Fare minimises the disadvantage of having to make new connections.

*8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?*

We believe that it is the latter and that the former approach is only taken when S106 or other sources of funding are available from new developments when there is likely to be a demonstrable increase in demand.

*9. What tools does TfL have to monitor and forecast demand?*

We have insufficient knowledge to give an informed opinion.

**Alternative models and approaches**

*10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:*

- orbital routes – to an outer London Borough like Bromley this does appeal as it may reduce the need to go further into London to travel east or west and should also reduce the total cost of travel
- through routes – not any particular issues although it is the length of any through route which could be of concern and how the longer the route the greater the risk of unreliability, eg Service 320, Catford to Biggin Hill
- bus rapid transit – not something that we believe has any particular merit in Bromley although we would like to see more bus priority across the Borough, particularly A21 and A232 (both TLRN routes)
- shuttle and hubs – no particular views

*11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?*

Yes it is. We believe that TfL appears to have a set approach to local bus services, which may mean that certain routes have too high a frequency and are slow and indirect. Whilst it is recognised that there is always a trade-off between maximising revenue and serving as many potential customers as possible there is also a potential 'tipping point' in the way indirect routes become less attractive with revenue ultimately declining. We see merit in some limited stop/express bus services and other outer town developments, eg, to support further development at Biggin Hill Airport (designated as

an SOLDC by the GLA) to provide a dedicated fast link between Bromley South and Orpington stations. This we believe is more likely to appeal to more professional, highly skilled workers than conventional stopping bus services and therefore encourage this group to shift away from the car.

*12. How successful have existing express routes been, such as X26 and 607?*

We've not had any experience of these routes so cannot comment.

### **Making changes to the network**

*13. What can we learn from others cities about successful/unsuccessful bus network redesign?*

Arriva's 'Sapphire' and Stagecoach's 'Gold' premium service brands have been a huge success across the UK. TfL would do well to investigate similar services in London, particularly for longer distance/limited stop services which is the type of facility that Bromley would be advocating between Biggin Hill Airport SOLDC, Bromley South and Orpington Stations.

*14. What are the challenges associated with this kind of large-scale change to the bus system?*

Any change always has to be handled very carefully as some may need to be convinced of the need and others may see it as an excuse to make cuts. That said, if it is a case of the latter, TfL needs to be honest and say that there is no new money and that existing resources can be better deployed which will strengthen the performance of the overall network even if that means that some reduction of frequency is required elsewhere.

*15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?*

TfL does actually consult well and, the only criticism we would level is that it is extremely lengthy and slow. For example the length of time it has taken to make changes to the Orpington 'R' network and the provision of additional and up-graded bus stops in Biggin Hill.

### **General questions**

*1. What should TfL's priorities be for delivering a safe bus network?*

Driver training

*2. Are you aware of any particular accident blackspots?*

Each year the Council reviews the worst crash sites across the Borough and if there is a pattern then plan suitable remedial works. Nothing has shown up that relates specifically to buses.

*3. What are the particular safety concerns for:*

- passengers on buses – erratic driving, drivers pulling away from stops before passengers have sat down, particularly an issue for the elderly, drivers having to deal with any rowdiness, vision obscured
- other road users – driver distraction, for example, from rowdy passengers

## **Operators and drivers**

### *4. How are operators and drivers incentivised to prioritise safety?*

We don't know the process but assume that there are contract penalty payments should standards fall below a certain level?

### *5. Should operators face contractual financial penalties for poor safety records?*

See above.

### *6. Are drivers provided with adequate 'driving skills' training?*

We would assume and hope so!

### *7. How effective is the training (which is delivered by individual operators)?*

Bearing in mind that standards do seem to vary between operators we would argue that there is a case for a consistent approach by TfL which all operators have to sign up to as a condition of being awarded London bus contracts.

### *8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?*

See above.

### *9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?*

We do not have any knowledge of what this process is.

## **Technology**

### *10. Has TfL taken advantage of new technologies to make buses safer?*

We have insufficient knowledge to comment.

### *11. What other technology advances should TfL consider piloting?*

Seat availability indicator in the cab so that drivers can inform passengers of spare seats which may reduce the numbers of passengers standing and blocking the aisle.

Not really a particular technological advance as electronic destination blinds are used widely across the UK so much so that we remain surprised at TfL's failure to adopt them, particularly when the amount of information on a standard TfL fabric blind is extremely limited. One of the great benefits of electronic blinds is the quantity of information that can be shown, how they can flip between 'pages' to show via points and display scrolling messages. They are also far easier to up-date.

## **Infrastructure and design**

*12. Are there any problems caused by bus and cycling infrastructure sharing roadspace (particularly kerb side) and how could these be resolved?*

As far as safety is concerned segregation is always the better option but can result in a greater share of roadspace which reduces the available capacity for other modes including buses. Whilst we are aware of the impact of the new east/west Cycle Super Highway on bus reliability we remain of the view that to increase the levels of cycling in London safe, high quality dedicated facilities for cyclists have to be delivered. There is inevitably a trade-off but there is also a level of confidence and an expectation that a combination of modal shift, traffic reassignment and some drivers changing their travel behaviour, will result in capacity improvement.

*13. Would expanding 20mph zones be a good way of reducing collisions?*

They can be but we do not support a blanket approach and they should only be implemented where the safety record justifies it.

*14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?*

Not necessarily. One could argue that slow moving buses held up in a queue of traffic could be less of a risk than a bus in a dedicated lane maintaining a higher speed than adjacent traffic. That said, we've no evidence to support the fact that they are less safe.

## LONDON ASSEMBLY TRANSPORT COMMITTEE

### CALL FOR EVIDENCE : BUS SERVICES

#### RESPONSE FROM THE LONDON BOROUGH OF HACKNEY ON BUS SAFETY ISSUES

##### INTRODUCTION

Making Hackney's roads safer for all users is one of the Council's key priorities set out in the Council's Sustainable Community Strategy<sup>i</sup>. Bus safety issues, therefore are very much of concern to the Council.

We therefore welcome the fact that the Committee are looking into this issue and taking evidence. We also welcome the publication by TfL of quarterly bus collision data in a more user-friendly format as well as the outcomes of all fatal bus collision investigations.

##### BUS RELATED INJURIES IN HACKNEY

An analysis by the Council of injuries by road class user between 2008-2012 showed the greatest rises to have been among pedal cyclists and pedestrian casualties. Although bus user casualties have also shown a slight increase over this period, overall numbers are much lower than for other groups.

Notwithstanding, analysis of the bus related incident data for Hackney for Q1-3 of 2016 shows by far that the largest numbers of injuries were to bus passengers (over 110 incidents) compared to less than 20 affecting pedestrians, about 10 affecting bus drivers and less than 10 affecting cyclists or motorcyclists. This suggests that buses are not seen as risk to cyclists in Hackney but that there is an issue affecting bus passengers.

**Q. Are you aware of any particular accident blackspots ?**

Analysis of the type of incidents in bus related incidents in Hackney for the same period i.e. Q1-3 of 2016 shows by far the highest incident being slip trip fall related (80 compared to 50 for collision incidents and 30 relating to personal injury). There is no particular distribution for these injuries across time but there is a spike in injuries on three bus routes (55,254 and 106). These buses serve a common section and the Council would be interested in examining the specific location of these incidents in more detail.

**Q. What are the particular safety concerns for :**

- **Passengers on buses**
- **Other road users**

As mentioned, an analysis of the Hackney data indicates the biggest danger to bus users being in the slip trip fall category. This could be attributed to bus design, road conditions, or getting on and off buses. Of those incidents, 55 were treated on scene while there were 7 minor injuries and 17 serious injuries which resulted in hospital treatment. The latter are a cause for concern.

In relation to other road users as these are distributed across different modes (car, cycle, pedestrian) it is hard to pinpoint any particular safety concern. It would be interesting to see, however, if these are more frequent at night.

**Q. Has TfL taken advantage of new technologies to make buses safer ?**

We note that TfL are continuing to develop the new bus safety standard which will specify the technologies required on new vehicles from 2018 to cut casualty rates and this is welcomed.

**Q. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved ?**

The low rate of cycling collisions (10 in 3 quarters) would suggest not but this may merit further investigations.

**Q. Would expanding 20 mph zones be a good way of reducing collisions ?**

Evidence from Hackney suggests drop in accidents following the introduction of 20mph zones in residential streets. We would, however, wish to see more enforcement and this is a way in which TfL could assist.

**Q. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions ?**

Bus lanes themselves do not remove conflict with cyclists if cyclists can use them. Widening them where possible may be a solution.

<sup>i</sup> Sustainable Community Strategy 2008-2018

# London Assembly, Transport Committee

## Call for Evidence: Bus Services

### 1. Bus network planning

#### General questions

1. Is London's bus network fit for purpose?

The major issue in Redbridge is poor frequency of some services, and any opportunity to increase frequencies on existing routes would be the best way to encourage greater mode share. The opportunity for this step change should be the phased de-bussing of Oxford Street – and routes would need to be considered accordingly. Where we have increased the route length (462 - Forest Road) or are seeking new re-routing (hospital regeneration site) there is also the need to increase the number of buses on the route to maintain service frequency. A significant (improvement) change in bus frequency should be supported by a local advertising campaign. It is acknowledged, however, that any frequency increases will exert pressure upon existing bus stands and that additional bus stand capacity might need to be secured at some locations.

2. How does the bus system compare in inner and outer London?

It is more viable as an alternative travel mode in inner London due to far greater destination choice and integration with other modes.

3. What different challenges do the inner and outer networks face?

There is less scope for bus lanes in outer London.

#### Designing the bus network

4. How well do TfL currently plan bus routes?

This appears to be a piecemeal activity with the recent central London consultation the only large-scale change for many years. Given the requirement for substantial new housing in London the network should be reviewed with the affected Boroughs sufficiently in advance of whenever a route is retendered to ensure that bus service provision meets the new demand.

5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?

Opportunities offered by TfL in recent years to hold 1-1 discussions with individual Boroughs to inform their longer term bus service planning taking into account existing demand and future population and projected housing developments have been welcomed and taken up. Continuation of these and action upon Borough comments put forward would be positive steps.

6. What bus priority measures has TfL already introduced and how successful are they?

Bus speeds are reducing, so something clearly isn't working.

7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?

The hopper ticket should be pro-actively considered when considering the development of the London bus network. More "hops" should be permitted for longer single commutes to encourage bus use.

8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?

See answer to question 5.

9. What tools does TfL have to monitor and forecast demand?

No comment.

### **Alternative models and approaches**

10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:

- orbital routes
- through routes
- bus rapid transit systems
- shuttles and hubs

For Redbridge greater consideration should be given to orbital and express routes. BRT is capital intensive and suburban geography doesn't easily lend itself to shuttles and hubs e.g. the "W" set of routes are not a cohesive network. It is noted that changes around the night tube and Elizabeth line can be considered a multi-modal model shuttle / hub suitable for the suburbs. TfL's service network planning should also consider fast links to key transport hubs outside the GLA area, e.g. an express from Ilford to Stansted using A406 / M11 corridor.

11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?

Yes. Bus routes perform a number of functions. If these can be separated out, but with appropriate interchange, then they will better meet people's travel aspirations. This is similar to the way that rail services have developed out of Liverpool Street with TfL rail managing an intensive inner-suburban service and Abellio operating longer distance routes, having withdrawn services from inner-suburban stations over a period of many years.

12. How successful have existing express routes been, such as X26 and 607?

No comment.

### **Making changes to the network**

13. What can we learn from others cities about successful/unsuccessful bus network redesign?

Communication of phasing for user perception.

14. What are the challenges associated with this kind of large-scale change to the bus system?

User confusion on routes / fares / journey times.

15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?

Links on Borough websites.

## 2. Bus safety

### General questions

1. What should TfL's priorities be for delivering a safe bus network?  
To ensure that the bus network is as safe as can be within the available resource constraints.
2. Are you aware of any particular accident blackspots?  
No comment.
3. What are the particular safety concerns for:
  - Passengers on buses
  - Other road usersNo comment.

### Operators and drivers

4. How are operators and drivers incentivised to prioritise safety?  
No comment.
5. Should operators face contractual financial penalties for poor safety records?  
No comment.
6. Are drivers provided with adequate 'driving skills' training?  
No comment.
7. How effective is this training (which is delivered by individual operators)?  
No comment.
8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?  

Given the physical constraints on the development of cycling infrastructure greater emphasis should be paid to the safety aspect linked to operators and driver training. LBR is the only borough in London to have its own Fleet Operator Recognition Scheme (FORS), driver training centre (based at the Ley Street depot). Bus drivers do receive training but Safer Urban Driving (SUD) training should be mandatory if not already for bus drivers. A TfL led training programme aligned with FORS and CLOCS would be a good thing to create a London Standard and ensure heightened awareness and potentially a reduction in collisions. Where complaints or incidents have been reported with regards individual driver behaviour, follow up training could be offered.
9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?  
No comment.

### Technology

10. Has TfL taken advantage of new technologies to make buses safer?

No comment.

11. What other technology advances should TfL consider piloting?

Buses are not currently fitted with 360 camera / detection devices, and are not covered by the Fleet Operator Recognition Scheme (FORS) standard as are other large vehicles in London. Camera / detection devices are an option to both protect the driver from accusation, and vulnerable road users; as are the proximity sensors also being trialled on lorries.

## **Infrastructure and design**

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

Cycling and bus infrastructure have for many years been crammed into the same shared space which can create a conflict at peak times, with buses not being able to travel along a clear route due to cyclists being in the lane. This can lead to intimidation of cyclists by a large vehicle trying to pass and keep to timetable, and potential accidents; which is counter-productive in encouraging use of both modes of travel.

Specific issues highlighted are:

- There are conflicting calls on available road space, for example a road where it was found that for the preferred bus scheme to be installed it would be necessary to remove the existing cycle lane infrastructure.
- Bus stop build-outs are provided on roads, where waiting and loading is restricted. This requires cyclists to weave out into the general traffic to pass the build-out and it also makes it more difficult to pass stopping busses.
- Reducing conflict at bus stops between other motor vehicles and pedestrians through use of floating bus stops where appropriate.
- Explore options to integrate bus journeys with onward cycle journeys through improved provision / infrastructure at key bus interchanges / hubs e.g. include secure bike parking, access to hire bikes. Should also explore the potential for transportation of bikes on buses through use of bike racks. <http://www.bikesonbuses.com/locations/uk/>.

13. Would expanding 20mph zones be a good way of reducing collisions?

If the evidence base from existing 20 mph zones supports this then the answer is yes.

14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?

No comment.

31 January 2017

Georgina Wells  
London Assembly  
City Hall  
The Queens Walk  
London  
SE1 2AA

Dear Sirs,

**London Borough of Richmond upon Thames  
Response to the Transport Committee Call for Evidence: Bus Services**

**Introduction**

As a London stakeholder with a number of emerging public transport issues, the London Borough of Richmond upon Thames welcomes the opportunity to respond formally to the above call for evidence.

Buses form an important part of the borough's local and strategic transport needs within a local road network constrained by the River Thames and large Royal Parks, and the recent increase in both development and the demand for school places in the borough means that a number of peak services are under increasing strain. The historic nature of some of the routes also mean that they are not necessarily in keeping with recent travel patterns and local needs, but the ongoing constraints on both TfL and borough funding mean that much needed changes will require both careful planning and management of expectations in terms of delivery.

Richmond also boasts a large number of cyclists, with 7% of our travel mode share taken by cycle journeys. The increasing numbers of cyclists, with matching demand for safe cycling routes in our town centres at the expense of other road users, mean that safety is also a key concern for us.

**Response to questions**

General questions

1. Is London's bus network fit for purpose?

Broadly yes. There is a vast amount of historical knowledge of how London residents move and where demand is, and an evolutionary approach which has worked well. However, recent increases in population and changing demographics, together with the constrained road and rail networks in Richmond, risks travel demand changing faster than is able to be met by a traditional, somewhat sedate, approach to managing the bus network. In Richmond we are now observing the effects of national policies on housing and education which have put additional strain on key routes or introduced new demand. Greater freedom of choice in educational opportunities and access to medical services has many benefits but, coupled with permitted development, loosens the relationship between land use and transport provision.

## 2. How does the bus system compare in inner and outer London?

Inner London's bus network is often based upon radial routes from central London or the major rail termini. These have evolved from the original routes in London and supplement the rail network and Underground network. In Richmond and elsewhere in outer London, the network is more varied and diffused and there are areas of very low Public Transport Accessibility Levels (PTAL) where it is some distance to even low frequency buses.

There are a number of radial bus routes and night bus routes that connect with central and inner London and terminate. Any delays caused by congestion at the city end of the route means that our end of the route can be vulnerable to cancellation or premature turnbacks. In Richmond borough, there are a number of town and village centres which act as local draws and as with other outer boroughs, there are local bus routes linking the borough centres and their interchanges with their surrounding area. Richmond has several high-frequency orbital bus routes linking the boroughs with other towns, stations and attractions in neighbouring boroughs.

## 3. What different challenges do the inner and outer networks face?

As an Outer London borough, we are conscious that delays and congestion within the inner boroughs, where there is a greater concentration of development and roadworks has a significant impact on those buses on radial routes. Problems include services terminating early in order to get the timetable back on track, and buses unable to stop at certain locations due to being full. Future implementation of the Elizabeth Line (Crossrail) and Crossrail 2 will have further impacts on bus usage.

Outer London has seen lower reductions in car usage than inner London. The private motor vehicle will remain by far the single most used mode of travel in outer areas; buses offer a vital service but the more dispersed nature of settlement and lower bus frequencies in outer London mean that the bus is less of an alternative for many journeys, can be infrequent for essential users and will be more prone to road congestion in the future as outer London road traffic increases.

TfL's proposed amendments to inner London Bus Services, on which consultation has just closed, presents the opportunity to use any financial savings achieved in this process on to key areas in outer London boroughs. A number of key themes for Richmond borough are set out our response to question 5 below, and we would urge

the Assembly to encourage the Mayor to prioritise these areas in TfL's investment plans.

#### Designing the bus network

##### 4. How well do TfL currently plan bus routes?

The planning of bus services does not appear to be as proactive or even responsive as it once was. This is not a new occurrence. For some years, TfL has been constrained by the realities of its financial position and transport policies, relatively few routes have been extended or introduced in recent years; more apparent has been a strengthening of existing services possibly as offering a more cost-effective approach to providing additional capacity. Within the context of current Mayoral policy and TfL's financial predictions, new or extended routes without offsetting reductions in services elsewhere are considered unlikely to be common. It is welcomed that TfL offer the Borough meetings with senior representatives to discuss bus planning and local aspirations but it is important that these meetings, and indeed investigations like this one, do not unduly raise local expectations if the reality is that relatively little material change will occur.

##### 5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?

Yes – we are in regular contact with TfL route planners and, of course, TfL assess all referable planning applications for any bus impacts or financial contributions towards improving services. However in Richmond the scale of development is relatively small, and rarely exceeds a threshold whereby TfL considers significant improvements to bus services are necessary. This can be disappointing as travel demand arising from new or expanding schools and town centre developments is a cause of concern, and yet it is difficult not to get the impression of Richmond being afforded a lower priority by TfL.

The processes and formulas used by TfL to assess the need for bus services should be more visible and better understood; the process seems to be rather opaque and leads to communities refusing to give up on demands for amending services as they do not feel their requests have been adequately assessed and responded to. We have a meeting arranged with TfL to discuss bus services in the Borough so will raise specific issues in that forum; however several requests are common:

- the need to strengthen/extend direct routes between Twickenham, Teddington and Hampton, and provide services to a relatively isolated part of Ham.
- The lack of any direct bus service to serve Whitton town centre from the West
- The need for a review of bus services in Barnes, particularly the town centre, to reflect the changing priorities of the travelling public and to serve Putney Bridge and Fulham
- Long standing issues which we have raised in discussions with TfL Buses regarding provision of peak services along or near the A316 corridor serving colleges, St Marys University and new and existing schools.

##### 6. What bus priority measures has TfL already introduced and how successful are they?

During the early life of TfL, boroughs continued to implement bus priority measures and it was a high priority. More recently in London, other policies and other road users have been greater priority along with a sense that bus priority had reached a point where benefits were becoming fewer and costs greater. There are no bus lanes on the Transport for London Road Network in the borough and a rather small but important number of bus lanes on Borough roads. We have been in discussion with TfL over relatively small scale funding for local corridor improvements on strategic cross-borough services such as the 281, but many of these have not yet come to fruition.

However, our programme of bus stop improvements towards a target of 95% of stops being fully accessible is well on target to be met this Spring. The highway network and bus network in Richmond is such that specific and significant bus priority measures are not anticipated, although we are keen to ensure that buses benefit from our programme of corridor and neighbourhood improvements being funded through the Local Implementation Plan.

We welcome the proposals within the next TfL business plan to phase out diesel-only buses in favour of hybrid or electric models from 2018. However, we have over 30 air quality monitoring sites where NO<sub>2</sub> and PM emissions are at or above the prescribed EU limits – indeed, the top six of these are 50-100% above the limit. Seven of our poor air quality sites are served by between 7 and 12 bus routes, with frequencies of up to 10 buses an hour per route. We have urged TfL to start the replacement of buses on these routes with lower emission versions as soon as possible in order to help improve air quality in what are often busy high streets with high footfall.

#### 7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?

There is a potential for an increase in bus patronage to help offset recent falling numbers of bus passengers and reductions in income arising from being able to change buses without paying twice. There is a prospect of additional bus journeys while off work or at weekends using Oyster pre-pay, as more destinations become available for a lower cost via interchanging. The hopper ticket could be promoted as an alternative to extending bus routes; indeed it is theoretically possible that existing long and unreliable routes could even be shortened and made more reliable if good quality bus interchange facilities were available. In practice, however, we doubt that the hopper ticket will have a significant impact on bus service planning. Many requests we receive for bus routes to be extended come from Freedom Pass holders; a single journey will always have benefits over making a change even where the change costs nothing in money terms. However, it does make sense to additionally assess in some detail the extent to which the use of the hopper ticket, coupled with bus stop and interchange improvements, might go some way to addressing demands for new, amending or extending routes.

#### 8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?

From a Richmond perspective, the latter. As mentioned in the answer to question 1 above, there is an issue of speed and proactivity – recent increases in school places within the borough have caused high peak bus demand and complaints from residents about full buses passing stops in the morning. It often takes some time to increase peak frequency or adjust patterns.

9. What tools does TfL have to monitor and forecast demand?

Bus origin and destination surveys, iBus journey time data, key point location surveys. Oyster cards will now provide larger levels of boarding data. Stakeholder feedback is a valuable source. Engagement with developers and their consultants regarding the future impact on the network from major sites.

Alternative models and approaches

10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:

- orbital routes
- through routes
- bus rapid transit systems
- shuttles and hubs

TfL should be open to all approaches to network design, but bearing in mind that there is not one approach suitable to the whole of London, both in terms of passenger demand and also in terms of the possible infrastructure. For example, providing effective bus rapid transit systems in historic parts of London is unlikely to be cost-effective or be feasible without closing major roads to traffic, although bus rapid transit systems may be feasible in major development zones. Shuttles and hubs may be attractive in areas where very high frequency bus routes are in operation. While not generally supported by TfL, we recognise the benefits of limited stopping services for longer distance high frequency services but, for outer areas with lower-frequency routes the all stopping point-to-point benefit of bus travel (avoiding the need to interchange) may be supported by many users.

We support through routes where beneficial, for example in providing connections to airports in outer London, but note that many of south London's roads are narrow and in planning through services - which depend on overtaking other bus services – this must be considered. We also support orbital routes, as mentioned above, as these provide important links between outer London towns.

11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?

In a borough with a constrained road network due to the large open spaces and parks, and a number of historic service patterns that have not kept pace with changing demographics and demands (such as access to and from Barnes town centre) we would be open to a variety of approaches to ensure suitable coverage. Flexibility in service planning is important; business cases need to take full account of the social benefits of connecting relatively inaccessible locations where the financial return may be lower than strengthening existing busy routes but the social need is greater.

## 12. How successful have existing express routes been, such as X26 and 607?

The X26 service runs via Teddington, and the longevity of the service suggests it is well-used, however as there are only one or two stops in Richmond borough we do not have any indication of how well it is used by borough residents.

## Making changes to the network

## 13. What can we learn from other cities about successful/unsuccessful bus network redesign?

We are aware that TfL has contacts with other cities, both in the UK and abroad, and we would hope that they are learning from this experience of other systems.

## 14. What are the challenges associated with this kind of large-scale change to the bus system?

A large number of residents have established their lifestyle, employment and residence around the existing networks. It should be noted that most journeys are relatively short and do not go via key town centres or hubs.

People are also creatures of habit, and transitioning to new travel patterns and routes could take some considerable time, especially for elderly passengers or people with disabilities. In making large scale changes to the network there needs to be considerable thought given to the severance and displacement of existing journeys, and whether this inconvenience is significantly outweighed by the benefits of changes.

## 15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?

TfL recently stopped providing posters at bus stops to notify users of changes. While we can see the logic behind this it doesn't necessarily benefit potential new users. Emailing registered Oyster card holders is welcome but does not capture non-users who might be interested in switching, or those who top up their cards at stations rather than via the internet. We would be interested in knowing what usage figures are available for unregistered Oyster card usage on key routes.

## **Bus Safety**

### General questions

#### 1. What should TfL's priorities be for delivering a safe bus network?

We believe that a safe bus network involves clean, safe vehicles operated by drivers trained to a common high standard, with particular consideration for cyclists and other vulnerable road users. Route capacity should be kept under review to allow greater flexibility as passenger demand changes, in order to avoid overcrowding.

#### 2. Are you aware of any particular accident blackspots?

No

3. What are the particular safety concerns for:

• Passengers on buses –

we get regular complaints from our mobility forums about buses moving off, often accelerating (and braking) quickly, when the elderly or people with disabilities have not yet secured themselves or sat down. Growing numbers of schoolchildren on buses and the changing travel patterns mean that it is not uncommon to watch several full buses go past before one with capacity stops. Such crowding and large numbers of standing passengers can give the perception of safety issues to certain user groups.

• Other road users –

Richmond has a high mode share for cycling, but comparatively few cycle lanes or off-road facilities in urban areas. Quietways are being developed in some town centres but there is competition for road space and considerable parking demand, which limits options.

Operators and drivers

4. How are operators and drivers incentivised to prioritise safety?

No comment

5. Should operators face contractual financial penalties for poor safety records?

Yes

6. Are drivers provided with adequate 'driving skills' training?

Not able to answer this question.

7. How effective is this training (which is delivered by individual operators)?

Not able to answer this question fully. However, recent collision and casualty data continues to show a low level of incidents involving buses.

8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?

We consider that all companies operating buses in London should have drivers trained to the same high standard, and independently assessed either by a separate body or by other operators elsewhere in the capital.

9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?

We have no knowledge of this.

## Technology

### 10. Has TfL taken advantage of new technologies to make buses safer?

Yes, CCTV and external warning sensors/cameras, as well as the adoption of lower emission vehicles as noted above.

### 11. What other technology advances should TfL consider piloting?

## Infrastructure and design

### 12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

Yes in Richmond, due to competing demands for parking. A Quietway network is being developed and cyclists are permitted to use bus lanes, but there will be gaps.

### 13. Would expanding 20mph zones be a good way of reducing collisions?

Yes, but needs to be balanced against principal/strategic road network and the need for traffic calming to self enforce the 20mph limit as well as concerns from the blue light services.

### 14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?

Following the creation of the Richmond and Wandsworth Shared Service, borough highways schemes are based on a new corridor approach and looking at all aspects of a given route. As part of this we can look at public transport infrastructure and provision, and work with TfL to develop or enhance facilities. In terms of bus lanes, current policies show little if any appetite for new lanes and the present administration has a manifesto commitment to remove all 24 hour bus lanes. There are no TfL lanes in the boroughs, and pressure from residents to reduce bus lane operating hours.

## **Conclusion**

The Borough is pleased to be engaged with the London Assembly on these vital issues. We welcome further engagement on the above points as discussions continue, and thank you for the opportunity to respond at this time.

Yours sincerely



Phil Crockford

**From:** [Howson, Pip](#)  
**To:** [Transport Committee](#)  
**Subject:** Southwark Council's response to GLA consultation on buses  
**Date:** 09 February 2017 17:14:50

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Dear Samira Islam

## **Southwark Council's response to GLA consultation on buses**

Thank you for the opportunity to respond to the call for evidence on buses in London.

Firstly is a summary of some of the key bus issues that Southwark Council feel need to be reviewed in order to optimise this opportunity.

- Southwark would support a radical review of the bus network to look at efficiency and interchange which could inform rationalising of services.
- Southwark would support the consideration of trams or light rail alternatives within the borough where evidence suggests this would lead to improvements to the overall public transport experience.
- Southwark would support improvements in bus driver training particularly in relation to vulnerable passengers and on board communication.

We have not responded to every question as it was not clear how we could usefully contribute. We look forward to further involvement opportunities in the review of the bus network.

## **Bus network planning**

### **General questions**

#### ***1. Is London's bus network fit for purpose?***

- Due to for example the intense development and increased population in London the current bus network is struggling to provide adequate service levels. Therefore the answer is no.

#### ***2. How does the bus system compare in inner and outer London?***

- As a central London Borough we are not in a position to comment on the comparison

#### ***3. What different challenges do the inner and outer networks face?***

- The South of our borough has lower PTALs and our residents who commute

find overcrowding of both bus and rail of significant concern. It is a challenge to promote mode shift to sustainable transport while this overcrowding persists.

## **Designing the bus network**

### **4. *How well do TfL currently plan bus routes?***

- Our main observation on this subject is that due the silo style of working at TfL there is a higher likelihood of missed opportunities.
- Specifically, an example of the challenges of implementing a major scheme at Camberwell was largely due to with insistence on bus priority over pedestrian and cycle safety.

### **5. *Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?***

- This is an area where we would welcome improvements – we believe that our joint working on the Old Kent Road, Peckham Town Centre and Canada Water will be the opportunity to improve this important process learning from the Elephant and Castle experience.

### **6. *What bus priority measures has TfL already introduced and how successful are they?***

- The most significant changes have been in Blackfriars and the Elephant and Castle. We would refrain from commenting on their success until they are complete and settled in.

### **7. *What impact could the introduction and development of the hopper ticket have on the design of London's bus network?***

- It should identify common interchange which could inform rationalization of routes.

### **8. *Does TfL plan new bus services to stimulate demand or just to respond to existing demand?***

### **9. *What tools does TfL have to monitor and forecast demand?***

## **Alternative models and approaches**

### **10. *What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:***

- ***orbital routes***

- *through routes*
- *bus rapid transit systems*
- *shuttles and hubs*
- all of the above.

**11 Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?**

- Southwark would like to continue to work with TfL on an area by area basis and not close the door on options for consideration.

**12. How successful have existing express routes been, such as X26 and 607?**

No information on these routes.

**Making changes to the network**

**13. What can we learn from others cities about successful/unsuccessful bus network redesign?**

- Benchmarking against other cities is essential

**14. What are the challenges associated with this kind of large-scale change to the bus system?**

- That other sustainable modes are negatively impacted.

**15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?**

- More consultation with passengers on the buses during the journey
- More consultation at key bus stops on the routes to understand passengers experience..

**Bus Safety**

**General questions**

**1. What should TfL's priorities be for delivering a safe bus network?**

- Reduction in conflict with other modes

**2. Are you aware of any particular accident blackspots?**

- The concentration of accidents is most common on the strategic road network
- The most common casualty appears to be passengers who fall over within the bus due to sudden braking.

**3. What are the particular safety concerns for:  
Passengers on buses**

- Southwark Council recently attended the Southwark Pensioners forum. They clearly identified the following concerns:
  - Bus driver behaviour particularly in pulling up to the kerb, allowing vulnerable passengers to sit before moving forward, that when a bus is third in line at the bus stop the driver doesn't take into account waiting for passengers to walk along two bus lengths to get there, poor communication is respect to changes to routes and diversions.

#### **Other road users**

- Wider bus lanes could allow cyclists and motorcyclist to overtake at bus stops and avoid conflict with pedestrians

#### **Operators and drivers**

N/A

#### ***4How are operators and drivers incentivised to prioritise safety?***

N/A

#### ***5 Should operators face contractual financial penalties for poor safety records?***

yes

#### ***6. Are drivers provided with adequate 'driving skills' training?***

N/A

#### ***7. How effective is this training (which is delivered by individual operators)?***

N/A

#### ***8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?***

N/A

#### ***9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?***

N/A

#### **Technology**

#### ***10. Has TfL taken advantage of new technologies to make buses safer?***

- The new routemaster does not provide improvements for those users with disability, ageing and buggy users.
- The door safety is particularly concerning at peak time when the overcrowding is most prominent

#### ***11. What other technology advances should TfL consider piloting?***

N/A

#### **Infrastructure and design**

#### ***Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?***

- Southwark Council await the monitoring of Blackfriars CSH to comment on design

#### ***11. Would expanding 20mph zones be a good way of reducing collisions?***

- Only if they can be enforced efficiently

**12. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

- Only if its is complemented with appropriate improvements in bus driver behaviour

Yours sincerely,

Pip Howson  
Team Leader Transport Policy

Pip Howson  
Team Leader Transport Policy  
Chief Executive's Department  
5th Floor, Hub 2, Zone C

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## **London Assembly: Transport Committee**

### **Call for Evidence: Bus Services, December 2016**

#### **Comments by London Borough of Sutton**

Thank you for the opportunity to comment on this investigation into how TfL plans the bus network and the safety of bus passengers and other road users.

#### Bus network Planning

##### **General questions**

###### *1. Is London's bus network fit for purpose?*

This is difficult to answer as the response depends on what part of the network is regularly used. There is a clear difference between central/inner London and outer London as set out below in the response to question 2. However, the current network appears to be one that has evolved organically over time and passengers have established travel patterns which could be disrupted if more fundamental replanning is undertaken. This points to the need to fully understand how the system is used in addition to how it might be used in the future.

###### *2. How does the bus system compare in inner and outer London?*

Both frequency and duration of services as well as the route coverage are far more limited in outer London compared to central and Inner London. Furthermore the fleet tends to be older and more polluting in outer London. This compounds the difference in public transport provision between inner and outer London where the former also enjoys better rail coverage and the Underground.

###### *3. What different challenges do the inner and outer networks face?*

In outer London the challenge is to provide a bus service which is the backbone of a public transport network which can deliver a real alternative to car use for short to medium journeys. It needs to be comfortable (sufficient capacity), reliable in the face of congested roads, with high priority despite historically narrow roads and provide as close to a 24/7 service as possible. This needs to be supported by changes to the image of buses which does not present the service as a second class travel option. At present there is no evidence to suggest improved bus provision can bring about significant modal switch, unlike the tram, to encourage growth and investment.

##### **Designing the bus network**

###### *4. How well do TfL currently plan bus routes?*

From an individual local authority point of view, it is not clear how strategically bus planning takes place as any consultation is generally restricted to individual routes. Over recent years the level of engagement on procured bus services has declined. Previously there was regular consultation when various tranches of routes were coming up for retendering and this took place some considerable time in advance to allow meaningful consultation. This process no longer takes place in any meaningful way and it is only privately initiated routes that this council is regularly notified of and by which of their nature have very little impact on the overall bus network.

In addition, it appears that funding constraints often contribute to this approach and that new or additional funding is required. TfL has historically looked to new developments to assist in the funding of new capacity through S106 agreements and still appears to look to this as a future

means of funding services. However, changes to the planning system now means only the largest of developments are likely to be able to contribute. This is because LPAs can no longer pool more than five S106 agreements once a CIL charging regime is in place and most developments by themselves are too small to contribute to the level of funding required. The general scale of development means that outer London boroughs are worse affected than more densely developed inner London boroughs. There is real concern that the lack of TfL forward planning and funding could severely constrain future growth opportunities which in turn could frustrate achieving London's housing targets.

*5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?*

Whilst it is appreciated that it is difficult to respond to all the competing pressures for additional bus capacity it is the council's view that bus planning is generally reactive rather than proactive (see response to 8).

*6. What bus priority measures has TfL already introduced and how successful are they?*

The council in conjunction with TfL has an on-going programme of bus priority schemes funded via the Local Implementation Plan (LIP). Joint route tests between operator, TfL and borough have taken place to identify areas where buses suffer regular delay. Practical measures have included extension of parking restrictions to prevent bottlenecks along bus route.

*7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?*

If passengers are able to change between one or more routes then it is likely to become easier to introduce shorter more reliable services which in principle would be welcomed by the council. However, this would require better interchange facilities and the frequency of services needs to be sufficiently high to avoid passengers incurring delays when changing buses.

*8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?*

One of the biggest criticisms of bus planning in London is that TfL is not forward thinking and prepared to fund future services to support new developments. Rather it is reactive and awaits new developments to have happened and sufficient demand to have arisen before providing more services. In this way, it misses opportunities to influence travel patterns of new occupants of developments who plan their journeys on the basis of existing available modes and hence does not maximise potential bus income. It is also particularly important to plan for the growth in school places in boroughs such as Sutton. This borough has a very high reputation for its schools meaning there is pressure to expand the number of places to meet demand from parents moving into the area.

*9. What tools does TfL have to monitor and forecast demand?*

N/C

### **Alternative models and approaches**

*10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:*

- *orbital routes*
- *through routes*
- *bus rapid transit systems*
- *shuttles and hubs*

The council considers more emphasis should be given to orbital links between town centres and other strategic destinations around London particularly where no similar rail connections exist. In the council's view, far too much emphasis continues to be placed on improving radial public transport in London. At present a high proportion of movement in the borough is orbital and largely made by car. However, the council only has one truly orbital route which is a semi express service (X26). There are no other west/east orbital services unless passengers interchange in Sutton town centre (between 213/151 and 407). To bring about a significant modal shift towards public transport, investment needs to be made in providing prioritised, comfortable and reliable modes such as the tram on key corridors supported by frequent feeder bus services.

However, if funding is limited for public transport requiring more fixed infrastructure such as the tram, then TfL should investigate other types of service not traditional provided to try and provide this improved level of service at least in the interim. However, it should not be at the expense of providing the more traditional regular stopping services.

*11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?*

Yes. The current approach of trying to provide standardised vehicles to serve different types of area needs reconsideration. As an outer London borough those routes which penetrate into narrow residential streets with on street parking needs smaller vehicles where routes are not so long that capacity becomes an issue. The residents of this borough have since the 1990s enjoyed the benefit of most of its suburban areas (located away from main bus routes) being served by services with extensive sections of the route operated on a hail and ride basis. A number of these routes were introduced through cooperation between the former London Transport and the council where the council underwrote any operating losses of the services. Such services would not have been able to be introduced without adopting a flexible approach to stopping and were particularly beneficial to the elderly who would have found it difficult to walk long distances to stops. These routes very quickly proved successful and were taken into the overall network. Larger and standardised buses make it challenging to maintain such services.

*12. How successful have existing express routes been, such as X26 and 607?*

In the council's view the X26 has been a very successful service. Since its introduction increased demand has led to the service frequency being increased to two buses per hour and operating for longer hours. In addition, it is understood that double deck buses will shortly be replacing single deck ones to provide additional capacity. However, the council would like to see the frequency of this service increased and reliability improved. With low frequency services of this nature it is important that there is good information about the impending arrival of services at stops.

### **Making changes to the network**

*13. What can we learn from others cities about successful/unsuccessful bus network redesign?*

N/C

*14. What are the challenges associated with this kind of large-scale change to the bus system?*

It is important that TfL has a full understanding of existing journey patterns as well as looking for changes to existing routes. Otherwise a fundamental change could disrupt existing journey patterns. Therefore, TfL needs to fully engage with residents and businesses once it has

considered the different options going forward. There also needs to be sufficient resilience in the network to help cope with unforeseen events such as industrial action on the railways where in south London there is no ready access to the Underground.

*15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?*

As set out in the response to question 4 TfL consultation methods with boroughs are not as effective now as in the past. In terms of changes to specific sections of routes it is important that the area of public consultation is sufficiently broad so as not to just include the proposed directly served roads. Otherwise, a largely negative response is likely. Wider consultation should include public events to explain why changes are proposed and the benefits of such changes. Such consultation needs to be early in the process.

## 2. Bus Safety

### **General questions**

*1. What should TfL's priorities be for delivering a safe bus network?*

N/C

*2. Are you aware of any particular accident blackspots?*

N/C

*3. What are the particular safety concerns for:*

☐ *Passengers on buses*

☐ *Other road users*

Overcrowding in buses and at bus stops during peak periods is a concern for both passengers and pedestrian access at stops. TfL needs to review capacity issues on bus routes near schools and town centres.

The increase in size and weight of buses on Hail & Ride routes since introduction are a constant cause of complaint along specific narrow sections of the road. Traffic congestion leads to driver frustration whereby buses and general traffic resort to driving along pedestrian footpath and grass verges. This results in damage to footpath and grass verges with a potential risk to pedestrians and damage to underground services.

### **Operators and drivers**

*4. How are operators and drivers incentivised to prioritise safety?*

N/C

*5. Should operators face contractual financial penalties for poor safety records?*

N/C

*6. Are drivers provided with adequate 'driving skills' training?*

N/C

*7. How effective is this training (which is delivered by individual operators)?*

N/C

*8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?*

N/C

*9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?*

N/C

### **Technology**

*10. Has TfL taken advantage of new technologies to make buses safer?*

N/C

*11. What other technology advances should TfL consider piloting?*

N/C

### **Infrastructure and design**

*12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?*

Careful design consideration of road layout is required when buses and cycles are expected to share road space in order to avoid conflicts with cyclists.

*13. Would expanding 20mph zones be a good way of reducing collisions?*

N/C

*14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?*

Further investment to improve bus priority would be welcome. Commitment towards ongoing bus priority programme should be maintained to allow continuous improvement to bus priority.

## London Assembly Call for Evidence: Bus Services (Jan 2017)

| Bus Network Planning      |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | Call for Evidence Questions                                                                                                                          | Waltham Forest Responses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| General questions         | 1. Is London's bus network fit for purpose?                                                                                                          | <p>Yes - it is the best bus service in the UK, with good routes, high frequency and high vehicle standards. However congestion issues and network planning are the biggest challenges to maintaining this service.</p> <p>For example, traffic congestion on narrow roads through Waltham Forest towards Stratford/Newham (e.g.. Hoe Street, Church Road and Leytonstone one way system) means that several routes (such as 58, 69, 97, 158, 257) can have long journey times for short distances.</p> <p>Routes that are too long also cause problems, such as the 123 on Forest Road in Waltham Forest. Buses get held up in Ilford to the east and Wood Green to the west, causing lots of bunching in the middle of the route which results in long gaps between services and overcrowding on buses.</p> <p>In Waltham Forest, we find that local short distance routes tend to work well and also the main routes along Lea Bridge Road (48, 55, 56) are good and have high frequencies.</p>                                         |
|                           | 2. How does the bus system compare in inner and outer London?                                                                                        | Waltham Forest is outer London but has some characteristics of inner London so differences seem fairly minimal. In the south of the borough, there are significant areas of growth which the bus network doesn't fully cover. Inner London also has more bus routes converging together which can cause bus congestion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                           | 3. What different challenges do the inner and outer networks face?                                                                                   | <p>Congestion and poor bus journey time are the main challenge to the networks , and in Outer London this is largely due to higher car ownership levels. Therefore some short journeys (e.g.. Walthamstow to Stratford) are considerably longer than they should be and this makes the service unattractive to users (see examples in (1)).</p> <p>There is also the challenge of catering for new areas of growth in Outer London which could be improved by looking into frequency of service and changes to the network, for example the Blackhorse Lane area isn't well served by a high frequency bus, and the Leyton/Lea Bridge area of growth would benefit from a bus route being re-routed to better serve the new residential area.</p> <p>Finally, both networks face the significant challenge of improving the air quality standards of the bus fleet. Urgency is required on improving this situation due to the significant health implications and TfL should accelerate the roll out of the zero emission bus fleet.</p> |
| Designing the bus network | 4. How well do TfL currently plan bus routes?                                                                                                        | Many bus routes have been in place for a long time and TfL typically show little response or a slow response to changes in demand. We have suggested to the borough team at TfL that bus route planning should be more collaborative and transparent, enabling boroughs to contribute their local knowledge around usage and growth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                           | 5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions? | <p>TfL could improve on bus network planning by engaging with boroughs earlier in the process, particularly in areas of growth, to ensure that bus route planning corresponds to changing demand. TfL Planners often attend meetings regarding large new developments but TfL Buses do not get involved at the same early stage. Buses could be engaged much earlier in the process, for example when a masterplan is being developed. Regular meetings (e.g.. quarterly) between TfL Buses Network Development and boroughs could also be beneficial.</p> <p>It is also worth noting that the London Plan (and borough planning documents) are updated irregularly and so use of live development monitoring information would be more appropriate. GLA housing/planning have a lot of this information, so it should be easy enough to share between all parties.</p>                                                                                                                                                                   |
|                           | 6. What bus priority measures has TfL already introduced and how successful are they?                                                                | <p>LBWF introduced bus lanes to borough roads, where possible, from 2005. These were largely successful and popular with bus users. Due to recent increases in congestion across London, bus lanes with limited times of operation are now less useful and these should be revised to be in operation 24/7, ideally.</p> <p>TfL has also introduced bus priority measures at some signalised junction using recent technology improvements.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                   |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | 7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?                                                                       | Waltham Forest welcome the hopper ticket and a more flexible system which enables people, particularly on lower incomes, to more easily access employment, town centres and stations. It is especially useful in the north of the borough where there are fewer public transport options. However we feel there is minimal impact on the design of the bus network.                                                                                                                                                                          |
|                                   | 8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?                                                                                                 | It appears that TfL only really respond to existing demand when necessary. There are no instances in the area where TfL has planned new bus services to stimulate demand, partly due to the lack of coordination with boroughs and new developments.                                                                                                                                                                                                                                                                                         |
|                                   | 9. What tools does TfL have to monitor and forecast demand?                                                                                                                                  | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Alternative models and approaches | 10. What other approaches to network design should TfL be considering? As appropriate, please make reference to orbital routes, through routes, bus rapid transit systems, shuttles and hubs | <p>A more strategic approach that links key areas of growth or fills in gaps in the underground/rail network would also be beneficial for example there is a gap in transport links and connectivity from Walthamstow/north of the borough to Stratford that could be better served.</p> <p>Express routes would be supported particularly in areas of Outer London with lower PTAL.</p> <p>Bus rapid transit systems are unlikely to work in London due to a lack of road space compared to other cities where they've been successful.</p> |
|                                   | 11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?                                                         | Yes - areas of growth and areas with low PTAL and high congestion (typically Outer London) could be treated differently with a mix of express routes as well as regular stopper services.                                                                                                                                                                                                                                                                                                                                                    |
|                                   | 12. How successful have existing express routes been, such as X26 and 607?                                                                                                                   | Waltham Forest strongly supports express routes, mixed with regular stopper services. The borough doesn't have any currently to comment on.                                                                                                                                                                                                                                                                                                                                                                                                  |
| Making changes to the network     | 13. What can we learn from others cities about successful/unsuccessful bus network redesign?                                                                                                 | Bus rapid transit systems require robust priority measures which require a significant amount of road space. This is something that London doesn't have so this model is unlikely to work.                                                                                                                                                                                                                                                                                                                                                   |
|                                   | 14. What are the challenges associated with this kind of large-scale change to the bus system?                                                                                               | Challenges include the need to work with 33 different boroughs and the different processes/timescales/ambitions of each. Additionally, differences in political support, and sometimes a lack of political support to reallocate road space away from private vehicles, present significant challenges.                                                                                                                                                                                                                                      |
|                                   | 15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?                                                                                                 | Yes. Currently the consultation seems to serve more as a notice. TfL are less connected to the public/residents/users than the boroughs who are often the first point of contact. TfL Buses could engage with boroughs at a much earlier stage, as boroughs often hear suggestions and concerns from local campaign groups and there can be insufficient/untimely discussion on these matters. TfL could also connect with the public and local residents at an earlier stage too through workshops and events.                              |
| <b>Bus Safety</b>                 |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| General questions                 | 1. What should TfL's priorities be for delivering a safe bus network?                                                                                                                        | <p>Priorities should be improved driver training and customer care training to better engage with bus users.</p> <p>A safe bus network also means ensuring buses aren't adversely affecting the environment around them and their users, and therefore urgency is required on improving the air quality standards of the bus fleet.</p>                                                                                                                                                                                                      |
|                                   | 2. Are you aware of any particular accident blackspots?                                                                                                                                      | Not particular to buses.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                   | 3. What are the particular safety concerns for: Passengers on buses and other road users                                                                                                     | A safety concern for elderly and less mobile bus passengers is sudden braking and acceleration which could be improved through drive training. Another safety concern for passengers is personal safety and crime however this has significantly reduced thanks to the widespread introduction of CCTV on board, which is very positive.                                                                                                                                                                                                     |
| Operators and drivers             | 4. How are operators and drivers incentivised to prioritise safety?                                                                                                                          | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                   | 5. Should operators face contractual financial penalties for poor safety records?                                                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                   | 6. Are drivers provided with adequate 'driving skills' training?                                                                                                                             | Training on safe driving around cyclists should be mandatory for all bus drivers and should be reinforced regularly, including the need for all bus drivers to be required to do Cycle Proficiency training course, similar to HGV drivers. Also, as (2) - drivers could be trained further on the safety concern of sudden braking and acceleration.                                                                                                                                                                                        |
|                                   | 7. How effective is this training (which is delivered by individual operators)?                                                                                                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                   | 8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?                                                                 | This sounds like a sensible approach. Alternatively, if TfL ensure that certain driver skills training standards are met as part of the tender for operators then this may be sufficient, if there is confidence that it is being delivered to a high standard.                                                                                                                                                                                                                                                                              |

|                           |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | 9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?   | This is beyond our expertise, except that it seems that good practice to report collisions is being upheld as many incidents on buses seem to be reported and shown on collision reports, as they should be. These records should be used to identify particular areas of driver training required, in order to reduce the number of incidents.                                                                                                                                                                                                                                                                                                                                |
| Technology                | 10. Has TfL taken advantage of new technologies to make buses safer?                                                                             | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                           | 11. What other technology advances should TfL consider piloting?                                                                                 | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Infrastructure and design | 12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved? | Yes, this is a recurring conflict due to limited roads space. Bus stops are challenging to design for all users. Bus stop bypasses provide a compromise for all road users but are a good level of service, where there is space and if designed correctly. More support from TfL Buses on this approach would be welcome. Where bus lanes have previously been provided for cycle routes, or where bus lanes must be maintained on a cycle scheme, then it should operate 24/7 to benefit buses as well as improving cycle safety. Buses and the teams working on cycling improvements need to work together from an early stage to identify common issues and opportunities. |
|                           | 13. Would expanding 20mph zones be a good way of reducing collisions?                                                                            | 20mph zones are good for all users in urban areas and Waltham Forest supports their expansion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                           | 14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?                                   | Unsure of the effect of bus priority on collisions but it's worth bearing in mind that bus lanes have already been implemented in almost all locations where it is possible. Finding the space for new bus lanes will be very challenging.                                                                                                                                                                                                                                                                                                                                                                                                                                     |



Georgina Wells,  
London Assembly,  
City Hall,  
The Queen's Walk,  
London SE1 2AA

## **Wandsworth Council**

Environment and Community Services  
Department  
Disraeli House, 2 Adelaide Road  
London SW18 1DA

Please ask for/reply to: John Slaughter  
Telephone: 020 8871 6000  
Direct Line: [REDACTED]

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Web: [www.wandsworth.gov.uk](http://www.wandsworth.gov.uk)

Our ref: ECS/JSI  
Your ref:  
Date: 31 January 2017

Dear Ms Wells

### **London Assembly's Call for Evidence on Bus Services**

Thank you for the invitation to submit evidence to the Assembly on London's bus services.

The Council welcomes this opportunity, as we have become frustrated with Transport for London (TfL) seemingly losing interest in the Council's views on bus services and how they should be developed. We used to have regular meetings with TfL officers who were familiar with bus issues in our Borough, but these have ceased and we rarely get the opportunity to comment on services or service planning. When we do make suggestions, and even offer developer funding to support improvements, we have great difficulty in progressing these. This situation culminated last year in the Council objecting to service changes proposed to routes 424 and 485, and withholding £600,000 of Section 106 developer funding to improve public transport in Wandsworth Riverside Quarter. TfL have yet to respond by undertaking the necessary background work and consultation on the Council's alternative proposal to route the 485 along Upper Richmond Road and down Putney High Street.

We are also frustrated that TfL have not delivered improvements to public transport in Roehampton, which has an expanding population and university, and is totally dependent on bus services for public transport provision. Similarly they have not delivered a bus service from the Trinity Road area to Fulham over Wandsworth Bridge, despite years of lobbying and the issue continuing to be raised by local residents. TfL have also not addressed the lack of bus services between Wandsworth and Balham: both this and the absence of the Trinity Road-Fulham link forces passengers onto busy services via Clapham Junction, thereby increasing congestion on these routes..

With reference to your specific questions:-

## **General questions**

### **1. Is London's bus network fit for purpose?**

We are conscious that there have been substantial improvements in the network in recent years, and that it will never be possible to satisfy all the demands being made on it. However, the network has become very complex due to the organic nature of its development, and it is very difficult for the occasional user to navigate through it. Ideally the network needs to be restructured to make it more user-friendly, although in practice this would be difficult to implement without seriously inconveniencing many existing users. TfL appears to lack any strategic thinking in this respect, and we are not aware of any attempt being made to recast the network on a London-wide scale.

We are aware that many radial corridors into central London are well-served by rail services, but there are very few orbital public transport options available. Instead travellers have to travel in towards central London and back out again, adding to congestion on these routes and at interchange stations such as Clapham Junction. TfL has been very reluctant to address this problem by considering new orbital bus or coach routes, such as the modest proposals we mention above, in our introduction, for links between Trinity Road and Fulham, and Wandsworth-Balham. Similarly TfL have been dismissive of requests for limited stop or express services, in order to improve journey times on long routes, such as those to Heathrow Airport, with the obvious exception of the X26 service from Croydon.

### **2. How does the bus system compare in inner and outer London?**

The inner London network is more intensive than in outer London, and consequently provides a more attractive service for short journeys, supplementing the rail and Underground network. Longer journeys by bus tend to be very slow, partly due to traffic congestion, and therefore unattractive for most purposes. In outer London services are sparser except on important corridors, and consequently the network is more legible to the occasional user.

### **3. What different challenges do the inner and outer networks face?**

The current network is lagging behind new developments in London, so that new areas of extensive residential and commercial development on the southern side of the Thames between Putney and Vauxhall are poorly served, and existing services are overcrowded. This is leading to developers providing their own private bus services to interchanges, which are not advertised to the general public.

Congestion and road works in inner London make longer bus routes unreliable, with services at the outer ends of routes particularly unpredictable as buses get turned around short of their destinations to recover their timetables. This has been a major problem in Roehampton, which is remote from rail, Underground or tram services, and therefore depends on long bus routes such as the 72, 170 and 430.

TfL's proposed amendments to inner London Bus Services, on which consultation has just closed, presents the opportunity to use any financial savings achieved in this process on improving bus services in the areas of large-scale new developments described above, and also to improve the connectivity of Roehampton, where there is also substantial new development taking place. We would urge the Assembly to encourage the Mayor to prioritise these areas in TfL's investment plans.

### **Designing the bus network**

#### **4. How well do TfL currently plan bus routes?**

As explained above, TfL appears not to look strategically at the bus network, but continues to work incrementally at the micro-level, which tends to exacerbate the complexity of the network. We used to be regularly consulted on bus routes and their tendering, but this has now ceased and liaison occurs only on specific issues. In our experience TfL ignore our suggestions for service improvements, as seen with Wandsworth Riverside Quarter and the riverside in general, and instead bring forward their own proposals which ignore local needs. Modifications often seem to be proposed because they are easy to implement, rather than addressing the actual issue/problem.

#### **5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?**

TfL's planning of bus services for new developments seems to be reactive to those developments, suggesting that they are not planning pro-actively to accommodate the London Plan. The provision of any new service usually lags behind the implementation of the development, so that new residents and users frequently resort to private transport, despite local authorities' desire to see public transport provision from the outset, to discourage the use of private vehicles. This causes particular difficulties with many recent developments designed with minimal car parking provision to reduce environmental impact and further congestion on the highway network.

TfL need to improve their decision making by planning strategically for the long term, in the context of the London Plan, and by consulting local authorities at regular intervals on the results of this planning.

#### **6. What bus priority measures has TfL already introduced and how successful are they?**

There are a good range of bus priority measures in our Borough which have been established for over 15 years, and generally these are effective. Due to restrictions in road capacity and the needs of other road users, the Council is wary of installing further bus priority measures unless there are clear benefits. TfL have been slow to respond to the Council's and bus operators' concerns in areas like Blackshaw Road in Tooting, and instead have been promoting their own priorities.

It is noted that bus priority has been identified as a key element of the Low Emission Bus Zones and we welcome the opportunity of reviewing bus priority as part of that initiative. The Council has for several years campaigned for low emission buses to be used in our borough, particularly in areas where air quality breaches continue to occur. To make progress we need to see the wholesale conversion of bus routes to low emission vehicles, rather than mixed fleets being operated. The focus of our concern is Putney High Street, where we are calling for zero emission buses to be used, backed up by a research study by Kings' College. We are aware that this requires investment in recharging points at bus termini, and possibly the need to plan for shorter bus routes with new bus stands, which are always difficult to provide. We are looking forward to meeting TfL to progress these issues.

**7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?**

Whilst the Council welcomes the introduction of the hopper ticket, as it enables passengers to change buses more easily, we suspect it will result in a loss of revenue to TfL, bearing in mind the current fares freeze, even if it increases the use of buses. However, it provides the opportunity to simplify the bus network with shorter high capacity routes that allow easy and quick interchange.

**8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?**

We have never known TfL attempt to stimulate demand; they merely respond to demand, and even this may be delayed by inertia in their planning system and the 5 or 7 year cycle of re-tendering bus services.

**9. What tools does TfL have to monitor and forecast demand?**

TfL seldom involves local authorities in monitoring and forecasting demand. We are aware that they use bus origin and destination surveys, key point location surveys, oyster card use and stakeholder feedback, as well as monitoring services using their i-Bus system.

**Alternative models and approaches**

**10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:**

- **orbital routes**
- **through routes**
- **bus rapid transit systems**
- **shuttles and hubs**

TfL should be considering all these approaches, depending on the nature of the area being reviewed. Through routes are always preferred, where possible, to minimise the costs and inconvenience of changing buses. But this has to be balanced against

reliability of services (see above), and the availability of suitable points to terminate services.

A particular difficulty in Wandsworth is the provision of bus stands to accommodate terminating services, due to the shortage of highway capacity and TfL's inability to plan ahead with their requirements for bus stands, including suitable toilet provision for drivers. TfL's land-use planners seem to be unaware of the needs of TfL's bus services, and we are aware of several "missed opportunities" in recent developments in which TfL have had extensive involvement in Wandsworth. The scarcity of bus stands, particularly in Clapham Junction, Tooting and Roehampton, limits TfL's ability to improve bus services in our Borough, and may be a limiting factor in the future provision of zero emission services.

TfL have been particularly reluctant to consider improving orbital routes as explained above, and do not even consider limited stop bus services let alone other options for "rapid transit".

TfL should also be drawing on the experience of their bus operators, who have day-to-day knowledge of their routes. Currently TfL seem to keep operators at "arms-length" due to the commercial nature of the operating contracts: this may account for TfL sometimes appearing remote and disconnected from the real world.

We are concerned that TfL appear to overly rely on their Quality of Service Indicators when considering the performance of individual services; we have repeatedly pointed out to them that as the data is averaged over the day, the specific problems of peak hour travel are obscured and appear not to get addressed. The data also omits early terminations of bus services, which is a particular problem for Roehampton, which lies at the ends of three long bus routes. Consequently we are not confident that TfL are fully aware of the problems this causes, or that they factor this into the provision of new contracts for services, or planning for services in the future. We are sure that it should be possible to run algorithms based on population, accessibility to services and the quality of these services, as well as other relevant matters, to come up with an improved provision of bus services.

#### **11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?**

TfL should be planning networks appropriate to their locality, bearing in mind the need to link localities together, the need to keep the network sustainable and legible for occasional users. There should be full consultation with local authorities who have the local knowledge of local plans and associated development proposals, politics, aspirations and sensibilities, as well as controlling the majority of the highway network.

## **12. How successful have existing express routes been, such as X26 and 607?**

The Council has unfortunately no direct experience of these routes, but we are aware that they have operated in a variety of guises for many years, suggesting that they are popular and fulfil a purpose. We also aware of the disincentive to use buses for longer journeys, due to the discomfort of being on a bus for over an hour with constant stopping and starting, and the disturbance of passengers getting on and off. We believe bus travel could be encouraged with the provision of additional express routes, which could potentially generate a new revenue stream for TfL and relieve some congestion on other services.

### **Making changes to the network**

## **13. What can we learn from others cities about successful/unsuccessful bus network redesign?**

We are aware that TfL has contacts with other cities, both in the UK and abroad, and we would hope that they are learning from this experience of other systems.

## **14. What are the challenges associated with this kind of large-scale change to the bus system?**

The challenges are substantial and would need to be carefully handled, as all changes to the status quo result in objections. Many of these objections are likely to be well-founded, due to the impact on current journey patterns, travel times and life-styles. Any large scale change would need to be well researched and justified by clear benefits, and would need to be the subject of extensive consultation, starting at the high level with local authorities, and user groups, particularly with the mobility impaired, who are perhaps the least adaptable of bus users.

## **15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?**

TfL is starting to discriminate against people who are not regular bus users with Oyster Cards or a smart phone, due to restricting themselves to electronic communications. Normally they do not even advertise changes at bus stops or on notices, and they have a blanket ban on advertising changes on buses where passengers would notice them during their journeys. This practice should be reversed, so that everyone has access to the information, and this should be extended to non-bus users where appropriate, who may also be affected and want to use new proposals. This would provide TfL with a more representative response to their consultations.

## **Bus Safety**

### **General questions**

#### **1. What should TfL's priorities be for delivering a safe bus network?**

TfL's priority should be the safety of highway users, including pedestrians, cyclists and other vehicles. The Council has been very frustrated that TfL's release of accident data for bus services has until this month omitted the location of accidents and any reference material (eg police reference) for the Council to establish the details of the accident. Data which purports to be for Wandsworth has been thrown into doubt by the inclusion of a few routes which do not operate in the Borough, leaving us to doubt whether other records relate to our Borough or others through which the relevant route operates. However, it appears that TfL are now starting to respond to our requests for more detailed and accurate information.

#### **2. Are you aware of any particular accident blackspots?**

We are not aware of any particular accident blackspots involving buses, and in the absence of any meaningful data until this month from TfL (see above), we have been unable to monitor this issue as well as we would like.

#### **3. What are the particular safety concerns for:**

- **Passengers on buses**

We get regular complaints, often through our mobility forum, of buses moving off before mobility impaired passengers have sat down or moved to a safe position, resulting in falls or near misses. We also get complaints of buses not pulling into the kerb, so that passengers have to step into the carriageway to reach the bus or the footway, which can cause falls or conflict with other road users. We also have the occasional report of mobility impaired passengers getting caught in the centre doors of a bus when they are closing, which can also cause people to fall or stumble.

A rather different concern has been overcrowding on buses and boisterous school children, which mobility impaired passengers and those with learning difficulties report to be a very stressful experience for them, with allegations of abuse from other passengers.

- **Other road users**

There are no particular safety concerns, although we are aware of the vulnerability of pedestrians and cyclists to moving buses. This is a particular issue in very busy shopping areas such as Putney High Street and St John's Road Clapham Junction. We also regularly get complaints about buses allegedly speeding in residential roads, particularly those where the speed limit is 20mph, and there are many observed instances of buses going through red traffic signals.

### **Operators and drivers**

#### **4. How are operators and drivers incentivised to prioritise safety?**

No comment

#### **5. Should operators face contractual financial penalties for poor safety records?**

We would suggest they should.

#### **6. Are drivers provided with adequate 'driving skills' training?**

TfL keep telling us that bus driver training is being improved.

#### **7. How effective is this training (which is delivered by individual operators)?**

We have seen noticeable improvements in driving standards over the last 15 years.

#### **8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?**

This sounds like a sensible proposition to us.

#### **9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?**

We have no knowledge of this.

### **Technology**

#### **10. Has TfL taken advantage of new technologies to make buses safer?**

Yes, CCTV and external warning sensors/cameras, as well as improved internal layouts in buses.

#### **11. What other technology advances should TfL consider piloting?**

No comment, although we wonder whether automatic braking in the event of a driver being incapacitated ought to be investigated?

### **Infrastructure and design**

#### **12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?**

Not aware of any particular problems except at bus stops, where cyclists have been allowed to use the footway, resulting in potential conflict at bus stops with bus passengers boarding and alighting.

#### **13. Would expanding 20mph zones be a good way of reducing collisions?**

20mph is being introduced in all residential streets in Wandsworth,

**14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

As mentioned above, the Council is wary of installing further bus lanes unless there are every clear benefits for all road users. We have not seen any evidence to suggest the provision of a bus lane would reduce the risk of bus collisions: to the contrary we suspect it might increase the risk, by offering buses the opportunity to travel faster than other traffic.

If you have any queries on this response, please do not hesitate to contact us.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J. E. Slaughter'.

John Slaughter

Senior Transport Planner

# ▶ London Councils response

## ▶ London Assembly Investigation – bus services

London Councils represents London's 32 borough councils and the City of London. It is a cross-party organisation that works on behalf of all of its member authorities regardless of political persuasion.

### Introduction

London Councils is pleased to respond to the London Assembly Investigation into bus services. We know that bus provision is a matter of concern for boroughs, and that buses are the most agile form of public transport, that should in theory be able to be deployed with relative ease to support new development and new centres of economic growth.

### General questions

#### 1. Is London's bus network fit for purpose?

London's bus network provides a vital service for millions of Londoners every day. Our travel affordability research, commissioned with London TravelWatch and Trust for London, means we know how important the bus network is for lower income Londoners, and given its accessibility compared with rail and tube modes, its importance for elderly and disabled Londoners in getting around their city.

That said, boroughs want to see more orbital routes linking key areas of economic activity, and more express routes. Reducing pressure on radial routes (bus, rail or tube) into central London should be a priority of the bus network, especially in outer London. Bus-led development is also an underdeveloped concept that should be a much stronger priority for TfL. We acknowledge that new bus routes need to be located where they will achieve high patronage. However they are seen as imperative to support sustainable growth in regeneration areas and some boroughs feel the barriers are too high at present for the introduction of new bus routes. We suggest that TfL undertakes trialling of new routes more readily to understand the demand in an area, before it commits to new routes.

#### 2. How does the bus system compare in inner and outer London?

#### 3. What different challenges do the inner and outer networks face?

London is well served by buses, but it serves different purposes in different areas. In Outer London, not everyone wants to travel into central London, with demand for travel to different town centres crossing borough boundaries. Many people in outer London (more so than inner London) choose buses to save costs on public transport and to access the rail and underground network. This reflects the growing trend of people being 'priced out' of central and inner London. Routes in outer London may have lower demand due to lower densities of population. However, when this is found to be the case, early and honest engagement with the borough will be appreciated to find a mutually agreeable way forward.

Traffic congestion, overcrowding and demand are challenges common to all parts of the networks, and are more complex than an inner/outer split. However, according to TfL figures, bus patronage has been reducing in central London and one of the suggested reasons is a significant increase in congestion, which has a negative impact on the actual time it takes to travel between points on the road network. Bus routes through any town centre or congested area will experience delays, whether in inner or outer London. Buses in outer London can be the only

form of public transport available to people, depending on proximity to train, underground or tram services, whereas there is greater competition from the tube and rail services in inner and central London.

It is fair to say that due to the radial nature of the bus network into central London; central London has a higher number of routes going through it compared to inner and outer London, in some cases contributing to the congestion experienced. Given the recent consultation on bus provision in central London, TfL is aware of this and looking to reduce the sheer numbers travelling through Oxford Street and others.

We are aware of the challenges TfL bus network planning faces regarding driver facilities at end of bus routes and believe that these are more pronounced in outer London areas; sometimes requiring facilities to be put in place. Given the availability of kerb space throughout London, this puts an additional pressure on this sought after resource.

## Designing the bus network

### 4. How well do TfL currently plan bus routes?

London Councils has recently responded to the West End and Oxford Street consultation on changes to the bus network in Oxford Street which has implications for the wider connectivity of some routes in London. In that response, we express our concerns that TfL has not sought to undertake a holistic review of the bus network in that area. We expected the review to take into account air quality impacts and displacement; opportunities to better serve new development, Housing Zones, Intensification Areas and Opportunity Areas; consideration of the Clean Bus Zones; and the impacts on lower income, elderly and vulnerable Londoners. We have not been convinced that any of these factors have been taken into account. Although London's bus network is generally regarded as the best in the country, improvements to TfL's planning processes are required. That central London review was an opportunity to undertake a holistic approach and this opportunity has been missed.

More widely, our response to the London Assembly Transport Committee when it previously investigated this issue in 2013 indicated that boroughs felt consultation on bus routes was too focused on very minor changes proposed and insufficiently integrated or corridor focused. Our experiences of the West End review and the review of buses serving hospitals indicate that this continues to be the case. We called in 2013 for TfL to undertake area-based travel planning, looking at all modes in an area, and ensuring as much alignment as possible, including signage and co-location. Bus integration with other modes (and vice-versa) continues to be a problem.

### 5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?

Boroughs continue to feel that TfL could do more to support new housing developments, major local economic development sites, and new expanding schools. Given the lead-in times for new major infrastructure such as new rail and tube lines, bus routes ought to be able to be introduced with relative ease. Boroughs tell us this is not the case in practice, as the barriers to introduction and the costs involved are too high. Anecdotally boroughs tell us that section 106 or other funding from new developments is required together with indications of high demand before TfL will consider new routes or rerouting existing ones. We have concerns that as TfL does not plan to extend the mileage of the bus network in its new five year Business Plan, this will continue to be the case.

We want it to be much easier for boroughs to work with TfL from the onset of new developments, to assess the potential transport links that could be introduced. We want to see much greater transparency in decision-making about new routes – we acknowledge that not all new routes will be viable, but this process should be open and honest with boroughs. We note the example of Kilnwood Vale, an extension to Crawley which has been built on the principles of sustainable travel and reducing car use. The development has secured not only the diversion of two bus routes into the development, but is offering homebuyers £100 travel voucher which can be used towards the purchase of a bicycle or bus or rail season ticket. We want to see an increase in public transport-led development in London.

**6. What bus priority measures has TfL already introduced and how successful are they?**

Boroughs are best placed to answer this question. We support bus priority measures and TfL's efforts to ensure bus reliability. We agree that bus patronage will only increase when bus reliability improves.

**7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?**

We support the introduction of the Hopper ticket because it presents a real opportunity for financial savings for some of London's poorest citizens. It may also encourage greater bus use as people can go further for less, and makes the bus network more competitive in terms of journeys and cost compared to the tube.

There are clear possibilities for the Hopper fare to be used in situations where routes are too long to be run reliably. However, before the Hopper fare is used as a reason to truncate routes earlier than previously run, TfL needs to understand how many passengers are already on their second bus journey, the first journey of which may have taken close to or over an hour already, to ensure that passengers are not financially penalised. Even unlimited journeys within one hour using the Hopper fare cannot address this, and the Mayor may wish to consider extending the one hour time period, particularly for journeys originating in outer London.

**8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?**

We think TfL is too focused on responding to demand, and there are untapped opportunities for stimulating demand. Bus-led development, express bus routes and orbital routes are all examples of this.

TfL's messaging seems biased toward existing users rather than encouraging new users. TfL could give more thought into how new users could be encouraged to use the bus network and universities are well placed to help with this.

**9. What tools does TfL have to monitor and forecast demand?**

We understand TfL uses data from Oyster card touch ins as well as regular bus passenger surveys to understand bus demand, and that they are starting to use potential 'return' trips to understand where people alight from buses. We want to see TfL alive to the planning system and calculating demand based on new schools, hospitals, housing and business developments.

**Alternative models and approaches****10. What other approaches to network design should TfL be considering?**

**Orbital routes and through routes** – we strongly support new orbital routes, and consider there to be particular value in these being express or 'through' services. Journeys to neighbouring towns and centres should be made easier and provide a viable alternative to train or tube routes (which may equally not be orbital).

**Bus rapid transit systems** – London already has elements of this and we support efforts by TfL and boroughs to improve bus reliability through bus priority measures. There is more that can be done to improve bus reliability, but we acknowledge that TfL and boroughs work within the confines of an existing road network that is congested and not designed for the levels of traffic seen today; and that other modes including walking and cycling need to be taken into account.

**Shuttles and hubs** – we are cautious that TfL completely adopt such a model. Whilst there are plenty of people who wish to get to a train station, not everyone does. In practice, buses already 'hub' around town centres. The boundary of inner and outer London could have a series of hubs and shuttle buses bringing people into central London. Such a model could make use of the Hopper fare, or connections with tube stations, but this assumes everyone wants to get into central London. Shuttle buses may still be affected by road congestion.

**11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?**

We would support this approach and would encourage a more holistic, all modes approach to network planning. We acknowledge that the nature of buses means that they are not restricted to borough boundaries, and so

network planning may need to be considered from a sub-regional perspective. A particular approach could be to consider smaller buses on local roads to allow greater penetration of residential areas connecting with local town centres and transport interchanges for longer journeys.

#### **12. How successful have existing express routes been, such as X26 and 607?**

London Councils thinks there is more scope for an increase in express buses, and an increase in frequencies to the existing express buses. Anecdotal evidence suggests that certainly the X26 was very well regarded and used but is suffering currently due to increased congestion. Bus priority measures are therefore very important for this type of route.

### **Making changes to the network**

#### **14. What are the challenges associated with this kind of large-scale change to the bus system?**

Communication with the public will present significant challenges, especially when there are major changes to the route a bus travels. Continued communication, giving clear timescales of the changes is particularly important as well as providing help to people to find an alternative journey, especially as not everyone in London is confident using a smartphone. TfL have previously suggested that incremental changes work better for the public, which we accept. However, this should not stop TfL to plan on a network basis and then proceed with implementing the findings gradually.

Bus operators will need to be involved closely during any proposals to ensure that not only are they comfortable with implementing them but also have ample time to train their drivers. Planning on a network-wide and integrated basis would require a significant, cultural shift to planning bus services. Changing the culture of any organisation has considerable challenges attached to it, requiring much staff engagement and training,

#### **15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?**

We have been underwhelmed by the poor presentation of the information provided on the West End bus consultation. For example, the webpages giving information on the changes divided the routes up in a different way to the consultation document; and the consultation document had additional information and in some cases justification to was not provided on the webpages. Additionally a summary document, clearly outlining the changes in a user friendly way could have supported the understanding of the otherwise quite complex consultation documents.

An Equality Impact Assessment may help TfL officers to ascertain whether there are certain groups they should make particular effort to consult with, especially given the number of passengers that could be classed as vulnerable, given buses are the most accessible form of public transport.

Boroughs would like greater opportunity to input into bus tenders and route and service alterations. They know their local areas and want to be able to contribute to these specifications. At present we understand long-term timetables are given to boroughs, but they need more specific dates to ensure they can consult residents in a timely way.

As such we believe TfL should improve the way it consults; albeit that if the proposals are not particularly substantial changes, then we do not feel the public is likely to be particularly interested.

### **General questions**

#### **1. What should TfL's priorities be for delivering a safe bus network?**

TfL's priorities need to encompass all of the below:

- Safe, reliable, modern bus fleet;

- Good driver awareness and training and safety matters on board and externally, including other road users and behaviours, for example the dangers people place themselves in when running for a bus;
- The safety of passengers on board the bus;
- The wider Vision Zero road safety vision, and the role that buses play in that;
- Consideration of wider safety matters including health impacts of buses running their engines.

## 2. Are you aware of any particular accident blackspots?

This is a question better answered by boroughs. We note that often TfL requires evidence of a collision or accident before a site can be considered for improvement work. We know that boroughs often consider this to be inadequate as many 'near misses' may occur at a site.

## 3. What are the particular safety concerns for:

**Passengers on buses** – movement on board buses whilst the bus is moving, including getting to a seat after boarding and standing up to move towards the exit on approaching a stop; when passengers have to stand, staying upright, especially on corners; unsecured wheelchairs and pushchairs and luggage/bags; the gap between buses and the pavement when boarding and alighting, especially for elderly people or people with limited mobility; the behaviour of other passengers; driver distraction.

**Other road users** – pedestrians crossing roads in front of buses approaching at speed; pedestrians on pavements as buses turn corners; cyclists and motorcyclists who could get trapped between buses and corners, edges of roads or railings; overcrowding at bus stops in peak periods, especially in town centres and at schools

## Operators and drivers

### 4. How are operators and drivers incentivised to prioritise safety?

### 5. Should operators face contractual financial penalties for poor safety records?

### 6. Are drivers provided with adequate 'driving skills' training?

### 7. How effective is this training (which is delivered by individual operators)?

### 8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?

### 9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?

London Councils does not have enough knowledge on the incentives on safety to comment on these questions. As a general principle, any incentives on reliability should always be balanced by incentives for safety.

## Technology

### 10. Has TfL taken advantage of new technologies to make buses safer?

### 11. What other technology advances should TfL consider piloting?

We consider that TfL should consider whether the technology used on lorries to create an audible warning when indicating left or right could also be rolled out to buses. We note that TfL has not adopted electronic destination blinds at the front of buses. Electronic blinds can give much more information to passengers waiting about immediate stops.

## Infrastructure and design

### 12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

When cyclists and buses share bus lanes, there are inevitable problems when buses pull in, as cyclists often have to move into oncoming traffic or into another lane to get past safely.

Other problems occur at junctions when there is insufficient room for cyclists to get past a bus to wait in the cycle box in advance of the other traffic without undertaking a dangerous manoeuvre.

Buses can also block walking and cycling crossings where multiple bus stops mean a bus cannot pull forward into a bus stop. Buses that then pull forward even when cyclists and pedestrians have the right to cross, can become dangerous manoeuvres.

Despite these concerns, we feel it is safer for cyclists to have access to bus lanes when alternative segregated infrastructure is not feasible, than for cyclists to have to use the regular road space.

### **13. Would expanding 20mph zones be a good way of reducing collisions?**

It is a local decision about whether 20 mph zones are right for individual boroughs and locations. We want to see the police support boroughs through enforcement of 20 mph zones. Collisions are more complex than only involving speed, although we note that slower moving vehicles in theory have longer time to react and more time to be aware of other road users and cause less damage if collisions occur. Removing opportunities for conflict, including poorly designed junctions and cycle routes, and consideration of the sighting of loading bays, car parking spaces and bus stops are also part of what is needed to reduce collisions. Greater education of both drivers and cyclists, and the associated behaviour change and legal requirements is also needed, in a similar way to that with lorry drivers and lorry safety training for cyclists.

### **14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

Bus lanes in themselves do not remove conflict with cyclists, if cyclists can use bus lanes. However, in general the provision of bus lanes can reduce conflicts with other road users and should be supported as well as assisting bus service reliability and speed.

**From:** [abby taubin](#)  
**To:** [Transport Committee](#)  
**Subject:** Re: call for evidence: bus services  
**Date:** 10 January 2017 14:33:34

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One last thing to add to this consultation if you could :

One side only parking

One way systems wherever possible

Yearly charge for car ownership ( Yes I know that this would be difficult!!! )

There has to be more safe space on narrow roads

Abby Taubin

On 10 January 2017 at 14:16, Transport Committee  
<[TransportCommittee@london.gov.uk](mailto:TransportCommittee@london.gov.uk)> wrote:

Dear Abby

Thank you for your submission.

We will be gathering evidence over the coming months and will share our findings with the Transport Committee.

We will inform you when our findings are published.

We will publish written submissions online unless they are marked as confidential or there is a legal reason for non-publication. We may be required to release a copy of your submission under the Freedom of Information Act 2000, even if it has been marked as confidential. We will store your submission for as long as there is a business need.

Thank you for sharing information about our investigation on your Facebook page.

Kind regards,

Samira

Samira Islam

Project Officer (Transport Committee)

**LONDON**ASSEMBLY | City Hall | The Queen's Walk | London | SE1 2AA

Tel: [+44 \(0\)20 7983 4591](tel:+442079834591) | [samira.islam@london.gov.uk](mailto:samira.islam@london.gov.uk)

**From:** abby taubin [REDACTED]  
**Sent:** 09 January 2017 13:46  
**To:** Transport Committee  
**Subject:** call for evidence: bus services

This is a submission from the Facebook Page: London Cycling. London Cycling has just short of 4,000 members on 9 January 2016.

The London Assembly Call for Evidence is pinned at the top of the Facebook page.

If you scroll down this email there's the result of a poll we tried before asking that users respond individually.

I am an Administrator. I could sign anyone of you into the group and every day you could pose a Transport Committee question to 4000 people who use the roads all the time everywhere as cyclists

Be proactive, go TO your road users don't sit and wait for them to respond to this complex on-line set of questions

<https://www.facebook.com/groups/LondonCycling/>

<https://www.facebook.com/groups/stopkillingcyclists/>

Abby Taubin  
[REDACTED]

## General questions

1. Is London's bus network fit for purpose? **transit is like a spider's web of links. If there were no cars at all on the streets getting around by bus and cycling and tube and taxi would be great. Everything east west in London is second rate as the rail lines and roads are originally north south**
2. How does the bus system compare in inner and outer London? **London gets bigger as you go out arterials are best connectors but congested. I hate the "driver change" stops as the driver isn't there as often as not. Going by bus as I have to from SE22 is for the lowest class; buses make you feel under valued and poor**
3. What different challenges do the inner and outer networks face?

## Designing the bus network

4. How well do TfL currently plan bus routes? **In SE22 TFL was begged for years to help school children get to their schools on time. That's literal btw begged for years**
5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions? **Look at Camberwell. Look at Bermondsey. Look at Canada Water, Elephant and Castle, cycle lanes that start and stop, that change sides of the street**
6. What bus priority measures has TfL already introduced and how successful are they? **I like bus lanes**
7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network? **Hopper ticker over due by 50 years. Do you ever look at what other cities around the world get right and wrong. Might save decades**
8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand? **How much do TFL planners get paid? What do they study? do they travel? do they read? I did this at university in the 1970's and in Chicago. Your profound questions are dinosaur level and aged**
9. What tools does TfL have to monitor and forecast demand?

## Alternative models and approaches

10. What other approaches to network design should TfL be considering? As appropriate, please make reference to these or others:

- • orbital routes
- • through routes
- • bus rapid transit systems
- • shuttles and hubs

11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice? **More trams more smaller buses**

12. How successful have existing express routes been, such as X26 and 607?

## Making changes to the network

13. What can we learn from others cities about successful/unsuccessful bus network redesign?

14. What are the challenges associated with this kind of large-scale change to the bus system?

15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?

### 1. General questions

1. What should TfL's priorities be for delivering a safe bus network? **smooth journey every act of courtesy rewarded**

2. Are you aware of any particular accident blackspots?

3. What are the particular safety concerns for:

- • Passengers on buses
- • **Other road users Operators and drivers. I have bus drivers race me to**

**every bus stop in Peckham slams their  
breaks in from of my bicycle**

4. How are operators and drivers incentivised to prioritise safety?

5. Should operators face contractual financial penalties for poor safety records? **Absolutely**

. Are drivers provided with adequate 'driving skills' training? **Probably not**

7. How effective is this training (which is delivered by individual operators)?

8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)? **There ALWAYS has to be a standard what an insane question**

9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?

**Drivers involved in accidents have to be criminally penalised and the victim of poor driving has to be compensated for life limb and labour. These are well know formulas**

### **Technology**

10. Has TfL taken advantage of new technologies to make buses safer? 11. What other technology advances should TfL consider piloting? **TFL was DRAGGED over years to new reporting and safety technology. They hid behind corporate invisibility cloak lies and stonewalling. In every single instance they lied and cheated and ignored poor management, design, training, collisions**

### **Infrastructure and design**

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be

resolved? **Any problem caused is TFL foot dragging, half measures and not linked up design, lack of explanation lack of public training. The Dutch approach still has to bed in. 5 to 10 more years**

13. Would expanding 20mph zones be a good way of reducing collisions? **yes**

14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions? **yes allowing for cyclists**

Buses are part of the solution to congestion



[+29](#)

[ ]

Buses need more safety systems





[+14](#)

[ ]

Buses cause pollution

- [+13](#)

[ ]

Buses are not held to account for problems they cause

- 

[+11](#)

[ ]

Bus drivers don't take SUD training as HGV drivers would despite often driving larger vehicles, this needs to change

- [+10](#)

[ ]

Buses are not driven well over all

- [+7](#)

[ ]

Buses are the solution to congestion

- [+4](#)

[ ]

Buses are driven well over all

- [+3](#)

[ ]

Buses cause congestion

- [+3](#)

[ ]

Buses need a new design

- [+1](#)

[ ]

Buses should/could be solution to pollution

- [+1](#)

[ ]

Bus Lanes should be 24/7

- [+1](#)

[ ]

Existing Bus Routes are outdated and need redesigning

- [+1](#)

[ ]

Buses are the solution to pollution

This message has been scanned for viruses by the Greater London Authority.

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#LondonIsOpen

GREATER LONDON AUTHORITY NOTICE:

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**From:** [Simon Munk](#)  
**To:** [Transport Committee](#)  
**Cc:** [Caroline Pidgeon](#)  
**Subject:** Call for evidence: Bus services  
**Date:** 31 January 2017 16:59:23

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Dear sir/madam,

Please find below the London Cycling Campaign's response to the London Assembly Transport Committee call for evidence on bus services.

## **London Cycling Campaign**

31 January 2017

### **London Assembly Transport Committee Investigation into Bus Services**

<https://www.london.gov.uk/about-us/london-assembly/london-assemblys-current-investigations/bus-services>

This consultation response is on behalf of the London Cycling Campaign, the capital's leading cycling organisation with more than 12,000 full members and another 30,000 supporters. The LCC welcomes the opportunity to provide commentary on bus services.

## **Network Design**

### **Introductory notes:**

- London's road transport should be planned to maximise walking, cycling and bus use ahead of movements by private motor cars, private hire vehicle and taxi movements (there is also a need to reduce freight traffic through measures such as consolidation). Therefore, an investigation into how Transport for London plans the bus network is welcome.
- The bus network has grown and changed over many years largely through the addition or modification of individual routes. A thorough analysis and redesign of the entire bus network at a strategic level should be performed because of this, but also because of emerging and changing trends of travel, development and technology in London.
- The redesign should take into account existing usage plus impact of new cycling infrastructure and predicted growth in cycling, predicted growth in population (by centre), plans for housing and other major development across London, emerging centres of employment/retail, new tube and rail developments and potential new river crossings, among other factors.
- The bus network should be redesigned to make bus journeys more attractive than private motor car trips without hindering the growth in cycling and walking that is also necessary. And the network should be redesigned for a London where "mixed mode" journeys are an increasingly common feature as people ride to the bus station, or hire a cycle from the bus stop onwards.

**Recommendation:** A strategic redesign of London's bus network to enhance not just bus usage, but maximise walking, cycling, and mixed-mode journeys.

## **Bus, cycling and other roads infrastructure**

On the issue of bus priority schemes and bus lanes: such measures, currently prohibits most high-quality cycling schemes from reaching fruition. The most innovative and highest-quality cycling schemes (and indeed even often quite unambitious ones) are routinely vetoed by TfL Buses for introducing even very small delays to buses. The Mayor, London Assembly and TfL

must be absolutely clear – if bus concerns are to always trump cycling concerns, London will not become a cycling city, and will not achieve its targets for growth of cycling. Instead, private motor vehicle traffic should be targeted to free up space for bus priority, cycling *and* walking infrastructure.

While in general buses and cycles should not be required to share the same space (as this is not an approach likely to enable a more diverse range of people to cycle), it should not be the case that cycle infrastructure automatically displaces bus infrastructure: restriction of private motor vehicle traffic (including private hire vehicles, taxis and motorcycles, plus commercial deliveries etc.) should be the primary way bus priority schemes should be delivered – not by removing or reducing space for cycling or walking. Restricting motor traffic capacity will also encourage modal shift to cycling, walking and bus journeys. Analysis of the potential to shift current private motor vehicle and private hire vehicle journeys to bus, tube, rail, cycling and walking should also be considered as part of this – with areas with high numbers of short car trips etc. targeted as a priority.

**Recommendation:** prioritise walking, cycling and bus infrastructure and priority; de-prioritise private motor vehicle traffic priority, particularly in central London. Ensure TfL Bus, Cycling and Walking teams work in concert, rather than against each other.

### **Bus lanes and cycling**

Some bus lanes have value for some people who currently cycle in London – as they are often quieter and less aggressive to ride in than the main roads next to them. But beyond a certain volume of motor vehicle traffic, bus lanes become a barrier to much broader adoption of cycling – they are not suitable for children, the elderly and for many others to cycle in. In other words, they offer some benefits to those who currently cycle, but little benefit in increasing cycling numbers and diversity. It is not just Oxford Street where the sheer weight of bus movements (with or without a lane) dominates the street scene, reduces the attraction of walking and causes large amounts of pollution the volume of buses has also reduced the vitality of many other iconic central London streets.

LCC considers the threshold beyond which bus lanes lose any amenity for current cycling and become instead a barrier to further uptake to cycling to be 2,000 PCUs (Passenger Car Units) of motor vehicle traffic daily. This figure would include buses, motorcycles and taxis where permitted.

Most bus lanes (because they are busy and sited on main roads) do not represent good quality cycling infrastructure. Equally, permitting taxis, motorbikes, private hire vehicles (PHVs) or even cycling in bus lanes impedes bus movements, inconveniencing passengers. The default should be either cycle tracks provided separate to bus lanes, or bus and cycle routing should be separated onto different streets entirely.

On some roads, the removal of motor vehicle traffic may be sufficient to create both a high-quality bus priority scheme and acceptable conditions for cycling provided total motor vehicle numbers fall below the 2,000PCUs threshold and bus speeds are low. Where a bus lane is present at the same time as motor vehicle volumes remain above 2,000 PCUs/day then, even if bus frequency is low, a cycle track is required. This is because even low volumes of buses will

deter many from cycling in the bus lane for fear of collisions.

Regarding routing: the London Cycling Design Standards demonstrate that the more indirect the cycle route, the less it will be used. Therefore, where rerouting on separate streets occurs, the more direct route should be given to cycling and the less direct one to buses.

The goal for London's cycling network should be a grid, with 250m spacing, of high quality routes. Point to point cycle journeys within this network should be safe and easy to negotiate. To avoid collisions, the bus network should ultimately be configured around and this grid.

Rerouting of bus networks should not have the effect of decreasing amenity for cycling and walking – including by introducing large bus “stacking” areas or creating street designs that lock in bus schemes and lock out future cycling and walking improvements.

TfL should, in fact, take the opportunity of a thorough reconsideration of the bus network to gather regional and international evidence on bus interactions and bus lane safety with vulnerable road users – for instance, data on cycle collisions in bus lanes compared to similar roads without lanes, and/or those roads with cycle tracks, should be collated.

**Recommendation:** Buses and cycles should be kept separate, either by having separate routes – with the cycle route taking priority in terms of directness - or by using physically protected cycle tracks on all bus routes where motor vehicle traffic exceeds 2,000 PCUs daily irrespective of whether a bus lane exist that may be used for cycling.

**Recommendation:** TfL should study and compare bus-cycle and bus-pedestrian collision data in the following categories: where cycling occurs in bus lanes; where high quality cycle tracks run parallel to bus routes; where all traffic shares the same space.

## **The bus network of the future**

Surface transport in the London of tomorrow will be very different to that of today, as new spatial developments occur to accommodate its growing population, new public transport capacity is created (e.g. Crossrail and Underground extensions), new services and technologies disrupt the private car market (e.g. car sharing, autonomous vehicles) and indeed as cycling is promoted across the capital. The bus network must be redesigned to play an even more effective role as patterns of travel change in the future.

For instance, one future scenario worth investigating is where people often cycle to the bus stop or station, then board – leaving their bike locked up– or conversely where people leave a bus and get on a Hire Cycle at a certain point in their journey. In this scenario, a combined ticketing system between Hire Cycles and the Bus network, even integration into the "Hopper" fare, and planning cycle parking facilities well would maximise the utility and uptake of both cycling and buses.

The network, and any permanent bus infrastructure, should also be designed with consideration for likely future technology trends. The increasing likelihood of autonomous vehicles becoming part of the transport mix creates the possibility of dynamically routed bus or other road-based public transport networks where the route is created by demand. Again, these ideas should be considered on the basis of maintaining cycling and walking networks, likely bus interfaces with

them, and the best possible bus infrastructure that's fit for the future.

**Recommendation:** plan a bus network fit for a future London, allowing for mass cycling numbers, maximising bus/cycle integration and anticipating other key technology-driven trends in road use.

## Outer London

Large buses or high frequencies of buses are often routed down residential, quiet streets in Outer London. With the introduction of the "Hopper" ticket, smaller buses and less frequent services could be instead be used to penetrate larger, quiet residential areas, and these can then be linked to larger, more frequent bus routes on "distributor" roads. This approach would both encourage walking and cycling, and quieten many residential areas by removing large volumes of bulkier/noisier buses. In these areas "bus gates" using Automatic Number Plate Recognition (ANPR) cameras, rising bollards etc. could be used to remove through motor traffic, enhancing bus priority in the area.

**Recommendation:** investigate redesigning bus network in outer London to provide quieter and more cycle-friendly residential neighbourhoods.

## Central London

In central London there is an opportunity to remove many bus movements from our densest urban areas – where bus routes suffer worst delays, add most to pollution and represent the most off-putting barrier to more cycling and walking, especially on main roads and near amenities. Here, the Hopper ticket (and other, future time limited ticketing approaches) could be used to terminate and loop back many current through routes (e.g. many buses that run from SW London to NE go directly through central London). Instead, in the centre, smaller and lower pollution buses could work in a grid format – allowing those who do want to cross London to continue to do so, but removing much congestion to the network simultaneously and freeing up space for more cycling and walking.

**Recommendation:** remove through bus routes from central London and replace with low pollution network of smaller buses.

## Bus stop design

Special consideration should be given to bus stop design where cycle tracks and bus lanes run adjacent to each other. Such stops should be located to ensure continuity of cycle tracks whilst still ensuring safe and easy use by bus passengers. , Further design, analysis and innovation is needed to ensure London has the best answer for how to do this. (As an example, "bus stop bypasses" require a certain width to be installed – if TfL settles on such designs as the best possible stop/track interface, then care should be taken to install stops wherever there is width to do a bypass, where possible.) Often current designs of bus lanes ensure that buses stopped in a "bus cage" force those cycling out into the next lane, or to squeeze between the bus and

traffic, or to wait. Bus stop “bypasses”, “boarders” or other designs that maintain physical separation between buses and cycle tracks are to be encouraged throughout any replanned network.

**Recommendation:** establish best practice design criteria for bus stops located adjacent to cycle tracks and remove as far as possible any use of the “bus cage” for those cycling.

### Summary of network design recommendations

- A strategic redesign of London’s bus network to enhance not just bus usage, but maximise walking, cycling, and mixed-mode journeys.
- Prioritise walking, cycling and bus infrastructure and priority; de-prioritise private motor vehicle traffic priority, particularly in central London. Ensure TfL Bus, Cycling and Walking teams work in concert, rather than against each other.
- Buses and cycles should be kept separate, either by having separate routes – with the cycle route taking priority in terms of directness - or by using physically protected cycle tracks on all bus routes where motor vehicle traffic exceeds 2,000 PCUs daily irrespective of whether a bus lane exist that may be used for cycling.
- TfL should study and compare bus-cycle and bus-pedestrian collision data in the following categories: where cycling occurs in bus lanes; where high quality cycle tracks run parallel to bus routes; where all traffic shares the same space.
- Investigate redesigning bus network in outer London to provide quieter and more cycle-friendly residential neighbourhoods.
- Remove through bus routes from central London and replace with low pollution network of smaller buses.
- Establish best practice design criteria for bus stops located adjacent to cycle tracks and remove as far as possible any use of the “bus cage” for those cycling.

### Safety

#### Introductory notes:

- A common theme throughout this section is the suggestion that measures and standards already introduced in the construction sector to reduce work related road risk through schemes like **CLOCS (Construction Logistics and Community Safety) should be adapted for use in the bus sector**. Further details of CLOCS are available on the CLOCS website.
- We note also that **London’s buses and bus drivers, whose employers are licensed by TfL, could, and should, be a beacon of good practice and behaviour** for all road users in London. Whether it’s observing the speed limit, or not entering ASLs (bike boxes) bus drivers could set the standard that others would likely follow.
- We note that the previous Mayor published a list of bus safety measures that have not yet been fully implemented.
  - Develop a world leading bus safety standard for London

- o Update TfL's bus contracts to include new safety incentives
- o Provide a UK-first Incident Support Service for those affected by fatal or serious injuries
- o Publish additional bus collision data and making it more accessible
- o Provide a new safety training module to all 24,700 drivers

**Recommendation:** Fully implement the bus safety programme incorporating the further recommendations listed in the sections below.

### Collision data

LCC notes the absence of comprehensive statistical data on bus collisions with pedestrians and cycle users. The data currently available sometimes includes both buses and coaches and at other times separates them making analysis difficult.

We note, for example, that the London Assembly briefing for this consultation states that:

“Bus and coach collision casualty rates (killed or seriously injured – KSIs) have roughly halved

between 2006 and 2014.<sup>[1]</sup> Despite this long-term improvement, casualty rates have risen recently. Between 2014 and 2015, the number of fatalities in bus collisions increased from 10 to 14 (40 per cent), and the total number of injuries requiring hospital treatment increased from 1,300 to 1,585 (22 per cent).”

This statement, which draws on the recent TfL analysis of bus and coach safety and separate bus safety data, does not provide a direct comparison of bus collision data. By using combined bus and coach data the TfL analysis leads to a more positive picture regarding bus-only safety statistics for recent years.

Tom Kearney, of the Safer Oxford Street blog and #LondonBusWatch campaign, provides yet another set of figures based on his FOI requests which concludes that London road collisions

involving buses and coaches have grown steadily since 2012.<sup>[2]</sup>

We note the following statistics from the information provided in response to Mr Kearney’s FOI request. Data supplied to Kearney relates to collisions not casualties hence a proportion of incidents listed in the total numbers will not have involved people.

- The total number of bus and coach collisions has increased from 22,223 in the year 2012/13, to 27,208 in the year 2015/16.<sup>[3]</sup>
- The rates of collisions per million kilometres operated have increased from 44.3 to 54.9 in the same time period.<sup>[4]</sup>
- Bus and coach collisions with cyclists increased from 142 in the year 2014/15 to 258 in the year 2015/16, amounting to an 81% increase.<sup>[5]</sup>
- The total number of collisions recorded for 2015/16 in the FOIs listed is the highest since 2007/8, the last available year provided within the FOI request.<sup>[6]</sup>
- Pedestrian collisions for the year 2014/15 were recorded at 572 incidents<sup>[7]</sup>, considerably higher than the 341 total pedestrian casualties reported for 2015 in the TfL document on long term bus casualty trends<sup>[8]</sup>.

TfL acknowledges the discrepancy between the STATS19 (Met police data) and IRIS data (internal incident management system) sources and is in the process of consolidating these, with the aim of publishing STATS19 and IRIS data for the same time period as a single data set from May 2017<sup>[9]</sup>. This may, or may not, account for some of the discrepancies in the numbers above.

**Recommendation:** There should be no ambiguity or lack of clarity in collision and fatality data so that appropriate lessons can be learned and relevant measures taken. Bus and coach data should be provided and analysed separately.

### **Analysis and reporting**

There is no comparable report to the Construction Logistics and Cyclists Safety study by TRL for the bus sector. The CLOCS report led to a series of clear recommendations that have been implemented by TfL and participating industry members of CLOCS who now number more than 400.

**Recommendation:** Carry out an independent analysis of fatalities and serious injuries involving buses which leads to concrete actions supported by bus operators.

**Recommendation:** Fatal road collisions involving buses should be investigated by an independent body.

### **Standards**

TfL has initiated two valuable safety standards for the freight and construction industries: the Fleet Operators Recognition Scheme (FORS) and the Construction Logistics and Community Safety (CLOCS) standard.

Both schemes have helped to set and maintain standards in the HGV sector. Buses, like HGVs, are large vehicles which pose significant danger to vulnerable road users. The FORS and CLOCS models merit adaptation for the bus sector.

We note that FORS silver grading, which includes SUD driver training as a requirement, should be used as the minimum base for a bus operator standard.

Some HGV operators, such as McGee, use digital apps and handheld devices to maintain and enforce safety standards. By using NFC tags on vehicles or premises specific physical checks can be confirmed, and faults identified, by photographs. This saves time in addressing faults because managers are immediately aware of faults or problems and it also ensures that all physical checks are carried out and keeps a record of them.

**Recommendation:** Implement a bus safety and operation standard that exceeds the standards set in FORS and CLOCS

**Recommendation:** Require operators to document safety standard enforcement through apps and NFC tags. A date should be set for London bus operators to implement this technology.

### **Driver training**

More than 25,000 HGV drivers, , mostly London-based, have now completed the Safer Urban Driving (SUD) module. This module, approved by the government JAAPT agency for a driver's annual Certificate of Professional Competence, is designed to address road danger from large vehicles to vulnerable road users and includes on-bike experience of the road traffic. The programme has been consistently rated highly by drivers who, in a large proportion of cases, say it has changed their behaviour.

A variation of this training has also been piloted with London-based Stagecoach bus drivers by Cycle Training UK, the major developer of training modules related to cyclists and pedestrians. We note that LCC receives complaints about bus drivers which relate to close passing, excess speed and, frequently, ignoring Advanced Stop Lines (ASLs). It is hard to know whether this is a case of thoughtlessness or a lack of understanding of what does, and does not, constitute a hazard for cyclists or pedestrians. While education may not mitigate inappropriate incentives or counter thoughtlessness it can enable drivers to understand cyclists' behaviour and adjust their driving accordingly. Bus driver respect for ASLs must be encouraged because it sets an example

to other drivers.

**Recommendation:** A programme of driver training based on a CPC approved module, similar to SUD, should be standard for all London bus drivers. The training must include on-bike experience of road traffic as in the SUD training for HGV drivers. TfL should consider making such a programme obligatory for London operators, including both new and current drivers, through the licensing or franchise process.

**Recommendation:** Drivers should be made aware that operators may carry out random checks of their bus video camera footage to ensure best practice is being followed.

**Recommendation:** Bus drivers should respect ASLs and other cycling infrastructure.

### Incentivisation

It is imperative that incentivisation of faster journey times does not play any role in the bus and coach industry. Such practices can very easily lead to increased road danger for vulnerable road users.

Incentivisation of improved safety standards is welcome.

**Recommendation:** Companies operating buses in London should be required to sign documents stating that they do not operate any incentivisation scheme relating to the speed or number of journeys carried out by drivers.

### Vehicle design

The CLOCS project has led to a specific working group looking at vehicle design and safety improvements. Sensors that detect cyclists and pedestrians, improved camera systems, turn indicators with repeaters across the side of the vehicle, audible turn warnings, wheel guards and auto braking systems are among the innovations that have recently been developed.

**Recommendation:** TfL should facilitate a bus industry working group to improve bus safety and environmental performance features.

### Speed

High burst speeds by buses can endanger both bus occupants, when braking takes place, and other road users. ISA and other technology can discourage excessive speeds. By controlling the speed of buses the speed of other traffic can be kept within the set speed limits.

**Recommendation:** Buses should use appropriate technology to prevent excessive burst speeds on London roads

### Summary of safety recommendations

- Fully implement the bus safety programme incorporating the further recommendations listed in the sections below.
- There should be no ambiguity or lack of clarity in collision and fatality data so that appropriate lessons can be learned and relevant measures taken. Bus and coach data should be provided and analysed separately.
- Carry out an independent analysis of fatalities and serious injuries involving buses which leads to concrete actions supported by bus operators.
- Fatal road collisions involving buses should be investigated by an independent body.
- Implement a bus safety and operation standard that exceeds the standards set in FORS and CLOCS.
- Require operators to document safety standard enforcement through digital aps and NFC tags. A date should be set for London bus operators to implement this technology.
- A programme of driver training based on a CPC approved module, similar to SUD, should be standard for all London bus drivers. The training must include on-bike experience of road traffic as in the SUD training for HGV drivers. TfL should consider making such a

programme obligatory for London operators, including both new and current drivers, through the licensing or franchise process.

- Drivers should be made aware that operators may carry out random checks of their bus video camera footage to ensure best practice is being followed.
- Bus drivers should respect ASLs.
- Companies operating buses in London should be required to sign documents stating that they do not operate any incentivisation scheme relating to the speed or number of journeys carried out by drivers.
- TfL should facilitate a bus industry working group to improve bus safety and environmental performance features.
- Buses should use appropriate technology to prevent excessive burst speeds on London roads.

Cheers,

Simon Munk

Infrastructure Campaigner

**London Cycling Campaign**



[www.lcc.org.uk](http://www.lcc.org.uk)

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[1] <http://content.tfl.gov.uk/long-term-bus-casualty-trends-paper.pdf>

[2] <http://saferoxfordstreet.blogspot.co.uk/2016/07/londonbuswatch-question-of-ownership-is.html?view=sidebar>

[3] [FOI-0369-1617](#) [FOI-0369-1617](#)

[4] See note 3

[5] See note 3

[6] See note 3

[7] See note 3

[8] See note 1

[9] <http://content.tfl.gov.uk/sshr-20161117-item10-bus-safety-programme.pdf>

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### General questions

#### 1. Is London's bus network fit for purpose?

It is far and away the best in the country but improvements could be made to facilitate interchange with other public transport modes or other buses. The reverse has recently happened at Archway and is threatened at Vauxhall and Highbury Corner. In some areas there are insufficient bus stops and being stuck in traffic for several minutes, yards from a stop while two trains go by, is frustrating. More generally, there has been a gradual movement of bus stops away from junctions to facilitate journeys in private vehicles to the detriment of bus users with poor mobility.

Many Opportunity Areas are not well connected and TfL is often slow to catch up with changing requirements.

#### 2. How does the bus system compare in inner and outer London?

Inner London: There is generally a choice of routes so that if information is provided on Countdown delays can be avoided. In outer London, we are dependent on there being no cancellations but reliability is better than it was 30 years ago. Outer London's bus services do not connect well enough areas of living, entertainment, sport, leisure, health facilities, retail, libraries, etc.

#### 3. What different challenges do the inner and outer networks face?

Designing the bus network. There are countless irregular visitors to central and inner London who rely on past knowledge of routes for whom major changes are a problem. New developments require changes which are slow to be implemented – local authorities should be more proactive in securing funding via s.106 agreements. Planning frameworks for Opportunity Areas should reflect the changes to the bus network needed. Connections with rail and tube stations are critical to travel in outer London.

#### 4. How well do TfL currently plan bus routes?

This is difficult to answer, because there is no published document setting out the criteria by which routes are planned and how a balance is drawn between conflicting desires. We think the Assembly should insist on this being provided and kept up to date.

As noted above we feel TfL is slow to respond to new developments, but it needs to focus more on dealing with disruption to services and

less on changing routes. The impact of Night Tube on buses must be reviewed and changes made where necessary.

#### 5. Does TfL take account of the London Plan and housing developments when planning bus routes?

Could they improve the way they make these decisions? Yes, but local authorities need to be more proactive as set out in (3) above.

#### 6. What bus priority measures has TfL already introduced and how successful are they?

There has been a dearth of new measures in recent years and some have been undermined by schemes to improve access for cyclists and pedestrians. Contra flow bus lanes are highly effective, e.g. Pentonville Road, Piccadilly; priority signals (e.g. Angel southbound) and bus gates. Other bus lanes require enforcement, too often they are negated by parked cars or drivers who cannot quite keep to their own lane. Bus priority signals are also highly effective, and self enforcing.

#### 7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?

It should have no effect on the route, but facilities for interchange should be reviewed.. Paying twice is not the only drawback to changing buses. Older people and those with disabilities do not pay but are seriously inconvenienced by having to change and wheelchair users add to dwell times which affects all users.

#### 8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?

Just to respond. There is nothing wrong with this. As London grows demand should be stimulated and it is necessary and sufficient to discourage car use. However, regular disruption from construction work suppresses demand, and more needs to be done to counter this.

#### 9. What tools does TfL have to monitor and forecast demand?

Alternative models and approaches. There is plenty of data about absolute numbers but it is only by experiencing a particular journey that the causes of delay/frustration that lead people away from bus use become apparent. There should be more use made of user experience, e.g. passenger surveys.

10. What other approaches to network design should T/L be considering? As appropriate, please make reference to these or others:

- orbital routes•
- through routes•
- bus rapid transit systems•
- shuttles and hubs•

Many orbital journeys are unnecessarily difficult, e.g. the old 347A route from Uxbridge to Hemel Hempstead. People are forced to travel via zone 1 when a direct bus route would be as quick and remove pressure on overcrowded rail routes. Similarly, through routes will attract people, if they can be run reliably. There needs to be adequate means of limiting congestion, either with new CGZs or some other form of road pricing. It is possible to work on a bus, but not if you have to change. Shuttle services rarely see well filled buses – even in central London very few Red Arrow routes stood the test of time and quite rightly only two survive.

11. Is it a good idea for T/L to consider different types of network for different areas of London? How could this work in practice? There may well be scope for the introduction of intermediate modes (between bus and tube), particularly if the City in the East is to be effective and sustainable.

12. How successful have existing express routes been, such as X26 and 607? The X26 is a valuable orbital route. The 607 seems to be more successful at peak periods when a longer walk occasioned by having fewer stops still gives a net saving in time.

#### Making changes to the network

13. What can we learn from others cities about successful/unsuccessful bus network redesign? Nottingham, York and Oxford have made significant improvements to their buses but they are so different to London I am not sure how relevant they are.

14. What are the challenges associated with this kind of large-scale change to the bus system?

Getting the information to regular but infrequent visitors. There is over-reliance on technology and an assumption that everyone goes around with a “smart” portable telephone. They are easy to use to track buses that run, but inadequate when bus routes are being curtailed, as was happening at the time of writing with all Holloway Road routes. There was no

explanation on bus stops around Bank for the lack of 43 buses beyond the alteration of the disc displaying the number to a blue background and the legend “nights only”, and no indication of their revised starting point.

15. Could T/L improve the way it consults the public on proposed changes to bus routes? You can always improve. How? The economic appraisal of bus routes needs to be far more transparent, it is not good enough to dismiss consultee’s ideas without explanation. Some users have expressed surprise to be consulted by e-mail about a change that does not affect them, because it relates to a different section of a route to that which they use. Others are caught out by changes such as re-routing the 9 away from Piccadilly Circus because they are very occasional users of the 9.

#### Safety: General questions

1. What should T/L’s priorities be for delivering a safe bus network? All contracts should place greater incentive on safety than on meeting journey time targets. In particular, the full length of the bus should pull right up to the kerb and right up to the stop when there is a queue of buses.

2. Are you aware of any particular accident blackspots? Not recently. Use of diversionary routes not normally home to buses has resulted in more accidents. The solution is not to abandon these routes but to ensure they are designed and signed appropriately.

3. What are the particular safety concerns for:

- Passengers on buses• Behaviour of other passengers, in the absence of a conductor; lack of accessible seats in the lower saloon
- Other road users

We welcome the recent judgement asserting the greater rights of a wheelchair user over someone with a foldable buggy. We believe the notices on London’s Buses are clearer than that in use in the test case.

There is some evidence that in the absence of conductors bus passengers are less considerate than tube passengers, because it is easier to use a portable telephone on a bus. This particularly applies in making room for others to board or alight.

4. How are operators and drivers incentivised to prioritise safety? Should be through the award of contracts.

5. Should operators face contractual financial penalties for poor safety records? Yes, or loss of contracts.

6. Are drivers provided with adequate 'driving skills' training? Don't know

7. How effective is this training (which is delivered by individual operators)?

8. Should there be a 'London standard' for driving skills training (which would likely result in T/L managing the training)? It is one way of potentially raising standards.

9. How are incidents managed by T/L and by the operators? What kind of support is available to those involved in bus collisions and incidents?

#### Technology

10. Has T/L taken advantage of new technologies to make buses safer?

11. What other technology advances should T/L consider piloting? Infrastructure and design

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved? Yes. I would prefer to see cycle routes on parallel roads not used by buses, but cyclists will not use routes that involve a significant lengthening of their journey time.

13. Would expanding 20mph zones be a good way of reducing collisions? It would reduce their severity, not their number.

14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions? Yes, but there are more pressing reasons for bus lanes. Narrow lanes can add to danger for cyclists.

## GLA Transport Committee: Call for evidence: bus services December 2016. Response from London Living Streets

We are concerned that the terms of reference of the inquiry are too narrowly focused on bus operation. It is vital that in considering bus services and safety, the inquiry also takes into account the needs of pedestrians and the quality of public spaces. Moreover, the questions posed in the consultation do not include any on bus stops. Bus stops are the point of entry to London's bus network. They need to be managed in the optimum way to provide the best possible service and thus attract customers and increase bus ridership and income. Congestion is a major obstacle to increased ridership. We see as key measures to reduce congestion the closure of key junctions to all traffic except buses as at Bank and the closure of a significant number of side roads to prevent other traffic accessing bus routes.

### *London Living Streets statement of our general position in relation to buses in London:*

- We recognise that buses are a key part of London's transport mix, and an effective way to reduce use of private motor vehicles. It is important to have a **holistic view** of London's bus network in the context of other modes and the needs of Londoners – and to take into account the Mayor's 'Healthy Streets' agenda
- The synergy between walking and use of buses (almost by definition, most bus users are pedestrians) needs to be maximised. In effect, pedestrians are the 'life-blood' of buses; there should be **no detriment to pedestrians** arising from bus service alterations
- Recent falls in bus use and decreased bus journey reliability are related – the primary cause is congestion arising from over-dependence of London's transport system on car use ('excess traffic', see Fig 6.10 in 'Transport in London 9', TfL, 2016). This highlights the importance of **reducing other motor traffic** on existing and proposed bus routes, and also benefits pedestrians. Steps are urgently needed to stem the increase in PHVs and van usage, which is leading to the rise in motor vehicle numbers and hence congestion in London. In addition, we propose that TfL should look at ways in which to decrease other motor traffic on bus routes in Central London, for example by creating 'mode filters' at junctions with side roads. Modal filters on side roads where they join bus routes could create a better environment for pedestrians and speed up buses by stopping other traffic entering and leaving the bus route.
- Safety and perception of safety is crucial for pedestrians on, and on the approaches to, bus routes; it should fully take into account **Vision Zero**, and include a focus on pedestrian KSIs involving buses. We fully support the rapid introduction of ISA into the bus fleet and the commitment of London buses to adhere to the posted speed limits and in particular 20mph limits once ISA compliant buses are introduced and prior to that through the careful monitoring of ibus data on speed.
- We are keen to work with TfL to promote **common goals** for London's bus network, walking and the public realm; we think there is scope for improvement
- A **pedestrian-friendly bus system is a 'win' for buses**; we note that increasing bus ridership is a key element of TfL's Business Plan
- Our ultimate aims are for **efficient, safe and enjoyable movement of people** wherever they are in London, a **high quality public realm**, and **healthy streets** for all Londoners, with an emphasis on active travel and usage of public transport.

### *Our approach in this response:*

We have taken a focused approach, responding only to questions most relevant to pedestrians and walking in London, and highlighting opportunities to improve bus transport holistically i.e. with co-benefits to pedestrians – hence to Londoners generally. We note the overlap between **bus network planning** and **bus safety**.

*Summary of London Living Streets comments:*

A pedestrian-friendly bus system is a 'win' for buses too. TfL's Business Plan makes clear that the plan is heavily dependent on growing use of buses in London. London Living Streets proposes:

1. That measures to pedestrianise Oxford Street (or, more generally, to improve bus operations across London), are not introduced at the expense of an improved public realm at nearby squares and public spaces, both existing and planned.
2. A review of opportunities across London to remove general motor traffic from busy junctions and other key locations, following the City of London's example at Bank junction. In addition, action should be taken to prevent motor traffic accessing bus routes from side roads.
3. A review of the locations of and seating at bus stops. Reviewing locations would be a major undertaking, but could yield substantial benefits to passengers and for TfL. In recent years, bus stop locations have been strongly influenced by the needs of general traffic flow. For instance, the most convenient locations for pedestrians are generally near junctions. Instead, many have been moved away from junctions, to aid other vehicles. We discuss this further in the Appendix.
4. A review of the feasibility of improving provision of Bus Countdown at bus stops, prioritising the busiest bus stops and new developments and opportunity areas.
5. A review of the feasibility of extending zebra crossings at floating bus stops, to improve pedestrian safety and access to bus stops on both sides of the road.
6. A review of the policy of allowing powered two-wheelers (PTWs) in bus lanes. The decision on this went against the evidence. It creates danger and intimidation for pedestrians and impairs bus reliability.
7. We stress the importance of the commitment by TfL and the GLA to introduce ISA backed buses after the success of the recent ISA trials and the importance of monitoring bus speeds to reduce casualty numbers and the intimidation that speeding buses can cause to pedestrians and other road users.

We set out our comments in more detail in the **Appendix**.

## **1. Bus network planning**

We think that a key principle in bus network planning should be to move away from one-mode-at-a-time thinking to a holistic approach, actively seeking and taking up opportunities to improve travel for different modes simultaneously (prioritising the most efficient, healthy and sustainable), as well as the public realm.

### Use of bus lanes by taxis and powered two-wheelers (PTWs) (Bus priority: Question 6)

TfL Business Plan places heavy reliance on increased bus ridership. Achieving this will require bus lanes to be as uncongested as possible, in order to enhance bus priority. Keeping bus lanes clear of unnecessary motor vehicles has particular implications for pedestrian safety and we therefore discuss it further under 'Bus safety', below.

### Bus hopper ticket (Question 7)

There is scope for capitalising on the flexibility introduced by the welcome introduction in September 2016 of the bus 'hopper' fare. This fare makes bus use more attractive and is a good way to encourage mode shift away from driving since it enables more convenient travel, as well as making better use of London's bus network.

We welcome the Mayor's commitment to pedestrianising Oxford Street. We think that the bus hopper ticket, by reducing/removing the financial penalty of changing buses, will help achieve this. However, we have a particular concern about the potential for detriment to pedestrians of services starting/ending at Oxford Circus. Specifically, we would not wish to see Cavendish Square used as a place for 'stacking' buses. We therefore call on TfL to make best use of technology to ensure that bus stacking is not needed as part of changes to any bus services. We also have a similar concern about the potential effects on the 'place' function of Berkeley Square resulting from the proposed routing of more buses through Berkeley Square. In essence, our concerns are that TfL Bus Division may wish to stack buses in, or send more of them through, attractive places for pedestrians where there is clear scope for improvements, e.g. Cavendish and Berkeley Squares, and the proposed new square at Centre Point. We believe that both these existing iconic London squares are ripe for improvement as places, given how much space is currently devoted to unused carriageway.

### Alternative models and approaches (Question 10)

We highlight recent developments which benefit buses and pedestrians, such as the far-sighted decision to close Bank Junction to all motor vehicles except buses. Could this be repeated elsewhere? Similarly, modal filters on side roads where they join bus routes could create a better environment for pedestrians and speed up buses by stopping other traffic entering and leaving the bus route.

### Possible improvements to the bus stop network – maximising convenience for passengers

Bus stops form a key element of London's bus system, and their design, facilities and positioning are important determinants of the attractiveness of bus use.

Factors to take into consideration in reviewing bus stop locations could include:

- (1) Location in relation to road junctions. Many bus stops have been moved away from junctions. We understand that this has been to help the flow of general traffic. The Mayor's priorities appear to have changed, giving more weight to bus passengers. Locating bus stops near to junctions provides more convenient access to passengers, since the stops are then nearer for more people, both in the arm of the junction with the stop and on the other arms.
- (2) Place bus stops as near as possible to rail and tube stations. This assists transport integration. Even moving stops a few metres nearer the station could benefit large numbers of people making the connection, in both directions.

As one of many possible examples, 'Earlsfield station' southbound bus stop is located past Earlsfield Station,

necessitating negotiation of a busy junction - usually entailing a long wait for pedestrians to back-track to the station. Bus stops serving stations and other interchanges and 'trip attractors' should ideally be located immediately outside such destinations.

Alternatively, improving access between bus stops and nearby major destinations could be achieved by introducing, as suggested above, a mode filter; even reduced motor traffic flow through side road junctions could enable re-timing of signals to give more priority to pedestrians.

We believe that a strong case can be made for TfL to carry out a review of the positioning of bus stops in relation to destinations such as stations and junctions, with a view to (a) simultaneously improving bus services, (b) increasing income to TfL from bus use (in line with TfL's Business Plan), and (c) reducing motor traffic flow. As part of such a review, we suggest that TfL would wish to quantify the benefits of moving bus stops nearer junctions, noting that such repositioning would have the effects of changing traffic flow and reducing the distance that most pedestrians have to walk to the bus stop. The end result for people wishing to walk to a bus stop would be reduced time and increased convenience, hence increasing the attractiveness of bus services. Further suggestions for bus stop network improvement are to:

2. Combine stops catering for several routes. Split stops mean that passengers with a choice of route need to hop between stops to catch the next bus. As with the other suggestions, a balance of factors needs to be taken into consideration. We suggest that, in weighing up this balance, customer convenience should be the most important consideration. We note that this factor is not always given sufficient weight; for example, recent changes made at Archway have resulted in bus stops now being scattered widely.

3. Put seats and shelters at almost all bus stops. These are particularly important for elderly passengers. Time spent standing at a stop, particularly without shelter, seems to pass more slowly than when sitting, so seats and shelters improve the attractiveness of bus travel.

#### Information for passengers and potential passenger/pedestrians while on the move

As noted earlier, bus passengers almost by definition are also pedestrians. With respect to bus 'Countdown', TfL cannot assume near-universal possession of smart phones and knowledge of relevant apps; further, the distribution of smart phones ownership is unevenly distributed across London's population. We would therefore like to see a resumption in roll-out of Countdown perhaps prioritising the busiest bus stops which are not currently provided with Countdown. Providing public information about bus destinations and timings at bus stops is also a way of advertising the range of destinations and frequency of London Bus services to passers-by and thus growing bus ridership – and so, new developments may also be targets for roll-out of bus Countdown.

## **2. Bus safety**

We commend Tom Kearney's and Sarah Hope's campaigning, which have highlighted weaknesses in TfL governance of bus operations which it commissions (especially relevant to Qs 1-9) and ask we ask TfL to continue to press for reducing the number of pedestrian casualties from buses. We also bring to the Committee's attention the briefing by 20splentyforus which highlights the many benefits to bus operators of 20mph speed limits on bus routes (available at [http://www.20splentyforus.org.uk/BriefingSheets/20s\\_plentyfor\\_buses.pdf](http://www.20splentyforus.org.uk/BriefingSheets/20s_plentyfor_buses.pdf) ).

#### Intelligent speed adaptation (Questions 10, 13)

We call on TfL to move quickly to maximise use of technology to reduce road danger at source e.g. by improving speed limit compliance and reducing the top speed of buses themselves. We welcome the introduction of speed limiters on all new buses from 2018; this could be a game-changer in enhancing enforcement of speed limits, including 20mph limits, and encouraging further roll-out of 20mph speed limits. Prior to the implementation of ISA across the fleet we would continue to press for TfL to use ibus data to ensure that operators comply with posted speed limits and that their schedules do not impose the requirement on driver to exceed the speed limit.

### Infrastructure and design

#### Floating bus stops (Question 12)

London Living Streets' general stance is that no infrastructure measure should introduce disadvantage to pedestrians. We note that the response to Caroline Russell's Mayoral Question on this topic, tabled on 14 December 2016 (Question 2016/4556), indicated no reported collisions between cyclists and pedestrians at 'floating bus stops' AKA bus stop bypasses. We welcome TfL's trial of zebras at central London (busy) floating bus stops in order to learn from and optimise the design of these bus stops for pedestrians and cyclists.

We ask further that TfL carry out a review of the feasibility of extending zebra crossings which serve floating bus stops across roads i.e. installing a zebra crossing on the whole of the carriageway, not just on the cycle track part of the highway at these locations. This would both enhance pedestrian access to bus stops from both sides of the road, and improve pedestrian safety at and on the approaches to bus stops.

#### 20mph zones and speed limits (Question 13)

We note the clear link between vehicle speed and the frequency of severity of road casualties and in our forthcoming submissions on Vision Zero we will be pressing for a default speed limit of 20mph to be created within the North and South Circular roads. We understand that the ISA trials were particularly successful in relation to ensuring compliance with 20mph limits and we believe that a wider use of 20mph zones and the capacity of buses to adhere to them will not only reduce casualty numbers but create an environment where more people will wish to make use of buses and public transport in general as active forms of travel become more attractive as the general environment of frequently speeding vehicles is reduced.

#### Further investment in bus priority measures (Question 14)

London Living Streets strongly supports further investment in bus priority measures such as bus lanes. Effective bus priority measures have the effects of (a) making bus use more attractive by improving journey time reliability, (b) reducing kerbside traffic thus improving the public realm, and (c) reducing pressure on bus operators to compromise pedestrian and other road user (and passengers') safety by unsafe driving, including exceeding the speed limit, in an attempt to meet operating schedules.

In addition, we recommend that TfL should look at ways in which to decrease other motor traffic on bus routes in Central London, for example by creating 'mode filters' at junctions with side roads. Modal filters on side roads where they join bus routes could create a better environment for pedestrians and speed up buses by stopping other traffic entering and leaving the bus route.

#### Use of bus lanes by taxis and powered two-wheelers (PTWs)

We note the 2013 TfL report on patterns of KSIs to PTW-users and TfL's statement in recent Mayoral Question 2016/4915 concerning motorcycle safety, tabled by Florence Eshalomi AM that no change in this pattern is expected to have happened since publication. We refer the Committee to evidence of PTWs being an increasing threat to pedestrians, as indicated by KSI trends of vehicles involved in pedestrian deaths and serious injuries on London's roads:

### **Pedestrian KSI casualties for which PTW was vehicle in direct conflict in Greater London - 2010 to 2015**

| Year                                                                | 2010  | 2011  | 2012  | 2013  | 2014  | 2015   |
|---------------------------------------------------------------------|-------|-------|-------|-------|-------|--------|
| PTW Category 02+03+04+05 (totals)                                   | 71    | 80    | 105   | 80    | 73    | 75     |
| PTW Category 02+03+04+05 (as a percentage of total pedestrian KSIs) | 7.78% | 8.16% | 9.35% | 9.55% | 9.37% | 10.27% |
| Total no. of pedestrian KSIs (all vehicles)                         | 913   | 980   | 1123  | 838   | 779   | 730    |

We think it timely for TfL to review the policy of allowing PTWs in bus lanes. The decision on this went against the evidence. It creates danger and intimidation for pedestrians (as well as not delivering clear safety benefits for motorcyclists), complicates the driving environment for bus drivers, and impairs bus reliability.

*Summary of London Living Streets comments:*

A pedestrian-friendly bus system is a 'win' for buses too. TfL's Business Plan makes clear that the plan is heavily dependent on growing use of buses in London. London Living Streets proposes:

1. That measures to pedestrianise Oxford Street (or, more generally, to improve bus operations across London), are not introduced at the expense of an improved public realm at nearby squares and public spaces, both existing and planned.
2. A review of opportunities across London to remove general motor traffic from busy junctions and other key locations, following the City of London's example at Bank junction. In addition, action should be taken to prevent motor traffic accessing bus routes from side roads.
3. A review of the locations of and seating at bus stops. Reviewing locations would be a major undertaking, but could yield substantial benefits to passengers and for TfL. In recent years, bus stop locations have been strongly influenced by the needs of general traffic flow. For instance, the most convenient locations for pedestrians are generally near junctions. Instead, many have been moved away from junctions, to aid other vehicles.
4. A review of the feasibility of improving provision of Bus Countdown at bus stops, prioritising the busiest bus stops and new developments and opportunity areas.
5. A review of the feasibility of extending zebra crossings at floating bus stops, to improve pedestrian safety and access to bus stops on both sides of the road.
6. A review of the policy of allowing powered two-wheelers (PTWs) in bus lanes. The decision on this went against the evidence. It creates danger and intimidation for pedestrians and impairs bus reliability.
7. We stress the importance of the commitment by TfL and the GLA to introduce ISA backed buses after the success of the recent ISA trials and the importance of monitoring bus speeds to reduce casualty numbers and the intimidation that speeding buses can cause to pedestrians and other road users.

London Living Streets  
January 2017

The London Road Safety Council (LRSC) has been approached, by the London Assembly Transport Committee, for its views on Bus Safety in London. The LRSC is pleased to see that bus safety has been steadily improving over the longer term and is delighted that ideas for further improvements are being sought.

Whilst some areas in the consultation are outside our area of expertise, we have provided answers and comments to all of the questions laid out in the call for evidence document that we feel able to.

### General questions

1. What should TfL's priorities be for delivering a safe bus network?

Current performance targets that concentrate on excess waiting time and late running services could pressurise drivers to increase their speed in order make up time following a delay earlier on their route. This could produce a culture that is detrimental to safety.

2. Are you aware of any particular accident blackspots?

N/A

3. What are the particular safety concerns for:

☐ Passengers on buses

Buses are not required to have seat belts fitted, so if a bus is involved in a collision the risk of injury to unrestrained passengers is greater.

☐ Other road users

Vulnerable road users such as pedestrians and cyclists are at particular risk when sharing the road space with large vehicles because of the limited field of vision that drivers of such vehicles have.

Pedestrians make up the second largest group of casualties resulting from collisions involving London buses. Some pedestrians that cross streets in busy urban environments only look for traffic as they step from the kerb. Buses often need to drive close to the kerb and they also have their engines at the rear of the vehicle so pedestrians do not always hear them approaching. This combination can result in bus/pedestrian collisions.

### Operators and drivers

3. How are operators and drivers incentivised to prioritise safety?

We are unable to comment on this question

4. Should operators face contractual financial penalties for poor safety records?

We believe that safety records should be included as a performance indicator and some form of sanction should be included where safety standards appear to be compromised.

5. Are drivers provided with adequate 'driving skills' training?

We are not familiar with the current training programme, but do feel that it is important that drivers receive regular training and assessments to ensure that the highest possible standards are maintained.

6. How effective is this training (which is delivered by individual operators)?

We are unable to comment on this question

7. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?

We believe that this seems like a sensible approach to take.

8. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?

We are unable to comment on this question

### **Technology**

9. Has TfL taken advantage of new technologies to make buses safer?

We believe that TfL have taken advantage of new and technologies designed to improve the safe operation of buses, including trailing emerging technology solutions. We applaud them for taking this approach and encourage them to continue to do so.

10. What other technology advances should TfL consider piloting?

We are unable to comment on this question

### **Infrastructure and design**

11. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

Difficulties can be caused where bus and cycling infrastructure share road space, particularly at points where they cross. Ideas that segregate these two road user groups, such as floating bus stops, can help, but are difficult to incorporate retrospectively into the limited space available in many urban environments.

12. Would expanding 20mph zones be a good way of reducing collisions?

We support 20 mph zones in areas where there is a large volume of pedestrian crossing movements. We feel that they do have the potential to reduce collisions as all road users are given more time to react to emerging situations. Lower traffic speed also has the potential to reduce the severity of any injury resulting from collisions.

13. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?

We feel that bus lanes potentially improve the running times of buses, but as a stand-alone feature, do not necessarily improve safety or reduce bus collisions.

In addition to the above safety related issues, some of our members felt it was important that the needs of special needs adults and people with dementia are considered at all times. They also felt that the needs of disabled passengers should be reassessed in the wake of the wheelchair Vs buggy incident that was recently featured in the news.

## London Assembly Transport Committee

### Call for Evidence: Bus Services

We very much welcome the opportunity to submit evidence to the London Assembly Transport Committee's important work regarding bus safety, and to share with the committee the company's experience and expertise.

Mobileye<sup>®</sup> is the global leader in collision avoidance technology – the integration of which, we firmly believe – will be central to TfL's ability to reach its goal of reducing KSIs by 50% (or more) by 2020.

With over 15 years of experience in research and development, and programmes with more than 25 global auto manufacturers, Mobileye's experience and expertise points to the revolutionary power of driver assistance technology to significantly reduce road collisions. Mobileye already has experience with bus companies and fleets in the UK and throughout Europe and the US.

Our experience is in response to the call for evidence regarding bus safety, specifically questions 10 and 11 regarding **on-board safety technology**. That being said, we believe that the installation of driver assistance systems can also bring benefits in other areas of your programme which we will enumerate below, namely in response to questions 2, 4, 5, 6, and 12.

### The Need

A sad, but important reality that must be considered in the effort to reduce collisions, is that research has shown that **upwards of 90% of collisions are caused by human error**<sup>1</sup>. Typically, the driver is not paying attention at the critical split second of the crash, and neglects to brake in time or at all, in order to avoid or mitigate the collision. Additionally, further research has shown that a simple **early warning of 1.5 seconds could prevent 90% of rear-end collisions**, and that 2 seconds of warning could prevent nearly all crashes.<sup>2</sup>

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<sup>1</sup> US Department of Transportation, *Traffic Safety Facts* (2015).

Available from: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812115>

<sup>2</sup> Zhand, B. (2009). *Forward Collisions Accidents*, AXA Winterthur's Accident Research department.

Available from: <http://documents.mx/documents/4th-february-2009-accident-research-bettina-sinzig-forward-collision-accidents-the-swiss-insurance-company-perspective.html>

Worryingly, distracted driving is only getting worse as mobile phone usage while driving, for example, is on the rise.<sup>3</sup> This is of course in addition to the already challenging driving circumstances for bus drivers in busy urban environments who are expected to keep their eyes on the road, while managing passengers getting on and off the bus, maintaining the route, and often dangerous weather conditions. Even further complicating the situation is the growing phenomenon of distracted pedestrians – not pausing to look up from mobile phone screens or unable to hear properly with headphones on while walking in and around traffic.<sup>4</sup>

### **Advanced Driver Assistance Systems (ADAS) – Lifesaving On-Board Technology**

The power of early warning of an imminent collision or a dangerous situation is the logic that lies behind all Advanced Driver Assistance Systems (ADAS). By providing early warning of imminent collisions and other dangerous situations on the road, **ADAS systems give the driver the critical second or two of warning to be able to avoid or mitigate collisions by braking or taking corrective action.** In addition to imminent collisions, ADAS functions can also warn for example of unintended lane departure (veering out of a lane without signaling) – one of the major causes for some of the most fatal accidents and most severe injuries.<sup>5</sup>

***ADAS systems are powered by artificial vision technology using a single camera mounted on the vehicle windscreen and a single processing chip. Real-time feedback (visual and audio alerts) about road dangers and potential collisions are provided to the driver via a small display mounted on the dashboard.***

Mobileye ADAS systems offer a comprehensive suite of safety functions:

- 1) **Forward Collision Warning (FCW)** - indicates that under the current dynamics relative to the vehicle ahead, a collision is imminent.
- 2) **Pedestrian and Cyclist Collision Warning (PCW)** – during daylight hours, indicates that under the current dynamics relative to the pedestrian or cyclist, a collision is imminent.

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<sup>3</sup> Johnson, T. (2016). *87 Percent of Drivers Engage in Unsafe Behaviors While Behind the Wheel*, AAA National.

Available from: <http://newsroom.aaa.com/2016/02/87-percent-of-drivers-engage-in-unsafe-behaviors-while-behind-the-wheel/>

<sup>4</sup> Mobileye Blog (2016). *Distracted Walking – a New Challenge to Pedestrian Safety*. <http://www.mobileye.com/en-uk/>

Available from: <http://www.mobileye.com/en-uk/2016/11/02/distracted-walking-new-challenge-pedestrian-safety/>

<sup>5</sup> American Association of State Highway and Transportation Officials (AASHTO) (2009). *Driving Down: Lane Departure Crashes*.

Available from:

[https://www.crab.wa.gov/LibraryData/RESEARCH and REFERENCE MATERIAL/County Road Safety/080401AASHTOLaneDepartureCrashes.pdf](https://www.crab.wa.gov/LibraryData/RESEARCH_and_REFERENCE_MATERIAL/County_Road_Safety/080401AASHTOLaneDepartureCrashes.pdf)

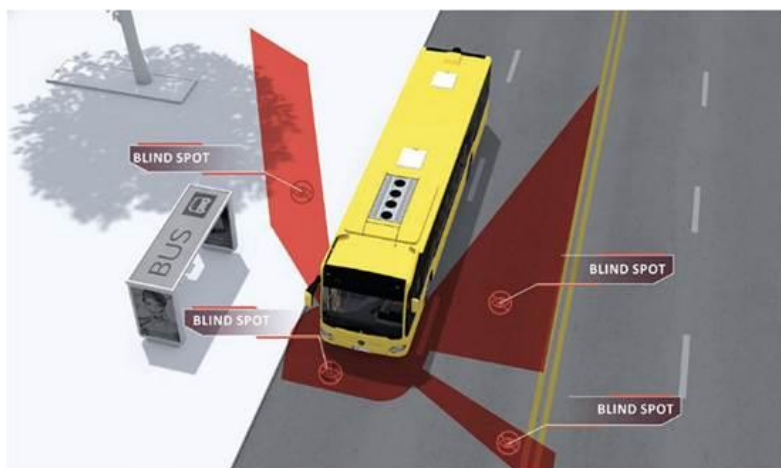
- 3) **Lane Departure Warning (LDW)** - alerts the driver of unindicated (and presumed unintended) lane departure.
- 4) **Headway Monitoring and Warning (HMW)** – shows the driver its distance to the vehicle ahead (in seconds) and alerts if the distance becomes dangerous.
- 5) **Speed Limit Indication (SLI)** – the system reads speed limit signs (including electronic signs) and notifies the driver if speeding.

Today, Mobileye technology is already integrated into over 300 new car models, but we also offer the system as an aftermarket add-on which can be installed into any existing vehicle. **All in all, over 15 million vehicles worldwide are protected by Mobileye technology.**

One-time installation is straightforward, requiring minimal off-duty time for fleet vehicles.

### **Mobileye Shield+™**

Due to the fact that buses and other large vehicles have additional challenges beyond what smaller vehicles face, such as **large blind spots**, Mobileye has developed a system uniquely designed for these vehicles called Mobileye Shield+™. This system includes the standard ADAS features as well as additional cameras to provide better visibility for the blind spots along the sides of the bus as well as two additional displays for pedestrian and cyclist detection.



*Bus blind spots create danger zones all around the bus.*



*Sample bus cabin outfitted with Mobileye Shield+ technology.*

Cities with Implementation or Pilots of Mobileye's Shield+ system include:

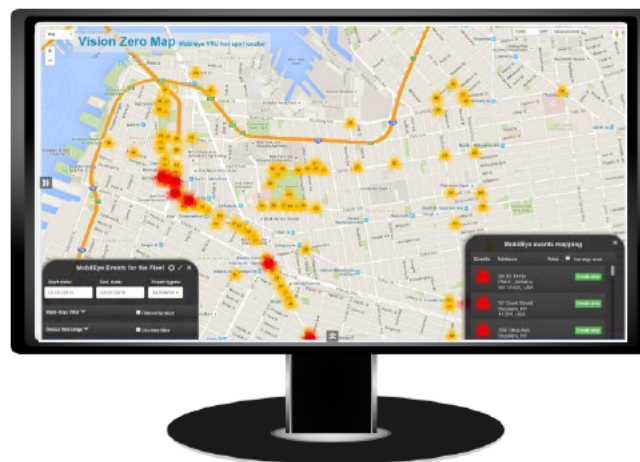
- Mass Transit Authority (MTA) of New York, US (implementation)
- Two pilots with bus contractors operating in London
- The City of Karlstadt, Sweden (pilot)
- The City of Malaga, Spain (pilot)
- Washington State, US (pilot)
- Beijing, China (pilot)
- Austrian Ministry of Transportation (upcoming pilot)
- Columbus, Ohio, US (upcoming pilot)

### **Mobileye Shield+ Provides Data**

Importantly, Mobileye Shield+ can be integrated with telematics so that driver data can be reported to a fleet management system. This provides valuable and actionable data about daily driving behaviour. Additionally, reporting is geographically specific and provided in real time, and can therefore **provide a map with accident black spots that have a disproportionately high number of accidents and infrastructure can be improved accordingly.**<sup>6</sup> This can greatly improve the way in which TfL logs and learns from collisions – with hard data in real time.

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<sup>6</sup> This is in response to questions 2 and 12 – accident black spots and bus and cycling infrastructure.



*Sample 'hot spot' view of problematic junctions provided by Shield+*

Indeed, increasing public awareness and activism is growing up around the issue of accident black spots, increased road deaths, and government fleet vehicles involved in accidents, as can be seen through movements such as London Bus Watch and Road Safety Week. It has even come to the attention of foreign students who have become deterred from studying in London due to the surprising number of road deaths.<sup>7</sup> Being able to collect hard data about accident black spots and respond and repair infrastructure appropriately is an immediate and effective way to improve road safety while also showing the public direct responses to safety issues.

## **Results with ADAS**

Regarding the results that ADAS can bring, the numbers speak for themselves.

**Ealing Council trialed Mobileye's technology on its lorry fleet which showed marked improvements in cyclist safety.** During the six month trial, they found that "the system detected more than 40,000 cyclists, pedestrians and motorbikes but an alarm only alerted the driver on 15 occasions, when they became close enough to collide with the lorry."<sup>8</sup> They were then awarded the 2015 London Transport Award for Most Effective Road Safety, Traffic Management & Enforcement Project.<sup>9</sup>

<sup>7</sup> Evening Standard (21/12/2016). *London's danger roads for cyclists 'put off foreign students'*. Available from: <http://www.standard.co.uk/news/london/londons-danger-roads-for-cyclists-put-off-foreign-students-a3425446.html>

<sup>8</sup> Ealing Council (2014). *Ealing Council leading the way in cycle safety*. Available from: [https://www.ealing.gov.uk/news/article/1057/ealing\\_council\\_leading\\_the\\_way\\_in\\_cycle\\_safety](https://www.ealing.gov.uk/news/article/1057/ealing_council_leading_the_way_in_cycle_safety)

<sup>9</sup> Transport Times (06/03/2015). *Outstanding achievement & Innovation rewarded at the 2015 London Transport Awards*.

An actuarial study conducted on behalf of the Insurance Commissioner at the Israeli Ministry of Finance evaluated the effectiveness of Mobileye's FCW and LDW functions and to what extent use of the system reduced the claims in which there was bodily injury. **The claim frequency of vehicles using Mobileye was 39% less than vehicles without Mobileye.**<sup>10</sup>

The Dutch Ministry of Transport also conducted a large-scale field operational test aimed at reducing accidents, improving safety and improving traffic circulation, and the Mobileye system was tested in the trial. The trial was done in cooperation with two independent research institutes – TNO (Dutch) and BCI (Intl.) which evaluated 2,400 lorries from 123 companies driving a total of 77 million km over 8 months. The results were that over the whole period of the test there were **zero accidents, compared to 16-19 expected accidents** based on km driven (there were 5 accidents in the control group – meeting the expected 6 accidents for that size group).<sup>11</sup> The study also found a decrease in unintentional lane crossings of 30-60%.

The Research Institute of Highway (RIOH) of the Chinese Ministry of Transport trialed Mobileye systems in 300 buses and trucks over six fleets in five cities. The results showed a **reduction in Forward Collision Warnings by 31-44%**, a reduction in Lane Departure Warnings by 27-38%, and Headway Monitoring Warnings were reduced by 45-55%.<sup>12</sup>

### **Additional Research in Support of FCW & LDW**

The American National Transportation Safety Board conducted a special investigation report on the potential for Forward Collision Avoidance Systems to prevent and mitigate rear-end crashes. They found that during the two years studied, **"up to 2,220 lives might have been saved, had the vehicles been equipped with Forward Collision Avoidance Systems."**<sup>13</sup>

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Available from: <http://www.transporttimes.co.uk/news.php/OUTSTANDING-ACHIEVEMENT-INNOVATION-REWARDED-AT-THE-2015-LONDON-TRANSPORT-AWARDS-51/>

<sup>10</sup> Ron, S. (2012). *Actuary Research on the effectiveness of the Collision Avoidance Systems: FCW & LDW*. Commissioned by the Israel Ministry of Finance. Available [translated] from: [http://www.ron-ai.com/files/maagar/407204407204\\_1377150644.pdf](http://www.ron-ai.com/files/maagar/407204407204_1377150644.pdf)

<sup>11</sup> TNO and Buck Consultants International (2009). *Accident prevention systems for lorries* [Final Report].

<sup>12</sup> Research Institute of Highway (RIOH, Chinese Ministry of Transport) (2016). *China: Mobileye and MoT release results of truck and bus ADAS tests*. Available [reported] from: <http://safecarnews.com/china-mobileye-and-mot-release-results-of-truck-and-bus-adas-tests-ma7256/>

<sup>13</sup> National Transport Safety Board (NTSB) (2015). *The Use of Forward Collision Avoidance systems to Prevent and Mitigate Rear-End crashes* [Special Investigation Report]  
Available from: <https://www.nts.gov/safety/safety-studies/Documents/SIR1501.pdf>

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The Highway Loss Data Institute tested the effectiveness of FCW and LDW systems in Honda Accord models and found that the combined FCW and LDW system is associated with significant reduction in claim frequency – namely **the frequency of claims for Bodily Injury Liability were reduced by 40%, and the frequency of Medical Payment claims were reduced by 27%.**<sup>14</sup>

## **Case Studies – Fleets**

As awareness of ADAS is growing, commercial and governmental fleets worldwide are adopting and trialing Mobileye technology with impressive results. For example, **Coca-Cola Hellenic experienced zero accidents during the 19-week trial period with Mobileye and also had an 80% reduction in Lane Departure Warnings and a 50% reduction in Forward Collision Warnings.**<sup>15</sup> Additionally, German logistics company IN TIME said of their experience with Mobileye, **"We have done more than 1.5 million kms with only one accident. We get a 5% discount on insurance for every vehicle that is equipped with Mobileye and decreased maintenance costs for brake pads."** The largest refrigerated trucking company in the US, C.R. England also experienced a **37% reduction in crash costs per mile** with Mobileye.

## **Additional Benefits**

Beyond the obvious benefits of mass reduction in collisions, we believe that the TfL also stands to benefit from additional "side effects" of mass installation of ADAS in its buses, such as:

- **Reduced congestion** – due to fewer collisions which hold up traffic and cause pollution.
- **Restoring passenger trust** – the on-board safety technology is visible to all riders and warnings are audible. This then helps create a culture of safety so that passengers will hear alerts and know about near-collisions which are avoided. This will help passengers appreciate the investment in safety on the part of TfL, and feel safer and more encouraged to continue using the system.

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<sup>14</sup> Highway Loss Data Institute (2014). *Honda Accord collision avoidance features: initial results*. Available from: <https://trid.trb.org/view.aspx?id=1312657>

<sup>15</sup> *Coca-Cola Hellenic signs the European Road Safety Charter* (02/02/2011) [News release]. Available from: [http://coca-colahellenic.com/media/2096/eu\\_road\\_safety\\_charter\\_eng.pdf](http://coca-colahellenic.com/media/2096/eu_road_safety_charter_eng.pdf)

- **Fuel Savings** – Many fleets find fuel savings due to use of ADAS systems, such as the Ealing Council which experienced "fuel savings of £1,000 per vehicle per year, due to less aggressive acceleration and breaking."<sup>16</sup>
- **Built-in driver training** – as opposed to investing in major driver training initiatives, the use of ADAS provides real time feedback to the driver who learns as they go. Over time – typically only a number of weeks<sup>17</sup> – the driver begins to 'sense' when he or she is likely to receive a warning (for example when they are closing a dangerous following distance), and in order to avoid hearing the beep, they learn to simply adjust their driving accordingly.<sup>18</sup>
- **Treat the driver as an asset, not a liability.** Rather than being driven by penalties and incentives which can simply add stress to an already stressful job, outfitting the fleet with ADAS shows the driver support, and positions them not as an obstacle to increased road safety, but a partner in making it a reality.<sup>19</sup>

What these additional benefits make clear is that, as opposed to alternative policy options where benefits come at the expense of certain stakeholders, implementation of ADAS makes all stakeholders better off.

Thank you so much for your time and consideration.

## **Contact**

For any questions or further information, please contact Jeremy Coleman at:  
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Or visit: [www.mobileye.com/en-uk](http://www.mobileye.com/en-uk)

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<sup>16</sup> Ealing Council (2014). *Ealing Council leading the way in cycle safety*.

Available from: [https://www.ealing.gov.uk/news/article/1057/ealing\\_council\\_leading\\_the\\_way\\_in\\_cycle\\_safety](https://www.ealing.gov.uk/news/article/1057/ealing_council_leading_the_way_in_cycle_safety)

<sup>17</sup> Research Institute of Highway (RIOH, Chinese Ministry of Transport) (2016). *China: Mobileye and MoT release results of truck and bus ADAS tests*. Available [reported] from: <http://safecarnews.com/china-mobileye-and-mot-release-results-of-truck-and-bus-ad-as-tests-ma7256/>

<sup>18</sup> This is in response to question 6 – driver skills training.

<sup>19</sup> This is in response to questions 4 and 5 – incentives for prioritising safety and financial penalties for poor safety records.



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## London Assembly Bus Safety inquiry RoadPeace response

### Key points

- RoadPeace welcomed TfL's bus safety programme but have yet to see any impact. TfL should publish an annual monitoring report documenting the activities undertaken and progress made.
- TfL should set best practice standards with its bus collision investigations. This should include:
  - Increased transparency with the investigation procedures and judicial outcomes.
  - Quality assurance that the investigations are thorough, fair and effective at ensuring lessons are learned and risk reduced.
  - Training to ensure victim blaming is avoided in the investigation.
  - Asking bus crash victims for feedback on how well they were kept informed and treated.
  - Clarity over bus casualty statistics, including an estimate of under-reporting.
- For those bus crash victims not prevented, more should be done to support them, including
  - Written information explaining the procedures involved in the bus collision investigation and how lessons would be learned.
  - Specialist support services available, such as RoadPeace's Resilience Building Programme.
- In keeping with TfL's Healthy Streets agenda and commitment to Vision Zero road danger, TfL's bus safety programme should include casualty reduction but also tackle fear and intimidation, with perception of safety enquired.

### Introduction

Based in London, RoadPeace, the national charity for road crash victims, was founded in 1992 by a bereaved mother out of shock and outrage at the justice system's dismissive treatment of her son's killing by a law breaking driver. In addition to supporting crash victims, who do not receive the same rights, support or information as other victims, RoadPeace also campaigns to end society's tolerance of road danger, especially within the justice system.

Launched in early 2016, TfL's bus safety programme includes the six key areas:

1. Vehicle design safety standards.
2. Bus contract safety incentives.
3. Support service for victims and witnesses.
4. Bus collision data transparency.
5. Bus collision investigation transparency.
6. Bus driver safety training.

RoadPeace welcomed this ground breaking programme and for good reason as it posed to tackle danger at source. This is a long standing call of RoadPeace, which was founded on the principle of road danger reduction. The programme also promised increased transparency of investigations, another key call for RoadPeace.

And RoadPeace has commended the years of campaigning on bus safety by two victims of bus collisions in London--Tom Kearney and Sarah Hope. Tom recovered from a near fatal crash and has led the charge for increased transparency in publishing bus casualty data as well as greater priority to safety being given in bus contracts. After a bus crash killed her mother, left her young daughter with a life changing disability and Sarah herself seriously injured, Sarah campaigned for years for more support to be provided to those bereaved and seriously injured by bus crashes in London.

But with little information being reported on the progress of this bus safety programme, our response focuses on the key areas of bus collision investigation and victim support, including what we expect this programme to deliver and how this can be monitored.

## Key questions

### General questions

#### 1. What should TfL's priorities be for delivering a safe bus network?

Priorities should include reduced speeds and speed compliance. TfL should ensure it is consistent with the wider Vision Zero and Healthy Streets approach. Safety should not just be measured by casualties but also include the intimidation and level of safety perceived by walkers and cyclists.

#### 2. Are you aware of any particular collision blackspot (not accident)?

No. We know that most casualty collisions in London are concentrated at junctions. But TfL has also reported that the worst 100 junctions were responsible for only a small share of fatal and serious injury collisions.

We do not think the problem can be tackled at just a few locations. And the threat posed by buses includes not just casualty collisions but also near misses which intimidate cyclists.

#### 3. What are the particular safety concerns for:

- *Passengers on buses*
- *Other road users*

In 2015, police reported that 12 people were killed and another 129 seriously injured in bus collisions in London. As seen in the table below, it is mainly bus passengers who are reported injured in bus collisions, according to STATS19 data.

Table 1: London reported bus collision related casualties (2015)

|                                | Killed | Seriously injured | Total casualties |
|--------------------------------|--------|-------------------|------------------|
| Pedestrian                     | 7      | 52                | 329              |
| Cyclist                        | 0      | 7                 | 96               |
| Motorcyclist (50 cc and under) | 0      | 2                 | 3                |
| Motorcyclist (over 50cc)       | 2      | 5                 | 55               |
| Car                            | 1      | 3                 | 249              |
| Bus                            | 1      | 58                | 1142             |
| Van/LGV                        | 0      | 2                 | 18               |
| HGV                            | 0      | 0                 | 3                |
| Any other vehicle              | 1      | 0                 | 2                |
| Total                          | 12     | 129               | 1897             |

Source: DfT (2016), RAS40004 London

Speed will be a key concern for bus passengers as well as other road users, and also for all other types of collisions. Bus acceleration will be a key factor in passenger falls whilst bus impact speed will influence both collision risk and casualty severity.

We do not know how often a bus driver was caught breaking the law, including speeding. We are still waiting for the MPS to publish their Roads Policing Report which was supposed to include data on driving offences by vehicle type.

And we note the confusion over bus casualty data. The police reported STATS 19 data set is the traditional source of information on road crash casualties. And under-reporting is known to be a serious problem with DfT estimating that over three times as many people are seriously injured in crashes, than reported by the police. And TfL's quarterly bus safety data reports many more other casualties, including those from slips and trips and personal injury which are assumed not to stem from a collision. This is confusing and it is not easy to know how many are crash related for comparison with STATS 19 data.

TfL should clarify how the quarterly bus safety data compares with STATS 19. It should not be so hard to identify how many people were killed or seriously injured in bus collisions. At the first meeting of TfL's Safer Streets for London Steering Group, this data classification was requested by David Davies, PACTS and RoadPeace has also regularly asked for this data, but we are still waiting.

#### *Operators and drivers*

4. *How are operators and drivers incentivised to prioritise safety?*

This is changing with more weight being given to safety in new bus contracts. We do not have more information on how far this has progressed or the reasons for any delay.

The Confidential Incident Reporting System (CIRAS) was introduced in 2016, for bus drivers, but we do not know if enough time has passed for its effectiveness to be evaluated, or how its effectiveness will be evaluated.

TfL should publicise what action is taken by the operator, as well as TfL, after a driver is reported for breaking the law, e.g. speeding, running a red light, not giving way to a pedestrian on a crossing, using a mobile phone or unsafe overtaking of cyclists. Road users should be encouraged to report unsafe driving with information on how to do this publicised on buses.

5. *Should operators face contractual financial penalties for poor safety records?*

Yes, given that they already face penalties for time delays.

6. *Are drivers provided with adequate driving skill training?*

More emphasis should be given to Safe Urban Driver training for bus drivers, as has been with lorry drivers. But (any) driver training is an optional CPD course. RoadPeace supports Safe Urban Driver training being made a requirement for all bus/coach drivers operating in London, as it also should be with lorry drivers.

7. *How effective is this training (which is delivered by individual operators)?*

We do not know how effective it is, or how this is monitored. This should be publicised against performance indicators related to road danger reduction.

8. *Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?*

We think this would be a very sensible idea and ensure consistency in training. It should also contribute to improved standards in driver training.

9. *How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?*

We highlighted the lack of transparency and accountability of collision investigation in our response to the London Assembly Police and Crime Committee's inquiry into the effectiveness of the MPS Roads Transport and Policing Command in January 2016. RoadPeace gave oral evidence but also

coordinated submissions on behalf of Cycling UK, LCC, Living Streets, Road Danger Reduction Forum, Sustrans, and 20's Plenty for Us. Our April 2016 joint submission included suggested key performance indicators –all of which apply to bus services--of:

1. Perception of safety by those walking and cycling
2. Speed compliance
3. Offenders brought to justice
4. Victim satisfaction in collision investigation
5. Public confidence in police efforts to reduce road danger

We also noted how in the TfL and MOPAC Services agreement, TfL's stated expectation included: *Undertaking thorough and effective investigation of collisions on London's roads that has victim satisfaction at its centre, distils learning to prevent further collisions...*

And RoadPeace is campaigning for thorough investigations, including transparency around investigation procedures and resources as well as with court outcomes. We note the draft London Police and Crime Plan refers to greater transparency around prosecution and court outcomes of collisions, but we also know this has been promised more than once in the past.

And transparency is lacking. We do not (yet) know how incidents are managed by TfL and the bus operators. We welcomed the promised transparency around bus collision investigations announced a year ago but we have yet to see any change. We would like to work with TfL in ensuring victims and vulnerable road users have confidence in the thoroughness and effectiveness of bus collision investigation.

For instance, the press has recently reported the trial of Go-Ahead bus driver Nathan Quintyne for causing the death of Nicholas Shaw. But we do not know if Quintyne was suspended from driving whilst awaiting trial, what response Go-Ahead took from the time of the crash, and why driving a bus in the wrong lane without any forward visibility in a busy neighbourhood did not qualify as dangerous driving. Victims' families often want to know if the driver has been allowed to continue driving and what interest the bus company has shown in the crash.

We are aware that TfL has conducted research into bus fatal collisions but have not seen the findings, or even the scope or terms of reference of this study. We were disappointed with TfL's last research into cyclist deaths as it failed to include information on the judicial outcome, e.g. how often a driver was prosecuted for causing the collision and which charge. We know from previous research into pedestrian deaths undertaken by TfL that few pedestrian deaths involving a bus resulted in a prosecution.

RE support. TfL informed us of how the Sarah Hope helpline would work. We encouraged TfL to produce a guide for those bereaved or injured in a bus collision, and offered to assist with this. We believe that this would still be useful, especially with those injured as they do not receive any government funded literature on what happens after a crash.

We have also urged TfL to fund a Resilience Building Programme for those bereaved by bus collisions in London. This programme combines the opportunity of peer support as well as guidance with developing coping skills after traumatic bereavement.

### *Technology*

#### *10. Has TfL taken advantage of new technologies to make buses safer?*

Intelligent speed adaptation (ISA) is being introduced into London bus network. And whilst this is welcomed, it is also over a decade after TfL first piloted ISA.

And TfL should ensure on board cameras are working properly, especially given how effective they have proven with lorries in proving innocence/guilt.

TfL has also trialled pedestrian and cyclist detection sensors, and these should be adopted, assuming the trial proved cost effective.

*11. What other technology advances should TfL consider piloting?*

TfL should learn from New York City and introduce incident data recorders, e.g. black boxes, in its fleet.

*Infrastructure and design*

*12. Are there any problems caused by bus and cycling infrastructure sharing a road space (particularly kerb side) and how could these be resolved?*

TfL should follow the Vulnerable Road User Hierarchy and give priority to the disabled and pedestrian needs first, and then cyclists. Bus passengers come next in the priority order.

*13. Would expanding 20 mph zones be a good way of reducing collisions?*

Yes. More 20 mph zones and limits (especially the latter which are lower cost) would be a great way of reducing collisions, casualty severity as well as intimidation.

[20s Plenty for Us](#) have highlighted the many ways in which 20mph speed limits benefit bus companies, including

- Lower crash costs
- Less acceleration—less fuel
- Less stressful for drivers

It also reported how research had shown how rare it was for buses to operate at more than 20mph, so there would be very little effect on journey times.

And we are aware that bus companies have adopted a voluntary code of not exceeding 10 mph in the busier parts of Manchester.

*14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?*

We know of no evidence that bus lanes have contributed to a reduction in bus collisions but we believe they are safer spaces for cyclists and support the reduction in space available for private motor vehicle use.

We would also ask for clarification on what guidance is provided to buses upon approaching bus stops. Some of our members have expressed concern about both the speed of the approaching bus as well as the protruding wing mirrors.

## **South London Partnership response to the London Assembly Transport Committee Call for Evidence on Bus Services**

### **Introduction**

The South London Partnership (SLP) is a sub-regional collaboration of five London boroughs: Croydon, Kingston upon Thames, Merton, Richmond upon Thames and Sutton. Through collaboration – between ourselves and with local public, private and voluntary and community sector partners – the South London Partnership is committed to accelerating and increasing the potential for economic growth in this area, beyond what we can achieve individually.

The SLP welcomes the chance to respond to the LATC's call for evidence on bus services. As the sub-region with very little provision by TfL's rail network, and two boroughs with none at all, the bus network is especially important to the SLP.

Our key comments on the provision of bus services are:

- In order for local knowledge and plans to be fed more accurately into changes of bus services there needs to be much greater transparency in decision-making about new routes. Engagement with boroughs has declined in recent years and varies substantially between boroughs. Previously there was regular consultation when various tranches of routes were coming up for retendering and this took place some considerable time in advance to allow meaningful consultation. This process no longer takes place in any meaningful way and, with TfL likely to have reduced resources following last year's business plan, a new process needs to be brought in to make engagement easier
- Many low income residents in outer London rely on buses to get to work within and out of the sub-region. As congestion increases these buses are taking increasingly long times and the possibility of the hopper fare being extended beyond 1 hour for journeys starting in outer London should be considered.
- Express buses and other similar innovations should be explored more regularly. In particular this should be part of a solution to providing more orbital routes. The SLP believes the X26 orbital route has been a success and would encourage an increase in its frequency.
- Bus networks should be planned in consideration with the rail services available currently and potentially in the future. In many parts of south London, considerations of how the bus network can be improved should consider the role of the tram network and the potential for it to expand as an alternative on particularly clogged bus routes.

## General questions

### **1. Is London's bus network fit for purpose?**

London's bus network remains far superior to the offer in other UK cities but there is a need for it to contribute more to efforts to reduce air pollution, increase access to public transport in outer London and allow for more orbital routes.

### **2. How does the bus system compare in inner and outer London?**

### **3. What different challenges do the inner and outer networks face?**

In inner London, the bus network meshes with other TfL offers such as the underground, overground and DLR. However this happens less frequently in outer London as the rail offer is significantly diminished and two SLP boroughs (Kingston and Sutton) have no TfL rail services at all.

Bus services should be designed to compensate for this and to work in tandem with rail offers that do exist such as Network Rail services and in particular Tramlink. For South London we believe plans for buses should be heavily coordinated with plans for extending the Tramlink to ensure both provide high quality services and do not cause congestion for each other.

There also needs to be recognition of the need for different services for less densely populated areas located away from main bus routes. These services have often had extensive sections operated on a hail and ride basis which has been of particular benefit to older residents. Larger and standardised buses make this offer harder to maintain. While these services may not be able to offer the numbers of passengers in more densely populated areas, by offering connections into the transport network they can reduce congestion and increase take-up of other services.

## Designing the bus network

### **4. How well do TfL currently plan bus routes?**

### **5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?**

SLP boroughs have often found that there are problems of coordination between TfL's operational and commercial property teams as well as with GLA officers. SLP is willing to work with TfL on developing more efficient discussions which will allow buses to be used to help improve the access to new development on TfL land as well as more generally.

### **6. What bus priority measures has TfL already introduced and how successful are they?**

### **7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?**

The Hopper ticket is an important measure which will allow more citizens to see the value of using multiple bus routes to get to work. However for many low income residents in outer London they depend on the bus for longer journeys including into the Central Activities Zone and consideration should be given to extending the Hopper fare for journeys which begin further out.

**8. Does TfL plan new bus services to stimulate demand or just to respond to existing demand?**

We believe TfL can and should consider bus routes more as part of the solution to unlocking development.

**9. What tools does TfL have to monitor and forecast demand?**

**Alternative models and approaches**

**10. What other approaches to network design should TfL be considering?**

We believe there is a strong need to look in detail at options which allow more orbital services. The SLP believes the X26 orbital route has been a success and would encourage an increase in its frequency. If this is not possible, the focus should be on ensuring information about its arrival times are as accurate and accessible as possible. More generally SLP is supportive of exploring bus rapid transit systems with TfL as a solution to areas where greater connectivity.

**11. Is it a good idea for TfL to consider different types of network for different areas of London? How could this work in practice?**

We believe this is important as the effectiveness of a type of bus network varies considerably depending on the other transport options available. The level of rail provision has a very clear impact on what bus services are needed. In outer London there are also important considerations about how it works in relation to neighbouring services in bordering counties.

There are no perfect geographies for different types of bus networks but sub-regions can help advise on the needs of their boroughs and where there are clear links which should be considered together.

**12. How successful have existing express routes been, such as X26 and 607?**

SLP boroughs believe the X26 has been a success and would support increasing its regularity.

**Making changes to the network**

**13. What can we learn from others cities about successful/unsuccessful bus network redesign?**

**14. What are the challenges associated with this kind of large-scale change to the bus system?**

**15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?**

**General questions**

**1. What should TfL's priorities be for delivering a safe bus network?**

We believe that TfL should look particularly at the concerns around overcrowding of buses and bus stops at peak times in town centres and around schools

**2. Are you aware of any particular accident blackspots?**

### **3. What are the particular safety concerns for:**

#### **Operators and drivers**

- 4. How are operators and drivers incentivised to prioritise safety?**
- 5. Should operators face contractual financial penalties for poor safety records?**
- 6. Are drivers provided with adequate 'driving skills' training?**
- 7. How effective is this training (which is delivered by individual operators)?**
- 8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?**
- 9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?**

#### **Technology**

- 10. Has TfL taken advantage of new technologies to make buses safer?**
- 11. What other technology advances should TfL consider piloting?**

#### **Infrastructure and design**

- 12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?**
- 13. Would expanding 20mph zones be a good way of reducing collisions?**
- 14. Would further investment in bus priority measures like bus lanes be a good way of**

#### **Conclusion**

The SLP welcomes the London Assembly Transport Committee looking into bus services. We believe there are real opportunities to use the bus network more effectively to serve communities that have fewer other transport options and through this raise bus usage again.

# Transport Committee: Bus Services

## Sustrans response to the London Assembly

January 2017

### About Sustrans

Sustrans is a leading UK charity enabling people to travel by foot or by bike for more of the journeys we make every day.

Sustrans has over 4,000 supporters in London and works in partnership with Transport for London (TfL), the London Boroughs and other private and public sector organisations to realise our vision.

Sustrans' London Director sat on the previous Mayor's Roads Task Force and the Mayor's Road Safety Steering Group.

Accordingly, our response focusses on the questions relevant to our vision under the Bus Safety section.

### Key Points

- The Mayor should establish a set of principles behind his commitment to 'Vision Zero' and a 'Healthy Streets' approach and apply them to TfL's bus operations.
- Reducing danger should be a core objective of TfL's Bus Priority investment programme.
- To reduce danger to people walking or cycling, the same principles apply to buses as for general traffic and large vehicles.
- Sustrans would welcome update on TfL's Intelligent Speed Adaptation trials and early-warning technology trials.

### Bus Safety

As the regional transport authority with direct oversight of bus services in Greater London, Sustrans believe TfL have a responsibility to improve bus safety.

The Bus Safety programme<sup>1</sup> was a very welcome step. Almost a year on from its launch, we welcome the Transport Committee's investigation into this important topic.

Police data shows a commendable overall reduction in casualties from bus / coach collisions since 2006.<sup>2</sup> The focus of the bus safety programme should ensure the improvements continue apace.

Sustrans notes that the Mayor has made strong signals of adopting a Vision Zero approach.<sup>3</sup> The objective of Vision Zero should be to eliminate serious injury and fatalities from road traffic entirely, therefore the new Mayor's Transport Strategy

should contain proposals to achieve objectives that go further than the existing bus safety programme.

## General questions

### 1. What should TfL's priorities be for delivering a safe bus network?

- 1.1. Sustrans is supportive of the Mayor's focus on a 'Healthy Streets approach' and a focus on Vision Zero for road danger reduction.<sup>4</sup>
- 1.2. London should strive towards a 'safe system' approach that accepts human error and designs its bus infrastructure and technology accordingly.
- 1.3. Under the control of TfL, buses and the bus network have a role to play in achieving these aims. A priority for TfL should be to establish a set of 'Vision Zero' principles and apply them to its bus operations and infrastructure programmes. The four priority themes should be:
- 1.4. **Infrastructure** – TfL's Roads Modernisation Plan and Healthy Streets programmes should ensure that infrastructure prevents collisions or minimises the risk of them taking place. Buses must be a consideration in these programmes.
- 1.5. **Vehicles** – TfL has an opportunity to improve safety standards in the industry by utilising its procurement and buying powers just as the Mayor proposes to for air quality and the 'Direct Vision Standard' for Heavy Goods Vehicles (HGVs).
- 1.6. **People** – Through its contractors and in-house driver training, TfL has the ability to ensure safer driving behaviours.
- 1.7. **Tracking progress** – Sustrans is unaware of bus safety monitoring and evaluation but this should be a key priority to ensure action is led by the evidence.

### 2. Are you aware of any particular accident blackspots?

- 2.1. No

### 3. What are the particular safety concerns for other road users?

- 3.1. Buses present significant danger to people walking or cycling due to their size and weight, their capacity for speed and the movements they undertake.

#### Walking

- 3.2. TfL data shows pedestrians account for an average of 26% of those killed and seriously injured by bus/coach collisions; 63 people in 2015.<sup>5</sup>
- 3.3. TRL analysis carried out in 2012<sup>6</sup> states that:  
*In 177 of the collisions (90%), the pedestrian was crossing the road, most commonly whilst the vehicle was travelling straight ahead;*
- 3.4. The general principles for buses are the same for general traffic. Speed management and pedestrian comfort are key means to prevent collisions or reduce their severity. For example, where pavements are busy and crowded, pedestrians may be more likely to step out or seek to cross the road.

#### Cycling

- 3.5. TfL data shows cyclists account for on average 8% of those killed or seriously injured in bus/coach collisions; 11 people in 2015. This is potential disproportionate when cycling represents less than 3% of all trips.<sup>7</sup>
- 3.6. Like any large vehicle, buses present particular safety concerns for people cycling and, therefore, collision patterns are likely to be similar to those with general traffic. The prospect of sharing roads with buses is likely to be putting people off, supressing demand for cycling.
- 3.7. On much of London's road network, cyclists share bus lanes or share general traffic lanes with buses. In addition, bus stops are particular conflict points because this is where buses regularly pull in and out, bringing them into conflict with cyclists on the kerb side. For many this is a barrier to cycling, while for those already confident cycling, it exacerbates risk as cyclists overtake into busy traffic.
- 3.8. We know that the prospect of cycling with buses puts people off in the first instance, as with other heavy traffic. For those already cycling, near misses can reduce confidence and lead to reducing the amount they cycle or whether they cycle at all.<sup>8</sup>

## Operators and Drivers

Sustrans is unfamiliar with the bus operator and driving environment.

## Technology

### 10. Has TfL taken advantage of new technologies to make buses safer?

- 10.1. TfL have trialled Intelligent Speed Adaptation (ISA) technology. ISA relies on digital infrastructure to manage speed, rather than physical infrastructure (traffic calming). TfL should provide an update on its plans for the roll out of Intelligent Speed Adaptation across the bus fleet. A co-benefit of this approach is for the bus fleet to marshal overall traffic speeds across London where they share lanes, reducing overall road danger.
- 10.2. TfL also trialled technology that would alert the bus driver to a likely collision between the bus and a nearby cyclist or pedestrian. Sustrans would welcome an update on this pilot.

## Infrastructure and design

### 12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

- 12.1. As stated in response to question 3, like any large vehicle, buses present particular safety concerns for people cycling. On much of London's road network, cyclists share bus lanes or share general traffic lanes with buses.
- 12.2. We know that the prospect of cycling with buses puts people off in the first place, as with other heavy traffic. For those already cycling, near misses can reduce confidence and lead to reducing the amount they cycle or whether they cycle at all.

- 12.3. Bus stops are a particular conflict point. Buses regularly pull in and out while cyclists continue near-side. This often exacerbates risks when cyclists pull out into busy traffic. And, anecdotally, buses can increase risks by overtaking before promptly pulling in to a stop.
- 12.4. The most sustainable long-term method for managing these risks is to physically separate modes (eliminating these conflicts entirely) or to manage speeds and volumes where buses and cycle share space (reducing likelihood of collisions).
- 12.5. London has a number of working examples of 'floating bus stops' and low speed environments where buses and cycle share space.
- 12.6. Sustrans conducted analysis of 'floating bus stops' in Cambridge.<sup>9</sup> The study used video analysis to observe interactions between users. It found that there were no interactions between cyclists and buses or cars. The majority of interactions between cyclists and pedestrians were considered as safe and normal behaviour.
- 12.7. The study suggests that 'floating bus stops' pose minimal risk to road users, with pedestrians and cyclists appearing to take normal and safe precautionary actions when interacting at this site.
- 12.8. Sustrans is aware of research TfL are conducting to understand accessibility concerns of 'floating bus stops'.

### **13. Would expanding 20mph zones be a good way of reducing collisions?**

- 13.1. 20mph zones have proven effective at reducing collisions and the severity of casualties.<sup>10</sup>

### **14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

- 14.1. Sustrans is unaware of evidence on the effects of bus lanes on road danger reduction.
- 14.2. In principle, bus priority measures offer the opportunity of redesigning a street space. Therefore they present an opportunity to redesign pedestrian or cycle facilities to improve their safety.
- 14.3. Improving safety should be a core objective of TfL's bus priority programme.

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6 February 2017

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**Call for Evidence: Bus Services by The London Assembly Transport Committee**

I am making this submission on behalf of The Clapham Society in my capacity as member of its main committee and convenor of its Roads & Transport Sub-committee. The Clapham Society is a civic amenity society that was formed in 1963. Our aims may be summarised as follows:

- to improve the quality of life in Clapham and strengthen its identity and sense of community
- to promote excellence in new developments as well as conservation of the best features of the past
- we want Clapham to be a vibrant, exciting and safe place to live, with job opportunities and good shopping and leisure amenities

We have over 800 members, we publish a monthly newsletter, and organise topical meetings and events for our members throughout the year.

**Context** - In common with London's many dense residential districts with a busy town centre Clapham relies heavily on its transport links not just to Central London and The West End, but also to its neighbouring town centres, schools, colleges and hospitals etc. Our town centre is host to a bustling nightlife, especially at weekends, and Clapham Common is a heavily used recreational amenity that attracts people far and wide both for active sports and one-off events.

**The Northern Line** provides access to the Underground network and is a vital link for the many local residents who work in the Central Business District and West End, and for evening trips to the centre, though it is massively overcrowded during peak times, with trains already full to capacity before they arrive at the three Clapham stops during the morning peak which runs from 7-9am. At Clapham North and Clapham Common we have the sole remaining single shared platforms that serve both northbound and southbound trains, which get dangerously overcrowded at peak times. This hazard is exacerbated by congestion around



the stairs that provide the sole access and egress at one end of the platform for all passengers. We are advised that there are no plans to relieve this pressure on the tube, and with social changes taking place in areas further down the line such as Tooting and Morden, and new flatted developments in this sector of London, these problems are getting worse.

**The Overground** service that passes through Wandsworth Road and Clapham High Street stations provides a useful though limited and relatively infrequent orbital service to Clapham Junction and East London. Any improvements to the frequency of this service and **the reinstatement** of direct services to Victoria would be very welcome.

This brings us to the importance of the bus services that serve the area, and which link Clapham to a range of destinations. Our buses are heavily used throughout the day and provide a crucial lifeline for people of all ages and occupations. **London's buses are the most important means of transport for the less mobile, the old, parents with young children, school children, and people with disabilities. They provide transport for all.**

**The need for transparent planning** - A major focus of the Assembly's inquiry is the adequacy of the way in which TfL currently plans bus routes. A key problem, however, is that it is not clear how TfL does currently plan bus routes, especially at the strategic level, as there is no apparent TfL document that explains this. This includes the absence of any document which sets out how it is decided what is worth publicly consulting on. In many cases one hears about a plan only after decisions have been made, or are so far down the line that it is difficult to influence the outcome.

We propose that the Assembly's report should recommend that TfL should prepare, and update at regular intervals, a document for consultation which explains clearly the principles by which TfL currently plans bus routes and what changes it proposes to make to these arrangements.

London is generally well served by its network of buses. However, there are shortcomings and there is a growing sense that those of us who rely on buses are suffering a progressively worsening service as priority is given to the creation of Cycle Superhighways at the expense of all other road users, including pedestrians and bus users. This is resulting in the elimination of bus lanes and increasing competition for the remaining road space on major routes serving the capital, leading to worsening congestion, and heavy pollution.

**The Central Area** - The problem of congestion in Oxford Street, where access is largely limited to buses and taxis, is well known and has been endured for many years. We welcome this is now being addressed, and that certain bus routes will no longer clog up this thoroughfare. One can argue about which routes should be truncated, but this is a sensible and long overdue change in routes. Oxford Street is of course not the only thoroughfare that suffers severe congestion and pollution from traffic fumes, and this needs to be addressed urgently. We are very supportive of the Mayor's recent proposals concerning limiting access



to the centre by more polluting vehicles, but tackling the congestion, that frequently results from TfL investment and other development activity, should also be a priority.

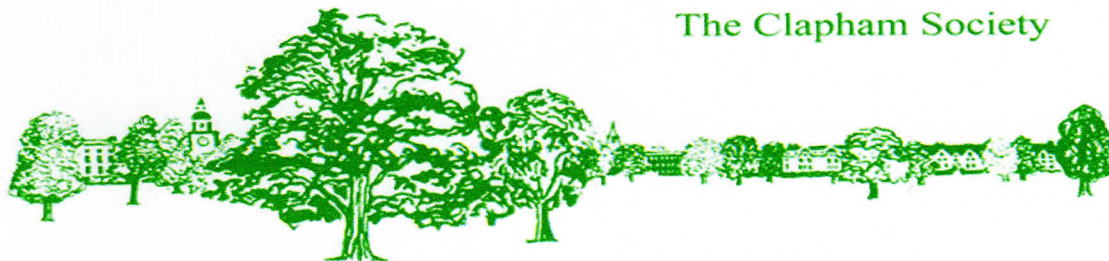
What is unclear is whether better service reliability, easing of congestion, and creating a more efficient bus service could be achieved by the shortening of other routes, and whether this is being planned. It would be helpful to know if this is the case.

**Bus design** – Some poor choices have been made in recent years when new buses have been procured. Evidently the notorious bendy buses were largely inappropriate for our roads, and proved to be extremely dangerous. The more recent Heatherwick buses, while stylish to look at, lacked ventilation necessitating retro-fitting of opening window vents, have few seats downstairs which make them less convenient for less able-bodied passengers, and facilitate fare dodging by passengers boarding via the rear doors. In addition, their engines are now some of the more polluting in the fleet.

**Air Pollution** - we strongly welcome the programme of modifications to the older bus fleet to reduce toxic emissions, and the stop-start technology now being adopted, and the proposed introduction of low emission vehicles. The identification of pollution hotspots along major routes of the capital and the belated recognition by TfL that public transport procurement decisions and a range of policies by government bodies at all levels have contributed to this, is long overdue. Public education in this area is essential, and the publication of data on pollution and the decision to prioritise the use of buses with the lowest emission standards along the most polluted routes is to be applauded.

**Hopper Fares** - A very important and long overdue innovation has been the introduction of the Hopper Fares, a system that has been widely used in many cities around the world for many years. To facilitate greater use of the bus network as well as to enable re-planning of routes, and taking account of the problems of congestion, we consider Hopper Fares should be more widely available, to enable multiple trips during a longer timeframe than just 1 hour. This would be especially useful to visitors. Taking two or three buses to complete a trip can easily take much longer than an hour when walking to another stop and waiting for the next bus is involved.

**Orbital Routes** - There have always been problems with ensuring London is adequately served by orbital routes, which are often as important for the resident population as may be radial routes for workers. In Clapham we are well served by certain orbital bus routes such as the 35, 37 and 345 and 45. A major omission is that there is no direct bus service eastbound from Clapham along the South Circular Road serving Tulse Hill, Dulwich and Forest Hill which is a particularly important route for school students. This results in many parents doing a regular school run along this route, adding to congestion, and encouraging families to purchase larger, usually diesel, vehicles so they can share this duty with other parents. A dependable service along this route would undoubtedly relieve pressure on this important orbital route.



**Bus Countdown** - the introduction of countdown at bus stops has been a really useful and greatly valued service. It helps people plan their journey, and to make sensible choices over which bus to take and how much time to allow to get their destination. Where possible this technology should be maintained, and where feasible extended throughout the network.

At the latest count there were nearly 150 stops across the network where countdown had been disconnected due in the main to stops having been moved or due to roadworks in the vicinity. We are aware of busy stops where the service has been out of commission for what appears to be a very long time (eg Brixton Town Hall), which leads us to question the priority being given to re-establish the service in these instances.

**Siting of stops** - A related safety issue concerns the siting of stops near road intersections. Frequently these are places where routes intersect and passengers seek to transfer from one route to another. We are aware of instances where stops could be much better co-located to facilitate such transfers, and where traffic lights could also be phased to assist those who need to cross a busy road to change routes (eg at Clapham Junction, and at the junction of Lavender Hill with Cedars Road/Queenstown Rd).

**Bus Stop Bypasses** – a number of members have raised concerns over the introduction of “floating bus stops”, and the additional hazards they pose for less mobile passengers, people with young children, and the visually impaired. We are aware of the concerns raised by the Guys and St Thomas’s Hospital Trust and the RNIB regarding the proposed floating stops in the vicinity of St Thomas’s, and share their concerns. Furthermore, we do not consider it appropriate to site these floating stops at interchanges and close to schools, shops, bars and restaurants, where clear conflicts are likely to arise between pedestrians and cyclists over sight lines, who has right of way, especially when a bus approaches, and the extra hazard of kerbs to negotiate.

**Information on routes and ticketing** – The transport options in London are myriad and complex. It can be complicated enough for residents, even more so for the visitor. TfL has a duty to ensure that getting around London is made as easy as possible, with clarity over fares, modes, and routes. TfL’s website and information updates and alerts do a grand job, but not everyone has access to, or can use the web, and it is vital that a network of travel centres is maintained across the network where people can seek advice and acquire the appropriate passes, as well as ticket machines at street level in places where they are convenient for bus users.

**Transport Interchanges** – when properly planned, interchanges make it easy to transfer between different modes of transport and routes, and are essential at key nodal points in the system. These should enable passengers to obtain comprehensive information on the service, ticketing machines, good signage, and transfer between buses and other modes of transport



under cover. The new bus station at West Croydon is a poor example of what an interchange should be. Vauxhall is a good example.

**Vauxhall Bus Station** – is heavily used by people who live and/or work in Clapham, and The Society is very disappointed that TfL is still proposing to demolish the bus station created just 12 years ago and to disperse some of the bus stops back onto the surrounding roads. The current station comprises a well-designed grouping of covered stands that form part of one of the busiest interchanges in London, where people not only change buses, but change between overground and underground rail. This can all be achieved under cover. We are concerned that in drawing up their proposals for Vauxhall Bus Station, TfL has sought from the outset to redevelop the existing station, and has not properly considered the interests of bus users.

**Local Routes** – Apart from the desirability of a route serving the South Circular referred to previously, we concur with representations made by others for a direct service between central Clapham and St Thomas's hospital which could involve extending the 155 route. Consideration could also be given to achieving better connectivity between the 155 and the 3 and the 159 where they intersect at Kennington Park. Consideration should be given to ways in which the dangerous congestion on the Northern Line at peak times might be alleviated, and whether additional buses along this route could alleviate this.

**Bus Driver Standards** – we recognise that driving a big London bus along our congested roads, and having to make frequent stops, and cope with poor road etiquette by other road users must frequently be a frustrating, tiring, uncomfortable, and sometimes hazardous occupation. Londoners generally get a very good and conscientious service. That said, there are times when some drivers accelerate and decelerate too sharply between stops which can be very hazardous for passengers, especially those carrying shopping or who are less able bodied. It can be particularly dangerous for users of the upper deck. It is unclear what routine checks are made on driving styles, but greater emphasis should be given to ensuring customer safety is uppermost in the manner that buses are driven.

Yours sincerely,

Mark Leffler

## General questions

### 1. Is London's bus network fit for purpose?

The last decade or so have seen major improvements to the accessibility of the bus network in London. These are largely due to the campaigning and lobbying of generations of Disabled and older accessibility campaigners. However there are still major issues which compromise the accessibility and therefore the usability of buses in London.

These include:

- Complaints on access issues raised by Disabled passengers need to be dealt with and resolved in a much more effective manner. TfA has written to the commissioner of TfL Mike Brown listing our concerns on this matter. (Letter attached)
- Bus companies need to better train and instruct their drivers on the rights of Disabled passengers and implement measures that ensure that wheelchair users do not face conflict when it comes to accessing the wheelchair space. In particular we would like to know how TfL and bus companies will be responding to the Supreme court ruling on *Paulley V First Bus* and the judgement that now states that bus drivers must 'require not just request' for the wheelchair space to be vacated.
- Whilst the introduction of the Mobility Aid card is a positive development mobility scooter users still face uncertainty and encounter problems when travelling. With London's population ageing and more older Londoners deciding to use mobility scooters these issues need to be resolved. TfA believes that mobility scooter users should be given the same priority access to the wheelchair space. We have had reports of bus operating companies stating that only wheelchairs and not mobility scooters have priority. This needs to urgently reviewed and revised in of light of the *Paulley V First bus* Supreme Court judgement.
- We still receive many reports of buses where the i-bus system is broken, not turned on or set to a low volume. This makes travelling for many Disabled and older passengers, especially those with a visual impairment challenging. In addition many audio-visual announcement screens are fitted at the front of the bus-these are often not visible from the rear-facing wheelchair space. Screens should also be fitted at the middle and/or back of the bus.

We believe that TfL needs to closer monitor how bus companies use i-bus and issue them with penalties for not operating the system correctly.

- Broken/malfunctioning ramps. These need to be checked more regularly, and buses must be pulled out of service immediately if the ramp is broken.
- Use of the 'kneeling' systems. These need to be checked more regularly, and all drivers must be instructed to use them when a Disabled and/or Older passenger boards as a matter of course. If the system is broken buses must be immediately reported and urgently repaired.
- Faulty audio announcements- These need to be immediately reported and urgently repaired

- The uncomfortable design of the seats at bus shelters leaves many Disabled and older people unable to wait at bus stops. We have heard from TfL that there is a review happening across London yet we are unaware of an official consultation.
- We fully support the idea of 'talking buses' and in particular of an external audio system that ensures that blind and visually impaired travellers can be made aware of the route and destination of the bus without the need to ask the driver or fellow passengers
- Many Disabled and older people need ready access to a public toilets. However we often hear of toilets at bus stations that are closed or not maintained. TfL need to ensure that bus companies keep and maintain accessible public toilets at bus stations.
- Work needs to be done with the Deaf and BSL speaking community to ensure that changes and terminations are communicated in writing, in addition to audio announcements.

## **2. How does the bus system compare in inner and outer London?**

Our joint study with Age UK (2011) found that Buses in central London are less likely to pull into the curb and kneel for passengers, and that they are less likely to allow time for passengers to take a seat before pulling away. This situation still remains. Regularly elderly people are injured every day on buses, and more careful driving would help to reduce this. Bus drivers need to be trained to allow passengers the time they need to safely take a seat, with penalties for drivers who repeatedly fail to do so. TfL also must ensure that their targets and regulations do not incentivise unsafe driving.

## **3. What different challenges do the inner and outer networks face?**

Outer:

In outer London there is a less diverse range of transport options so reliable access to buses is essential. Broken ramps, kneeling systems and other passengers in the wheelchair space can leave people without any alternative transport options.

Inner:

Overcrowding is a particular problem on central London buses, and can really affect the confidence of Disabled and older transport users. Especially as Disabled people attempt to get to work. TfL should ensure other passengers are encouraged to behave respectfully towards Disabled transport users and that bus drivers are trained to enforce this.

## **Designing the bus network**

### **4. How well do TfL currently plan bus routes?**

TfL must include Disabled and older people in their planning process when devising new bus routes. Often accessibility issues could easily be avoided if they are identified at the planning stage, if Disabled transport users are not allowed to take part in the planning process accessibility problems are often overlooked.

We receive many complaints about distances between bus stops being too large for Disabled and older users, particularly when there are road works or diversions in place.

Given the provable economic and social benefits of accessible transport all changes and upgrades to the system should be done in way which enhances accessibility.

**5. Does TfL take account of the London Plan and housing developments when planning bus routes? Could they improve the way they make these decisions?**

TfL must include Disabled and older people in their planning process when devising new bus routes.

**6. What bus priority measures has TfL already introduced and how successful are they?**

We would welcome further bus priority measures as they tend to aid accessibility, as buses are more likely to pull into bus stops correctly when they are not in heavy traffic.

**7. What impact could the introduction and development of the hopper ticket have on the design of London's bus network?**

While we welcome the hopper fair and the flexibility it will give transport users we are concerned that it will mean that TfL are more willing to build in bus changes for transport users. Changing buses is often extremely difficult for Disabled and older transport users and this should be taken into account when designing the bus network.

**12. How successful have existing express routes been, such as X26 and 607?**

Express services are welcome and popular; however they also tend only to be run in peak hours. This can lead to such buses being overcrowding that can be off putting to Disabled and older passengers due to the attitude of fellow service users and the practical problems that overcrowding creates. Consideration should be made to making express route more regular and run outside peak hours. If properly promoted, we feel that there would be adequate demand for these services.

**Making changes to the network**

**13. What can we learn from others cities about successful/unsuccessful bus network redesign?**

Brighton and Edinburgh bus services both have separate pushchair and wheelchair spaces, which help to avoid conflict over the wheelchair space.

**14. What are the challenges associated with this kind of large-scale change to the bus system?**

Any large scale change will cause a lot of disruption to Disabled and older passengers, who due to uncertainty caused by inaccessibility can be less confident travelling new routes and in unknown places. Therefore it is vital that they are fully consulted on any planned changes to the network, are provided with all the information they need to adapt to the change and are offered while they grow accustomed to the new routes.

Many Disabled and older transport users feel extremely unsafe when using TfL's new 'bus stop bypasses'. The stops bring pedestrians directly into conflict with busy cycle lanes, and present a particular danger to bus users with visual impairments who may not be aware of approaching cyclists.

We strongly believe Transport for London should stop building new bus stop bypasses until their safety can be assured for all. We regularly hear from Disabled and older people who find that the distance between bus stops is too great when there are temporary diversions. It's vital that Disabled and older people are consulted on temporary layouts, and that large distances between bus stops are avoided.

#### **15. Could TfL improve the way it consults the public on proposed changes to bus routes? How?**

Disabled and older people should always be included in the consultation process to ensure accessibility issues are not overlooked.

Consultations should also be clear, accessible, and designed in a way that allows people without a detailed knowledge of individual routes to respond. TfL's recent consultation on changes to West End bus routes was particularly inaccessible, only offering information on a route by route basis which denied transport users the opportunity to give feedback on the overall direction of the proposals.

### **Bus Safety**

#### **1. What should TfL's priorities be for delivering a safe bus network?**

A safe bus network must ensure that all passengers feel confident and comfortable using the bus. This means TfL must ensure that drivers do not move off before passengers are seated, and that they kneel and pull into the curb to ensure passengers can board correctly.

They must also drive safely many Disabled and older transport users feel London buses are driven unsafely, with some users reporting being thrown off seats and injured when drivers fail to slow down or turn carefully.

#### **3. What are the particular safety concerns for:**

- Passengers on buses
  - Drivers moving away before passengers are properly seated
  - Wheelchair users coming into conflict with other users over the wheelchair space
  - Buses not stopping close enough to the curb or kneeling

### **Operators and drivers**

#### **4. How are operators and drivers incentivised to prioritise safety?**

Whilst the introduction of the Big Red Book is a positive development however adherence to it varies greatly across London's bus network. With greater clarity and firmer instruction drivers will be more confident in ensuring safety and accessibility particularly when it brings them into conflict with other passengers.

#### **5. Should operators face contractual financial penalties for poor safety records?**

Yes, we strongly believe that there should be a transparent contractual penalty system for operators who fail to meet safety or accessibility standards. Operators that persistently fail these standards

should lose their contract. In addition when routes do go out for tender then the record on access must be a key part of awarding routes.

Drivers who repeatedly fail to stop for Disabled people or do not assist in accessible journeys should be subject to disciplinary procedures and refresher Disability Equality Training.

#### **6. Are drivers provided with adequate 'driving skills' training?**

Many Disabled and older people feel that some buses are driven unsafely, regularly not allowing them sufficient time to sit down not pulling into the curb to allow them to board.

It is clear that drivers across the city are not receiving sufficient training to ensure the safety or accessibility of the service. All drivers should receive training which involves Disabled and older people and be required to undertake refresher training if they are not meeting standards.

#### **7. How effective is this training (which is delivered by individual operators)?**

We have found training effectiveness to be extremely variable, between bus companies and from driver to driver. It's clear that on many services drivers are not receiving sufficient training to ensure a good level of customer service and accessibility for Disabled and older people.

We now understand that training has been taken 'In house' by TfL under the 'Hello London' programme. It also appears that currently there are no separate Disability Equality Training (DET) modules, and no Disabled or older people involved in many bus training programmes. We are alarmed at how this has happened despite the fact that the need for training for bus drivers that includes DET has been raised loudly and clearly with TfL for many years and indeed promised by the Mayor in the run up to the elections.

TfA has written to TfL Commissioner Mike Brown and requested the following actions:

- a) Immediately include in the 'Hello London' training a DET element developed and delivered by Disabled people and based on the social model of disability.
- b) Work with bus companies and set up refresher courses / seminars at garage level so that drivers can be routinely reminded of their duties towards Disabled passengers.
- c) Ensure that Disabled and older people are included in driver training

#### **8. Should there be a 'London standard' for driving skills training (which would likely result in TfL managing the training)?**

Yes, a London standard of training would help to ensure consistent practice across the city.

If the training process is taken into TfL's hands it should be transparent, responsive to the public and include a separate disability equality training module-which involves Disabled and older people in delivering the training.

There should also be a special programme of DET for drivers involved in complaints.

## **9. How are incidents managed by TfL and by the operators? What kind of support is available to those involved in bus collisions and incidents?**

We currently don't believe that complaints about London's bus services are currently resulting in improvements for Disabled Londoners. Indeed from the cases that we have seen (details available if requested) over this year. This was very recently highlighted by the case of our member Chris Stapleton who featured on ITV London news, and has now complained 63 times on the issue of bus drivers not stopping the bus after he has pressed on the blue buzzer. Many of his complaints are on the same routes: 249, 38, and 155.

It is staggering that despite such a large volume of complaints there has been no improvement in Chris's journey experiences.

There is clearly a gaping disconnect between Disabled people lodging a complaint and it impacting on the way bus services are run. Generic 'boiler plate' letter responses from TfL almost always include the following:

*"I've been in contact with <bus company> who operates the route XX on our behalf and made them aware of your comments. With the information you've helpfully provided the driver will be identified and interviewed by a member of the management team about this incident.*

*Following their findings appropriate action will be taken in line with their internal procedures".*

We no longer believe that any meaningful action is taking place or that drivers actually are being interviewed. We have one case that we dealt with (we can provide details if requested) where it was proved that despite the response letter saying that 'the driver has been interviewed' we later discovered that s/he had not. It seems that using the term 'internal procedures' is a convenient way of passing the buck and of pretending that action is being taken when it is, we believe, not being taken.

## **Technology**

### **11. What other technology advances should TfL consider piloting?**

We believe that there needs to be investment in innovation. In particular:

Ensuring that all stops have real time up-dates to reassure transport users

There needs to be an external audio system that ensures blind and visually impaired travellers can be made aware of the route and designation of the bus without the need to ask the driver or fellow passengers

Work needs to be done with the deaf community in ensuring signs and writing messages are understandable. This can be particularly problematic when bus change routes or are terminated.

Investing more in apps and assistance technologies to help Disabled and Older people navigate the transport network.

## Infrastructure and design

### **12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly curb side) and how could these be resolved?**

We have serious concerns about 'bus stop bypasses', which require Disabled and older transport users to cross a busy cycle lane in order to access the bus.

Many Disabled and older users struggle to move out of the way of fast moving cyclists and people with visual impairments are particularly at risk, since they may not be aware of approaching cyclists.

TfL should halt the introduction of new floating bus stops. Until they can find a way to ensure the stops remain accessible for everyone.

### **13. Would expanding 20mph zones be a good way of reducing collisions?**

### **14. Would further investment in bus priority measures like bus lanes be a good way of reducing bus collisions?**

We would welcome further bus priority measures as they tend to help accessibility in that buses are more likely to pull up to bus stops correctly and as this reduces the time between stops could enable drivers to be thorough in ensuring passengers are safely on board.

**Organisation:** Transport for All - an organisation of disabled and older people dedicated to championing the right of disabled and older people to travel with freedom and independence in London.

**Contact:** Faryal Velmi

E: [REDACTED]

T: [REDACTED]

**Transportforall**  
Accessible transport is our right

**London Assembly Transport Committee investigation: Bus services**  
**Transport for London Submission – bus safety**  
**January 2017**

**1. Background**

- 1.1 Safety is our top priority. Every injury, whatever the cause, is one too many. London's bus network is one of the safest in the world, with fewer than three injuries for every million passenger journeys. We, the bus operators, and all that work for London's bus network remain focused on driving that number down further.
- 1.2 Over the past decade the number of people killed or seriously injured (KSI) as a result of a collision involving a bus or coach has decreased by 55 per cent<sup>1</sup>. This equates to an average 8.1 per cent decrease year on year, compared to a 6.5 per cent decrease in all KSI road casualties.
- 1.3 Despite a positive trend in KSI reduction, this is only one aspect of bus safety. Injuries on buses can arise if a driver is taking evasive action, for example sharp braking, to avoid a road collision. Therefore, we look across all areas of safety on the bus network, when looking for improvements. Our approach is to ensure that data collected is robust and comparable. This involves bringing together a variety of sources, including data collected by the police and data collected and reported by the London bus operators. Significant progress has been made to improve the timeliness of this data. Accurate and timely data allows us to fully understand the causes of accidents, so we can develop actions that reduce the likelihood of future incidents.
- 1.4 In February last year, we launched the Bus Safety Programme. By building upon and incorporating work to improve data and causal analysis, the programme aims to continue to drive down the number of people killed or seriously injured (KSI) on the bus network, reduce the number of injuries as a result of on-board slips, trips and falls and reverse the increase in (predominately damage-only) collisions.
- 1.5 The programme has the following strands, which are covered in detail below:
  - a) publish additional bus collision data and make it more accessible;
  - b) provide greater transparency on bus collision investigations;
  - c) provide a UK first Incident Support Service for those affected by fatal or serious injuries.
  - d) update TfL's bus contracts to include new safety incentives;
  - e) provide a new safety training module to all 25,000 drivers;
  - f) develop a world leading bus safety standard for London;
  - g) utilise iBus to monitor safety performance and bus speeds; and

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<sup>1</sup> <http://content.tfl.gov.uk/long-term-bus-casualty-trends-paper.pdf>.

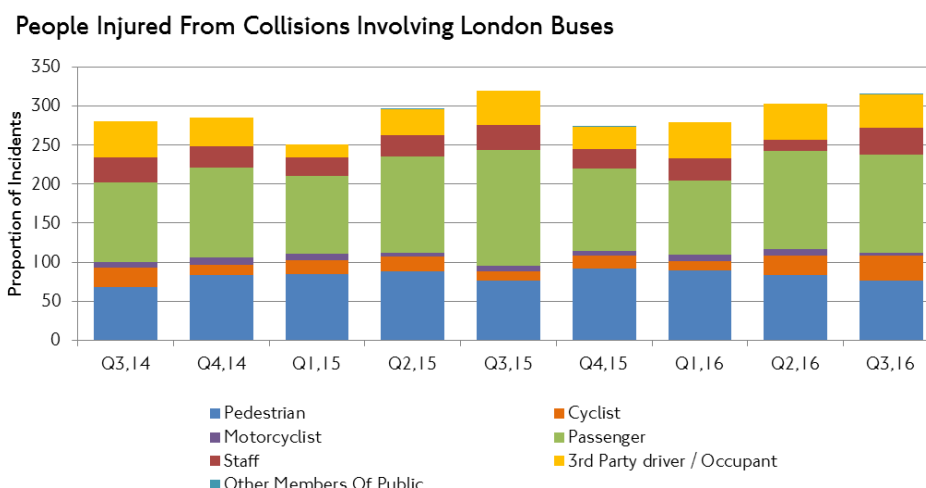
h) deliver safety highway engineering improvements at bus collision hotspots;

## 2. Priorities for delivering a safe bus network – data sources and trends

2.1 As mentioned in section one, there are two key data sources which are used to help understand bus casualty performance and trends and therefore help establish key priorities. Data relating to fatal, serious and slight injuries is included within the STATS19 data set for buses and coaches. Our Incident Reporting and Information System (IRIS) also captures data from bus operators for all incidents, including those reported under STATS19 and those that have not required police involvement. Drawing on both data sets enables performance and trends to be examined across all levels of incident severity.

2.2 Figure 1 shows the number of people injured from collisions involving London Buses by road user group over the past two years as reported to us by the bus operators via the IRIS system. Pedestrians and bus passengers make up the highest numbers of those injured, so interventions that aim to reduce injuries to them – such as vehicle re-design (see section 7) and driver training (see section 6) – have a high priority.

Figure 1.

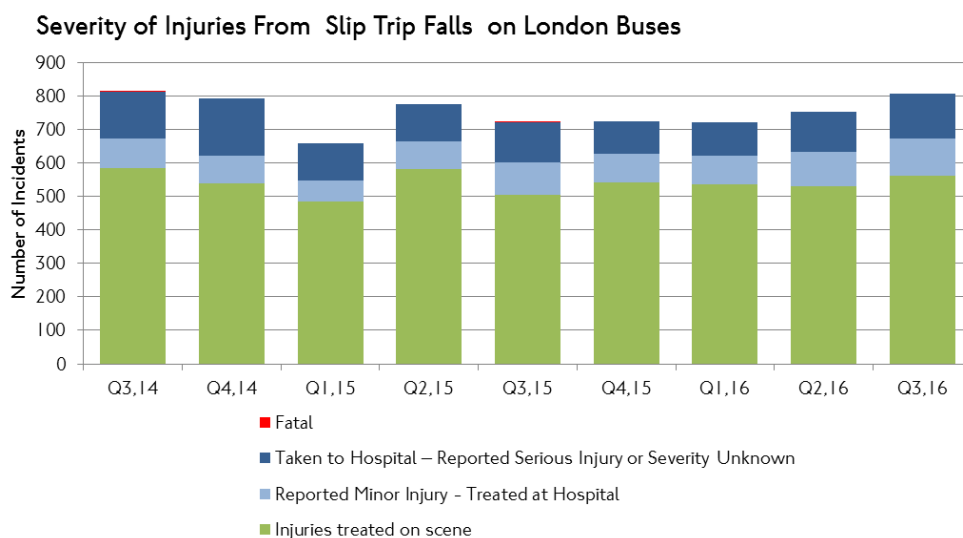


2.3 The locations where collisions involving buses are highest are also the locations where there are a larger than average number of collisions involving all road user groups. These include busy high streets such as Oxford Street and Brixton High Street, and busy interchanges such as Elephant and Castle. We look at road safety as a whole in these locations, analysing all collisions that have occurred, not just those involving buses (see section 8).

2.4 As mentioned above, delivering a safe bus network is not just about reducing casualties as a result of collisions. That is why we collect data from the operators on the number of passengers who are injured as a result of slips, trips and falls either on the bus or while boarding/alighting as shown in figure 2. To reduce these types of injuries we provide customer information, advising to be careful on stairs and hold the handrails through our 'Better Behaviours' communication campaign. The design

of the interior layout of the bus also has a bearing on the level of injuries (see section 7).

**Figure 2.**



### 3. Incident Management and transparency of investigations

- 3.1 When an event does occur on the bus network, we have processes in place to report and manage the incident and to ensure that we and the bus operators can identify the root cause, and where possible put systems in place to reduce the likelihood of a similar event occurring in the future.
- 3.2 Operators are required to report all incidents to us through the IRIS reporting system. All bus collisions, where a bus occupant (driver or passenger) or third party are killed or seriously injured, are additionally reported in detail through the Notification and Investigation of Major Incidents of the London Bus Network process. This is a TfL-defined and mandated process and reporting includes major injuries as well as those which had a high potential for injury even if none actually occurred, to ensure all learning opportunities are captured.
- 3.3 There may be instances where it is appropriate for us to commission an independent investigation of a major incident. The details of such investigations are shared with the operator involved, where possible. Where we believe there are lessons learned that would benefit the wider transport industry, those findings will be shared, and we meet with the Metropolitan Police Service's Serious Collision Investigation Unit every six months to discuss incidents involving buses.

Looking ahead, an Incident Review Group is being established to peer review the investigation of bus-related fatalities and other significant incidents. The remit of the group is to ensure that the causes of incidents are understood and the proposed actions are appropriate to prevent a similar incident occurring again. We will continue to oversee that actions arising from investigations are completed through the group's assurance activity. Additionally, the group will identify any actions that we, the bus

operator or any other group need to take, and ensure that they are tracked until completed.

- 3.4 Despite this, incidents do still occur. That is why it is essential that anyone affected by a safety incident can get access to the help they need. The Sarah Hope line was launched in April 2016 to provide support to anyone who has been involved in, or affected by, a life-changing incident on our network. There is a dedicated team who provide both practical support, and work in partnership with organisations that can provide further specialised support. The Sarah Hope Line has the support of the London Air Ambulance Service, which has briefed all its first responders on the service's scope. We continue to work with bus operators to ensure their employees are aware of the service and can pass on details to anyone involved in a serious incident on our network.
- 3.5 Since the launch of the Sarah Hope Line there have been 14 calls regarding incidents involving buses. The British Transport Police and Metropolitan Police Service provide both victims and witnesses with the phone number at all incidents they attend. Examples of services that have been offered so far include interim counselling services and transport to and from hospital for family members from outside London. Additionally, the team provide signposting to charities who can provide on-going specialist support to callers.

#### **4. Contract Incentivisation and Performance Management**

- 4.1 Apart from the moral imperative to safeguard passengers and staff, bus operators have a strong financial incentive to reduce the number of collisions their drivers are involved in, due to the cost of insurance claims and the ever-increasing insurance premiums. Even when a collision is not the result of driver error and does not result in a third-party claim, costs are incurred by the operator, for example due to the time a vehicle may have to spend off the road, damage repairs or driver time off work. Individual operators run bonus schemes to incentivise their drivers to prioritise safety, but this is not mandated.
- 4.2 Contractually, bus operators must meet a minimum safety standard to be considered to run any bus route in London. We audit each operator every year. This audit includes visits to every bus garage the operator owns or manages and a review of all safety management processes. Recommendations are made and operators are expected to resolve any outstanding issues within eight weeks or provide an action plan for any longer term solutions needed.
- 4.3 We use an external agency to independently monitor vehicle standards through Engineering Quality Monitoring (EQM) inspections. EQM reviews the engineering standards of the vehicles and their surroundings at the bus garage and will identify any failures that may compromise safety. The majority of EQM inspections are carried out unannounced and operators are contractually obliged to allow the inspection to take place.
- 4.4 To further incentivise operators to prioritise safety a bus operator safety scorecard is being developed using safety related metrics to benchmark safety performance at an

operator and garage level. A number of options for utilising the scorecard are being considered:

- a) performance management where scores will form part of the regular meetings we have with the operators to discuss actions and initiatives to improve safety;
- b) the current contract extension of up to two years would be dependent on a defined safety score; and
- c) tender evaluation where the operator will be given a score that is used as part of the criteria for awarding new contracts.

4.5 A draft set of measures has been developed, which we are currently discussing with the bus operators. We intend to finalise the scorecard metrics and agree its composition and application with our Board this summer.

## **5. Driver training**

5.1 Bus drivers in London receive driving skills training through four key areas: initial licence training, a TfL-specified City and Guilds qualification, on-going development, and remedial training in response to monitoring or incidents.

5.2 Contents and assessment of initial licencing training are prescribed and monitored by the Driver and Vehicle Standards Agency (DVSA) to ensure consistent standards throughout the industry. Initial training takes up to six weeks and covers safe driving skills.

5.3 We specify that all new bus drivers must achieve a Level 2 City and Guilds certificate in Professional Bus Driving for London within a year of entering service. This City and Guilds qualification has safety content throughout its syllabus.

5.4 Drivers must also complete 35 hours of professional development every five years in order for drivers to retain their licence, the certificate of professional competence (CPC). Within London, bus operators generally deliver this as seven hours of training a year. Bus companies can choose areas of development from a number of approved subjects, and we collaborate closely with bus operators on CPC training content. This has resulted in courses such as “In The Zone” which teach drivers about the psychology of driver behaviour and self-care in relation to safety, “All Aboard” which covered delivering an inclusive and accessible bus service and the benefits this brings to London’s communities. The latest two-day training programme, “Hello London”, focuses on delivering a safer and enhanced experience for customers. Driver CPC training content is approved and monitored by the Joint Approvals Unit for Periodic Training, part of the DVSA.

5.5 Going forward, we will be trialling the Safe Urban Driving CPC course with bus driver trainers. Safe Urban Driving was originally developed for HGV drivers and focuses on driving in urban areas and specifically vulnerable road users, such as cyclists and pedestrians. The course also includes practical on-road cycle training. This course can be modified for driving buses and will reinforce the messages from the ‘In the Zone’ training as part of a driver’s development. We plan to pilot this later this year. We will monitor the training to establish its effectiveness.

- 5.6 We use external agencies to independently monitor driving standards through Driver Quality Monitoring (DQM) surveys, customer experience surveys and we also monitor customer complaints data. DQM is a technical driving assessment driving, similar in scope to a driving test. DQMs are carried out for us by AA DriveTech and there are 7,500 DQMs per year. The long-term trend shows a steady improvement in scores, year on year. In 2014, to refresh the survey, standards were tightened, and there was a short-term worsening of scores, but the improving trend has continued.
- 5.7 We carry out 21,000 customer experience surveys a year. These are similar to “mystery shopper” surveys, with a greater focus on the helpfulness and attitude of the driver, and also incorporate some aspects of safe driving which clearly impact on customers, such as harsh braking. The survey also provides an assessment of the condition and cleanliness of the vehicle. The survey was reviewed in April last year and the scoring system changed significantly. Early indications show that the current Hello London programme of driver training is having a favourable impact on the scores.
- 5.8 DQM and customer experience surveys are covert and carried out at random. We, the driver and the bus company are not aware of which bus or driver will be assessed. Both surveys provide us with objective and comprehensive data which we can use to identify poor performance. We speak to all operators about their performance, either to note and understand the reasons behind good performance, or to ensure cases of poor performance are investigated and addressed. All customer complaints are coded to allow us to monitor trends (across routes, garages and bus companies) and to target areas for driver communication and training. As with DQM and customer experience surveys, we compile league tables to help identify areas for improvement.
- 5.9 Most bus companies carry out their own DQMs and utilise technology such as telematics to monitor driving standards and will address areas of concern, for example through remedial training.

## **6. Bus Design and Technology**

- 6.1 Much of the reduction in KSIs on roads is down to advances in vehicle technology. We think there is potential to adopt a greater range of technological innovations onto buses, and we are keen to lead in this area. We plan to introduce a new ‘Bus Safety Standard’ which will apply to new vehicles. Working with manufacturers and operators, we are trialing a range of technologies such as Automatic Emergency Braking (AEB) and Intelligent Speed Adaptation (ISA). Other potential design innovations include improving wing mirror design, windscreen glazing and front of bus re-design to reduce the impact of any collision.
- 6.2 To ensure that we are harnessing those technologies and design innovations that will achieve the greatest casualty reductions, an analysis of police collision investigation files for fatalities involving buses is underway. This commissioned research has been extended to include an analysis of some Department for Transport collision databases, including the Road Accident In-Depth Study. On-The-Spot and Heavy and Commercial Vehicles Incident Survey, which will look at slight and serious injuries in

addition to fatalities to ensure the Bus Safety Standard addresses casualty reductions, no matter how severe, and for all road users, including bus passengers. This work is due for completion in March.

- 6.1 The forthcoming iBus 2 programme could also include a speed limiting function. This could directly interact with the GPS data and link to the digital speed limit map of London. Including a speed-limiting function within iBus 2 will deliver a more integrated and robust system as it will no longer require separate ISA technology. In the meantime, an ISA solution that already exists for other vehicles will be delivered on all new buses from the end of 2017 until delivery of iBus 2 in 2020/21. This equates to between 700 and 800 buses per year in line with the regular fleet renewal programme.
- 6.2 We are also creating a speed compliance monitoring system using iBus data, which will be used to challenge bus operators where speed compliance needs improving. This capability will give us the detailed information we need to be able to ensure speed limits are adhered to, until improved speed compliance is achieved through the roll-out of ISA and the Bus Safety Standard.
- 6.5 The long list of potential technologies and design features was discussed with operators and manufacturers at a workshop at the end of November last year to seek feedback on measures and their suitability to be taken forward. The eventual shortlist, which is still to be agreed, will depend on a range of factors and it is intended that the independent evaluation of the shortlist will start in March. We plan to use the findings of the research to set a roadmap for further improvements to vehicle design over the next decade or more.

### **Highway design and engineering**

- 6.6 We use collision data to identify roads and junctions on the Transport for London Road Network that have the highest vulnerable road user collisions. Each year a review of the previous three years of collision data is carried out to identify those locations that are most in need of a road safety intervention. We then sponsor engineering improvements at these sites. This data is shared with the boroughs so that they too can prioritise their road safety engineering programme on the borough road network.
- 6.7 We are working to map bus casualty hot spots against the current road safety scheme programme to identify and determine whether measures to improve bus safety should be considered at certain sites.

### **Bus and Cycling Infrastructure**

- 6.8 Chapter 4 of our London Cycling Design Standards (LCDS) describes design techniques for the provision of infrastructure that benefits both cyclists and buses, while mitigating risks.
- 6.9 Much of the Cycle Superhighway infrastructure has incorporated segregated cycle infrastructure, separating cyclists from general traffic and buses, such as CS6 (Elephant & Castle to Farringdon) CS5 (Oval to Vauxhall) CS3 (Tower Hill to Lancaster

Gate) & CS2 (Aldgate to Bow). In some instances this has meant a reduction in space for general traffic along such routes where the existing road space has been redistributed to accommodate the segregated cycle facilities, which has reduced carriageway widths for vehicles including and buses. However, providing facilities which encourage cyclists away from the carriageway generally improves conditions for other traffic, by reducing stop/starting and over-taking associated with the slower moving cyclists, and so reducing shunting incidents which could possibly cause bus passenger injuries.

- 6.10 Reducing carriageway width has been trialled across a number of safety schemes throughout the UK specifically to reduce vehicles speeds and overtaking, to reduce potential collisions that could be caused by these actions. As a result, where possible, pedestrian crossing widths have also been reduced or split across cycle and traffic lanes. Pedestrian (and in some cases cycle) SCOOT has been introduced to reduce both pedestrian and vehicle wait times, allocating the optimum proportion of cycle time, dependant on capacity and time of day.
- 6.11 Other features of Cycle Superhighway routes include provision for bus stop bypasses. The bypasses implemented to date allow for buses to pull into a marked bus stop which is separated from the cycle lane by physical kerbed segregation. This eradicates the potential for conflict between buses pulling in and out across the path of the cyclist. The majority of bus stop bypasses include a 2.5m segregation island which can house the entire bus stop infrastructure, dedicating that space to waiting, boarding and alighting customers, which frees up the footway for pedestrians and other highway infrastructure which may have previously reduced the level of service of the bus stop waiting area.
- 6.12 Where possible, parking and loading bays have also been incorporated into the separation island. Relocating such facilities off the carriageway reduces the need for buses to pull in and out or wait for oncoming traffic to pass the bays, which improves visibility and smoother journey progression, reducing emissions and wait times.
- 6.13 Owing to available carriageway widths, in some cases existing bus lanes are removed in order to provide segregated cycle facilities. However, maintaining/reducing bus journey time impact is a very important factor when designing Cycle Superhighway routes and there are many measures which have been designed to benefit buses. For example the removal of Lancaster Gate gyratory and Great Tower Street Bus Gate on CS3.

## **20mph Limits**

- 6.14 We encourage and support boroughs to implement 20mph speed limits on appropriate roads, and we are trailing 20mph limits in a number of locations across the Transport for London Road Network (TLRN). 20mph speed limits offer a reduction in road danger for all road users, but particularly pedestrians and bus passengers who typically start and end their journey with walking. It is estimated that each 1mph reduction in speed could reduce the frequency of all severities of collision by around five to six per cent. Pedestrians are a particularly vulnerable road user group and small changes in impact speed have a large effect on the risk of fatal injury.

- 6.15 We are monitoring data during the trials on the TLRN, including information on walking and cycling levels, traffic speeds, air quality, and road safety. It is expected that there will be a negligible effect on bus journey times. Buses may also experience other benefits, such as finding it easier to pull out into traffic, reduced fuel consumption, reduced delays due to collisions and a more comparable journey time to private vehicles.
- 6.16 Casualty data cannot be analysed reliably until a scheme has been in place for three years and none of the 20mph trial sites on the TLRN yet have three years of collision data following implementation. From 2018 onwards, when the trial sites have been in place for three years, we will be able to more confidently conclude their impact on road safety and we will publish our findings.

### **Bus Priority**

- 6.17 Bus priority delivers journey time and reliability improvements for bus services. Measures can be in the form of bus lanes and bus-only roads, but can also include other traffic management measures such as adjusting traffic signal phasing to prioritise buses moving through general traffic, reducing the impact of parking and loading activity and removing physical pinch points.
- 6.18 Bus lanes means there is potentially less interaction between buses and general traffic and should reduce incidences of passengers injuring themselves after falling on a bus or shunts involving a bus, assuming bus priority is working effectively. Bus lanes can reduce stop/start movements caused by congestion. There could be a potential risk of conflict between buses, cyclists and powered two wheelers, such as motorcycles, where bus lanes allow access to all three, as there is a tendency for them to share the nearside lane, with buses requiring frequent kerbside access for boarding and alighting. Where it is practicable, and the lane is to be shared in this way, we seek to introduce wide bus lanes in new schemes, or widen existing bus lanes. This enables a more comfortable relationship between buses, cyclists and powered two wheeled vehicles in the bus lane as they are able to overtake each other, including at bus stops, reducing the risk of collisions with general traffic.
- 6.19 Certain types of transport are vulnerable to certain types of conflict in certain environments involving bus priority infrastructure. For example, pedestrian collisions are commonly clustered where opposing bus stops are closely located to one another where a controlled pedestrian crossing is not provided. Pedal cycle and/or motorcycle conflicts are often clustered where side roads adjoin lengths of bus lanes, particularly where the general traffic lanes may be congested and the bus lanes free flowing. This is due to vehicles turning across the bus lane (where visibility may be obstructed by queuing traffic), resulting in collisions with pedal cyclists and motorcyclists in the bus lane. These collisions often do not involve buses themselves (and therefore are not heavily represented in the bus collision statistics) but are in part contributed by the bus infrastructure, traffic conditions and operation.
- 6.20 These types of collision trends are being observed on a number of corridors, but are not easily 'engineered' out. We have investigated cutting back bus lanes in advance of side roads at locations where left turners are turning across pedal cyclists and

powered two wheelers on the nearside. This allows the left turners earlier access to the nearside lane, which reduces the likelihood of late turning manoeuvres immediately before the side road.

- 6.21 We have also implemented extended 'KEEP CLEAR' markings at a number of locations to improve the visibility between vehicles turning right into side roads and cyclists and powered two wheelers in the oncoming nearside bus lane that may otherwise be obscured by traffic. We are extending bus lanes to stop lines and banning turning manoeuvres at some junctions, which again would be beneficial for reducing collisions involving buses.
- 6.22 The bus stop accessibility programme also seeks to improve access for the vulnerable and mobility impaired, reducing the potential risk of trips or falls when passengers are boarding and alighting.
- 6.23 One other type of infrastructure where buses and cycles can share benefits are contra-flow bus lanes. Cyclists have generally been permitted to use these facilities as they can provide significant benefits, both in terms of journey length and reduced exposure to risk from other traffic. Examples are the Pentonville Road and Bloomsbury Way contra-flow bus lanes where the alternative route for cyclists would be significantly longer, less comfortable and potentially riskier. The lanes are relatively narrow on Bloomsbury Way so measures have been installed to deter cyclists attempting to pass buses at bus stops.

## **7 Conclusion**

Every fatality, injury or accident is one too many. Anyone who helps to deliver bus services in London is focused on reducing accidents and improving safety. Our Bus Safety Programme brings together a range of initiatives into a single, focused programme and we are constantly seeking new ways to improve. We would welcome recommendations from the Committee in this area.

Dr. Rachel Aldred, Reader in Transport, University of Westminster

This is a response to the London Assembly Call for Evidence on Bus Services.

I am writing as an expert in cycling, and hence am only focusing on bus infrastructure/services as they relate to cycling. This is clearly only a part of the picture, but I believe one that matters and one that should be taken into account in planning for buses and for cycling.

Specifically, in relation to the safety topics, I am responding to questions:

3. What are the particular safety concerns for other road users (NB I am writing here in relation to cycling)

12. Are there any problems caused by bus and cycling infrastructure sharing road space (particularly kerb side) and how could these be resolved?

Finally, the response briefly touches on cycling as it relates to bus journey times (which is of interest for the service provision topic, though there is no question specifically on the issue).

The key points I would like to make are:

Please don't only look at cycle-bus collisions. Also look at cycling injuries that take place where shared bus lanes are present - hundreds of cyclists are injured annually in London at such locations.

Perception of safety also matters - shared bus lanes are not a preferred form of cycle infrastructure.

When high volumes of cyclists and of buses are sharing lanes, this may have a negative impact on bus journey times, compared with separate provision for each mode.

Only a small minority of London cycle collisions involve buses (although the annual number of serious cycling injuries resulting from bus collisions and from HGV collisions are similar - both are large vehicles and when collisions do occur they can often have serious consequences, although HGVs kill more cyclists than do buses). However, to only examine the risk posed to cyclists by buses would be to miss the much wider question, implied in (12).

In the UK bus lanes have historically been considered a form of cycle infrastructure provision. This policy position implies that bus lanes should deliver some benefits for cyclists, including importantly in terms of safety, perceived safety and comfort. But do they?

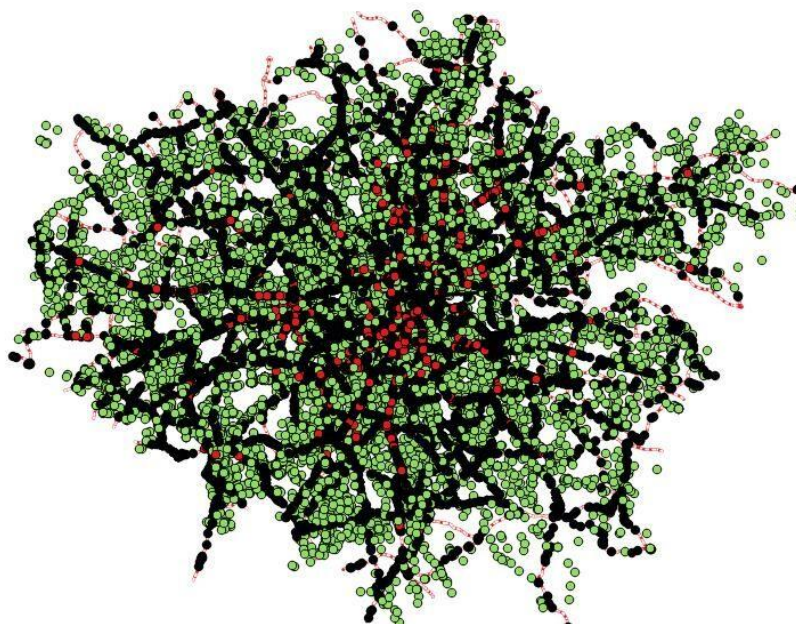
While shared bus lanes may be seen as preferable to A roads with no cycle provision at all, London's cyclists do not view bus lanes as a desirable form of cycle infrastructure. For instance a [TfL \(2012\) stated preference survey](#) found cyclists thought bus lanes were slightly worse than narrow advisory cycle lanes, while my own study found that across the UK, including in London, [bus lanes were not seen as preferred infrastructure and were not seen as child-friendly](#).

The question of how far bus lanes protect cyclists from motor vehicle collisions has been very little investigated either in the UK or elsewhere. This is a shame, because London has a

substantial volume of bus lanes, and therefore it would be feasible to conduct such investigation; given annual data on (a) estimated cycling flow across the network and (b) bus lane locations. I have requested (a) so I can carry out academic research looking more broadly at cycling risk and infrastructure, and subject to agreement, I hope to publish this research in an academic journal which can then be publically accessed.

At the time of writing, I haven't got access to this data, though (and it will be a while before I can get an article published, when I do have it). Although in recent analysis [I have used the Propensity to Cycle Tool to estimate cycling flow at a borough level and believe this to be sufficiently robust to estimate risks at borough level](#), I decided against using this to estimate volumes on specific route sections, because the PCT routes cyclists on the 'most direct' cycleable route, which does not necessarily mimic actual route choice behaviour (it is not intended to do this). Thus, the discussion here is necessarily limited, but I believe worth submitting, given the importance of the topic.

So, I do not have the 'denominator' data to reliably calculate the extent to which the presence of bus lanes might affect cycling injury rates. What I do have, is collision data from Stats19 on cycle injuries in London, and a map of the London bus lane network as it existed around 2015. Using QGIS software, I combined the two maps, attempting to identify which A road cycling injuries between 2012-5 took place on a road section with a with-flow bus lane. There was relatively little change to the bus lane network during these years, so I think this is reasonable, although annual bus lane data would be better. It was harder than I thought it would be to automatically assign each A road injury to a bus lane section or not, and not every injury is necessarily located accurately inside or outside a bus lane section.



Categorising cycle collisions - green are non A road, black are A road sections without a bus lane, red are A road sections where a bus lane is present.

However, looking at the results it seems generally good enough on a network-wide basis, as a first attempt. When I get a chance to do a more thorough analysis with better data, I'll refine it.

I then explored the characteristics of A road cycling injuries happening where bus lanes were present or absent. I removed from the dataset the small (though disproportionate) amount of cycling collisions happening at junctions with other A roads, on the grounds that bus lanes in the UK do not - except in very unusual circumstances - continue in such locations. Thus it seemed misleading to attribute those collisions and their characteristics to 'non bus lane' A roads. In a small number of cases (with or without bus lanes) cycling infrastructure might have been present at a crash location; but given that these years largely predate the completion of the segregated superhighways, in the vast majority of all cases (bus lane or no) cyclists would be legally obliged to use the carriageway.

One thing that surprised me was the large number of non-bus vehicles involved in cycling injuries where bus lanes were present. Perhaps I should not have been surprised. Bus lanes are only paint-based protection, after all. And many are not in operation off-peak, while often car parking or at least loading and unloading (creating more hazardous interactions for cyclists) are allowed at least some of the time. Almost all London bus lanes allow taxis and many now allow motorcycles, which seems unlikely to change in the near future - in fact recently the Mayor has announced that more bus lanes will be opened up to taxis.

Perhaps more fundamentally, though, many of the classic causes of cycling injury in London - which, as noted above, usually involve non-bus vehicles - are unlikely to be avoided by well-enforced, full-time bus lanes that ban parking and even loading. Bus lanes do not offer protection against motor vehicles pulling out of side roads into a main road, or turning left or right into a side road across a cyclist's path. As alluded to above, they can rarely provide any protection at major junctions, as they disappear in most cases. There are also specific hazards caused by cyclists having to share with buses on busy roads - in particular, interactions at bus stops where cyclists may overtake buses and be at risk from collisions with other vehicles.

How many cycling injuries take place in bus lanes? Excluding those A road/A road junctions, I think that just over one in five A road cycling casualties between 2012-5 took place where a with-flow bus lane section was present. London's A roads have around 275 km of bus lane, compared to just under 1,700 km of A roads. Note that the former measures one-way sections of bus lane, so it's not the case that 15% of London's A road length has a bus lane - it's likely to be more like 8-9%, as that A road length will be mostly (not entirely) made up of two-way A roads - i.e. becoming more like 3,000 km when we separate out directions.

So 21% of casualties injured in bus lane sections, versus around 8-9% of road length with A road sections. Does this mean bus lanes are more dangerous than A roads without bus lanes, then? I don't think so, because (a) Inner London boroughs have more cycling, and also (in almost all cases) have a higher proportion of bus lane than Outer London boroughs, and (b) people might in any case be more likely to cycle on A roads with bus lanes, rather than bus lanes with no cycle infrastructure at all, given the choice. However, in many cases people wouldn't have a simple choice between 'A road with bus lane' and 'A road without bus lane' in that way, because often bus lanes are intermittent across the length of an A road - even in Inner London.

Anyhow, as I don't currently have good enough data to estimate levels of cycling in bus lane vs. non bus lane sections, this is somewhat speculative. To return to the question of injuries on A roads where bus lanes are, or are not, present, between 2012-15 (excluding as I mentioned the minority of collisions at A road-A road intersections), I found the following:

- For 4.7% of bus lane cycle casualties, a motorcycle was involved, compared to 3.0% of non-bus lane casualties
- For taxis/PHVs, the figures were 7.0% and 7.3%, a difference that was not statistically significant
- For 65.3% of bus lane cycle casualties, a car was involved, compared to 68.9% of non bus lane casualties
- For 11.0% of bus lane cycle casualties, a van was involved, compared to 10.0% of non bus lane casualties, a difference that was not statistically significant
- For 3.6% of bus lane casualties, a bus was involved, compared to 3.0% of non bus lane casualties, a difference that was not statistically significant
- For 1.8% of bus lane casualties, an HGV was involved, compared to 2.6% of non bus lane casualties
- For 0.9% of bus lane casualties, a goods vehicle of unknown/unrecorded weight was involved, compared to 0.5% of non bus lane casualties

The bus lane sections had a higher proportion of fatal and slight casualties and a lower proportion of serious injuries, but these differences were not statistically significant.

NB that the above doesn't tell us if someone is at higher or lower risk of being hit by any of the above vehicles in a bus lane vs. a non bus lane section; it just gives us information about the types of collision/casualty that occur in each context.

Lambeth has the highest proportion of A road cycle casualties (41.2% of all A road cycle casualties between 2012-5, excluding A road-A road collisions), and in Bromley and Sutton there were no A road cycle injuries between 2012-5 in a bus lane section. This underlines the point about the importance of exposure - the most important factor here is the presence of bus lanes, I'd think. There's an awful lot more bus lanes in Lambeth than there in Bromley or Sutton.

And overall, I found, [the risk per km cycling in Inner London boroughs like Lambeth is often several times lower than it is in many Outer London boroughs including Bromley and Sutton](#). Borough-level analysis is fraught with confounders and I'm wary of trying to derive general explanations at this level. Plausible suggestions could include motor traffic speeds (which tend to be lower in Inner London) or driver culture in Outer vs. Inner London (possibly related to cycling levels). It's also possible that infrastructure that existed in 2012-5, including potentially bus lanes, could be a contributor (although the Inner London borough that stands out as having relatively few bus lanes, Kensington and Chelsea, doesn't seem that different to other Inner London boroughs in terms of cycling injuries per kilometre). As I say, I'm hoping I'll soon be able to explore this further at a route rather than area level, which I feel is more appropriate.

In any case, what we can say so far is that the pattern of cycling injuries taking place in A road bus lane sections so far doesn't seem to be radically different from those taking place in non-A road bus lane sections - for one thing, they're both relatively unlikely to involve an actual bus. This suggests we need to broaden our thinking about cycles and buses - to think about the level of protection bus lanes might or might not provide cyclists, rather than only focusing on bus-cycle injuries (of course, that's not to say those aren't important). Hundreds of Londoners are injured every year cycling where there are bus lanes; so we need to take a closer look at risk and injury in these. This post and submission to the inquiry is a start.

Finally, a word on cycling and bus services. Again here, I think we need to take a broader look at shared bus lanes. Research I have carried out suggests that at the kind of cycling volumes we are getting in some Inner London locations, shared bus and cycle lanes are inevitably going to have an impact on bus journey times. This is something that seems intuitive when you think about it, yet is not factored into planning. Instead, we assume that the impact that cyclists have on bus journey times is only through the building of cycle tracks and other ways of allocating separate space to cyclists.

A research paper based on a study that I was involved in (currently under second stage peer review; I am happy to send a copy on request but it cannot be publically shared until accepted for publication) found cyclists having a significant impact on bus journey times across London Bridge. Hence, re-allocating separate space for cyclists can - in some circumstances, depending upon where the space comes from, what the current and likely future levels of cycling is - potentially have positive impacts on bus journey times. However, in modelling this is generally not taken into account yet, partly because the high cycling flows in bus lanes that London is seeing are pretty unprecedented in the UK (and probably anywhere in fact, as most high-cycling countries don't generally make cyclists share with buses, particularly where there are high volumes of both modes).