## **HUMAN STREETS**

The Mayor's Vision for Cycling, three years on



#### **MAYOR OF LONDON**

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## FOREWORD BY BORIS JOHNSON MAYOR OF LONDON

Exactly three years ago, I unveiled my vision to make cycling in London safer, more popular and more normal. My single biggest regret as Mayor is that I did not do it sooner.

Our original painted lanes were revolutionary at the time. But knowing what I do now, we would have blasted ahead with our new segregated cycle lanes from the beginning.



Road space is hotly contested. According to a former Chancellor of the Exchequer, installing a cycle lane on the Victoria Embankment was "doing more damage to London than almost anything since the Blitz". Many of my colleagues in Parliament share this view. The Superhighways have probably been one of the most difficult things we have had to do.

But there is already clear evidence that they will succeed. The first one to open, at Vauxhall, has in only four months led to a 73 per cent increase in cycling across Vauxhall Bridge. I have every belief that the same will be true of the further four Superhighways we have almost completed. In the suburbs, our mini-Hollands are starting to reshape car-dominated town centres into places that work for the majority who do not drive.

We have dramatically improved what was already a world-leading cycle hire scheme, increasing the availability of bikes, opening new extensions, more than doubling our income from commercial sponsorship – and driving usage to an all-time record. We have made lorries safer, and improved our enforcement against rogue cyclists, too.

And for motorists, an end to the roadworks is in sight. On the Vauxhall Superhighway scheme, the congestion caused by the works is already over, and traffic, with only one exception, is now back to where it was before.

As I prepare to leave office, I am proud to have kept my promises. Cycling in London has never been more popular: the number of bike journeys has risen by two-thirds since I became mayor. Every day, more people now use bikes than the Bakerloo, Circle and Hammersmith & City lines combined.

Cycling in London has never been safer: despite the huge growth in cycling trips, the total number of deaths and serious injuries, per journey, is the lowest it has ever been.

Above all, cycling in London has never been more normal. Within a few years, at the current rate of growth, people commuting by bike to central London will outnumber those commuting by car. Already, in the centre, a third of all vehicles on the road during the morning rush hour are now bicycles. Eight per cent of black and minority ethnic Londoners are now frequent cyclists, the same proportion as white Londoners.

Yet though we must cater for the numbers of people cycling, there's an even better reason why I hope my successor will carry on where I leave off. It's that if more people cycle, everyone else benefits too, even if they have no intention of getting into the saddle. Everyone who gets on a bike is freeing up space for someone else on the bus, or the train, or indeed in a car. Everyone who cycles is improving not just their own health but other people's health, because bikes do not cause pollution.

The main cause of traffic congestion is not, of course, the cycle Superhighways. They get the blame because they're what you can see. But we are removing traffic lanes on only 15 miles of London's 1500-mile main road network. The main cause is the fact that our population is growing by 10,000 a month.

To cope with all those new people who need to use the roads, we must make better use of the roads - by encouraging people on to forms of transport, such as bikes, which take up less space.

I apologise for the short-term disruption caused by the works. But once they are complete, getting people out of cars is in fact the only way to keep London moving for essential business and commercial vehicles. Doing nothing with the roads would not return us to some never-existent '50s Elysium of free-flowing traffic. Doing nothing would mean that congestion gets worse than it is now.

The East-West Superhighway will be able to carry 3,000 people an hour. That is the equivalent of putting four extra trains an hour on the District and Circle Tube lines running beneath the route, at a fraction of the cost in capital works and disruption. It is the equivalent of running 41 extra buses an hour, at a fraction of the cost in road space and emissions. And it is the equivalent, at the average rush-hour loading, of the passengers carried by 2,100 cars.

I am immensely heartened that, with their usual common sense, the people of this great city do seem to understand all that. Almost every time Londoners have been asked what they think about the cycling programme – in public consultations, or in opinion polls – clear majorities have supported it.

In fact, only a very small minority of Londoners drive regularly in central London – and 71 per cent never drive there at all. They go by public transport, they walk, and increasingly they cycle. They want us to make the centre better for people like them, and less dominated by motor vehicles.

So as well as celebrating what we have achieved in such a short space of time, this document makes some suggestions for the next Mayor, whoever he or she may be. They are, I stress, only suggestions.

In the next mayoral term, I think whoever succeeds me will go further. The City of London wants to close Bank junction to all traffic except buses and bikes. Both the front-running candidates to be the next mayor have proposed the closure of Oxford Street, and the part-closure of Parliament Square has also been mooted.

For these things to happen, central London traffic will need to be lower than it is now. How that happens – perhaps by raising the congestion charge, perhaps by making it smarter – will, I predict, occupy my successors in the years ahead. Cities compete these days on quality of life. London can't afford to stand still in that – our rivals won't.

For now, though, I pay tribute to the hard work of the huge number of people at TfL, in the boroughs, at City Hall, lobbyists, campaigners and the general public, who have done so much to bring about a bike-friendly London.

**Boris Johnson** 

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Mayor of London

# FOREWORD BY ANDREW GILLIGAN CYCLING COMMISSIONER

As I write this, I'm thinking back to the day Waltham Forest Council opened the very first scheme paid for and brought about by the Mayor's cycling vision. It was in Orford Road, in Walthamstow Village, a pretty Victorian terraced street with neighbourhood shops and restaurants. The vast majority of people using Orford Road don't travel by car. But until that day, cars took most of the road space, and motor vehicles dominated the neighbourhood.

14 September 2015 was the date the council gave that street back to the majority of the people who use it and turned it into somewhere they can sit down and have a drink, somewhere they can walk or cycle without being run down by a car. We've ended rat-runs, reducing the traffic on some of the area's roads by 90 per cent, while not worsening traffic on the surrounding main roads. And it looks beautiful.

Officially, the cycling programme is about cycling. In reality, it is about breathing. It's about pollution, about health, about noise, about the kind of city we want to live in. It is about making the best use of scarce space on the roads, about freeing space on public transport. Most of the people who will benefit from the cycling programme aren't cyclists. That, no doubt, is why across London, almost every time we've put cycling schemes to public consultation, they've been supported by clear, often overwhelming majorities of people – most of whom aren't cyclists either.

I am just as excited by what's being achieved in Waltham Forest as I am by the glamour schemes in central London – because it is there, more than anywhere else, that could inspire others by showing how a whole area can be transformed. It has been the quickest and keenest of our three "mini-Hollands," outer London boroughs given large sums of money for dramatic change. It has shown how these schemes can grow a community of people – individual local residents, councillors and council officers – who are prepared to demand and defend change. Above all, it has shown real political leadership.

In engineering terms, cycling schemes are not very complicated. The key factor is political leadership. Everyone supports cycling – until it involves doing anything meaningful. Meaningful cycling schemes almost always have clear majority support, but seldom unanimous support. They will usually inconvenience or upset somebody. So for years in this country, we did half-hearted cycling schemes that upset nobody but also, bluntly, helped nobody and changed nothing.

Then in London, a few years ago, something did change. Triggered in part by the early painted Superhighways, the first real attempts to cater for cycling, the sheer numbers of cyclists rose so high that it became absurd not to cater for them. Cyclist safety became a major political issue. Not just cyclists but major London businesses, emergency service workers, council leaders and London Assembly members came together to give us the space to do more. One of the most exciting moments in the fight over the East-West Superhighway was when dozens of household-name London employers joined together to demand that the route be built. It was their staff who were dying on the way to the office.

Our new approach in London is to do serious, meaningful schemes and prove to others that they work. But it takes courage to be the first. The Mayor, the Deputy Mayor, Isabel Dedring, and others have shown that political courage, and it is already starting to look like it is working.

Our first zone 1 Superhighway scheme to be completed, at Vauxhall, has already shown huge increases in cycling, and – now the builders are out – none of the traffic disaster effects predicted by so many. In Walthamstow, opponents forecast gridlock on the main roads around the Village, and annihilation for the shops inside it. That hasn't happened either. Bus journey times along Hoe Street are the same as they were. New shops have sprung up. One of the main opponents of the Walthamstow scheme has applied to open a pavement café.

These are only early indications, of course. But London does seem to be on the same journey as the dozens of other places which have done this sort of thing. New York City, for instance, has already been through the cycle, so to speak, of the "bikelash," followed by growth in cyclists, falls in motor traffic, economic and civic dividends for everyone else, and acceptance. One of their new cycle lanes, on Prospect Park West, was dubbed "the most controversial slab of cement outside the Gaza Strip." Now it is a part of the furniture.

I expect we will be like all those other places. But I think there is still a risk that progress could stall. The elements of the programme delivered directly by TfL, the Superhighways and the junction improvements, have gone, I think, outstandingly well. They are also, with occasional exceptions, genuinely world-class schemes. But without the political push provided by the Mayor, the Deputy Mayor and others, they would simply not have happened.

In some of the borough-led schemes, as we explain below, progress has been slower and changes will be needed to achieve these schemes' full potential. In the mayoral election, political signals suggest that some of the candidates have been spooked by the bikelash. They shouldn't be – it won't last.

Everyone will remember why we started on this. Despite big improvements in safety, it is a fact that in 2013 and 2014 alone, ten cyclists were killed at the locations where we are now installing segregated junctions and cycle tracks. Our schemes would have saved many of those people's lives. And they will save dozens more over their time. That should put in perspective some of the complaints about having to wait longer in traffic.

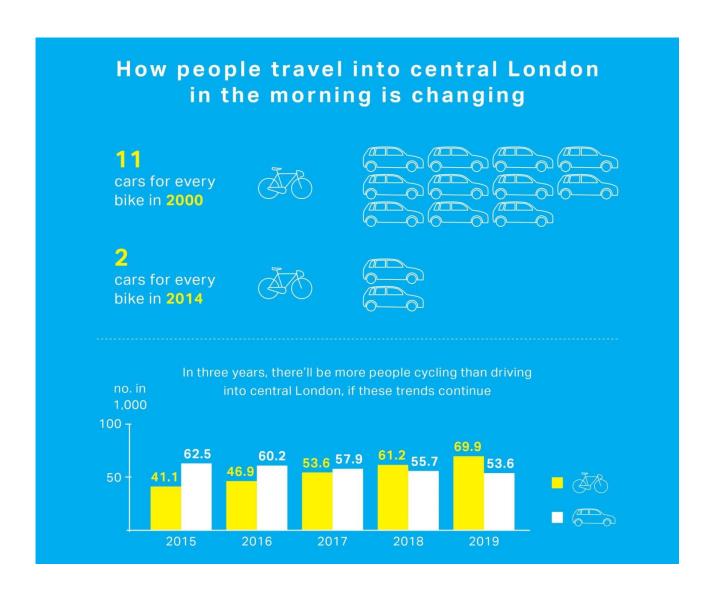
Much of the opposition to cycling schemes is based on a belief that motor traffic is like rainwater and the roads are the drains for it. If you narrow the pipe, these people say, it will flood. If you block one route, they say, the same amount of traffic will simply flow down the next easiest route. But that seldom or never actually happens in practice. Because traffic isn't a force of nature. It's a product of human choices. Our surveys tell us that huge numbers of Londoners will choose to cycle if they feel safe doing so. If we open up that choice, even more people will take it.

### A CYCLING CITY

#### Cycling in London has seen remarkable growth

Across London as a whole, cycling on the TfL-controlled main roads rose by 63 per cent in the first six years of the Mayor's term (figures for 2015 and 2016 are not available yet.) Cycling on all roads rose by 33 per cent over the same period.

Cycling growth across London in 2014 was at a near-record 10.3 per cent.



#### Cycling in London is now mass transport

It is sometimes suggested that cycling is a marginal or fringe activity. In London, this is no longer true. In zone 1, during the morning rush hour, 32 per cent of all vehicles on the roads are now bicycles. On some main roads, up to 70 per cent of vehicles are bicycles.

In the year 2000, motorists entering central London during the AM peak outnumbered cyclists by more than 11 to 1. By 2014, the ratio was 1.7 to 1 (or 2 to 1 in vehicle terms). If these trends continue, the number of people commuting to central London by bike will overtake the number commuting by car in three years.

Across London as a whole, by 2014 (the latest available data) there were 645,000 cycle journeys a day. That equates to one fifth of all tube passenger trips. It is slightly more than the number of trips on the Bakerloo, Circle and Hammersmith & City lines put together.



Cycle Superhighway 5. Photograph © Transport for London

#### Cycling in London has widened its social base

In a diverse city, we could not have reached these volumes without broadening cycling's appeal beyond its traditional demographic. The proportion of black and minority ethnic Londoners who cycle frequently (three days a week or more) is now the same as the proportion of white Londoners who do.

The proportion of Londoners from the DE social classes who cycle frequently is also catching up with the average. The number of women cycling has risen sharply, but the proportion of women cycling has not yet changed much. It is our hope that the continued rollout of the cycling programme will change this.

#### Cycling in London has never been safer

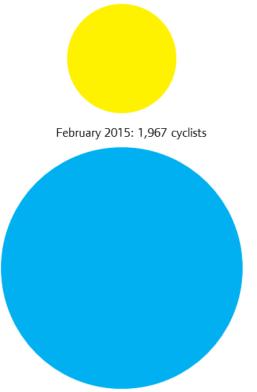
Fear about safety is a major deterrent to cycling. But even as the numbers of cycle journeys have risen sharply, cycling casualty rates are the lowest ever recorded. In 1989, the worst year, 90 million cycle journeys were made in London, of which 33 ended in death. By last year, around 270 million cycle journeys were made in London, of which nine ended in death.

The number of serious injuries and deaths in 2014 (the latest figure) was 432, an all-time low perjourney. The figure of 9 deaths in 2015 was the second-lowest on record in absolute terms, and the lowest ever in per-journey terms. Significant improvements in cycling safety have been reflected in a generally calmer media climate over the last few years.

#### Our cycling infrastructure will accelerate these trends. It has already!

Most of this has been achieved before our main infrastructure projects have even opened. But early evidence is that when they do open, they lead to even faster growth. At Vauxhall Bridge, the first central London segregated Superhighway to be opened in November, we have already seen a 73 per cent increase in the number of cyclists using the bridge. More than 80 per cent of the cyclists crossing the bridge are using the segregated track.

The number of cyclists using Vauxhall Bridge since Cycle Superhighway 5 was completed has risen by 73%



February 2016: 3,394 cyclists

Source: Transport for London

#### Cycle infrastructure is extremely popular...

The debate about cycling is distorted by complaints from a loud, but small minority – who tend to believe, often quite sincerely, that "everyone" drives. In fact, only 3 per cent of Londoners drive a car or van in central London every day, and only 7 per cent once a week or more. 71 per cent of Londoners never drive in central London. In no inner London borough – including Kensington & Chelsea, one of the richest places in Europe – do more than 50 per cent of households even have access to a car. Even in many outer London boroughs, most journeys are not made by car.

This may help explain why measures to improve cycling and reduce the dominance of motor traffic are consistently popular. The East-West and North-South Superhighways received 84 per cent support in the consultation and 64 per cent support in an independent YouGov opinion poll, even when respondents were reminded that they might delay traffic. A poll last month showed 71 per cent support for segregated cycle routes.

In Palmers Green, Enfield, campaigners against the borough's mini-Holland scheme claimed that it would benefit only "one per cent of the population" and was "deeply unpopular." However, it secured 60 per cent support when the consultation results came in. If the scheme had only benefited "one per cent of the population" — the proportion of Enfield residents who cycle now — it would not have been so well supported by non-cyclists.

#### ...because cycling is not just for cyclists

Cycling infrastructure improves places for pedestrians. The East-West and North-South Superhighway schemes will include 23 new pedestrian crossings and 7000 square metres of new pedestrian space. The main beneficiaries of our mini-Holland schemes in the suburbs, for street closures and tree-planting, will be pedestrians.

Around London, Quietways have included streetscape improvements, dropped kerbs for older people and wheelchair users, improved road surfaces, decluttered streets and better lighting. By creating better places, we make people want to visit them.

In Herne Hill, south London, a pre-Cycling Vision road closure caused fury. Businesses complained it would slash their trade. The Herne Hill Society website now says it "has been crucial to the continuing regeneration of Herne Hill" and is "such a success that it now seems strange that it attracted so much controversy".

Many think of cyclists as somehow a separate species, unconnected to the rest of the transport system. But of course, anything that gets more people cycling improves life for other users of the transport network too – even motorists, in the end.

If everyone who currently commutes to central London by bike went by car instead, it would put between 28,000 and 36,000 extra cars on the roads in zone 1 in the morning rush hour, and increase motor traffic by about a third. If they all travelled by Tube instead, it would require 42 additional trains on the Underground.

Motoring organisations recognise the benefits of Superhighways for motor traffic. Edmund King, the president of the AA, said this month that "getting more people on bikes, getting more dedicated cycle lanes is better for everyone." On the Superhighways, he said: "Once [the construction work] settles down and you get people transferring to cycling, we will begin to see some of the broader benefits."

# A RECORD OF ACHIEVEMENT

#### We have more than trebled the budget

We increased the ten-year budget for cycling from £273 million to £913 million. This year (2015/16), we will be spending around £145 million, roughly £18 a head, on a par with Germany and almost equivalent to the Netherlands. We are spending more on cycling than the rest of the UK put together.

#### We have built world-class Superhighways

By this year, five new or upgraded Superhighways will be open. You will be able to cycle on a connected network of traffic-free protected lanes or linking routes on low-traffic streets to Aldgate, Barking, Blackfriars, Bow, Canary Wharf, Canning Town, Cannon Street, the City, Dalston, De Beauvoir Town, Elephant & Castle, Embankment, Hyde Park, Hyde Park Corner, Kensington Gore, Lancaster Gate, Limehouse, Ludgate Circus, Marble Arch, the Olympic Park, Paddington, St George's Circus, Shadwell, Shoreditch (Great Eastern Street), Southwark Bridge, Southwark, Stamford Hill, Stepney, Stoke Newington, Stratford, Temple, Tottenham, Tower Hill, Wapping, West Ham, Westminster and Whitechapel. Other sections of segregated Superhighway serve Pimlico, Vauxhall and Oval.

Our east-west Superhighway will be Europe's longest substantially-segregated urban cycle route. It will cross the heart of London, passing the city's best-known landmarks – Buckingham Palace, the Houses of Parliament, and the Tower. London's status as a cycling city will be visible to all.

On the one stretch of segregated Superhighway in central London that is fully open, at Vauxhall, TfL monitoring shows that 81 per cent of cyclists are already using the track, rising to 93 per cent in the evening peak.

By 2017-18, subject to successful consultations and a Mayoral decision to proceed, Pimlico, Vauxhall and Oval will have been connected to the full network and the following further locations will have been added: Acton, Belgravia, Bloomsbury, Camden Town, Clerkenwell, Ealing, East Acton, Farringdon, Harrow Road, Kings Cross, Park Royal, Portland Place (for Oxford Circus), Regent's Park, Shepherds Bush, Swiss Cottage, Victoria and White City. Other locations will be added later.

#### We are fixing London's most dangerous junctions

Most serious bike and pedestrian injuries and deaths occur at junctions. We are making radical and transformational changes to London's most frightening and dangerous road junctions, removing roundabouts and replacing Sixties gyratories with two-way roads, segregated cycle tracks and new traffic-free public space.

Of the 33 worst junctions, 11 have been or will be finished this year – Tower, Blackfriars, Parliament Square, Elephant & Castle, Spur Road, Lancaster Gate, Aldgate, Apex (Shoreditch), Oval, Vauxhall and Stockwell. A further six – Hammersmith, Highbury Corner, Westminster Bridge South, Swiss Cottage, Archway and Old Street – are in consultation or under construction, making the total more than half of the 33.

The remainder – Kew Bridge, Woolwich Road, Rotherhithe Roundabout, Borough High Street/Tooley Street, Bow Roundabout, Great Portland Street Gyratory, Kings Cross, Lambeth Bridge North, Lambeth Bridge South, Marble Arch, Nags Head, St Paul's Gyratory, Stratford Gyratory, Surrey Quays, Wandsworth, Waterloo Imax and Woolwich Road/A102 - will roll out over the next few years. Dozens of smaller junctions, including those along the Superhighways, are also being remodelled to make them safer. Both the Superhighway and junction programme are the product of immense and grindingly detailed work from dozens, at the peak hundreds, of TfL staff who are the unsung heroes of London's cycling transformation.

#### We have started to transform suburbs into 'mini-Hollands'

We have awarded a total of £90 million to three outer London boroughs, Waltham Forest, Enfield and Kingston, for dramatic and wholesale change which places around the UK will want to copy. Enfield and Kingston have made excellent starts on their schemes and Waltham Forest has already completed its first schemes. They will be transformational for everybody in the boroughs concerned and we pay tribute to the immense political commitment shown by the leaders and officers of Enfield, Kingston and Waltham Forest councils.



Cycle Superhighway 5 © Transport for London

#### We have made lorries safer

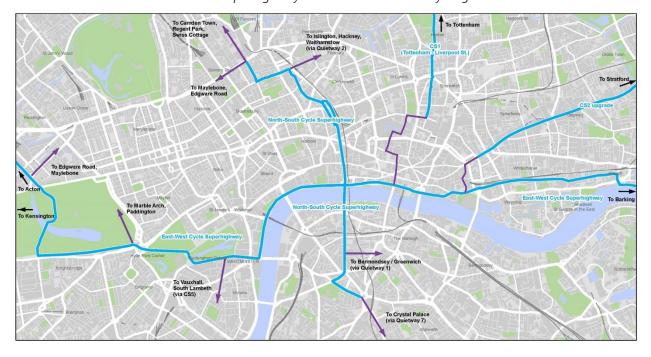
HGVs account for a vastly disproportionate share of cyclist deaths. We have introduced Britain's first Safer Lorry Scheme, requiring all lorries in London to fit special mirrors and sideguards to protect cyclists, and have achieved 97 per cent compliance. We are proposing to strengthen the scheme by requiring all operators to retrofit an extra cab window so they can see cyclists, and will use City Hall planning powers to dictate safe routes and the safest-possible vehicles.

We are lobbying hard in Brussels to require new radical "direct-vision" cabs in new lorries. This is being fought by the Road Haulage Association, whose chief executive, Richard Burnett, says: "We doubt if London has the power to impose such a requirement as EU law sets out the specification parameters for vehicles travelling across Europe."

#### We are working on a cross-London Quietway network

We are delivering cycle routes on London's matchless network of low-traffic back streets, parks and waterways. Quietways are designed to appeal to non-cyclists as well as existing cyclists, providing quieter routes away from main roads. They also include orbital routes between outer London town centres, to target trips that are currently being made by car.

How the East-West and North-South Superhighways will connect with the cycling network





MAYOR OF LONDON

Two routes should be completed this year. The first will run from Waterloo to Greenwich, including a new segregated cycle track behind the Millwall football ground. The second will run from Bloomsbury to Walthamstow, through Islington and Hackney.

A further five routes will be completed early next year, including new, safe and quiet connections between to Barkingside, Clapham Common, Wimbledon, and Crystal Palace. Eventually the network will extend to all 33 boroughs.

#### We have further improved the world's best cycle hire scheme

We have expanded Santander Cycles to south-west London and the Olympic Park, and added more docking stations in the original central London area to cater for ever-growing usage. We have done a dramatically better sponsorship deal, up 45 per cent in absolute terms and 25 per cent in real terms, and have secured a partner committed to marketing the scheme. We have improved reliability and availability. The result has been usage that has broken all records.



Photograph © Blaze

#### We have improved cyclists' and other road users' behaviour towards each other

We have set up 'Operation Safeway,' two days a month of police action against bad behaviour by cyclists and motorists. Together with the original, month-long Safeway, it has been demonstrated that static, high visibility intensive traffic enforcement improves road safety. The new routes we are opening are attracting new kinds of cyclists, including more women and older people, reducing the testosterone level and gradually making cycling in London calmer.

#### We have made bikes and trains work together better

We are building cycle superhubs at major railway stations, including one for several thousand bikes at Waterloo. We have ended the bike ban on the Docklands Light Railway and successfully fought plans to prevent them being taken easily on Eurostar.

#### We have taught 75,000 children to cycle

Since April 2014, over £17m has been made available for the 33 London boroughs to deliver a range of soft cycling measures. These include residential, on-street and station cycle parking; cycle training (for children and adults); and Safer Urban Driving courses to reduce lorry, van and coach conflict with cyclists. 29,000 adults and 75,000 children have received cycle training through these programmes.

# PRIORITIES FOR THE FUTURE

#### Protecting the cycling budget

Cycling accounts for only 4 per cent of TfL's capital spending (the £600 million being spent on upgrading one single Underground station, Bank, is equivalent to two-thirds of the entire ten-year cycling budget) yet delivers substantial transport capacity with a favourable benefit-to-cost ratio. The next mayor should pledge to at least maintain the current level of spending, and preferably to increase it.

#### Improving the Quietways

The Quietway programme is the only 33-borough strand of the infrastructure programme and is crucial to bringing safe cycling routes to every part of London. Quietway routes run on lower-traffic side streets, almost all of them part of the 95 per cent of roads owned by London's boroughs. They depend, therefore, on agreement and co-operation with the boroughs.

Quietways should have been quicker and easier than Superhighways and junctions to build. They are on much lower-traffic roads and involve far fewer significant physical interventions. But they have been slower and more difficult.

By next month, we will have delivered four segregated Superhighways on some of the busiest roads in London. But on the Quietways, despite more than three years' work, no route will be complete by the time the Mayor leaves office. This is partly due to flaws in the way the programme is run and partly to differences between some boroughs and TfL/City Hall over quality.

Quietways are supposed to be direct routes running on low-traffic back streets. They are meant to include filtering (bollards or other blockages) to reduce motor vehicle rat-running where necessary; full segregation wherever a route has to use a busy main road; and safe, direct crossings where the route has to cross a busy junction, road or gyratory. This is not always happening.

Some Quietway routes (in build and proposed) represent a step-change in quality from the old London Cycle Network. But most, so far, do not.

Some boroughs are coming up with good and ambitious designs. Real progress has also been made in several authorities traditionally criticised as hostile to cycling. But in some other places there is an unwillingness to make decisions which might create even very local or short-term opposition from anyone – which in practice means that little or nothing meaningful gets done.

There is, in particular, too little filtering. Many Quietway proposals would still see peak-time cyclists sharing often quite narrow roads with often quite high volumes of rat-running traffic. This might still be a bit better than cycling on an unsegregated main road, because there will be fewer large vehicles. But it will not deliver routes which can unlock the suppressed demand for cycling.

Some proposals consist largely of cosmetic improvements and other things which cost substantial sums while doing little to truly make a road better for cycling. Aesthetic improvements are an important part of the Quietway programme, but they cannot be all that is delivered on any scheme.

We continue to see old-school designs such as shared space or cyclists crossing main roads by having to ride up on to the pavement and share a toucan crossing. Such designs create conflict between cyclists and pedestrians and are not capable of coping with increasing numbers of cyclists (or pedestrians).

Most of the lower-quality proposed routes have not yet been approved or built (with a few exceptions) and there is still time to change them.



Walthamstow Village Mini-Holland scheme – an example of good design that works for all users Photograph © London Borough of Waltham Forest

#### Delivering the Quietways programme more directly

The Superhighways and junctions programmes have worked so well because TfL has its own dedicated teams for each project whose job is to deliver the schemes, to monitor contractors, to keep to timelines, to manage stakeholders and to anticipate problems. The people doing these are highly effective and dedicated. TfL does not get the credit it deserves for the huge amount of exacting, detailed work its officers have done behind the scenes to deliver the programmes.

The people at TfL doing the Quietways are just as good, but there are far fewer of them and they do not have the capacity to manage the programme as directly or as proactively. This team should be expanded.

At the borough level, many officers and members are equally keen and committed but all boroughs have taken massive cuts in resources and staffing. The role of Sustrans as delivery agent for the Quietways has added a further layer of complication to the process.

Without dedicated teams, many routine interactions simply take too long, problems which could have been nipped in the bud are not resolved quickly enough and 'Chinese whispers' build up between the various groups involved. A few unacceptable or wasteful schemes have also slipped through.

The next mayor should bring the delivery of the Quietways programme under the same team in TfL which is successfully delivering the Superhighways and junctions, and TfL should take overall responsibility for delivering the schemes.

That does not mean that boroughs would lose control over the schemes, or over their roads. Boroughs could still design the schemes, if they wanted – though they could also ask TfL to do it, as some already have. Borough officers and politicians would still have to approve every detail of the schemes to be built on their roads, and would have a veto on anything at any stage.

Public consultation and engagement would be run jointly by the borough and TfL, as it often is already. Boroughs could even still deliver the schemes, using their contractors, if they wished. But TfL (which is, after all, paying for the whole programme) would be more involved in managing the process and providing support.

There is a successful precedent for this sort of relationship. Almost a third of the new TfL-delivered Superhighways run, or will run, on borough or non-TfL roads. On the East-West Superhighway, for instance, Castle Baynard Street, Bridge Street, Parliament Square, Great George Street, Lancaster Gate and Westbourne Terrace are borough roads. Birdcage Walk, Spur Road, Constitution Hill, South and West Carriage Drives are Royal Parks roads. On Cycle Superhighway 2, Stratford High Street – the first fully-segregated section to open, in 2013 – is a borough road.

The clearest precedent is perhaps Cycle Superhighway 1 (City-Tottenham), which is very similar to a Quietway. It runs almost entirely on borough roads, quieter back streets owned by two councils, Hackney and Haringey.

This route is being delivered by TfL in partnership with the boroughs concerned. The Hackney section was designed by the council and delivered by its contractors; the Haringey section was designed and delivered by TfL; but TfL had overall responsibility for delivery in both boroughs. The route will not be perfect – a short section in Tottenham will likely be re-routed – but the delivery model has worked.



Photograph © David Holt

#### **Dealing better with local politics**

In local engagement events, it has become clear that some opposition to Quietway proposals is based on a misunderstanding of what a Quietway actually is. Many residents at the events thought that it is like a Superhighway, with segregated tracks and the rest. Work needs to be done by City Hall and TfL, in particular, to better manage stakeholder engagement and communicate the programme. This will be easier once we have completed routes to show people.

It is also our hope that when other councils see the fantastic and ambitious work being done by some boroughs they will understand what can be achieved for human streets, both physically and politically.

The Vision promised that each Quietway route would be "delivered as a whole, not piecemeal". But it may in fact be politically easier to do the necessary interventions on each route one at a time, rather than all at once. This needs to be actively and vigorously managed as suggested above, however, to prevent it all taking too long and to avoid the easy things being done while the difficult things are ignored.

In some neighbourhoods there may be merit in taking an "area-based" rather than a "route-based" approach. Instead of measures to create one safe, filtered route through an area, with a perceived (if not always real) risk of unbalancing other roads, a whole neighbourhood should be filtered and made safe for cyclists and walkers. This is not a panacea, however – it has been tried in some places already and can be even more controversial.

#### Working only with boroughs prepared to make real improvements

Boroughs will always, of course, have the final say over what happens on their roads. For our part, we don't – and shouldn't – seek perfection, merely acceptable quality. A route with one or two bad bits might still be acceptable so long as the rest is good and the bad bits aren't too bad.

But since it is our money we should also exercise more frequently our own right of veto - to remove a route, or part of a route, from the programme if we cannot achieve adequate quality on it.

That probably will mean that the Quietway network does not cover some boroughs. But we would rather work with a smaller number of boroughs committed to acceptable-quality routes than allow a mediocre route for the sake of a line on a map.

Not wasting money on poor routes will allow us to spend more on those which genuinely represent a change.



Photograph © Matt Brown

#### More Superhighways...

Quietways on back streets have sometimes been spoken of as potential alternatives to Superhighways on main roads. They are not. Even if we had completed more Quietways, side-street routes alone cannot offer the cycling capacity that London needs.

Bluntly, too, even if the delivery of programmes on borough roads improves, it will still probably be slower than that on TfL roads, simply because there are more political actors. The average Quietway route crosses three boroughs.

There is a need, therefore, for more Superhighways on TfL-controlled main roads (and borough-controlled main roads), many of which already carry high volumes of cyclists without adequately providing for them.

#### ...but not necessarily done the same way

All future Superhighways should be completely separated from traffic, unless there is very little traffic on the road they are using. But that does not mean that they need look like the East-West and North-South routes.

At the moment, the TfL approach is to heavily model schemes on paper, then build them in costly, heavily-engineered, difficult-to-change stone and granite.

That will probably still be appropriate in many places. But it is not the only way. It is already planned that routes like CS9 in Hounslow, on the often narrow A315, will use space-saving stepped tracks, where the cycle track is carried at a level above the carriageway but just below that of the pavement.

There is also scope for simpler forms of segregation, such as segregator wands of the kind we are using on parts of CS2; the "armadillos" being trialled by Camden Council on Torrington Place; or the techniques used in New York City, where bikes are often separated from traffic by planters, parked cars and the like; or even for trial segregated lanes using temporary materials, like the plastic barriers used to make the 2012 Olympic Route Network.

None of this would avoid the need to model traffic, re-plan junctions, change traffic signals, remove general road space, install cycle bypasses around bus stops and the like. (The Olympic Route Network, for instance, may have been installed in a matter of weeks – but it took two years to plan.)

But it probably would be cheaper and quicker. Most importantly, it might be more politically saleable because it will cause less disruption during the delivery phase, and can be done as a trial which can be changed or removed more easily if it does not work. For all these reasons, it may allow the Superhighway network to expand more quickly.

#### Where should the next Superhighways be?

The Superhighway routes to be completed this year are almost entirely in the eastern half of London. Large and relatively high-cycling areas of west, north-west and south-west London are not yet served by effective cycle routes.

The priorities for the next Mayor could therefore be (in all cases subject to consultation):

The three routes currently under consultation, all of which improve service to west or north-west London

- 1. West End Swiss Cottage (Cycle Superhighway 11). Includes measures to remove through traffic from the Outer Circle of Regent's Park by closing four of the eight gates to motor vehicles at certain times of the day, and to remove Swiss Cottage gyratory.
- 2. Stonecutter Street St Pancras (Extension of North-South Superhighway). Will link via Camden Council segregated/semi-segregated scheme to Outer Circle and CS11, allowing low-traffic or traffic-free cycling from Canary Wharf, Elephant & Castle and the City to Camden Town and Swiss Cottage.
- 3. Westbourne Terrace Acton via A40 (Extension of East-West Superhighway). Including the developments of link routes to North Kensington/ Ladbroke Grove, Westfield, Shepherds Bush, Acton, Ealing, Park Royal and the new Old Oak Common opportunity area.



Cycle Superhighway 2. Photograph © @bikesandbabies

#### Further routes now being designed and planned to be consulted on this year

The CS9 route from Hounslow to Kensington Olympia, via Brentford, Chiswick and Hammersmith is at an advanced design stage and a few months from public consultation. It includes new segregated tracks through the Hammersmith gyratory (already in consultation) and Kew Bridge junction. These are mostly borough roads, but both boroughs are ambitious for the scheme. It would link a large swathe of west London to central London and the Superhighway network, with a gap of about a mile between Olympia and the East-West route at Coalbrookdale Gate.

#### Extension of Cycle Superhighway 5 to Victoria and beyond

Public consultation on this route will start later this year. It uses quieter roads with little segregation and links to the East-West Superhighway at Hyde Park Corner. A link to the Superhighway at Spur Road could also be provided.

#### Easily-fillable gaps in the network

There is a gap of only around half a mile between the north-south Superhighway at St George's Road and the new Westminster Bridge South scheme, linking to the East-West Superhighway. A new section of segregated Superhighway along the upper part of St George's Road and Westminster Bridge Road would create invaluable links between south London and Westminster.

#### Diversion to Cycle Superhighway 8

The first-generation paint-only Superhighway, CS8, currently runs on Grosvenor Road, on the north side of the river, in order to get to Battersea and Wandsworth on the south side. Not only is it a long way round, but there is a nasty right turn at Chelsea Bridge in the northbound direction. The route ends at Lambeth Bridge roundabout, only slightly short of the East-West Superhighway at Parliament Square, but there is no room for segregated lanes past Parliament in Old Palace Yard.

The route should be diverted south of the river to make a shorter, better-segregated and more connected route. It would use Nine Elms Lane, on which there are plans for segregated tracks, and Albert Embankment to reach the new segregated tracks on Westminster Bridge and link to the East-West Superhighway and to Elephant & Castle as above. The paint lane would remain on Grosvenor Road.

#### Cycle Superhighway 4

Will run from the City to Woolwich, via Jamaica Road, Rotherhithe, Greenwich and Charlton.

#### Routes around Heathrow

Future extensions to CS9 could take the route further west to Heathrow, for the benefit of the tens of thousands of airport-area workers. There are already also mostly-continuous segregated cycle tracks on the A312 Parkway from near the Heathrow area to Yeading which could provide a useful orbital link in west London.

#### Links from CS2 along the Greenway

Wide areas of inner east London experiencing sharp population growth, including Hackney and West and East Ham, are served by the traffic-free Greenway cycle route which connects to CS2 at Stratford High Street.

#### A316 Superhighway

The London Borough of Richmond's mini-Holland bid included a proposal for a Superhighway along the A316, linking the CS9 route above to Sheen, Richmond and Twickenham. This could be an invaluable link to a high-cycling part of west London without adequate current bike route connections. There are already cycle tracks along much of this route which would need to be made continuous.

#### Bishopsgate and Gracechurch Street

There are extremely heavy volumes of cyclists in the City. A segregated Superhighway on these TfL-owned main roads running north-south through the City from London Bridge to Liverpool Street would link CS4 and CS1 and would be a useful compensation for the relative lack of north-south routes on Corporation of London roads.

#### Theobalds Road/ Clerkenwell Road/ Old Street

This is the single busiest cycling corridor in London. At the western end, almost 70 per cent of the westbound vehicles in the morning rush hour are now bikes. Various solutions are being optioneered by the three local authorities concerned, Camden, Islington and Hackney, to improve service for these phenomenal volumes without affecting the busy bus service on the road.

#### A23

After those roads where we are already installing Superhighways, among the TfL main roads with the highest cycling share is the A23 to Brixton, Streatham and Croydon. For much of the way it is a wide road with scope for segregated lanes. The stretch through Streatham was given motorway-like characteristics in the 1960s which blight the town centre and could now usefully be removed. Lambeth Council has also in the past expressed support for segregated tracks on its stretch of the A23, the Kennington Road.

#### A1/ Camden Road/ Seven Sisters Road/ York Way

As part of our Better Junctions scheme, we are already constructing, or proposing, new safer junctions at Highbury Corner and Archway. In between these two junctions, a third major intersection, Nag's Head, is also one of the 33 Better Junctions to be improved.

The works on all these junctions make it highly logical to improve the routes either side of them with segregated lanes, namely the A1 from at least Highbury Corner to Archway and the A503 Camden Road from at least Camden Town to Finsbury Park, with a possible link to proposed segregated tracks on the Seven Sisters Road. There could also be an extension of the North-South Superhighway up York Way from Kings Cross, once the Kings Cross junction scheme is complete. These are high-cycling areas with few alternative routes.

#### Upgrade of existing CS7

Parts though not all of CS7 (along the A24 from the City to Clapham, Balham and South Wimbledon) are also wide enough for segregated tracks and where possible, they should be installed on this extremely successful and popular route.

#### Other central London roads

As described below, both the main mayoral candidates have supported schemes for significant road closures in central London which imply further measures to reduce traffic there. Traffic reduction measures offer the opportunity for further cycle provision on several main roads.

#### Town centre projects

Suburban town centres are often major barriers to cycling, full of traffic and one-way schemes, difficult to cycle to and through, but also difficult to avoid. All three mini-Holland boroughs are planning transformational schemes for their main town centres. Several boroughs which were not selected for full "mini-Holland" status proposed important changes to their town centres in their bids. The following have been allocated funding, are now proceeding through the design stage, and should be delivered in the next mayoralty:

- Newham: removal of the Stratford gyratory
- Ealing: improvements in Ealing town centre to make it more pedestrian and cycle-friendly.
- Merton: improvements in Wimbledon town centre to make it easily accessible and crossable by bike.
- Richmond: further improvements in Twickenham town centre to make it more easily accessible and crossable by bike.

More such projects should be brought forward under the next mayoralty, since the benefits accrue to large numbers of non-cyclists as well as cyclists.

#### Infrastructure

Most cycling infrastructure should be functional, but occasionally "iconic" interventions are required. These are only justified when they meet a genuine need and are properly connected to cycle routes either side. The following projects fit within this category, are committed in the cycle budget and should be delivered in the next mayoral term:

Ramping of main H10 cycle access bridge to the Olympic Park (currently stepped)

Planning permission has been granted and construction will start in summer. This bridge will be part of the City- Hainault Quietway route and will offer a safe, traffic-free alternative to the Bow Roundabout for east-west cyclists.

#### Bridge across the North Circular near Ilford

To deal with severance issues created by the dual-carriageway road and the lack of a comfortable or safe way for cyclists to cross it to reach a large swathe of east London.

#### Bridge across the North Circular at Neasden

To deal with severance issues created by the dual-carriageway road and the lack of a comfortable or safe way for cyclists to cross it to reach a large swathe of north-west London.

#### Bridge across the railway line at New Cross Gate

The only access to much of south-east London at New Cross Gate is across one of London's busiest main-road railway bridges without space for any cycle facilities. The only alternative crossing is up a steep hill. A cycle and pedestrian crossing would open up a safe, quiet parallel route and exploit growing cycling in the area.

#### Other potential projects include:

#### Highgate railway tunnels

Opening the disused rail tunnels at Highgate station would link to the Quietway network (and the potential A1 Superhighway) and enable substantial numbers of cyclists to avoid a narrow, busy and dangerous section of the A1.

#### Former Kingsway tram subway

Between Southampton Row and the Victoria Embankment, beneath Kingsway and the Aldwych, runs a former tram subway disused for many years. Opened for cycling, it would connect the busiest cycle road in London, Theobalds Road, on which almost 70 per cent of rush hour traffic is cyclists, with the East-West Superhighway on the Embankment, avoiding four notoriously difficult junctions and gyratories. It would connect to Aldwych and Waterloo Bridge as well as the Embankment, allowing journeys between a wide area of the South Bank, the City and the West End. The southern end of the subway is currently used as the Aldwych underpass, which would need to be converted from motor vehicles.

#### Next moves on lorries

A disproportionate number of cyclist deaths involve lorries, and a morning rush-hour lorry ban is finding favour among mayoral candidates. Typically, however, only a handful of cyclist deaths a year involve lorries in the morning rush hour. In 2012, it was one of 14. In 2013, it was three of 14; in 2014 it was none of 14. In 2015, there were four cyclist deaths involving lorries in the morning rush hour, but this was untypical.

Any decision must also take into account the potential negative effects of a ban, including the safety of lorries flooding on to the roads mid-morning, the effects or more deliveries at night and the economic impact on time-critical industries, particularly construction. There is a danger, therefore, that a ban would be a distraction, consuming a vast amount of energy and political capital for a measure which would be fought tooth and nail and might never happen, delivering an unpredictable impact on road safety.



Photograph © Foundation Inns PLC

Our approach has been to promise things which we think we can deliver. The key reason why lorries kill cyclists is that they cannot see them. We have already consulted in principle on requiring lorries to retrofit extra windows and will expect to take this forward under the next mayor. The stage after that should be mandating complete "direct-vision" cabs with large windows and full-length glass doors.

#### **Developing electric bikes**

We are developing an electric bike hire scheme, separate from the main Santander Cycles scheme but operating similarly to it, in Crouch Hill and Muswell Hill. The scheme should launch in March next year. It aims to promote and popularise the use of e-bikes, where the rider gets assistance with pedalling from a small motor, and is particularly suited to this hilly area.

#### Less traffic in central London

After falling for many years, the number of vehicles in central London has started to rise again. Cheaper petrol, population growth, a buoyant economy, the construction boom, the growth of Internet shopping deliveries and the rise in the number of private hire vehicles have all contributed.

Central London traffic volumes are still well below where they were in 2000. So future cycle and pedestrian schemes in central London are not dependent – and should not be conditional – on a fall in traffic. Indeed, cycle schemes can in themselves induce traffic reduction, as the existing Superhighways are likely to do. But over the next decade, if the number of vehicles continues to rise, it will inevitably make it more difficult to deliver future cycle and pedestrian schemes. Both for this reason, and for London's general good, strategies will need to be developed to resume the downward trend in motor vehicles.

Measures to discourage traffic in central London have not been explicitly discussed by either of the main mayoral candidates. But such measures are implicit in some of the policies they have proposed. Both Zac Goldsmith and Sadiq Khan have promised to pedestrianise Oxford Street. Mr Khan also proposes to part-pedestrianise Parliament Square. The City Corporation wants to restrict traffic at the Bank junction to buses and bikes. It is likely that none of these ambitions, let alone all three, can be achieved with the current volumes of vehicles in central London.

The most obvious way to reduce traffic is a general increase in the congestion charge. However, technology now allows smarter approaches, with price increases targeted to particular routes, locations, vehicle types or times of day. In either case, the aim should be to discourage discretionary car journeys and encourage freight operators to consolidate their deliveries. Investment in freight consolidation hubs and "last mile" services would be given a substantial boost by such a move. Any move should be consistent with London's move to an ultra-low emission zone by 2020.

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#### Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

#### Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

#### Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

#### Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

#### Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

#### Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি কেপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

#### Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

#### **Arabic**

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

#### Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઇતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાદ્યો.

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