

LONDON ASSEMBLY

Hostile Streets

Walking and cycling at outer
London junctions



Transport Committee

December 2017

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

LONDONASSEMBLY

Transport Committee Members



Keith Prince AM
(Chairman)
Conservative



David Kurten AM
UKIP



Caroline Pidgeon
MBE AM
(Deputy Chair)
Liberal Democrat



**Joanne
McCartney AM**
Labour



Shaun Bailey AM
Conservative



Steve O'Connell
AM
Conservative



Tom Copley AM
Labour



Caroline Russell
AM
Green



**Florence
Eshalomi AM**
Labour



Navin Shah AM
Labour

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

Contact

Emily Hopkinson, Financial and Policy Analyst

Email: TransportCommittee@london.gov.uk

Contact: 020 7983 4000

Follow us:

@LondonAssembly #AssemblyTransport

facebook.com/london.assembly

Contents

Foreword	4
Summary.....	6
Recommendations	8
1. Introduction.....	11
2. Hostile Streets	14
3. Creating the right culture at TfL.....	23
4. Changing the rules	34
Our approach.....	39
Appendix 1: Minority Report from the GLA Conservatives	41
References	43
Other formats and languages	45

Caroline Russell AM

Rapporteur and Member of the Transport Committee



I want walking and cycling to be Londoners' first choice for everyday journeys. Active travel improves people's health, cuts air pollution, and when the streets are set up for it, is the quickest and easiest way to get around.

However, many streets in outer London have been designed for cars, and not for people. Londoners who want to walk to school, cycle to work, or pop out to the shops face hostile streets that don't meet their needs. Main roads and busy junctions disrupt journeys, and make walking and cycling less enjoyable, less convenient and less safe.

I have campaigned for measures to enable walking and cycling for many years but I launched this investigation after talking to people who live near the North Circular. They told me that they would drive a few hundred yards from their homes on one side of this busy trunk road to the shops on the other, simply because it was not convenient for them to cross in any other way.

The most striking example of a hostile street we saw was near Brentford, where primary schools are straddled by the A4 and M4 flyover. We walked the route with parents and children, who showed us how difficult it was for them to get to school. They were worried about fast-moving traffic, high levels of pollution, and getting stuck in the middle of the busy road waiting for ages for a green light to cross.

“Many streets in outer London have been designed for cars and not for people”

I'm pleased to see walking and cycling at the forefront of the Mayor's Healthy Streets approach and draft Transport Strategy. I welcome the target he has set to reduce London traffic and get 80 per cent of all trips completed by public transport, cycling or walking by 2041. The question now is how to start getting people out of their cars – especially at main roads and busy junctions

in outer London, which are some of the most difficult places to turn into Healthy Streets.

I hope that the recommendations in this report will help the Mayor and Transport for London (TfL) to achieve their aims on Healthy Streets. We look at steps that the Mayor and TfL can take immediately to improve conditions for people walking and cycling, ways to embed a Healthy Streets culture at TfL, and legislative changes that the Mayor should pursue to make walking and cycling safer and more attractive in the long term.

Finally, I would like to thank everyone who has contributed to this investigation, especially those who joined us on our site visits to Brentford, Walthamstow, Croydon, Havering and Bow. Seeing these junctions and hearing about people's experience using them was especially valuable and highlighted to me the scale of the challenge we face. I would also like to thank scrutiny staff at City Hall, in particular Emily Hopkinson, who have supported me in this investigation.

Summary

The Mayor has said that he will prioritise walking, cycling and public transport when making decisions about London's streets. This is part of his Healthy Streets approach, launched in February 2017, which looks to improve London's health by designing physical activity back into everyday lives.

We welcome the Mayor's Healthy Streets approach and support his aim to get more Londoners walking and cycling. This report looks at what Transport for London (TfL) and the Mayor can do to improve conditions at some of the most difficult places to turn into Healthy Streets – main roads and busy junctions.

We have chosen to focus on outer London because this is where the biggest opportunities lie.¹ TfL has found that 64 per cent of London's unmet potential for walking is in outer London, along with 61 per cent of its unmet potential for cycling. Despite this, successive Mayors have prioritised areas in inner London for walking and cycling investment.

Hostile streets

Main roads and busy junctions in outer London can feel like hostile places. And on any journey – to school, to work or to the shops – the route is only as good as its weakest link. While most of London's streets are residential, main roads and busy junctions disrupt journeys, and make it more difficult for people to walk and cycle.

While there are examples of good practice, some parts of outer London do not offer even a basic level of service. We came across crossings which were inaccessible to wheelchairs, and incomplete cycle lanes that threw people out into fast-moving motor traffic. In this report, we urge the Mayor to address these basic issues.

Reducing motor traffic speeds could transform main roads and busy junctions so they feel safer for people walking and cycling. The safety evidence on this is stark. On urban roads, each mile per hour reduction in average speeds results in there being up to 6 per cent fewer collisions. And where collisions do occur, a fast-moving vehicle is far more likely to cause serious injury or death.

Creating the right culture at TfL

While the Mayor's Healthy Streets approach makes it clear that TfL should prioritise people walking, cycling and using public transport, we found that this is not always how things work in practice. To date, TfL has prioritised

motor traffic capacity. The Healthy Streets approach represents a big shift in emphasis, which will be a real challenge for TfL in terms of its culture change.

TfL's performance monitoring is still geared towards prioritising motor traffic. In this report, we urge TfL to update its key performance indicators for 2018-19 such that they better reflect the Mayor's aims to reduce car dependency and get more people walking and cycling.

Some schemes are going ahead in outer London that don't fit with the Mayor's Healthy Streets approach. Changes consulted on at Croydon Fiveways, for instance, prioritise traffic flow and do not do enough to meet the needs of people walking and cycling. This is in part because TfL has only recently finalised its Healthy Streets check, which is an important tool to help it make investment decisions. We hope that the new check will help embed the Healthy Streets approach at TfL.

We found that TfL does not always collect the right data to help it understand the impact of its spending on walking and cycling. It doesn't consistently collect before and after data that would allow it to see what impact junction improvements have on the number of people walking and cycling. And it doesn't know how much it is spending on each borough, so can't assess whether it's allocating funding equitably across London. TfL should collect and publish this data as a matter of course.

In this report, we also ask TfL to reconsider its approach to selecting junctions for improvement works. It currently selects junctions based entirely on collision data, which prioritises places that already have lots of people walking and cycling. Dangerous junctions that have few collisions because people avoid using them will not be picked up for improvements, but could be worth investing in if they have high potential for walking and cycling.

Changing the rules

Being the most densely populated part of the UK, London faces unique challenges in terms of how its streets work for walking and cycling. It is important therefore that TfL is proactive in picking up on new road markings, signage and rules that could work for London and pushes for these to be included in the Highway Code and other relevant legislation.

We encourage TfL to re-establish discussions with the Department for Transport, and put the case forward for relevant statutory changes. Details on the changes it is asking for should be published online to improve transparency.

TfL also has a role to play in identifying international best practice and carrying out research on what could work for London. As an example, we recommend in this report that TfL should consider further research on pedestrian priority at turns. Earlier research, carried out by British Cycling, suggests that pedestrian priority at turns could shorten journey times not only for those walking, but also for those cycling, driving and travelling by bus.

Recommendations

Hostile Streets

Recommendation 1

TfL should review the speed limits on all its roads, in line with the Healthy Streets check. We ask for TfL to report back to us on its review by May 2018.

On 20mph limits, TfL should look to international best practice and carry out on-street trials in outer London to find ways that 20mph can be self-enforcing on main roads and at busy junctions. TfL should write to us with a list of places in outer London for on-street trials by May 2018.

The Mayor should also carry out a public information campaign to promote the work that the Metropolitan Police Service is doing to enforce 20mph. It must be clear to people that they can be caught and prosecuted for breaking 20mph limits.

Recommendation 2

TfL should review its compliance with the Equalities Duty in respect of pavements, crossings and cycle lanes on the TfL Road Network.

Recommendation 3

TfL should identify outer London junctions that cause problems of community severance, and run an improvement programme to resolve high risk road danger issues for people walking and cycling (as set out in the Healthy Streets check). This programme should also ensure that there are safe crossings where people want to cross. TfL should share a list of junctions for improvements with us by May 2018.

Recommendation 4

While on site carrying out standard and major roadworks, TfL and its contractors should check the TfL Road Network within a 250m radius of where the main roadworks are taking place and resolve the following safety critical issues:

- Side roads with no dropped kerbs
- Major defects in the surface for walking
- Major defects in the surface for cycling

Other high risk road danger issues that can't be fixed on the spot should be identified and reported for action.

We would expect this to be cost-neutral or to save TfL money on remedial works.

Creating the right culture at TfL

Recommendation 5

TfL should review its key performance indicators (KPIs) to ensure they align with the Mayor's Healthy Streets approach. For example, TfL might consider additional KPIs on:

- Walking mode share
- Cycling mode share
- Car dependency
- Bus journey time reliability

Recommendation 6

TfL should look beyond collision data and consider the potential to increase walking and cycling when selecting junctions to improve.

Recommendation 7

TfL should collect "before and after" data on pedestrian and cycle movements when it builds new schemes and carries out major works at junctions, and encourage boroughs to do the same. As well as counts at the junction itself, this should include an assessment of pedestrian and cycle movements on neighbouring streets. TfL should then use this information to identify and spread examples of good practice.

Recommendation 8

TfL should publish information to show how much Healthy Streets funding it is spending on each borough. Information for 2017-18 should be available by the end of April, and we would expect annual data to be published thereafter as a matter of course.

Changing the rules

Recommendation 9

TfL should be proactive in asking for changes to the Highway Code and other relevant legislation that could help people walking and cycling in London. It should publish a list of statutory requests and meet regularly with the Department for Transport to discuss these requests.

Recommendation 10

TfL should research and identify best practice from other countries. As an example, we recommend that TfL should consider further research on the changes set out in British Cycling's Turning the Corner campaign. Initially this would involve a traffic modelling study and then off-street trials. If this project were to go ahead, we would also recommend that TfL sets up an advisory group made up of key stakeholders such as the Department for Transport, Living Streets, the RAC Foundation and the Disabled Person's Transport Advisory Committee.

This report represents the view of a majority of the Committee.

The GLA Conservatives' dissenting views are set out in a minority opinion in Appendix 1 of this report (pages 41 and 42). In particular, they disagree with Recommendations 1 and 10.

The UKIP Group disagrees with Recommendations 1, 6 and 10. Further details are included on pages 18, 27 and 38.

1. Introduction

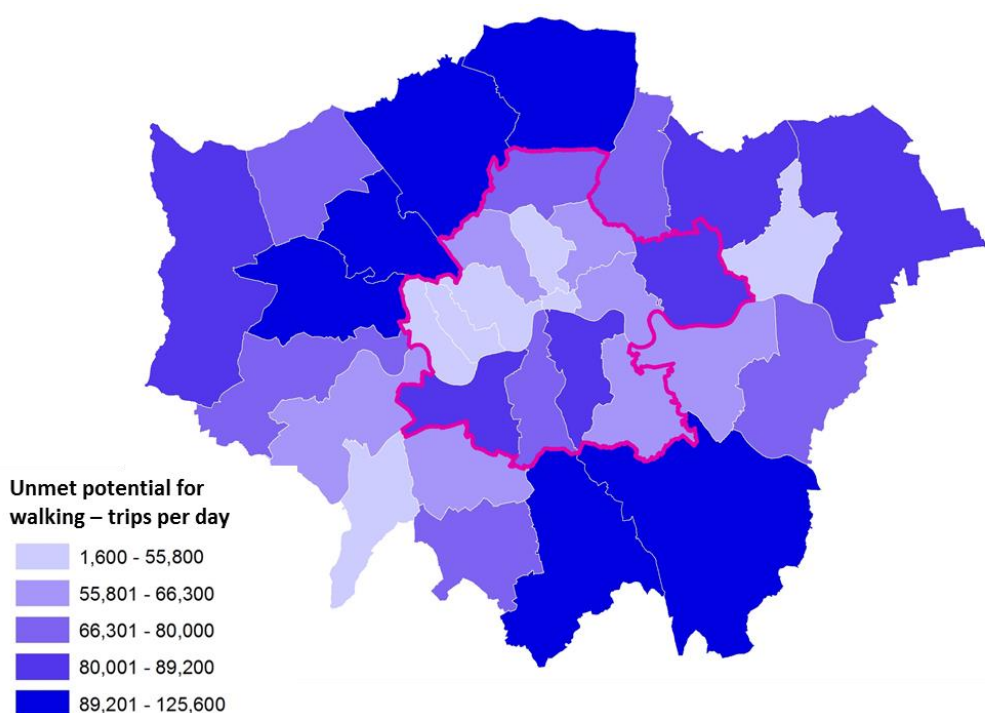
Key findings

- We welcome the Mayor's Healthy Streets approach and support his aim to get more Londoners walking and cycling
- There is huge unmet potential for walking and cycling in outer London
- Our investigation focuses on busy junctions that make it difficult for people to walk and cycle in outer London
- We have gathered evidence from pedestrians, cyclists and other stakeholders to understand the key issues and explore what can be done to help

Unmet potential for walking and cycling

- 1.1 The Mayor has said that he will prioritise walking, cycling and public transport when making decisions about London's streets. This is part of the Healthy Streets approach, launched in February 2017, which looks to improve London's health by designing physical activity back into Londoners' everyday lives.
- 1.2 The greatest opportunities to get more people walking and cycling are in outer London. There is huge unmet potential in outer London: 5 million trips each day that could be walked or cycled are being made by motorised modes. 64 per cent of London's unmet potential for walking is in outer London, and 61 per cent of its unmet potential for cycling is in outer London.²

There is more unmet potential for walking in outer London than inner London



Source: TfL, 2016 analysis of walking potential, March 2017

- 1.3 Fewer walking and cycling trips are made in outer London, so fewer people get the benefits of active travel. There are therefore greater gains to be made in outer London, not only in terms of trip numbers, but also in terms of people's health. A number of different factors make it less convenient for people living in outer London to walk and cycle. People living in outer London make, on average, just over four trips per week by active modes, compared to people in inner London who make just under seven.³
- 1.4 The Mayor's own draft Transport Strategy shows that outer London is the place that needs the biggest shift towards walking and cycling. By 2041, the

Mayor hopes to see 80 per cent of London's trips made on foot, by bike or by public transport, up from 64 per cent in 2015. To achieve this:

- Central London would need to shift by 5 percentage points, so that 95 per cent of its trips were made by walking, cycling and public transport, up from 90 per cent in 2015
- Inner London would need to shift by 10 percentage points, from 80 to 90 per cent
- Outer London would need to shift by 15 percentage points, from 60 to 75 per cent⁴

- 1.5 We fully support the Mayor's aim to get more people walking and cycling. That is why it is so important he instructs Transport for London (TfL) to improve main roads and busy junctions for pedestrians and cyclists, particularly in outer London.

Our investigation

- 1.6 The investigation was led by Caroline Russell AM as a rapporteur for the Transport Committee. It has looked at the experience of those travelling round outer London by bike and on foot, with a particular focus on main roads and busy junctions. We set out to consider how TfL could improve junctions in order to unlock walking and cycling potential.
- 1.7 The rapporteur gathered evidence through a range of methods. A call for views and information attracted 40 written submissions from Londoners, campaign groups, boroughs and other organisations. An online forum, through Talk London, attracted a further 69 responses. We met with various stakeholders, and carried out site visits to:
- Walthamstow Village, Waltham Forest
 - Gallows Corner, Havering
 - Bow Roundabout, Tower Hamlets
 - The A4 near Brentford, Hounslow
 - Croydon Fiveways, Croydon
- 1.8 The report sets out the conclusions of our investigation and makes recommendations to the Mayor and TfL about how to improve people's experience walking and cycling at main roads and busy junctions in outer London.

2. Hostile Streets

Key findings

- Busy junctions in outer London can feel like hostile places, dangerous to people travelling on foot or by bike
- A growing number of people live alongside main roads and busy junctions
- Fast-moving traffic poses a particular danger to people walking and cycling
- There are examples of good practice in outer London, but many places do not have even a basic level of service for people wanting to walk or cycle
- Our recommendations focus on interventions that TfL can carry out immediately, and will quickly help to improve conditions for people walking and cycling

- 2.1 Main roads and busy junctions in outer London can feel like hostile places for people walking and cycling. TfL's annual survey on attitudes to cycling has consistently shown that safety concerns are the biggest barrier to people taking up cycling.⁵ And many of the people we spoke to said that they didn't feel safe walking and cycling at main roads and busy junctions. We heard in our evidence that:

"Busy junctions with lots of cars feel unsafe. If pavements are narrow then it feels like the environment is for cars, not for people."⁶

"As soon as it feels scary, people won't do it. For example my wife won't cycle 5 minutes to the shops because the junctions near Bromley South scare her. I cycle there most days and have got used to it but it's intimidating. Doing it with my children is out of the question and there's no alternative route."⁷

- 2.2 London's junctions are some of the most dangerous places on the street network for people walking and cycling. These are the places where pedestrians are most likely to cross, and cyclists are at risk of a 'left hook' from turning vehicles. 76 per cent of the 9,718 pedestrians and cyclists who were injured on London's roads in 2016 were involved in collisions at junctions. And 71 per cent of the 1,287 who were killed or seriously injured were injured at junctions.⁸
- 2.3 On any journey – to school, to work, to the shops – the route is only as good as its weakest link. While the vast majority of London's streets are residential, main roads and busy junctions can be dangerous and intimidating, and make it difficult for people to walk and cycle.

Living alongside main roads and busy junctions

- 2.4 As London grows, more people are living alongside main roads and busy junctions. It is increasingly important that these places work for people walking and cycling. If the Mayor is to achieve his aim that all Londoners should walk or cycle 20 minutes a day, he will have to address the challenges facing these growing communities.⁹
- 2.5 TfL has found significant health inequalities between those living on main roads and those living on less heavily trafficked streets. So in many ways these are the most important places to target as Healthy Streets. Health inequalities affecting people who live at main roads and busy junctions include:
- Air pollution and noise pollution
 - Physical inactivity and obesity
 - Curtailed independent mobility of children and young people
 - Road traffic collisions
 - Community severance, leading to social isolation¹⁰

- 2.6 On our site visits, we saw communities built near large junctions where it was not obvious to drivers that there were homes and schools nearby. The starkest example was in Brentford, where primary schools straddle the A4 and the M4 flyover. When communities are hidden, drivers do not expect to come across people walking and cycling and don't know to drive with greater care and attention.

The A4 near Brentford feels like a place for cars, not for people

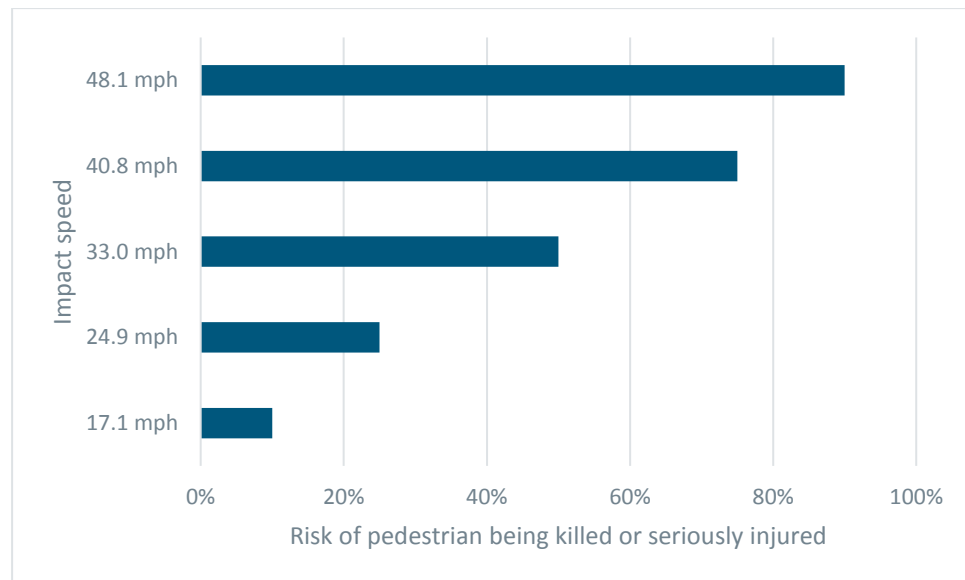


- 2.7 Many of the streets we came across had junction geometry to help motorised vehicles maintain their speed around corners – for example, side streets and roundabouts with wide, curved entrances and exits. Not only do these allow cars to drive faster, but they also widen the crossing distance, leaving pedestrians exposed to turning traffic for longer than necessary.

The dangers of fast-moving traffic

- 2.8 Many of the people we spoke to were particularly concerned about the dangers of fast-moving traffic. At Gallows Corner, cars accelerated rapidly when leaving the roundabout, and the speed limit along the A4 at Brentford was 40mph where children were crossing to get to school.¹¹
- 2.9 TfL, using evidence from the World Health Organisation, has previously identified speed as “the single most important determinant of safety”.¹²
- 2.10 Fast-moving vehicles are more likely to be involved in collisions than slower-moving vehicles. This is because they have greater stopping distances. On urban roads, each mile per hour reduction in average speeds can result in there being up to 6 per cent fewer collisions.¹³
- 2.11 Where collisions do occur, they tend to be more dangerous the faster the vehicle is moving. A pedestrian who is hit at 33 miles per hour has a 50 per cent risk of being killed or seriously injured, while a pedestrian hit at 17.1 miles per hour has only a 10 per cent risk.¹⁴

Pedestrians hit at higher speeds have a much higher chance of being killed or seriously injured



Source: Tefft, *Impact of speed on a pedestrian's risk of severe injury or death*, 2015

- 2.12 If motor traffic on the TfL road network drove slower, this could transform large roads and junctions so they feel much safer for people walking and cycling. TfL, the Mayor and the Metropolitan Police Service can reduce traffic speeds through a combination of speed limits, street design and traffic enforcement.
- 2.13 The Healthy Streets check that TfL uses to assess new schemes suggests that traffic moving faster than 30mph could pose a serious danger to people walking and cycling. TfL classes it as a “high risk road danger issue” if more than 15 per cent of vehicles on any given street drive faster than 30mph.¹⁵ Speed limits vary widely across the TfL road network in outer London, from 30mph to 70mph.¹⁶ Given the dangers of fast-moving traffic, we urge TfL to review the speed limits across its roads.
- 2.14 Reducing motor traffic speeds would fit with the Mayor’s Vision Zero aim that no-one is killed or seriously injured on London’s roads.¹⁷ It is worth noting that even in places with dedicated pedestrian facilities, formal crossings are not always enough to protect people. 377 people were killed or seriously injured at London’s light-controlled pedestrian crossings in 2016.¹⁸ Infrastructure alone is not enough, and it is hard to see how the Mayor can achieve his Vision Zero aim without reducing traffic speeds.
- 2.15 TfL is supportive of 20mph limits, but aims that any 20mph limits on its road network are ‘self-enforcing’, meaning that drivers comply with the limits because the streets look and feel like they should be 20mph. It is currently piloting 20mph limits in parts of inner London.
- 2.16 We believe that implementing further 20mph limits on the TfL road network could be an effective measure. We welcome the success of 20mph trials on

the TfL Road Network in inner London, and would like TfL to build up the evidence base in outer London. We therefore ask that TfL carry out further research on how 20mph limits can be self-enforcing on main roads and at busy junctions in outer London, learning from international best practice and carrying out on-street trials.

- 2.17 TfL and the Metropolitan Police Service are working to enforce speed limits but could do more to promote their work and raise public awareness. While there is a general perception that 20mph limits are not enforced, 12,251 people received notices of intended prosecution for breaking a 20mph speed limit on London's roads in 2016.¹⁹ The Mayor should run a public information campaign so that people are aware that they can be caught for breaking 20mph speed limits.

Recommendation 1

TfL should review the speed limits on all its roads in line with the Healthy Streets check. We ask for TfL to report back to us on its review by May 2018.

On 20mph limits, TfL should look to international best practice and carry out on-street trials in outer London to find ways that 20mph can be self-enforcing on main roads and at busy junctions. TfL should write to us with a list of places in outer London for on-street trials by May 2018.

The Mayor should also carry out a public information campaign to promote the work that the Metropolitan Police Service is doing to enforce 20mph. It must be clear to people that they can be caught and prosecuted for breaking 20mph limits.^{i, ii}

Examples of good practice

- 2.18 There are examples of good practice in outer London, for instance in Waltham Forest, which has seen recent improvements through the Mini Holland scheme introduced by the previous Mayor.
- 2.19 At Walthamstow, we saw that improvement works had opened up large areas for walking and cycling. The London Borough of Waltham Forest cut down traffic by filtering the residential streets, blocking through-routes to cars but allowing people to get past on foot or by bike. This makes walking and cycling

ⁱ The UKIP Group has dissented from this recommendation, believing that speed limits higher than 30mph should remain on TfL roads, where statistics show there are few accidents, in order to maintain good traffic flow. There should not be self-enforcement on trunk roads or red routes at the 20mph level which is too low a speed for good traffic flow.

ⁱⁱ The GLA Conservatives have dissented from this recommendation. Further details are on pages 41 and 42.

feel much safer, and makes it the most efficient way to get around over short distances.

- 2.20 The borough also tightened up the street geometry at junctions, slowing traffic and reducing the crossing distance for people walking. On top of this, they added over 40 'Copenhagen crossings', where the pavement on the main road continues across side streets to give pedestrians priority. This means that people can quickly walk along the main road without having to keep stopping to cross.

Copenhagen crossings require drivers to give way to people walking across side roads



- 2.21 Having opened up large areas of residential space for walking and cycling, Waltham Forest is now looking to improve the main roads and busy junctions that link different parts of the borough.
- 2.22 We support the work that is being carried out under the Mini Holland scheme, and hope that the Mayor's more recently announced 'Liveable Neighbourhoods' programme will yield similar results. The Liveable Neighbourhoods programme offers smaller grants than the Mini Holland scheme, though it should provide funding to more boroughs.

Failing to provide a basic level of service

- 2.23 We came across many basic problems on the site visits. These left routes inaccessible to people in wheelchairs, pedestrians without safe crossings, and junctions unpassable for all except the most confident of cyclists.
- 2.24 Improvements carried out under the Mini Holland scheme and Liveable Neighbourhoods programme can be relatively high cost, and would take a long time to roll out across the whole of outer London. In the meantime, the Mayor and TfL need to work out how to apply Healthy Streets principles on roads in the areas that haven't benefitted from this funding.

2.25 In just three locations – Gallows Corner in Havering, Croydon Fiveways and a stretch of the A4 near Brentford – we came across:

- A signed cycle route which was not completed and ran out midway down a 50mph road
- A pedestrian crossing with a dropped kerb for wheelchairs and buggies, and tactile paving for people with visual impairments, on only one side of the road
- A cycle lane which directs bikes onto oncoming traffic
- Pavements and traffic islands which are too narrow or have street clutter that makes it difficult for wheelchairs and buggies
- Busy, signalised junctions with no pedestrian phase in the lights
- Traffic islands where pedestrians wait to cross surrounded by high volumes of fast-moving traffic
- A pavement and crossing which were closed following a collision, when the issue had been dealt with and the road reopened several days earlier²⁰

2.26 Some of these issues raise particular concerns in terms of TfL's compliance with the Equalities Duty.²¹ London's streets must be accessible to all – including those who are disabled or visually impaired.

A cycle lane on the A4 directs bikes into three lanes of oncoming traffic



Recommendation 2

TfL should review its compliance with the Equalities Duty in respect of pavements, crossings and cycle lanes on the TfL Road Network.

From hostile to healthy

- 2.27 We recommend that TfL identifies outer London junctions which do not meet Healthy Streets principles, and runs a programme of improvement works to address these issues. As funding allows, we would suggest it prioritises junctions which cause problems of community severance, where roads cut people off from the services they want to use.
- 2.28 There are many junctions which fail to provide even a basic level of service. As such we are asking for this programme to cover only the fundamentals – high risk road danger issues – so that more junctions can be improved. TfL identifies ten “high risk road danger issues” in the Healthy Streets check it uses to assess new schemes, which should act as a starting point.
- 2.29 Crossings also need to be addressed in this programme. A lack of crossings is one of the key barriers to people walking. While TfL doesn’t identify it as a high risk road danger issue, we disagree. When there isn’t appropriate provision, people cross where it isn’t safe to do so. Crossings must be built where people want to cross, and pedestrian phases added to any signalised junctions which don’t have them already.
- 2.30 Three of the high risk road danger issues that TfL has identified can be easily fixed by TfL teams already on site for other roadworks. Each team should check and resolve these issues within a 250m radius of where the main roadworks are taking place. Other Healthy Streets issues that can’t be easily fixed should be identified and reported for action.
- 2.31 Issues we would expect to be picked up as part of this process include:
- Side roads with no dropped kerbs for people to cross
 - Major defects in the cycling surface
 - Major defects in the surface for walking

Recommendation 3

TfL should identify outer London junctions that cause problems of community severance, and run an improvement programme to resolve high risk road danger issues for people walking and cycling (as set out in the Healthy Streets check). This programme should also ensure that there are safe crossings where people want to cross. TfL should share a list of junctions for improvements with us by May 2018.

Recommendation 4

While on site carrying out standard and major roadworks, TfL and its contractors should check the TfL Road Network within a 250m radius of where the main roadworks are taking place and resolve the following safety critical issues:

- Side roads without dropped kerbs
- Major defects in the surface for walking
- Major defects in the surface for cycling

Other high risk road danger issues that can't be fixed on the spot should be identified and reported for action.

We would expect this to be cost-neutral, or save TfL money on remedial works.

3. Creating the right culture at TfL

Key findings

- The Healthy Streets approach is not yet fully embedded at TfL
- TfL's performance metrics don't incentivise it to get more people walking and cycling in outer London
- TfL is allowing schemes to proceed which don't fit with the Healthy Streets approach
- TfL does not pick up junctions which are so dangerous that people avoid using them for junction improvements
- TfL doesn't know how much it spends on each borough, so it cannot tell if its allocations are equitable across London
- Our recommendations focus on ways to change the culture at TfL and direct attention towards Healthy Streets in outer London

- 3.1 While the Mayor's Healthy Streets approach makes it clear that TfL should prioritise people walking, cycling and using public transport, we found that this is not always how things work in practice.
- 3.2 Since its creation, TfL has prioritised motor traffic when making decisions on the TfL road network. Engineers have to demonstrate that any changes they are proposing to the streets won't delay cars or buses. The key measure they use is 'journey time reliability', which aims to make sure drivers aren't too badly affected by congestion, and that their journeys take a consistent amount of time each day.
- 3.3 Prioritising motor traffic has limited TfL's ability to improve facilities for walking and cycling. Publica, an urban design company, explains that:

"Junctions designed to prioritise and optimise the flow of motor traffic rather than the safe and efficient movement of those walking or travelling by bicycle currently dominate outer London. For this reason, the needs of pedestrians and cyclists have been neglected in favour of schemes that maintain or increase motor vehicle capacity."²²
- 3.4 Healthy Streets and Vision Zero call for a fundamentally different approach. Motor traffic cannot be prioritised in the same way if the Mayor is to meet his aims to get more Londoners walking and cycling, and for there to be no-one killed or seriously injured on London's streets. This is a big shift in emphasis, and will be a real challenge for TfL in terms of their working culture.
- 3.5 We saw an early example in inner London where TfL was prepared to make changes that would benefit pedestrians and cyclists at the expense of motor traffic. TfL made junction improvements to Bow Roundabout, when traffic modelling showed that they would delay motor vehicles by up to two minutes.²³ However, this approach has not yet been replicated at major junctions in outer London.

Key performance indicators that contradict Healthy Streets

- 3.6 TfL sets out its key performance indicators (KPIs) in its 2017-18 scorecard. It explains that the scorecard "will be used prominently inside TfL to drive business performance. It will be discussed throughout the year by senior staff... [and] have clear visibility at Board level".²⁴
- 3.7 There is currently nothing in the scorecard to support the Healthy Streets agenda and incentivise TfL to increase levels of walking and cycling in outer London. The only KPI on walking and cycling numbers is on cycling trips in central London – there is nothing on cycling in outer London, and nothing at all on walking.
- 3.8 KPIs are particularly important for walking and cycling because these modes make no money for TfL. Most of TfL's projects, such as capacity upgrades on the Tube, help it to generate more revenue and do not require the incentive of a KPI. There is no such incentive for junction improvements or other walking and cycling infrastructure.

- 3.9 There is some evidence that the KPIs may act as a disincentive for TfL to make changes that would boost active travel. On our site visits, senior members of TfL staff expressed concern that by enabling more people to walk and cycle, improving the facilities at big junctions could lead to an increase in the number of people killed and seriously injured.
- 3.10 In the absence of KPIs on walking and cycling, KPIs on journey time reliability and bus speeds encourage TfL to prioritise motor traffic when making changes to the roads. We suggest that TfL should add a KPI to reduce London's car dependency, as a way of improving journey time reliability while also freeing up space for pedestrians and cyclists. The Mayor set out in his draft Transport Strategy that "reducing car dependency is the only way to keep London moving".²⁵ We would expect him to achieve this by making it more convenient for people to walk, cycle and use public transport.
- 3.11 In light of the new priorities set out in the Mayor's draft Transport Strategy, we also suggest that TfL could add an additional KPI on journey time reliability for buses. If the Mayor is focusing on walking, cycling and public transport, then it is important that TfL makes a distinction between buses and general traffic. This would also help to address concerns we raised in our July 2017 report *Driven to Distraction: Tackling safety on London's buses* – that bus drivers are having to work excessive hours, with inadequate time for breaks, due in part to delays caused by congestion.²⁶

TfL's existing key performance indicators	Commentary
Reduction in killed and seriously injured (KSIs) on London's roads	The more people walk and cycle, the more difficult it is to meet this KPI
Journey time reliability on the TfL road network (TLRN)	Giving more time and space to people walking and cycling at junctions and on main roads can make it more difficult to meet these KPIs
Excess wait time for buses	
Average bus speed	
Total public transport journeys and central London cycling trips	The only KPI on cycling trips focuses attention on central London

Recommendation 5

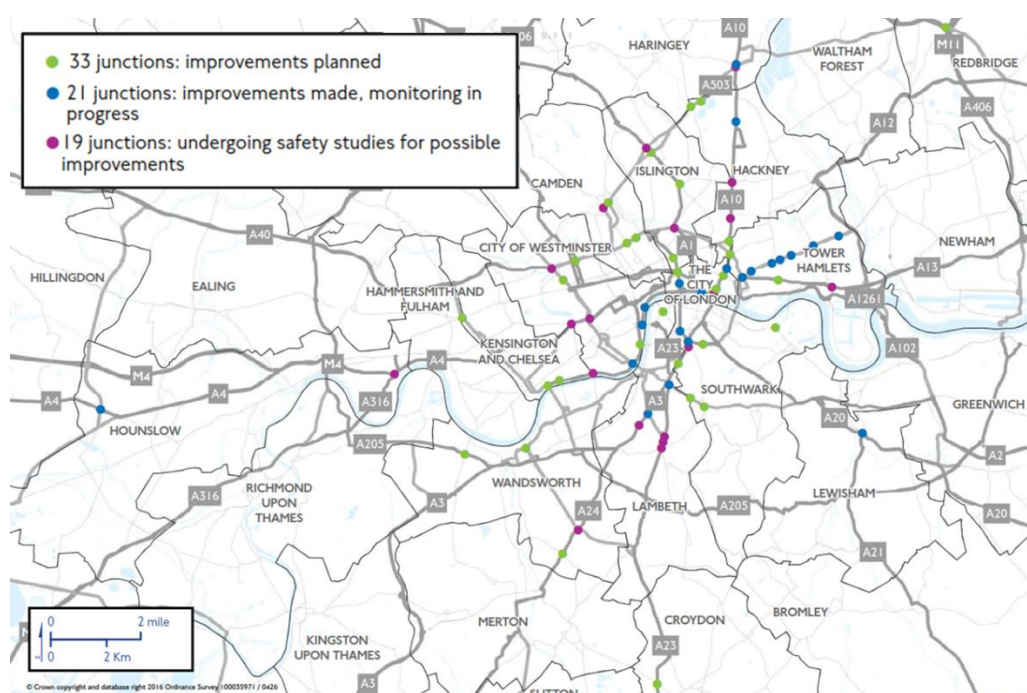
TfL should review its key performance indicators (KPIs) to ensure they align with the Mayor's Healthy Streets approach. For example, TfL might consider additional KPIs on:

- Walking mode share
- Cycling mode share
- Car dependency
- Bus journey time reliability

Selecting the right junctions for improvement works

- 3.12 TfL has not considered walking and cycling potential when selecting which junctions to improve. It has selected 73 junctions for its Safer Junctions programme (previously Better Junctions) based entirely on collision data. These junctions saw the highest number of collisions involving pedestrians, cyclists and motorcyclists between 2012 and 2015.²⁷
- 3.13 This approach means that TfL is effectively prioritising junctions that already have high numbers of pedestrians, cyclists and motorcyclists. Junctions that are so dangerous that people avoid using them will not be picked up for improvements.
- 3.14 The key distinction is between the number and rate of collisions. If people avoid using a junction, it may have a low number, but high rate of collisions per journey walked or cycled. If it also has high potential for walking and cycling, or cuts communities off from public transport, shops and places of work, then it may be a junction that is worth investing in.
- 3.15 By prioritising junctions that already have high numbers of pedestrians, cyclists and motorcyclists, TfL is also prioritising inner London over outer London. Only three of the 73 Safer Junctions are in outer London.

Only three of the Safer Junctions that TfL is prioritising are in outer London



Source: TfL, Safer Junctions map 2017

- 3.16 TfL's recent Strategic Cycling Analysis evaluates London's streets in a different way, and does not target the places with the most collisions. It takes a combination measure, looking for places that have a lot of people already cycling, and that have good potential for more people to cycle. The analysis identified 25 routes for further attention, around half of which are in outer London, though TfL has not yet explained what work it expects to carry out on these routes.²⁸ While the new analysis is a step in the right direction, it will not focus attention on those junctions which have high potential for walking and cycling, but are so dangerous that they're not currently used.

Recommendation 6

TfL should look beyond collision data and consider the potential to increase walking and cycling when selecting junctions to improve.ⁱⁱⁱ

Schemes that don't fit with the Healthy Streets approach

- 3.17 We found during this investigation that some schemes are going ahead which do not fit with the Healthy Streets agenda. A recent example is the Croydon Fiveways scheme, which went out to consultation in July and prioritises traffic flow over the needs of people who want to walk and cycle. The first aim set

ⁱⁱⁱ The UKIP Group has dissented from this recommendation, believing that the layout of junctions should consider walking, cycling and traffic flow. There should not be unnecessary cycle paths installed at junctions where there are hardly any cyclists.

out in the consultation on this scheme relates to traffic capacity, and is in direct conflict with the Mayor's aim to reduce car dependency:

“Our proposals would make Fiveways junctions simpler and increase capacity to accommodate expected traffic growth arising from population and economic growth in the area.”²⁹

- 3.18 The Croydon Fiveways scheme is poorly designed for pedestrians and cyclists. This is despite Croydon Fiveways being an £83 million scheme in a place that has been identified as having high potential for walking and cycling.³⁰ Cycle lanes are planned in some directions, but there is no provision for bikes at the most difficult parts of the junction. And pedestrians have to take slow, indirect routes around the junction, as shown on pages 29-30.
- 3.19 Part of the problem at Croydon Fiveways was that TfL did not carry out a full Healthy Streets check. The Healthy Streets check is a key decision-making tool to help TfL ensure its projects are in line with the Healthy Streets agenda. Croydon Fiveways went out to consultation in July 2017, while the Healthy Streets check was not finalised until November.
- 3.20 TfL said in response to an FOI request that it had tried to carry out a Healthy Streets check at Croydon Fiveways prior to consultation, but that at the time there were problems with the metrics. This meant the check returned “potentially misleading or unvalidated information which might over or understate the benefits of the project for pedestrians and cyclists”.³¹

Case study: Croydon Fiveways

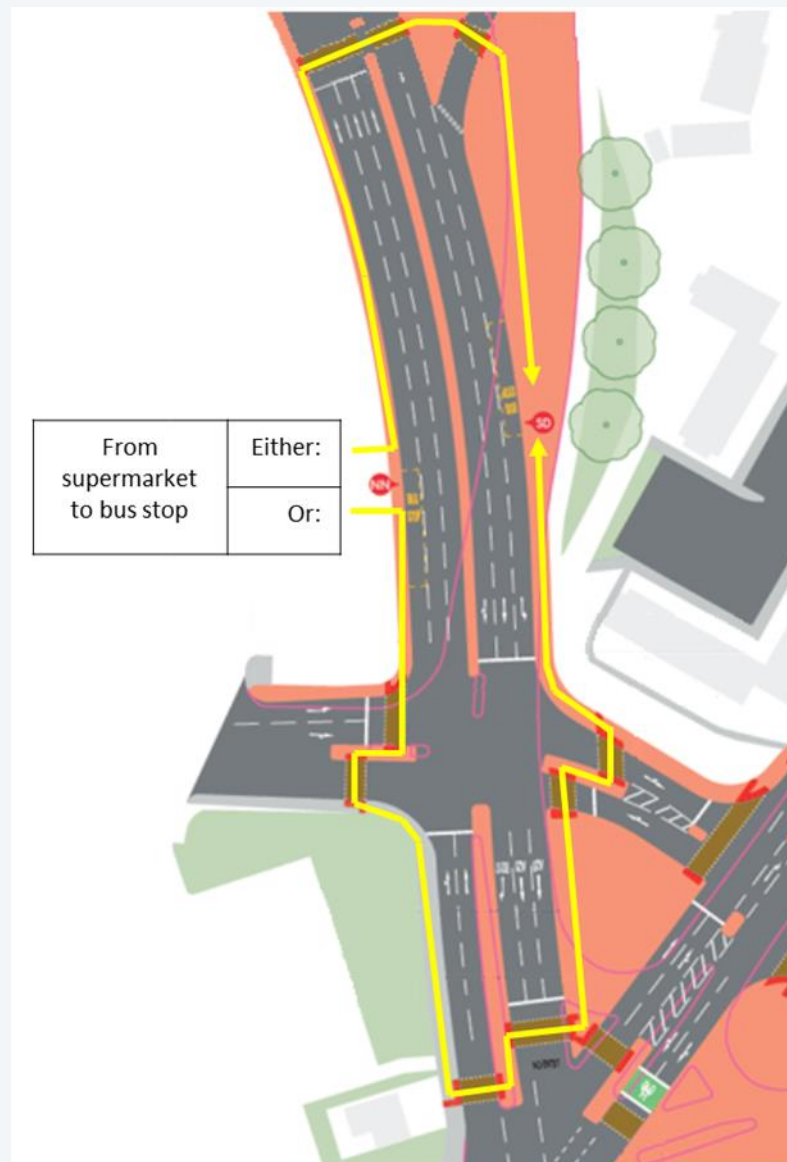
Croydon Fiveways is a large junction where the A232 meets the A23. It's around a mile from the centre of Croydon, and is a key route for freight, as well as for people walking, cycling and driving.

TfL is planning a major overhaul of this junction, which will cost around £83 million. The plans do not meet the needs of people wanting to walk and cycle.

Walking at Croydon Fiveways

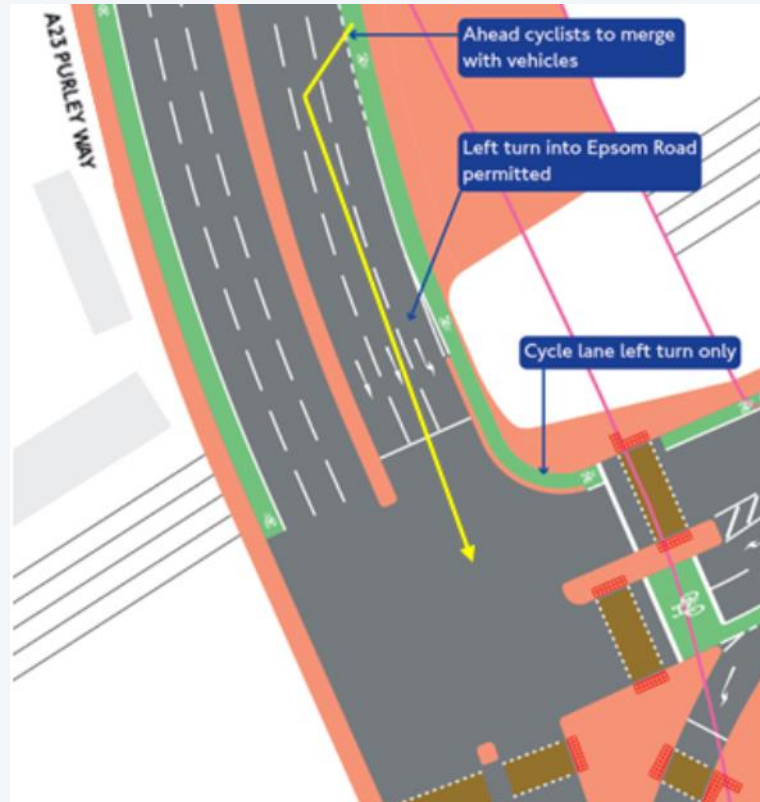
The crossings that TfL is planning are not always in convenient places. People walking have to take long, indirect routes around the junction.

Most of the crossings TfL is planning are 'staggered' rather than 'straight across'. People cross halfway at one set of lights, then have to wait on a traffic island to get all the way across at a second set of lights. This causes delay for people walking.



Cycling at Croydon Fiveways

The cycle lane planned for the main road is left-turn only, with cyclists who want to continue straight having to make a difficult merge into general traffic.



TfL plans for a safe cycle path to be added in one direction along Epsom Road into Croydon. But in the other direction it is not planning for any cycle facilities at the most dangerous part of the route – where bikes have to cross fast-moving traffic coming down Duppas Hill Road.

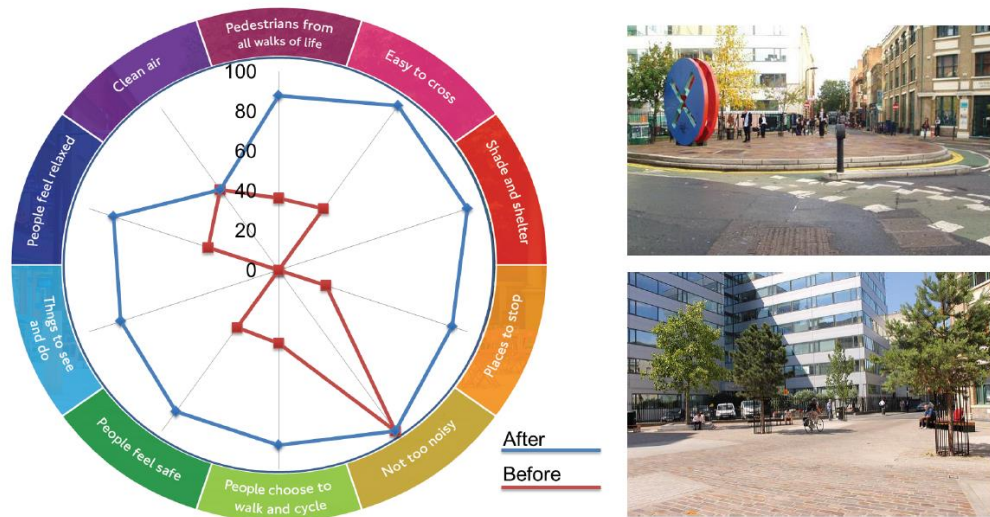


Source: TfL consultation on Croydon Fiveways

Using the Healthy Streets check

- 3.21 TfL published its new Healthy Streets check on 22 November 2017. The check has 31 metrics, which fall under the 10 Healthy Streets indicators set out in the diagram below. These are then combined to give an overall score for each indicator. Before and after figures show what effect each scheme could have, and the check also flags up high risk road danger issues. The high risk road danger element is crucial – TfL has to tackle these issues head on, and cannot make a street “healthy” just by adding benches or planting more trees.

Example output from Healthy Streets check at Leonard Circus, Hackney



Source: TfL, Introducing the Healthy Streets check, 2016

- 3.22 The Healthy Streets check helps to make sure that TfL is properly prioritising people walking, cycling and using public transport. The way that TfL is now structuring its funding makes it especially important that the Healthy Streets check works as intended. All street funding has been brought together into a single Healthy Streets budget, with the idea that TfL should move away from looking at single transport modes, and instead take a wider view of how streets function to best deliver for people. TfL intends that the Healthy Streets check will help it direct spending towards this aim.³²
- 3.23 Our understanding is that TfL will use the Healthy Streets check when assessing options for each project, and that it will publish results from the check alongside each of its consultations. We are yet to see the final check used in practice, but welcome this new approach. We hope that it will empower engineers to design healthy streets and to get their designs accepted by key decision makers at TfL.

Collecting the right data

- 3.24 Several people responding to our call for views and information told us that it is hard to tell what effect junction improvements have on the number of people walking and cycling because TfL does not collect the right data. “Before and after” data would help to show where junction improvements

have worked to improve people's perceptions of safety and enabled them to walk and cycle. The number of pedestrians and cyclists on neighbouring streets is important, as well as counts on the junction itself.

- 3.25 We asked TfL for “before and after” data on pedestrian and cycle movements at Elephant & Castle and the Archway Gyratory – junctions which have recently undergone significant work. TfL was not able to provide data on either junction, arguing that it is too early to assess the Archway scheme, and that other factors, such as regeneration, would affect the numbers at Elephant & Castle. It does, however, collect equivalent data on motor traffic.³³
- 3.26 In general, TfL has better data on cycling than walking. It carries out annual cycle counts in 2,500 locations across the Cycle Superhighways, Quietways, Central London Grid and Mini Hollands – although most of these are in inner London. For pedestrians, it only counts the number of people crossing the river bridges and foot tunnels, and is piloting a pedestrian count at two inner London town centres.³⁴
- 3.27 While we accept that there are other factors at play which should be considered when assessing results, we think that before and after data on cycle and pedestrian counts at junctions would help TfL to identify some of its most successful schemes. These should then be spread as examples of good practice.

Recommendation 7

TfL should collect “before and after” data on pedestrian and cycle movements when it builds new schemes and carries out major works at junctions, and encourage boroughs to do the same. As well as counts at the junction itself, this should include an assessment of pedestrian and cycle movements on neighbouring streets. TfL should then use this information to identify and spread examples of good practice.

Tracking spend on walking and cycling

- 3.28 Looking at the schemes that are going ahead, it is clear that TfL spends more on walking and cycling in inner London than outer London. Only three of the 73 Safer Junctions that TfL is prioritising are in outer London. And in terms of cycling infrastructure, Cycle Superhighways and Quietways are built mainly in inner London, best suiting the needs of those commuting into central London.³⁵ With so much focus on inner London, we suspect outer London isn't getting its fair share.
- 3.29 Investing in Mini Hollands at three outer London boroughs was a good first step to address the imbalance in funding, but from what we've seen of the current Mayor's plans for walking and cycling, it seems that the bulk of the funding will continue to be invested in central and inner London.

Most of TfL's spending on cycling is in inner London

Cycle infrastructure (excluding cycle hire)	2016-17 spend (Figures in £ millions)	Inner/Outer London
Cycle Superhighways	32	Mainly inner London
Safer Junctions	16	Mainly inner London
Mini Hollands	18	Outer London
Quietways	14	Mainly inner London
Central London Grid	12	Inner London
Other roads infrastructure	9	Mix of inner and outer London
There is no data on walking infrastructure as TfL does not have a separate walking budget. Instead it looks to improve conditions for people walking whenever it makes changes to the TfL road network.		

Source: Correspondence from TfL to the Transport Committee, October 2017

- 3.30 Precise figures are not available because TfL doesn't collect data on spending by borough. We were surprised that TfL didn't have this data, as it should be relatively easy to collect. TfL does not know how much it is spending in outer London compared to inner London, and without this data cannot demonstrate that it is allocating its resources equitably to meet the needs of all Londoners.
- 3.31 TfL has told us that it is developing new processes to help it record which boroughs it is spending its Healthy Streets funding on. We would expect that these processes are up and running by the start of the next financial year, and that data is made public when it becomes available.

Recommendation 8

TfL should publish information to show how much Healthy Streets funding it is spending on each borough. Information for 2017-18 should be available by the end of April, and we would expect annual data to be published thereafter as a matter of course.

4. Changing the rules

Key findings

- Changes to rules, road markings and signage can help make walking and cycling safer and more attractive
- There are examples where TfL has successfully negotiated with the Department for Transport to trial new road markings and signage
- TfL and the Mayor can do more to research changes that would work for London, and to lobby the government to update legislation to make those changes possible
- Our recommendations focus on interventions which would require legislative changes that are beyond the power of the Mayor, but for which the Mayor can lobby

- 4.1 London is the most densely populated part of the UK, and faces unique challenges in terms of how its streets works for walking and cycling. It is important therefore that TfL is proactive in picking up on new road markings, signage and rules and pushing for these to be included in the Highway Code and other relevant legislation.
- 4.2 TfL has led the way with innovation on cycle traffic lights and pedestrian countdowns. It has trialled and promoted such measures to the Department for Transport so that they can be used more widely across the UK.
- 4.3 We saw examples where TfL had successfully negotiated with the Department for Transport to use new road markings and signage. For instance, TfL is using more bus stop bypasses which take cycle lanes around the back of bus stops so that bikes aren't forced out into general traffic. To help people access the bus stops, it secured permission from the Department for Transport to trial mini zebra crossings across the cycle lanes. These mini zebra crossings would not normally be allowed under the relevant legislation on zebra crossings.³⁶

TfL has secured special permission from the Department for Transport to trial mini zebra crossings on cycle lanes



- 4.4 There are also examples of new road markings and signage that outer London boroughs have used, but don't currently have any legal basis. For instance, we saw 'elephant's footprint' markings used at Walthamstow to mark the edge of a cycle lane across a side road and signal to drivers that they should give way. While such markings could help people walking and cycling, they can confuse drivers if not used consistently across London and the rest of the UK. This is an area where TfL could help by asking the Department of Transport to change national legislation.

‘Elephant’s footprint’ markings are used in Walthamstow to mark the edge of a cycle lane and give bikes priority over turning motor traffic, but don’t have any legal basis



- 4.5 TfL used to maintain a list of statutory requests and discuss them regularly with the Department for Transport. It no longer maintains this list, and since 2015 discussions with the Department for Transport have slowed. We urge TfL to be more proactive in asking for changes to the Highway Code and other relevant legislation that could help people walking and cycling in London. Information about the statutory changes it is asking for and any progress should be published online. Where appropriate, the Mayor may also be able to use his meetings with the Secretary of State for Transport to push for regulatory change.

Recommendation 9

TfL should be proactive in asking for changes to the Highway Code and other relevant legislation that could help people walking and cycling in London. It should publish a list of statutory requests and meet regularly with the Department for Transport to discuss these requests.

Pedestrian priority at turns

- 4.6 TfL and the boroughs have previously been held back in their efforts to improve conditions for people walking and cycling by the need to demonstrate that any changes won’t delay cars or buses. While the Healthy Streets approach should help, traffic capacity continues to affect decision making. A borough officer told us in their response to our call for views and information that:

“Pedestrian and cycle improvements are often reduced/compromised to protect bus and general traffic journey times which inherently leads to a reduced benefit in pedestrian and cycle levels of service.”³⁷

- 4.7 Recent research by British Cycling suggests a new way forward which could give people walking and cycling a better deal without causing delay for those on buses or in cars. This would be achieved through rule changes that meant vehicles had to give way to pedestrians and cyclists when turning.
- 4.8 A rule change would save time because pedestrians, cyclists and general traffic travelling in the same direction could be given the green light to go at the same time. This means that junction designs are simpler and less time is lost while people wait their turn. These rules already apply in most other countries apart from the UK.

In most other countries, pedestrians, cyclists and general traffic travelling in the same direction can be given the green light to go at the same time

Turning traffic gives way to people crossing the road



- 4.9 British Cycling modelled the rule change at an outer London junction to demonstrate the efficiency gains that could be made. It found the change would benefit all road users. It could result in some 38 per cent less delay for pedestrians, 21 per cent less delay for bikes, and 25 per cent less delay for motor vehicles.³⁸ This would address one common complaint about initiatives designed to benefit people walking and cycling – that other road users must inevitably suffer as a result.
- 4.10 While the British Cycling research shows that efficiency gains could be used at least in part to speed up motor journeys, they could equally be used to free up road space for pedestrian and cycle facilities, or to make way for bus priority measures. This would be more in line with the Mayor's Healthy Streets approach and draft Transport Strategy.
- 4.11 Early results from the research are promising, but more research is needed to assess the wider effects of such a change. TfL is well placed to lead this research, and could initially start by modelling changes over a larger section of the road network. It could set up an advisory group made up of key stakeholders such as the Department for Transport, Living Streets, the RAC

Foundation and the Disabled Person's Transport Advisory Committee, and if the initial research is successful, carry out off-street trials.

- 4.12 This work would be done with the intention of lobbying central government for change. The better the evidence, the greater the chance of success in the long term. TfL is in a uniquely strong position among local transport authorities to lobby for change, due to its size and expertise.

Recommendation 10

TfL should research and identify best practice from other countries. As an example, we recommend that TfL should consider further research on the changes set out in British Cycling's Turning the Corner campaign. Initially this would involve a traffic modelling study and then off-street trials. If this project were to go ahead, we would also recommend that TfL sets up an advisory group made up of key stakeholders such as the Department for Transport, Living Streets, the RAC Foundation and the Disabled Person's Transport Advisory Committee.^{iv, v}

^{iv} The UKIP Group has dissented from this recommendation, believing that giving a green light to turning vehicles at the same time as pedestrians crossing the road in the path of those turning vehicles is a recipe for disaster which will cause collisions and casualties.

^v The GLA Conservatives have dissented from this recommendation. Further details are on pages 41 and 42.

Our approach

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

- To understand the experience of cyclists and pedestrians of all ages and backgrounds using busy junctions in outer London.
- To consider how TfL and London boroughs can use junction works to unlock walking and cycling potential.

Meetings

Caroline Russell and other committee members undertook the following activities during the investigation:

- Site visit to Walthamstow village, Waltham Forest
- Site visit to Gallows Corner, Havering
- Site visit to Bow Roundabout, Tower Hamlets
- Site visit to the A4/M4 near Brentford, Hounslow
- Site visit to Croydon Fiveways, Croydon
- Informal meetings with representatives of British Cycling
- Informal meetings with representatives of Transport for London

Submissions

In addition to 19 submissions from individual Londoners, the committee received written submissions from the following organisations:

- Campaign for Better Transport
- Canal and River Trust
- Elstree and Borehamwood Town Council
- Harrow Cyclists
- Hounslow Cycling Campaign
- London Borough of Brent
- London Borough of Croydon
- London Borough of Waltham Forest

- Living Streets
- London Cycling Campaign
- London Taxi Drivers Association
- One-World Design Architects
- Phil Jones Associates
- Publica
- Royal College of Physicians
- SHaW Academy Action Group
- Sustrans
- Transport for London
- Transport for Charlton
- University of Westminster
- Waltham Forest Cycling Campaign

The committee also ran an online discussion forum through Talk London, which received 69 responses from individual Londoners.

Appendix 1: Minority Report from the GLA Conservatives

The GLA Conservatives have been unable to agree to this report.

Due to significant time pressure outside of our control it is not possible for the Group to write a full minority report that would accurately reflect the way in which we believe the report should have been written. In addition, we strongly believe that the report has both exceeded its scope and produced a lack of real, costed, viable solutions to the problems that it was supposed to address.

The focus of the report should have been on understanding the experience of cyclists and pedestrians using busy junctions in Outer London and a consideration of how those junctions might be changed to encourage walking and cycling.

Indeed the initial scope had precisely that focus. It reads as follows:

- “To understand the experience of cyclists and pedestrians of all ages and backgrounds using busy junctions in outer London.”
- “To consider how TfL and London boroughs can use junction works to unlock walking and cycling potential.”

It is regrettable that the report has gone so far beyond this remit.

Recommendation 1 should have been struck out. The Transport for London Road Network (TLRN) or Red Routes are London’s arterial roads. Although they make up just five per cent of London’s roads they contain approximately 30 per cent of London’s traffic. Their purpose – and the reason that they are run by TfL rather than London’s boroughs – is to keep London and Londoners moving. Any suggestion that some of these roads might see their speed limits reduced to 20mph is unacceptable. There are real problems with regard to crossings and junctions on these roads and these should have been the report’s focus. Instead the very fact that the first recommendation is on reducing the speed limits on roads on the TLRN underlines the extent to which we feel this report has gone astray.

Recommendation 10 should also have been removed. It refers to the Turning the Corner campaign. This is a scheme that could make a lot of sense on roads with four or more lanes in each direction. However on London's red routes – many of which are dual carriageways or even single carriageways – the scheme would not work. On a typical dual carriageway, if cars were waiting to turn left and right then under this scheme no cars would be able to drive straight across a junction. This would lead to significantly increased levels of congestion and pollution.

Although these issues were discussed at length before the report was drafted and our objections were made repeatedly, the decision has been taken to continue to include both recommendations in this document.

This report uses the Fiveways Scheme in Croydon as a case study. It should note that the Fiveways Scheme is happening because of the need for increased capacity for motorised traffic. There is cross-party support in Croydon for the scheme to go ahead as it is. There is, however, scope for more cycle capacity south of the bridge by purchasing a small part of Morrison's car park. This is not mentioned in the report.

In conclusion, there are a number of recommendations within the report that are reasonable and worthy of consideration. However the decision to include Recommendations 1 and 10 removed the possibility of the report receiving unanimous backing – setting it apart from the vast majority of London Assembly committee reports.

References

- ¹ Outer London is made up of the boroughs of: Barking and Dagenham, Barnet, Bexley, Brent, Bromley, Croydon, Ealing, Enfield, Greenwich, Harrow, Havering, Hillingdon, Hounslow, Kingston upon Thames, Merton, Redbridge, Richmond upon Thames, Sutton, and Waltham Forest
- ² TfL, [2016 analysis of walking potential](#), March 2017; TfL, [2016 analysis of cycling potential](#), March 2017
- ³ London Assembly calculation, using data from: TfL, [2016 analysis of walking potential](#), March 2017; TfL, [2016 analysis of cycling potential](#), March 2017; Greater London Authority, [2016 based population projections](#), July 2017
- ⁴ Mayor of London, [Draft Transport Strategy](#), June 2017, page 277
- ⁵ TfL, [Attitudes to Cycling](#), September 2016
- ⁶ Comment on [Talk London discussion forum](#), July 2017, in response to the question “Are there any particularly difficult junctions or crossings around you that make it difficult to walk and cycle?”
- ⁷ Individual submission to London Assembly Transport Committee call for views and information
- ⁸ Department for Transport, [Road safety data](#) (STATS 19 accident reporting), 2016
- ⁹ Aim set out in: Mayor of London and TfL, [Healthy Streets for Londoners](#), February 2017
- ¹⁰ TfL, [Roads Task Force - technical note 20](#) (What are the main health impacts of roads in London?), 2013
- ¹¹ London Assembly Transport Committee site visits to Gallows Corner (Havering) and the A4 near Brentford (Hounslow)
- ¹² TfL, [Roads Task Force - technical note 20](#) (What are the main health impacts of roads in London?), 2013
- ¹³ Taylor, Lynam and Baruya, *The effects of drivers’ speed on the frequency of road accidents*, 2000
- ¹⁴ Tefft, *Impact of speed on a pedestrian’s risk of severe injury or death*, 2015
- ¹⁵ TfL, [Healthy Streets Check for Designers](#), November 2017
- ¹⁶ TfL, [Digital speed limit map](#)

- ¹⁷ Under Vision Zero, the Mayor aims that all deaths and serious injuries from road collisions are eliminated from London's streets by 2041
- ¹⁸ Department for Transport, [Road safety data](#) (STATS 19 accident reporting), 2016
- ¹⁹ TfL, Road policing enforcement statistics bulletin, 2016
- ²⁰ London Assembly Transport Committee site visits to Gallows Corner (Havering), Brentford (Hounslow) and Croydon Fiveways (Croydon)
- ²¹ Equalities Act 2010
- ²² Publica submission to London Assembly Transport Committee call for views and information
- ²³ TfL, [Response to consultation on pedestrian improvements at Bow Interchange](#), July 2015
- ²⁴ TfL, [Performance scorecard 2017-18](#), March 2017
- ²⁵ Mayor of London, [Draft Transport Strategy](#), June 2017, page 20
- ²⁶ London Assembly Transport Committee, [Driven to distraction](#), July 2017
- ²⁷ TfL, press release, [New roads targeted in updated safer junctions programme](#), April 2017
- ²⁸ TfL, [Strategic cycling analysis](#), June 2017, page 51
- ²⁹ TfL, [Consultation on Croydon Fiveways](#), July 2017
- ³⁰ Mayor's Question Time, [Question 2017/3590](#), September 2017; TfL, [2016 analysis of walking potential](#), March 2017; TfL, [2016 analysis of cycling potential](#), March 2017
- ³¹ TfL, [Response to FOI request on Croydon Fiveways consultation](#), July 2017
- ³² Mayor of London and TfL, [Healthy Streets for Londoners](#), February 2017
- ³³ Correspondence from TfL, October 2017
- ³⁴ Correspondence from TfL, October 2017
- ³⁵ TfL, [Strategic cycling analysis](#), June 2017, page 4
- ³⁶ Statutory Instrument 1997, no. 2400, [The Zebra, Pelican and Puffin Pedestrian Crossings Regulations and General Directions 1997](#)
- ³⁷ London Borough of Waltham Forest response to London Assembly Transport Committee call for views and information
- ³⁸ Phil Jones Associates, [Technical note on Turning the Corner](#), May 2017

Other formats and languages

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

Chinese

如您需要这份文件的简介的翻译本，
请电话联系我们或按上面所提供的邮寄地址或
Email 与我们联系。

Vietnamese

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

Greek

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

Turkish

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

Punjabi

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

Hindi

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

Bengali

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

Urdu

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

Arabic

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

Gujarati

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



Greater London Authority

City Hall
The Queen's Walk
More London
London SE1 2AA

Enquiries 020 7983 4100
Minicom 020 7983 4458

www.london.gov.uk

©Greater London Authority