London Assembly Transport Committee

Submissions to Outer London Junctions investigation – from organisations

(December 2017)

WALKING & CYCLING AT OUTER LONDON JUNCTIONS

REPLY TO KEY QUESTIONS OF GLA TRANSPORT CTTE

SUBMITTED BY CBT (LONDON GROUP) COMMITTEE

Introduction

Before addressing the individual questions (1-13), the London Group would like to query the implied terms of reference of the GLA. Walking and cycling are clearly modes of prime relevance, not least in relation to accident rates, but should be extended to the needs of bus (and future tram) priorities throughout Outer London.

In simple terms, junction design should (a) allow safe passage of cycles through all improved junctions (b) permit ease of interchange on foot between radial and orbital bus services and (c) prioritise bus and cycle movements by the shared use of all-day and continuous segregated lanes on the approach to, and through,road junctions.

Our comments are influenced by the deplorable design of the A1-A400 Archway Gyratory Scheme Removal. Whilst technically just inside Inner London (Islington) it represents the sort of junction improvement which the GLA are no doubt anxious to address in Outer London. Here, also, the safety of the three P's (Pedestrians, Pedal cyclists and Public transport users) must be secured if significant modal shifts are to be obtained. We have also noted similar defects (dislocation of bus servicesetc) in two other gyratory removal schemes (Highbury Corner and Vauxhall) but have been unable to prepare any detailed comments within their relevant consultation periods.

Replies to Questions

Q1+2: The Inner London programme of 30 schemes of 1960s gyratory and one-way scheme removal is an object lesson of how **not** to achieve junction improvements. These involved multi-million pound investments and substantial dislocation of local traffic. Moreover, the detailed scheme examined by us signally failed to achieve any significant improvement in cyclist and pedestrian safety or convenience relative to the earlier inept scheme by the Ministry of Transport in 1963, concurrently with the HMSO Buchanan Report which implicitly condemned such "*private car prioritisation*".

Q3: Impossible to say how successful "*recent*" junction works have been in altering the balance between the use of private cars and other modes. In the case of the Archway scheme, TfL did not even bother to quantify local pedestrian movements and have seemingly not published any "*before and after*" statistics which their traffic engineering consultants might have been instructed to quantify. It is odd that the present interest groups involved in this exercise should be expected to express a view on the "*take up of walking*" other than by submitting largely anecdotal evidence.

Q4: Some "*low cost solutions*" which could be "*rolled out*" at junctions may be found in the (seemingly forgotten) 2014 Roads Task Force Report, commissioned by the then Mayor. These included advanced "*stop lines*" for buses and cyclists (low cost) and associated preferential traffic light phasing for cyclists, buses and pedestrians (higher cost). Such measures, applied equally to light-controlled, small roundabout and larger gyratory junctions, might well encounter political opposition from some Outer London Boroughs. These authorities have been notable, in the past, for objections to what they see as "*anti-motorist*" or "*reduced-capacity*" improvements such as approach bus lanes and "*all green*" pedestrian phasing.

Q5: The biggest barriers to walking and cycling in Outer London must be the relative lack of permanent bus lanes, continuous cycle lanes and lengthy "*walk distances*" between bus stops on connecting routes and services. The latter are especially difficult for the elderly, partially disabled and wheelchair-bound, above all in hilly areas. There seems little point in providing (at considerable expense) ramp access to all buses in Greater London if this is effectively unusable by the propensity of selfish motorists to park at bus stops and to obstruct ramped footway access at road junctions. Such pedestrian facilities are relevant to better "*bus to bus*" interchange.

To prevent such abuse of road space, both at improved junctions and between junctions, bus lanes need to be introduced on all major routes as continuous 24/7 kerbside facilities. It is not commonly recognised that legitimate loading and unloading may take place "*off peak*" (eg 10.00-16.00) within continuous bus lanes. This practice would be consistent with 2009 advice by CABE (Commission for Architecture and the Built Environment) which suggested primacy of kerbside access for deliveries, emergency services, the disabled and public transport vehicles. It would be helpful if the GLA Transport Committee would review such cogent advice.

Q6: More people would undoubtedly walk or cycle if there were better priority provision at roundabouts, cross-roads and any larger gyratory schemes. Bus lanes need to be more fully integrated with the overall cycle network. It is notable that, where bus lanes are virtually continuous (eg in Holloway Road between the two (erstwhile)gyratories at Archway Station and Highbury Corner) significant peak-hour cyclist use is made of the bus lanes with buses seemingly able to share the space without evident danger. This route is fortuitously part of the emergent strategic cycle network but it may reasonably be asked why such "*de facto*" provision is not more widely introduced and prominently featured on TfL maps and publicity material.

Q7: Changes to "*roads and paths*" to make them easier for pedestrians and cyclists might include the advanced stop lines and kerbside cycle lanes already mentioned, together with continuous perimeter provision for cycles on the pattern adopted in the Netherlands (illustrated below). Multi traffic lane provision for other vehicles within roundabouts ought to be reduced, if necessary by the increased diameter of central landscape areas. Broadly speaking, all footways ought to be widened to the recommended DfT*minimum* dimension of 2.0-2.5 metres and made continuous over

side road entries so as to make pedestrian movement easier and more secure and also to prevent obstructive car parking at the entrance "*throats*" of such junctions.

Q7 The changes to "*roads and paths*" to make walking and cycling easier (and safer) should include all the above, plus the imposition of a general 20 mph (30 km/h) speed limit, enforced by ANPR, within residential areas. This lower limit does not seem to have been widely imposed in Outer London and might well lead to the progressive removal of speed humps; which are an uncomfortable experience for cyclists and (older) bus passengers. Broadly speaking, something like the general creation of "environmental areas" (by the selective closure of roads to motor traffic) on the Buchanan Report model would favour walking and cycling. The overall objective ought to be the shortening of "*walk*" distances, compared with "drive" trips.

Q8: The conflict between pedestrians and cyclists, quite apart from the illegal use by cyclists of footways (pavements), is not confined to junctions. A common problem is the conflict between passengers boarding buses and cyclists following kerbside bus or cycle lanes. One solution favoured by TfL is that of "*floating bus stops*". This consists of looping a dedicated cycle lane *behind*bus stops and shelters, if there is footway space. It was a possible solution of cycle-pedestrian conflict encountered (but not resolved) by TfL in their Archway junction design. An alternative solution, adopted in Camden, is the provision of raised mounting blocks in front of bus shelters and *withinkerbside cycle lanes*; the ramp being a slowing device. This would appear to be entirely successful and also allows easy wheelchair access.

Q9: Junction improvements which help pedestrians, cyclists (and, in our view, also bus passengers) are commonly viewed as "*anti-motorist*" by outer boroughs such as

Barnet and Bromley. These "*zero-sum*" arguments ought to be countered by the identification of the positive advantages of reductions in road accidents and injury, in lessened noise and atmospheric pollution and significantly increased levels of service by public transport. There should also be a programme of *"shared surface*" schemes in key town and shopping centres on the LTN1/11 model.

Q10: The needs of the physically disabled, the hard of hearing and visually impaired would be met by all the above, plus the usual tactile surfaces and greater adequacy of signal phasing. What needs emphasising is that these measures would be complementary to the provision of priority seating for women and the immobile in public transport vehicles. Such prioritisation must extend to disabled (and elderly) ease of access to and from (and in between) all the available forms of public transportie buses, trams and trains, in precisely the same way that very welcome "*step-free*" access is being (expensively) introduced at many TfL stations.

Q11-13: The prioritisation of the various options for physical implementation must surely be largely matters for the GLA and TfL to decide in the light of future budgetary restrictions and the weight of political objections to many of the above proposals.

Overall Conclusions

Firstly, it seems to us slightly odd that the GLA Transport Committee are posing questions and canvassing our solutions with respect to matters which have been the subject of endless arguments and policy advice issued by central and local government over the past 30-40 years. The London County Council, the Greater London Council, as the previous London administrations, were responsible for a good deal of very useful and expert research on matters such as environmental management, traffic noise reduction, area parking control and comprehensive bus lane provision and the many other subjects to which we refer to in this submission.

Secondly, it seems to us somewhat bizarre that the present London-wide strategic authority hope to achieve what is effectively a seismic shift in travel choices by way of "*tinkering*" with isolated road junction improvement schemes in Outer London. Such a basic shift from polluting to more sustainable forms of travel will only come about with coherent policies and programmes, including (for example) localised low emission zones, the progressive densification of residential development and the more intensive coverage of bus (and tram) services throughout the entire area.

We trust that the above comments will be of assistance to the Committee and trust that we may have a detailed response to all the points which they address.

Chris Barker ([redacted])

Secretary

Campaign for Better Transport (London Group) 31 July 2017

Canal & River Trust

11/08/17

Ms Caroline Russell AM
London Assembly Transport Committee
By email: transportcommittee@london.gov.uk

Dear Assembly Member Russell,

WALKING & CYCLING AT OUTER LONDON JUNCTIONS INVESTIGATION

Thank you for providing the opportunity to comment on the London Assembly's Investigation on Walking & Cycling at Outer London Junctions. The Canal & River Trust has experience of working with the public sector to improve our network in order that it can provide alternative routes for pedestrians and cyclists that would otherwise have to negotiate major road junctions. We suggest that there may be further opportunities to do this across London. We also wish to contribute suggestions in response to the Assembly's wider questions about encouraging walking and cycling in Outer London.

The Trust is the guardian of 2,000 miles of historic waterways across England and Wales, of which approximately 60 miles are within our London Waterway. Our vision is that "living waterways transform places and enrich lives". We believe that supportive policies and investment that lead to the development of thriving waterways and waterside places are part of a virtuous cycle that can improve physical and mental health, bring communities together and also encourage economic development. Thriving waterways can improve wellbeing in many of the ways that the Mayor is hoping to achieve through the "Healthy Streets" initiative set out in his draft Transport Strategy.

Our London waterways, and their towpaths, form key parts of the Blue Ribbon Network across London. They provide important areas for recreation, health and wellbeing, biodiversity, sustainable transport (with a related air quality benefit), business, tourism, a focal point for cultural activities, a heritage asset and, increasingly, a space where Londoners are choosing to live.

The Trust's waterways form an important and strategic part of 15 boroughs north of the Thames and two Mayoral Development Corporations. They are adjacent to or within many of the London Plan's Opportunity Areas and the Mayor's Housing Zones, including Old Oak and Park Royal, Upper Lea Valley (including Tottenham Hale and Meridian Water), Lower Lea Valley (including the Olympic Park and Poplar Riverside), Docklands, Southall Gasworks, Kings Cross, Paddington, Alperton and Hayes. As planned, these sites alone amount to approximately 125,000 new homes and 250,000 jobs. There are excellent opportunities to use the waterway corridors to provide walking and cycling

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routes that connect these areas together but they will need to be improved if they are to support the significant increases in the number of journeys that will be made.

The Trust has been at the forefront of developing routes which respond to people's cycling and walking preferences. In a study commissioned by TfL, Steer Davies Gleave – 2012 Cycle Route Choice, the results of a stated preference exercise highlighted that having an off-road route available to cyclists has by far the greatest benefit (50% of commuters and 62% of leisure cyclists would change their route to use parks / green spaces).

The Draft Mayor's Transport Strategy (p21) acknowledges that, "despite reductions in the number of people killed and seriously injured on London's roads, road danger still ruins lives and puts many people off walking and cycling." It goes on to state (p47) in relation to "street environments that encourage walking and cycling", "Londoners need quiet, safe, accessible streets that are not dominated by motorised traffic and that are pleasant for walking, cycling and spending time."

We very much welcome the principles of "healthy streets" that the Mayor has set out, which align to our own aspirations, and we would be keen to work with the Mayor, TfL, boroughs and other partners to deliver these. However, we will suggest in our response to the Draft Transport Strategy that the concept is too narrowly focused on streets, when green and blue corridors and open spaces can (and do) play an important role in encouraging people to walk and cycle. We will encourage the Mayor to reflect this in his final Transport Strategy.

Of course, it is essential to increased modal shift from vehicular transport to walking and cycling to help to the Mayor address the current air quality and NO_x emissions situation in London, particularly around commuting and getting to and from school. Nationally, there are 1,384 schools and 200 railway stations within 500m of a canal or riverside walkway so there is huge potential to increase walked or cycled journeys by using towpaths. In June, the Trust responded to the Government's call for evidence regarding its public consultation, "Improving air quality: national plan for tackling nitrogen dioxide in our towns and cities". In response, the Trust highlighted a range of positive opportunities including greater use of (and investment in) towpaths in cities to increase cycling and walking.

<u>The role of the Waterways in encouraging walking and cycling, supporting recreation and sustainable travel and improving health</u>

We would suggest that canal and riverside paths in the Trust's care have significant potential to help deliver the Mayor's vision to increase levels of walking and cycling, particularly for shorter journeys or as part of a longer journey. To enable a fundamental transport modal shift, canal and riverside paths should be evaluated strategically to develop routing, signing and promotion with appropriate targeted investment to improve infrastructure from origin to destination.

In contrast to the central London towpaths which are largely paved and accessible to walking and cycling, there are huge opportunities to improve the towpaths in outer London to provide safe, traffic-free routes, ideal for less-confident and entry level cyclists and walkers, amongst others. TfL is already supporting, through its Quietway programme, delivery of a route from Paddington to West Drayton to provide a 2m wide, good quality surfaced route along with vegetation improvements, access point improvements and wayfinding. The Capital Ring and London Loop long-distance walking routes already make use of the towpaths in places.

There are additional existing towpaths throughout outer London boroughs, where travel is currently more car-dependent, that could, with fairly straight-forward intervention, be upgraded to provide good quality, safe, off-highway routes for cycling and walking. We highlight examples in response to the Assembly's specific questions, below. These images provide an indication of the quality of towpaths and barriers that exist in outer London.

High Street Yiewsley, Hillingdon

Horseshoe Bridge/Markfield Park, Hackney

Stonebridge Lock, Haringey

The Trust's waterways do not just provide attractive, traffic-free walking and cycling routes. Due to their character as linear parks, they make a valuable contribution to making London an attractive and liveable city, fulfilling the same beneficial impact that the Mayor recognised green spaces can have on people's mental and physical health in "A City for All Londoners". They contribute positively to the character of the city in a way that should be respected and enhanced by new development. The Trust considers that waterways can also be an excellent focal point for programmes and initiatives to improve community cohesion and active citizenship. Our volunteering and waterway adoption programmes aim to develop and deliver this benefit. The Trust's waterways are an important part of the nation's cultural heritage but they have a part to play in the current cultural environment too. The Trust is actively developing new works and projects connected to the waterways through its "Arts on the Waterway" programme with the Arts Council. By enhancing the contribution that waterways make in these areas, they can become more attractive places to walk and cycle and deliver greater benefits for people that do so.

There are also opportunities for our waterways to do more to support the Mayor's aspirations to reduce congestion by encouraging their use to transport freight by water, in certain circumstances and certain locations.

Key questions of the Investigation

The Trust has the following comments to make on how our waterways can help to address the issues raised by the specific key questions posed by the Assembly:

Previous junction improvements

Although our experience of working directly with highway junctions is limited, the waterways frequently interact with the road network. We would suggest that the Assembly considers the example of the Bow roundabout on the Tower Hamlets/Newham boundary in Bromley-by-Bow, where a new walkway has been added to provide a step-free, level link from north to the south of the junction on the east side. This uses the towpath so that pedestrians and cyclists do not have to negotiate the highway junction itself.
(See: https://www.adams-sutherland.co.uk/projects/bow-riverside/)

Spaghetti Junction (J6 of the M6 and A38) on the outskirts of Birmingham is another example of where the canal and the River Tame provide safe, off-road alternative routes for pedestrians and cyclists to cross the junction without having to interact with the highway junction itself.

The canal network in Birmingham makes it possible for those on foot or cycling to pass under the busy outer ring road and into the city centre without encountering traffic. This is possible from multiple directions when approaching the city centre.

The Lee Navigation, Grand Union Canal, Paddington Arm and Brentford Arm also provide similar underpasses for major roads within London.

Question 1: What lessons can be learned from previous junction improvements, either in London or in other cities?

From our experience, in locations where the highway interacts with the waterway, fully separated step-free routes connecting the highway/pavement to towpath level, can avoid the need to interact with traffic and minimise time delays involved in crossing junctions.

Opportunities to use the towpaths in a similar way at other junctions in outer London should be investigated, for example, the A406 North Circular Road at Angel Road/Advent Way in Edmonton. This may include where our waterways are close to major junctions, where a minor diversion may be preferable to negotiating the junction itself, e.g. the A12 East Cross Route at Mabley

Green/Here East/Hackney Marsh and the A406 North Circular Road at Abbey Lane (the canal aqueduct a short distance away could help to address severance here).

Legible and coherent wayfinding to assist pedestrians and cyclists in identifying a suitable route across a junction, including alternative options nearby (and timing of diversions), is an important part of any such alternative routing. The Legible London scheme in London and similar schemes in other UK cities have provided very successful wayfinding and these can be supplemented by other forms of wayfinding, for example, in the form of signs at eye-level, identifiable and recognisable logos and iconography (e.g. London Loop) or ground markings (e.g. painted lines/footprints/logos on the ground).

Suitable walkable/cyclable connections to surrounding destinations can help to ensure that the towpath is not just used to bypass a junction but can be an attractive way to complete a larger proportion of a journey.

Question 2: How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

The towpath level walkway at Bow Roundabout has provided a step-free walking and cycling option without having to interact with highway traffic at the junction, therefore road safety issues can effectively be eliminated where it is used. The local authority or TfL will be better placed to comment on the impact on incident rates at the junction itself since the walkway has opened.

Lighting has been installed for this walkway (this is not standard for all underbridge environments). Where it is appropriate, lighting may increase the level of use of towpaths.

Question 3: How successful have recent junction works been in increasing the take up of walking and cycling?

We have no data to provide on the impact of the works at the Bow Roundabout. However, we have provided data below from our experience of delivering improved towpaths in Birmingham, please see our response to question 6.

Question 4: Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

Again, with limited examples around junctions specifically, we have observed the following to be useful at relatively low cost:

- Effective and accessible wayfinding – Legible London signs, logos, painted links, ground markings.

- Paved routes/different surfaces to obviously direct walking and cycling around the junction safely etc.
- Lighting appropriate for the location– possibly including down-lighting reflectors, lower level/directional lighting.

Encouraging people to walk and cycle

Question 5: What are the biggest barriers to people walking and cycling in Outer London?

In our view improvements to the Trust's waterways encouraging people to walk and cycle more on our towpaths would help to address the following wider barriers to walking and cycling:

- Poor quality walking/cycling infrastructure, such as poorly surfaced off-road and highway routes, stepped access points (particularly for people with mobility issues, but also for the wider range of cycles including cargo bikes, access with prams/pushchairs).
- Inadequate/lacking/unclear physical wayfinding and/or a lack of on-line wayfinding information.
- The severance, diversion or unattractive nature of some direct routes.
- Safety – road traffic risk, especially for cyclists and for pedestrians crossing roads and junctions.
- Safety – personal safety risk and theft of possessions including bike theft.

We recognise that there are a variety of potential additional barriers to people walking and cycling, particularly relevant to Outer London, including:

- The distance/time to destination, particularly into central London. Providing attractive routes and facilities that enable people to link into the public transport network should be a key aspiration.
- The physical ability of some people, especially where terrain or topography is challenging, may not allow them to walk or cycle long distances, if at all.
- Lack of provision of shower facilities at workplaces for those cycling a long distance.
- Concern about lack of cycle maintenance facilities, inconvenience of punctures etc.

Question 6: What would enable people to walk and cycle more in Outer London?

54km of towpath improvement works undertaken in Birmingham under the Department for Transport's Cycle Cities Ambition programme and also supported by Greater Birmingham and Solihul Local Enterprise Partnership and Canal & River Trust has resulted in significant uptake in cycling on the towpaths. The improvements included path surfacing and widening, access point improvements and wayfinding. Full results of the DfT's project monitoring study will be published later this year, however initial findings have shown an increase in cycling use over two years between 2013 and 2015 of up to 52% in some locations following the improvements. This short

video outlines feedback from users and local representatives on the improvements and how it encourages them to cycle:
https://www.youtube.com/watch?v=OrzztquvsCQ

We believe there are plenty of opportunities to improve environments in outer London to encourage walking and cycling, not all of which need to be costly. Many of these measures are already being improved and developed, and this trajectory should be supported on a continuing basis. The Trust is keen to play our part in this. The following points indicate measures that are relevant to our waterways.

Policy:

- We suggest that the Mayor's Transport Strategy should recognise that green and blue corridors and open spaces can deliver many of the benefits of his "healthy streets" initiative, with appropriate investment.
- The Trust will provide input to the production of Local Cycling and Walking Infrastructure Plans (LCWIPs).
- We suggest that policies and programmes should aim to develop connectivity at a local/strategic level with other blue/green routes and off-road routes, building on the Greenways and Quietways networks, parks and other blue/green assets.
- The London Plan and boroughs' local plans should recognise the importance of delivering improvements to infrastructure and facilities through new development; good design which improves the waterway environment and increases natural surveillance, and enabling connection with the waterway on foot or by cycle.

Improvements to walking and cycling infrastructure:

- Good quality walking and cycling infrastructure, including surfaced off-road routes: The network of routes needs to be expanded and developed to provide a consolidated and holistic network to be able to provide a viable alternative to and enhancement to the public transport network. This will require focused partnership working with public, private and charity sectors. The Trust's waterways provide great strategic connections on largely flat terrain, and we would hope to be able to continue to improve the quality of these routes through ongoing support from the Quietway programme, Section 106 and Community Infrastructure Levy funding, Local Implementation Plan funding and other funding streams. Good quality routes include level, tactile surfaces of suitable width, and removal of obstacles eg barriers to cycles, trikes, cargo bikes, mobility aids, prams and pushchairs (as referenced in the Draft Mayor's Transport Strategy, p49). Selecting a towpath surface that remains usable throughout the year is really important. In Birmingham, there has been a very obvious uplift in cyclists using the canal network during the winter months after the works had been completed.
- We consider that there are likely to be opportunities to use our towpaths to deliver a River Lee Quietway, a Quietway along the Grand Union Canal main line from Brentford to Bulls

Bridge (Hayes), and an extension to the current Paddington to West Drayton Quietway project to Uxbridge.

- Access improvements – accesses to our towpaths are varied with some ramped and some stepped access of varying standards. We would hope to be able to improve access points and remove barriers where possible to facilitate access for cycling and disability groups, within the constraints of our sometimes limited land ownership and a historic network including listed structures. It is key that access to walking and cycling routes connect holistically to the public transport network and in our experience investment in access points that connect to public transport result in high levels of use.

Wayfinding improvements:

- Walking and cycling routes need to be legible and well-signed to give confidence to those not familiar with them or using them for the first time (visitors and new walkers/cyclists). We encourage continued roll-out of the Legible London wayfinding scheme throughout outer London, and along our towpaths, to provide a consistent and recognisable sign set. Use of logos and icons, e.g. Thames Path, London Loop, Capital Ring, Quietway logos, is also a very effective way to promote routes and provide directional information without excessive signage. Walking and cycling times should be included.
- In many places people can be in close proximity to our towpaths without knowing they are there, so signage from the local highway environment to towpath entrances should be improved, not just signage on the towpaths themselves. There should also be better connectivity with wayfinding from other routes, to improve the network offering.
- Good maintenance of route wayfinding is required, e.g. replacing missing signs promptly and removing graffiti. A review of existing route signage would be helpful to improve sometimes patchy sign coverage.
- Improvements to online mapping, routing and information on existing routes with regular updates should also be sought.

Safety and better environments:

- Towpaths are traffic-free environments and therefore offer an opportunity for inexperienced cyclists to learn and gain confidence in cycling away from vehicles and navigating junctions. Walkers and cyclists can benefit from easy-to-follow paths, away from traffic noise and fumes. Promotion of our towpath routes could help to encourage those who are less confident to walk and cycle.
- The quality of the environment is a key factor in how attractive a space is for pedestrians and cyclists. It can affect safety (and the perception of safety) and visual appeal. Improved natural surveillance can be provided by well-designed developments and, on our network, boat moorings and increased on-water uses. As the number of people using a particular route increases, so too does the perception of safety. In appropriate areas lighting may help to improve safety and can be considered on a case-by-case basis, with the support of the local authority.

- Where crime does occur on a walking and cycling route it is important that it is tackled by the police to avoid repeat events and a negative reputation for the area / route.
- Good quality, well-signed access points also add to a feeling of safety and allow higher visitor numbers to improve natural surveillance.
- Towpath environments should be seen as both a destination as well as a route, and the environment should encourage people to dwell and enjoy their environment as well as passing through it. Place-making has a key role to play here and our various adoption and volunteering programmes can be very successful in improving environments and encouraging local community ownership of a towpath area, along with other funded community projects. Provision of seating, shade, art/culture and the availability/accessibility of facilities, for example, can add to place-making in appropriate areas.

Bike facilities supporting convenient cycling and inclusion of wider groups of potential cyclists:

- Connectivity of walking/cycling routes to public transport, availability of cycle facilities at transport nodes, including bus stations / stops (e.g. parking/storage, hire schemes, maintenance etc) and the ability to take bikes on public transport could all help to encourage people to make walking and cycling part of their journey.
- Expanding bike hire schemes, including to locations well connected to the Trust's waterway network, and including a variety of types of cycles, could help to encourage new groups to try cycling.

Softer measures/behavioural change/support:

- The right type of advertising and promotion of cycling, including how pedestrians and cyclists should "share the space" through images, role models and signage can help to create an environment that is open to a wide range of users.
- Organised walks and events, including group walks, group cycles, walking/cycling bus for children, can help to introduce new people to walking and cycling and build confidence.
- Companies should be encouraged to promote walking and cycling and provide the facilities to enable it.
- We would also support expansion of formal walking routes for example the London Loop, Capital Ring, Lea Valley Walk more widely across the network, and consider that improved access to online information about routes, events, advice and mapping apps could encourage people to walk more.

These approaches are supported by the findings of the Attitudes Toward Walking 2015 (TfL/Future Thinking, May15) study, referenced by this investigation. The survey found that the improvements/factors noted that would encourage Londoners to walk more, of most relevance to the waterway environment, and chosen by 60% or more of respondents, included:

- Knowing that walking was as quick as the bus or tube for short journeys
- Provision of new and improved walks for pleasure

- Improved safety and security, for example better lighting, safer crossings
- If there were improved walking routes that gave greater priority to pedestrians to main destinations
- Provision of better information on walks and places of interest in the local area
- Cleaner pavements and streets
- Easier ways to cross streets
- Provision of better wayfinding information such as more and better signs and maps.

The survey also found that women are significantly more likely to be encouraged by improved safety and security, better information on walks and places of interest in the area and knowing how long it would take to walk to the destination. We would expect that this would be the case for off-road routes as much as highway routes. Making improvements to wayfinding, lighting, natural surveillance through increased usage and better design of waterside developments would help to address these concerns and encourage more women to walk and cycle.

We are already working in partnership with the GLA at various levels, Mayoral Development Corporations, TfL, London Boroughs, The Royal Parks, Lee Valley Regional Park Authority, Port of London Authority, the Environment Agency, Sustrans, and many others. Sport England see the Trust as one of a very few strategic bodies that could help scale up proven interventions to use sport/activity as a tool for addressing social cohesion and health inequalities. The Trust and our waterways support events and volunteering opportunities, and we support a spectrum of activity from walking, through to cycling and a wide range of other physical activities that are possible on our network, such as jogging, canoeing, angling, paddle-boarding and rowing.

The Trust is keen to continue to engage with the Mayor and the GLA throughout the preparation of the London Plan, the Mayor's Transport Strategy, other associated strategies to ensure that London's waterways are seen as an important part of the public realm that can help the Mayor to deliver many of his aspirations. We are well-placed to support the delivery of the Mayor's walking and cycling strategies. We are keen to build on the relationship we have begun with Will Norman, Walking and Cycling Commissioner, and our partnership with TfL to develop and deliver a more broadly defined Healthy Streets agenda, including Quietways, and other cycling and walking development programmes as these are formulated.

Please don't hesitate to get in touch with us if we can be of further assistance.

Yours faithfully,

Steve Craddock MRTPI
Planning Manager – London, South & South Wales
[redacted]

From: EBTC Huw Jones <[redacted]>
Sent: 08 August 2017 10:47
To: Transport Committee
Subject: London Assembly investigation : Walking & Cycling at Junctions in Outer London

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sirs

London Assembly investigation: Walking & Cycling at Junctions in Outer London

Further to the above consultation/request for comments, Elstree and Borehamwood Town Council's Transport Forum has submitted several comments previously to TfL over a period of several years (at least since 2011) on the issue of the Roundabout at Stirling Corner on the A1, especially in view of the impact upon cyclists and walkers at this junction. Whilst the Forum lobbied TfL with some success to reduce the approach speed to the junction to 50mph and in reinstating the traffic lights, the difficulty for pedestrians and cyclists in crossing the road is quite extreme (and some have stated "nearly impossible") due to the speed and volume of traffic at this location. On behalf of the Forum which is made up of residents, local politicians, bus operators, train operators and other parties with transport interests (including Hertfordshire Constabulary), I would be grateful if this comment could be included in the investigation being carried out in order to assess whether improvements could be made.

I hope that this is helpful.

For ease of reference, I am blind copying this email to those on the Transport Forum distribution list.

H R O Jones
Town Clerk
Elstree and Borehamwood Town Council
[redacted]

From: Anoop Shah [redacted]>
Sent: 11 August 2017 18:50
To: Transport Committee
Subject: Outer London junctions - submission from Harrow Cyclists

Dear Sir/madam,

I am responding on behalf of Harrow Cyclists, one of the local borough groups of the London Cycling Campaign. This response is informed by practical experience of our members of using junctions in Harrow and other parts of London on different modes of transport, as well as liaison with the council for many years on a number of road schemes, which has enabled us to hear their reasoning for doing things in a particular way.

Are there lessons to be learned from previous junction improvements?

Many junctions in outer London were designed solely with the consideration of motor traffic. Many of the roundabouts in Harrow have no pedestrian crossing facilities, and signal controlled junctions have no pedestrian phases. Recent schemes to remodel these junctions have tried very hard not to reduce motor vehicle capacity, on the basis of modelling vehicular traffic (but these models ignore walking, cycling and modal shift). This means that even where dedicated pedestrian facilities have been provided, they are staggered and far from pedestrian desire lines, causing significant delay to pedestrians. There are no junctions in Harrow with adequate segregated cycling facilities, although a few have shared areas and toucan crossings.

A particularly worrying new scheme is planned in Wealdstone. At Goodwill junction in Wealdstone, on the corner of the Kodak development (Harrow View/Headstone Drive), Harrow Council is proposing to rebuild the junction with additional lanes for cars, no space for cycling and inconvenient staggered crossings for pedestrians. The aim of the design is to maximise capacity for motor traffic, despite it being on a key desire line for cycling (TfL's Strategic Cycling Analysis, June 2017) and on the proposed cross-Harrow cycle route. They now propose that cyclists should take a long detour through the Kodak site to avoid the junction, ruining the directness of the route. A proposed walking and cycling bridge from Tudor Road to the Kodak estate has also been cancelled.

Despite these expensive 'improvements' to many junctions in Harrow over time, congestion is as bad as ever, the cycling rate is the lowest in London, the cycling casualty rate is the highest in London and the prevalence of diabetes (caused by physical inactivity) is the highest in London.

The key lesson to be learned is that junctions need to prioritise walking and cycling, and previous schemes were not fit for purpose.

How can we enable more people to walk and cycle?

Build a mini-Holland in every borough. The mini-Holland competition provided a political impetus to previously car-centric boroughs such as Harrow to envisage an ambitious people-friendly transformation of the borough. The Waltham Forest mini-Holland is excellent.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

Build high quality cycling infrastructure, protected from motor traffic, restrict through motor traffic in minor roads and build safe, convenient pedestrian crossings. Ensure there is tight quality control of all road schemes at TfL so that poorly designed schemes are not funded.

How do you get all road users on board?

TfL and the boroughs should engage with the public and communicate that better walking and cycling facilities will encourage people to walk and cycle, and therefore reduce congestion. Long term benefits on congestion, pollution and public health should be strongly emphasised. It may not be possible to gain support from all stakeholders, as commercial interests (e.g. motor industry and privatised bus companies) may not benefit from modal shift away from motorised modes, and motorists may have experienced inappropriate privileges in the past (such as excessive allocation of scarce road space for parking or overtaking). However TfL

must not degrade good schemes in response to such opposition. TfL must act in the overall interest of London, which means supporting the wishes of the vast majority of the public who want safer roads and better cycling facilities.
Thanks you for considering our views.

Yous sincerely,

Anoop Shah
Secretary, Harrow Cyclists

www.hounslowcycling.org
@hounslowcycling

11 August 2017

Response to London Assembly Investigation into Walking and Cycling at Outer London Junctions

Hounslow Cycling Campaign is happy to provide our response to the London Assembly investigation into Walking and Cycling at Outer London Junctions.

Hounslow Cycling Campaign (HCC) is the borough group of the London Cycling Campaign. We have over 150 members in London Borough of Hounslow.

Our response is based upon some "case study" junctions in the borough however we could have provided more examples.

The common theme for all of the examples is the junction design has only considered convenience and capacity of motor vehicles rather than people on foot or on bikes.

The junctions therefore represent a barrier for people walking or cycling; either physical barriers with no crossings or multiple crossings required for short section of roads, or psychological barriers created by the intimidation of high volumes of motor traffic.

With these barriers blocking access to local amenities and centres of employment, it is not surprising that many in outer London choose to drive rather than walk or cycle because the environment has been designed solely for motor traffic rather than people walking or cycling.

Kew Bridge Junction (A205)

Location

Kew Bridge Junction consists of the A205 (S Circular) junction with the A315.

Traffic Volumes

31,008 average daily motor traffic movements in 2016 measured at Department for Transport CPID 6898.

Are there lessons to be learned from previous junction improvements?

Several years ago, Network Rail installed barriers to protect the parapet of the bridge over the railway line at Kew Bridge Station. These barriers take up space on the footway and have created a gully for litter and rats.

This is illustrative of the priorities at the junction – a bridge and passengers on trains have protection from motor vehicles but pedestrians and cyclists do not.

How can we enable more people to walk and cycle?

Kew Bridge Junction forms a barrier for both north-south and east-west cycling. Kew Bridge itself has "shared use" footway for both pedestrians and cyclists but this gives up at the northern end of the bridge and cyclists are either forced onto hostile roads with high volumes of traffic or continue cycling on the footway.

The barrier of Kew Bridge dissuades:

- People who live north of the river cycling to visit the UNESCO World Heritage Centre at the Royal Botanic Gardens, Kew.
- People who live east or west of the junction cycling to visit the local amenities on Chiswick High Road or the local employment centres at Chiswick Business Park or the Great West Road in Brentford.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

Kew Bridge Junction is a classic example of how motor vehicle capacity has been prioritised over people getting around by bike and on foot.

There is no crossing by Kew Bridge station and bus stop to reflect the "desire line" of people using the station. Instead, people using the station from the east of the junction must use a crossing 50m from the station which requires 4 separate light phases to cross 30m of road.

Understandably, many people ignore this crossing and cross directly in front of the station, dodging through slow moving traffic.

How do you get all road users on board?

Walking and cycling can be improved at the junction by:

- Providing protected cycle paths on the A205 and A315
- Improving pedestrian crossings to reflect natural desire lines and reducing the number of phases required to cross the road.

These improvements will almost certainly affect motor traffic however the junction has been designed primarily for motor traffic so these changes can be viewed as rebalancing the junction for all users.

The volume of traffic using the junction could be reduced by banning right hand turns from southbound traffic on the A205 onto Lionel Road South and closing the west end of Wellesley Road to westbound traffic. This would encourage traffic to use arterial roads.

Apex Corner Junction

Location

The Apex Corner junction is the junction of the A316 Twickenham Road / Great Chertsey Road and Hampton Road West and East (A312).

Traffic Volumes

51,321 average daily motor traffic movements in 2016 measured at Department for Transport CPID 58201 (A316) and 27,359 average daily motor traffic movements in 2016 measured at Department for Transport CPID 6895 (A312).

Are there lessons to be learned from previous junction improvements?

The A316 Apex Corner Hampton Road West junction with Twickenham Road. This was listed in the 2012 assessment of 503 sites that were reviewed for potential improvements as part of the original ‘Better Junctions’ programme and was categorised as Green – that is, one of the 'top' 100, most urgent junctions selected.

Junctions were prioritised following a detailed assessment of collision history, cyclist and pedestrian numbers, customer feedback and engaging with stakeholders.

Unfortunately, the amount of funding available was reduced and this scheme was pared down to less than a third of these junctions being included in the reformed programme. TfL have already done an assessment on this junction and deemed it requiring of action.

How can we enable more people to walk and cycle?

The junction of a road that is to all intents a motorway, with a local road that is of dual carriage capacity, encourages fast traffic speeds. Traversing the roundabout on foot via the extensive network of zebra crossings is tortuous, and the speed vehicles can reach at these crossings due to the position could easily be fatal.

There are no cycle lanes around the roundabout, and the choice is therefore to take multiple chances of interaction with fast moving motor vehicles, or to be a vehicle and take the lane. Conversely in busy traffic the roundabout can be easier to negotiate than in light traffic as the traffic speeds are lower; but motorist frustration is then high and disputes and near misses/shunts are common.

Attempting to join the roundabout from the Twickenham road A305 is daunting enough in a motor vehicle; it is terrifying as a cyclist to be trapped by the barriers and prevented from deciding to use the footway instead.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

There is unused space at the centre of the roundabout which could if funds allowed be used to introduce a more direct method of crossing the roundabout for pedestrians and people on bikes, reducing the number of crossing they make and their interactions with motor traffic. Pedestrian lights or traffic lights could also be used to control the local traffic flow which often suffers due to incidents and diversions from the A316.

The local road, A312 is currently a dual carriageway and so space could be used to create segregated cycleways leading up to the junction, which if then gave access to the hub in the centre of the roundabout would greatly increase the safety of the junction. There is also land available to the south west of the junction that could be given over to improvements.

How do you get all road users on board?

Hounslow Road, Hanworth and A312 Uxbridge Road.

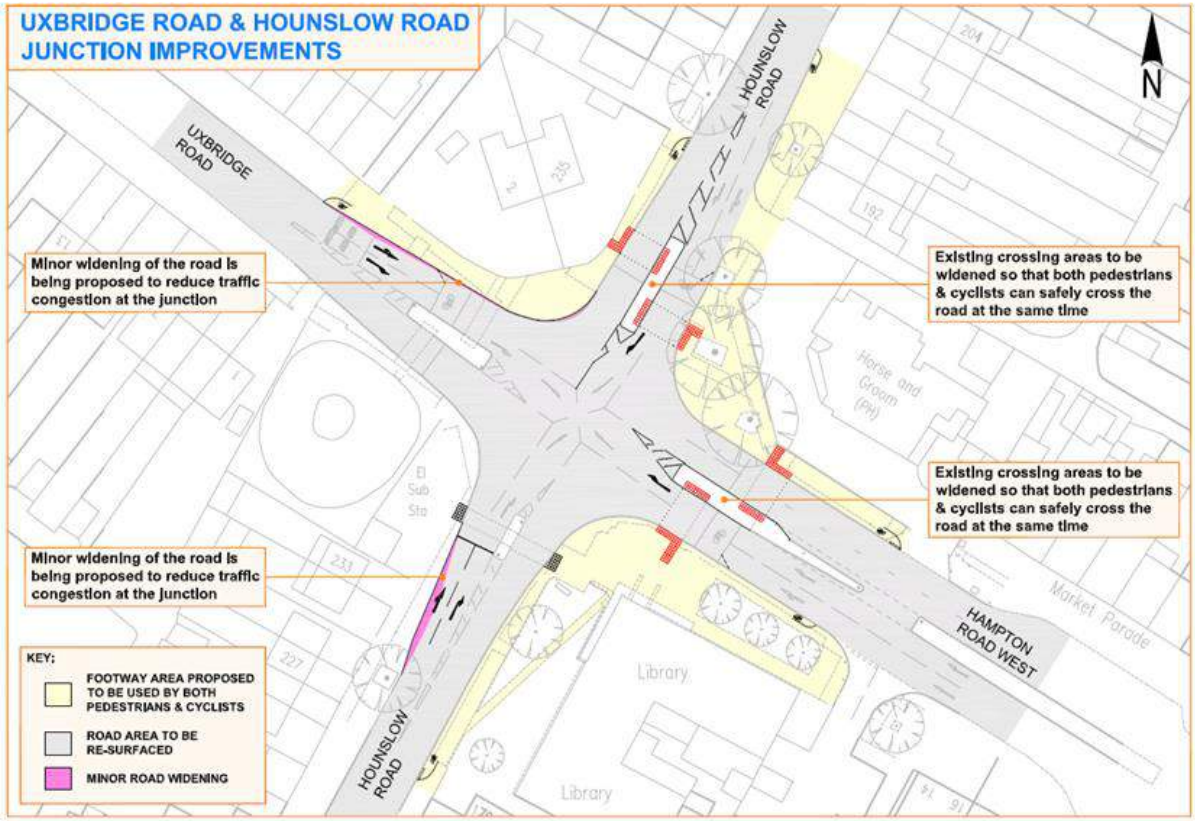
Location

Junction of A312 Uxbridge Road with A314 Hounslow Road.

Traffic Volumes

28,620 average daily motor traffic movements in 2016 measured at Department for Transport CPID 46922 (A312) and 11,407 average daily motor traffic movements in 2016 measured at Department for Transport CPID 46924 (A314).

Are there lessons to be learned from previous junction improvements?



In 2011 TfL made plans to increase the number of vehicle lanes at this junction and for the pavements to become shared use.

Road markings suggest that cyclists should leave the carriageway and continue on the pavement. The width of the pavement at the crossing on the northern arm of Hounslow Road is not wide enough to accommodate both cyclists and pedestrians.

Three of the arms of the junction have staggered crossings that take a long time to cross as a pedestrian. The crossing over the southern arm of the Hounslow Road is not staggered but is not controlled either, so it is unclear when it is safe to cross.

The new traffic islands are hard to cycle over as they have two sharp right angled bends. Despite what the TfL plans say, it is not possible to walk over the island if someone is cycling over the island in the opposite direction.

In 2016 Hounslow Council installed a partially protected south-bound cycle lane on the northern arm of Hounslow Road (there are issues of people driving on the cycleway and on the surrounding pavement). However, the route through the junction with the A312 (Uxbridge Road) is not obvious.

Further down the southern arm of Hounslow Road is Oriel Academy school. The mainly residential area on the northern arm of Hounslow Road should connect easily for people walking and cycling. Despite the council drawing up plans for cycleways on Hounslow Road, they have not coordinated with TfL to make a clear link through this junction.

On the southern arm of Hounslow Road, there is some indication that cyclists should rejoin the carriageway but the road design does not reflect the safety issues for those undertaking this manoeuvre.

For those travelling north on the southern arm of Hounslow Road, the cycleway simply stops:

How can we enable more people to walk and cycle?

Make clear continuous routes where rights of way are clear and unambiguous. This is likely to involve physical separation between pedestrians, cyclists and other vehicles.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

Junctions that have an all green phase for pedestrians and then an all green phase for cyclists, rather than the staggered designs currently used would be a clear indication that pedestrians and cyclists are not regarded by road designers as less important than other road users.

If provision is to be made for cyclists off the carriageway, they should not simply be deposited on the pavement. There should be a clear protected cycleway with clear cycle-specific traffic lights so that it is obvious how to navigate the junction safely.

This junction is hostile to cycle through, particularly if turning right. However the way in which provision has been made off the carriageway is confusing and unconnected, meaning it can easily be regarded as ‘the nuisance on the pavement’.

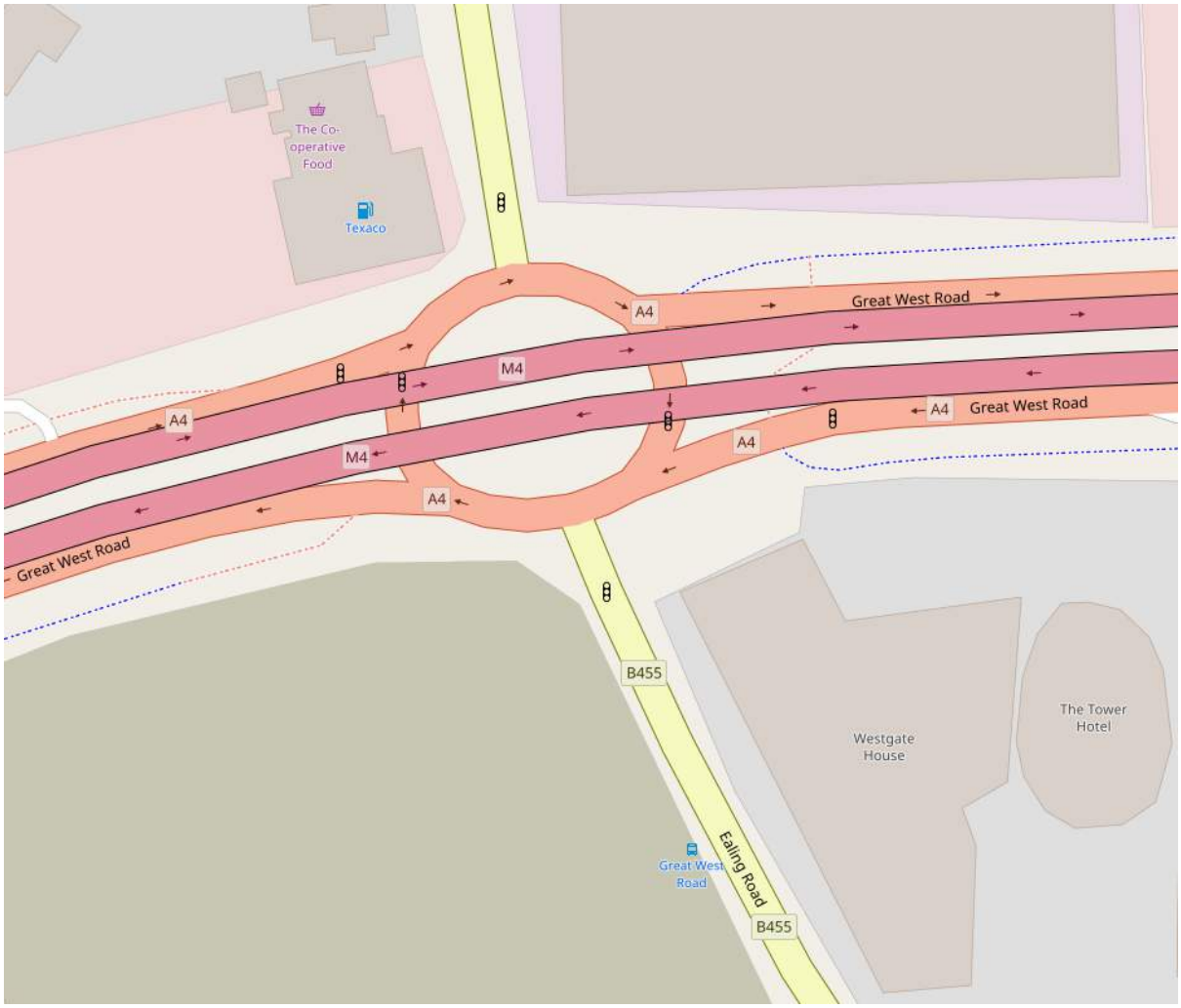
How do you get all road users on board?

Make it clear routes for pedestrians and cyclists and clear priority. Any ambiguity means that vulnerable road users feel unsafe and are unlikely to choose to walk or cycle this way again.

A4 Great West Road and B455 Ealing Road

Location

Junction of B455 Ealing Road and Great West Road.



Traffic Volumes

39,582 average daily motor traffic movements in 2016 measured at Department for Transport CPID 36120 (A4).

Are there lessons to be learned from previous junction improvements?

The junction of the Great West Road (A4) and Ealing Road was trying enough at the best of times, but recent "improvements" have made the situation far more dangerous for people cycling. The junction was turned into a roundabout some years ago, and the space for this so-called "improvement" came out of pedestrian and cycling right-of-way.

The ring of the roundabout cuts straight into what used to be part of the Great West Road cycleways, and little care was taken for the effects of this. The bidirectional cycle tracks at one point simply dumps riders out into oncoming motor traffic on the A4.

On most of the rest of the Great West Road, damaged or removed sections of this heritage cycling route can be circumvented by crossing to the opposite side of the road, but at Ealing Road the destruction was total: the only way to pass this junction is either to dismount (something many disabled riders are unable to do) or to mix with motor traffic at 40MPH.

11 August 2017

Addendum to Hounslow Cycling Campaign's
Response to London Assembly Investigation into Walking and Cycling at Outer London Junctions

Hounslow Cycling Campaign is happy to provide our response to the London Assembly investigation into Walking and Cycling at Outer London Junctions.
Hounslow Cycling Campaign (HCC) is the borough group of the London Cycling Campaign. We have over 150 members in London Borough of Hounslow.
HCC encourages cycling in the borough by providing a program of led rides (16 in 2017) and promoting and facilitating 'Bikeability' cycle training.
This is an additional paper drawing attention to two junctions in the North West of the borough one of which we consider to be the worst in West London. Our response is based upon some "case study" junctions in the borough however we could have provided more examples.

The common theme for all of the examples is the junction design has only considered convenience and capacity of motor vehicles rather than people on foot or on bikes.
The junctions therefore represent a barrier for people walking or cycling; either physical barriers with no crossings or multiple crossings required for short section of roads, or psychological barriers created by the intimidation of high volumes of motor traffic.
With these barriers blocking access to local amenities and centres of employment, it is not surprising that many in outer London choose to drive rather than walk or cycle because the environment has been designed solely for motor traffic rather than people walking or cycling.

www.hounslowcycling.org

@hounslowcycling

Jolly Waggoners Roundabout (A312 and A4)

Aerial photograph showing 'Bell Mouthed' entries to roundabout

Location

North West Hounslow the roundabout forming the junction at the A312 Parkway and A4 Bath Road

Traffic volumes

Over 30000 average daily traffic movements.

Are there lessons to be learned from previous junction improvements?

1. A bell mouth has been created at the entrances to the roundabout and the width of the road increased to four southbound lanes which increases the speed of vehicles entering the junction and increases the difficulty and danger for pedestrians and cyclists crossing the road.
2. Recently sight screens have been erected to reduce night time glare. Those sight screens block the view or pedestrians and cyclists crossing the road. The ability to 'See and be seen' has been severely reduced
3. Metal fencing on the central reservation form an additional hazard to pedestrians and cyclists crossing the road.


4GutterCleaning.co.uk

How can we enable more people to walk and cycle?

As can be seen on London Cycling Guide 6, The Waggoners roundabout is the cycle route to London Heathrow airport and is regularly used by foreign tourists on bicycles.
All but the bravest pedestrians and cyclists and Local residents tend to avoid the junction.
Hounslow Cycling have asked Transport for London and the London Borough of Hounslow to improve this junction and have brought the junction to the attention of MPs, Members of the London Assembly and Local Councillors who all agree it is dangerous embarrassment.
Prior to a major fatality, providing a suitable, safe crossing of The Parkway would bring those users back to this facility and return it to its intended use.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

Provide suitable, safe crossing of the dual carriageway for pedestrians and cyclists.
There is a subway connecting the NW to the SW corners and a toucan crossing between the SE and SW corners of the junction but there is no provision whatsoever, safe or otherwise on the NW and NE and the NE and SE corners.
Provide clear and appropriate signage and road markings to direct pedestrians and cyclists.

How do you get all road users on board?

This is the worst and most dangerous junction for walking and cycling in Hounslow. In the past there have been better facilities for pedestrians and cyclists but those have been cut away in favour of provisions for motor vehicles and increasing the speed of motor traffic entering the roundabout and on to The Parkway.

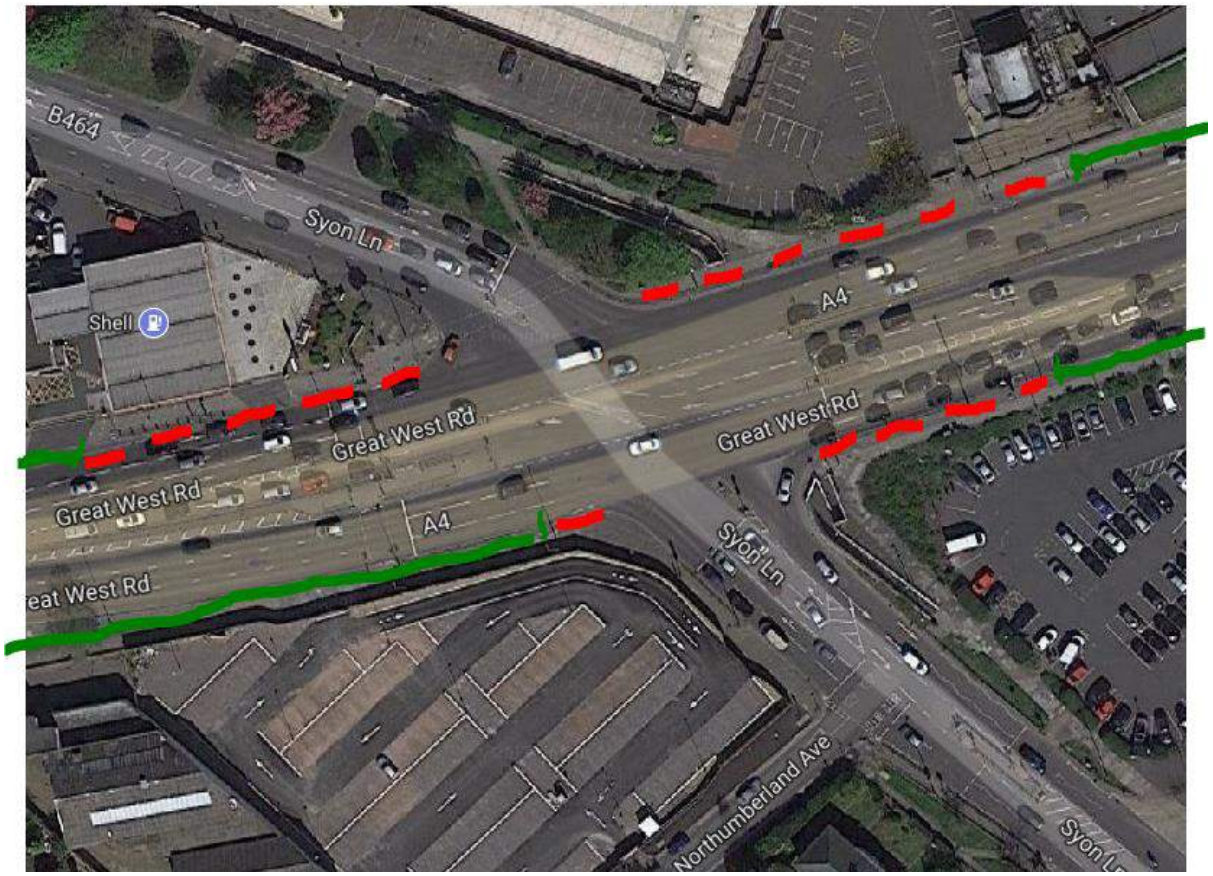
HCC is not usually in favour of subways but in this case there is a proposal for a complex of underground warehouses on the adjacent Rectory Farm site. Should that occur it would simple to incorporate subways to provide safe facilities for pedestrians and cyclists crossing from both the NW and NE and the NE and SE corners. Those subways should be provided. Prior to that there is a case for providing 'intelligent' computer and situation controlled traffic signals on all arms of this junction.

Despite the junction being redesigned for, almost exclusively, motor vehicle traffic intelligent improvements will keep the detrimental effects to motor vehicles to a minimum and changes can be viewed as rebalancing the junction for all users.

Photo 1 Shared path with St furniture NW of junction
Photo 2 Shared path closer to junction NW
Photo 3 The missing crossing to the NE of the Parkway
Photo 4 The missing crossing from the NE corner of the Parkway

Extract from London Cycle Guide 6

Gillette corner junction (A312 and B454)



Aerial photograph showing 'Bell Mouthed' entries to the junction and over written in red where cycle paths have been squeezed out

Location

North East Hounslow the junction between Syon Lane the B454 and A4 the Great West Road

Traffic volumes

Over 25000 average daily traffic movements.

Are there lessons to be learned from previous junction improvements?

1. Cycle and foot paths have been squeezed out in favour of bell mouthed entrances to the junction.
2. Pedestrians and cyclists have been disadvantaged and a safe crossing on the north side has been forgotten.
3. An advanced stop line on the Westbound carriageway hasn't been installed and cyclists are intimidated by 'left hooking' cars turning in to Syon Lane.
4. Street furniture has been over specified forming hazards to pedestrians & cyclists

Photo 1 End of cycle path NW of junction
Photo 2 Footpath and street furniture NW of junction
Photo 3 ASL and more street furniture NW of Junction
Photo 4 Footpath, phone box and redundant area NE
Photo 5 Street furniture, bus stop and Homebase land
Photo 6 As above SE of junction
Photo 7 The scary junction looking N
Photo 8 SE Looking W with left hook lane on left
Photo 9 Looking at SW corner with hazardous kerbs and disappearing cycle lane

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How can we enable more people to walk and cycle?

The Great West Road is currently the primary East, West route in West London and was originally provided with an adequate well designed foot path and separate cycle path. The Cycle path and in many places the foot path have been compromised by car parking, entrances to domestic driveways, entrances to petrol stations and the forming of 'bell mouthed' entrances to the B454 to increase the speed of vehicles turning.
Hounslow Cycling have asked Transport for London and the London Borough of Hounslow to improve this junction and have brought the junction to the attention of MPs, Members of the London Assembly and Local Councillors who all agree it is an embarrassment.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

Providing a suitable, safe crossing on the North side of the B454 for pedestrians and cyclists, removing the redundant street furniture and providing sufficient space for walking and cycling would make the junction less intimidating, bring more people back to this facility and return it to its intended use.

There is a subway connecting the NE to the SE corners and a toucan crossing between the SE and SW corners of the junction but there is no provision whatsoever, safe or otherwise on the NW and NE and the NW and SW corners.

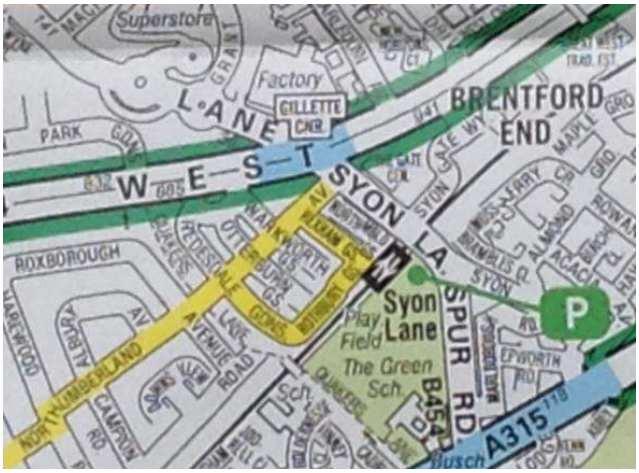
How do you get all road users on board?

This is a particularly intimidating junction for walking and cycling and one of the worst in Hounslow. In the past there have been better facilities for pedestrians and cyclists but those have been cut away in favour of provisions for motor vehicles and increasing the speed of motor traffic entering the junction.

There is space that can be made available for pedestrians and cyclists with little or no effect on motor traffic.

1. Removing the redundant street furniture on the NW corner. Acquiring a sliver of land from the petrol station on the NW corner and rationalising the entrances and remodelling the bell mouths form the entrances to the petrol station.
2. Removing the redundant street furniture on the NE corner, repositioning the protected telephone box, and widening the pavement to provide an adequate space for pedestrians and cyclists.
3. Acquiring a sliver of land from Homebase on the SE corner (low value space is available) and rationalising the foot path and cycle path and providing adequate space for pedestrians and cyclists.
4. Rationalising the foot path and cycle path and providing adequate space for pedestrians and cyclists on the SW corner. Removing the sharp kerb at the entry to the cycle path. Providing appropriate and clear road markings and signage.
   This corner has the least pedestrian usage and space for cycling could be improved.
   All this could happen with little effect on motor traffic and would make the facility for pedestrians and cyclist more enjoyable and less intimidating.

Despite the junction being redesigned for, almost exclusively, motor vehicle traffic intelligent improvements will keep the detrimental effects to motor vehicles to a minimum and changes can be viewed as rebalancing the junction for all users.



Extract from London Cycle Guide 6

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London Assembly
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10 August 2017

Dear Transport Committee,

BRENT COUNCIL RESPONSE TO LONDON ASSEMBLY INVESTIGATION INTO WALKING AND CYCLING AT OUTER LONDON JUNCTIONS

Brent Council welcomes research into walking and cycling at Outer London junctions to increase the take up of both walking and cycling. However it is fundamental that junctions are not viewed independently but as part of the whole network of walking and cycling routes. To see a rise in the number of Outer London residents walking and cycling, there not only needs to be an investment in infrastructure but more importantly, a shift in approach towards these modes.

The London Assembly's Transport Committee posed a number of questions related to walking and cycling at junctions. These are responded to below.

Previous junction improvements

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

Junction improvements can be costly and alone are not enough to increase walking and cycling. More people will cycle if they have a good, comfortable, safe and direct route to where they want to go of which good junction design is only a part.

Engagement with Brent residents identified that the provision of segregated cycle facilities would be desirable and would encourage as well as enable more people to cycle safely. However it is not always possible to achieve this within the available highway boundary to ensure that the vehicular capacity required is also available.

2. How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

Brent provides information for Transport for London (TfL)'s Traffic Accident Diary System (TADS) on new schemes and also continues to monitor accident data, but does not routinely monitor success in terms of numbers of pedestrians and cyclists. Where accidents increase, Brent would consider the causes and whether any further mitigation measures are required. The majority of Brent schemes are not confined to individual junctions but seek to improve an area or corridor. As well as safety, all junction improvements undertaken have had to also take into account bus journey times and congestion, and any changes to signal design have had to be approved by TfL. Any review that has taken place has focussed mainly on ensuring that the accident record improves or at least retains the status quo.

In order to be able to cycle more, people also need access to a bicycle. The Santander cycle hire scheme does not extend to the borough for those who are unable or do not wish to own their own bike and Brent have been liaising with TfL on extending this scheme into the South Kilburn regeneration area to further encourage cycling.

3. How successful have recent junction works been in increasing the take up of walking and cycling?

Brent Council has not undertaken any monitoring of recent junction works to date to be able to determine their impact on increasing the take up of walking and cycling. However, Brent Council is in the process of implementing a monitoring programme across the borough network to determine the type, volume and spot mean speed of vehicles and cyclists at set locations on the network. At present data is being collected to enable a baseline to be established.

4. Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

Potential low cost solutions will vary depending on the existing road layout and cause of accidents. Brent Council installed light emitting diode (LED) vehicle actuated signage on primary routes with a high number of accidents involving powered two wheelers recently. It is yet to be seen how effective this has been in reducing accidents.

Encouraging people to walk and cycle

5. What are the biggest barriers to people walking and cycling in Outer London?

As part of developing Brent's Cycle Strategy, a consultation was undertaken which included asking people why they did not cycle. The following (in order of popularity) are all reasons given for not cycling:

- Concerned about road safety
- Poor environment to cycle in
- Concerned about crime (including bike theft)
- Used to cycle but not for a long time
- Have no access to a bike
- Poor facilities for cyclists at my destination
- Have nowhere to store a bike
- Health reasons
- My regular journeys are too long to cycle
- Have not yet learned how to cycle
- I don't enjoy cycling

A further consultation was undertaken when developing Brent's Walking Strategy. The following (in order of popularity) were cited as reasons for not walking:

- Poor quality walking environment (including pavements, walkway surface, lighting, crossings, bus roads)
- Concern about road safety
- Personal safety
- Concerned about crime
- My regular journeys are too long to walk
- Health reasons
- The weather
- I don't enjoy walking

In addition to these the following can also act as barriers to walking and cycling:

- Mindset
- Pollution (air and noise)
- Fear of getting lost
- Role of car as a status symbol

- Cultural reasons
- Opinion that walking/cycling are for those with no other choice
- Inconvenience
- Assumption that it takes longer walking or cycling than using other modes (this is the case in some instances)

6. What would enable people to walk and cycle more in Outer London?
The provision of better footways and crossing facilities would enable more people to walk but provision of infrastructure alone is not enough. New developments are often designed to incorporate walking and cycling through the latest design and provision of associated facilities, such as secure cycle parking, but enabling more people to walk and cycle does not mean that people will choose this option.

There needs to be a more holistic approach to planning with jobs and social infrastructure located close to homes thereby increasing the potential for walking and cycling. However, a lot of Outer London residents work in Inner or Central London and the distance of walking or cycling is considered too far.

In order to be able to cycle more, people also need access to a bicycle. The Santander cycle hire scheme does not extend to the borough for those who are unable or do not wish to own their own bike.

Segregated cycle ways are perceived to be safer as they are separate from vehicular traffic and could therefore enable more people to cycle. Provision of segregated cycle ways may enable people to cycle more in Outer London but is not enough to bring about a mode shift. There needs to be a change in attitude towards cycling for this to happen.

There also needs to be a better perception of safety in relation to both walking and cycling, possibility through an increased visibility of police/agency surveillance to deter criminal behaviour particularly at night/when it is dark.

Railway tracks, rivers and major routes (i.e. the A406 North Circular Road) act as physical barriers in some instances resulting in those walking and cycling having to take more convoluted routes to reach their destination. Enabling better direct access may increase cycling/walking.

7. What changes to roads and paths would make it easier of more appealing for people to walk and cycle in Outer London?
Routes need to have less traffic, be quieter and have better air quality to make walking and cycling in Outer London more appealing. There also needs to be crossing facilities provided at pedestrian (and cyclist) desire lines.

The physical environment needs to be improved to provide good quality walking surfaces and places where people feel safe to walk and cycle. Improved pavements and less street clutter would help create better space and a more attractive environment for walking. As a whole the public realm needs to be improved on primary cycling and walking routes.

The needs of different road users
8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?
Conflicts between pedestrians and cyclists are mainly behavioural/attitudinal in nature rather than physical conflict. However, a combined cycleway/footway can often create conflict between users as can cycling in parks (especially if at speed). Brent Council receives a number of complaints from older residents regarding cyclists using pavements.

Physical conflicts can occur on narrow footbridges over railways where cyclists do not dismount potentially causing issues with pedestrians using the bridge especially when pushchairs are involved.

Conflicts also arise when there is a two-way segregated cycle route which runs alongside a one-way road. Pedestrians often look at the direction of vehicular traffic on the road, not realising that the segregated cycleway is two-way and consequently do not look in both directions before crossing.

9. How might junction improvements that help pedestrians and cyclists affect other road users?
Junction improvements that include pedestrian and/or cycle crossing phases could potentially increase congestion as a whole and cause delays to buses, freight and other vehicular traffic if vehicles have to wait longer to progress through the junction. This would impact adversely on bus journey time reliability and could result in increased air and noise pollution. Congestion and delays could occur if road space is reallocated to pedestrians and cyclists at junctions.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?
As a minimum, junctions need to ensure that tactile paving, dropped kerbs and pedestrian crossing facilities designed for those who are deaf and/or blind are provided. Paved surfaces need to be even and street clutter needs to be removed. In addition, drainage needs to be improved at junctions to ensure water does not pool causing a hazard for those with visual impairments.

Implementation
11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists, and how could these be addressed?
One of the main challenges is obtaining funding to assess, design and implement any improvements to junctions. There also needs to be the political will within an authority to actively reduce residents' personal car use in order for any improvements to take place.

It is also vital to determine what would make the biggest difference for pedestrians and cyclists whilst still ensuring the other users are not adversely impacted. As part of this, route and network planning is key to ensure that improvements at junctions are tied in with wider improvements/changes to increase walking/cycling. This includes implementation of a cycle network.

12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?
There needs to be a holistic approach where improvements focus on all types of journeys as well as the location for improvement. There is little point prioritising certain areas of Outer London and just improving the junctions there without the associated infrastructure connecting these junctions or just focussing on journeys to a school/town centre by a certain mode. Spending should be prioritised to enable desired travel choices to be taken up alongside use of the private car to be reduced.

13. Is there a need for a bigger overall budget to improve junctions in Outer London?
In recent years the focus has been largely on implementing changes and infrastructure in Central and Inner London. This emphasis now needs to shift to Outer London which needs a lot of work to improve walking and cycling infrastructure and to make this a mode that people choose. Therefore, the allocation of funding should be concentrated on Outer London to ensure a useable London-wide cycle and pedestrian network is established that benefits residents and integrates with facilities already in place in Inner and Central London.

As part of this junctions should not be considered in isolation from roads/paths that link junctions. There is also little point in improving a junction for pedestrians/cyclists if the routes to/from the junction are not improved as well. People will not walk more just because a junction is easier to navigate if the footways either side are in poor condition or they do not feel safe walking in that area.

If further clarification is needed on any of the items raised, please contact Monica Li, Principal Transport Planner, on [redacted] or [redacted]. Thank you for consideration of these comments.

Yours sincerely,

Amar Dave
Strategic Director, Regeneration and Environment
Brent Council

GLA Transport Committee Walking and Cycling at Outer London Junctions Inquiry Call for Evidence

Croydon Council Officer Submission

Introduction

The Transport Committee's call for evidence begins:

> *'Each junction that has been improved through TfL's Safer Junctions scheme (previously called Better Junctions) required significant funding. Works on the Elephant and Castle gyratory for instance were budgeted at £24.4 million. Outer London covers a large area and has many more junctions than Inner London. This means that the approach taken in Inner London, investing large sums in a relatively small number of junctions, may not be cost effective.'*

Our understanding is that the Elephant and Castle gyratory project is as much about 'Place Making' and creating space for residing as it is about helping pedestrian and cyclist movement. The project 'reclaiming' a wasted island site and turning it into a peninsular where it suddenly becomes useable public realm. The Croydon Opportunity Area case study presented in this evidence indicates that with conviction and determination, high quality pedestrian and cycle crossings can be provided at major gyratories of the scale of the Elephant and Castle, for a fraction of the cost.

The evidence below perhaps questions the statement that Outer London has many more junctions than Inner London. In inner London the street and road network is probably more finely grained (more junctions in a fine grained network). What is perhaps correct to say is that in outer London there are more large junctions that are problematic for cyclists and pedestrians. In this evidence however we highlight that whereas in inner and central London the routes of cycling potential identified by TfL are many and varied, in outer London those routes of highest cycle potential are much more coarse grained and these lines of cycling potential could be used to prioritise junctions for investment. However, if used, there still needs to be a mechanism by which outer London can compete for funding against routes in inner London with high cycling potential and high current levels of cycling.

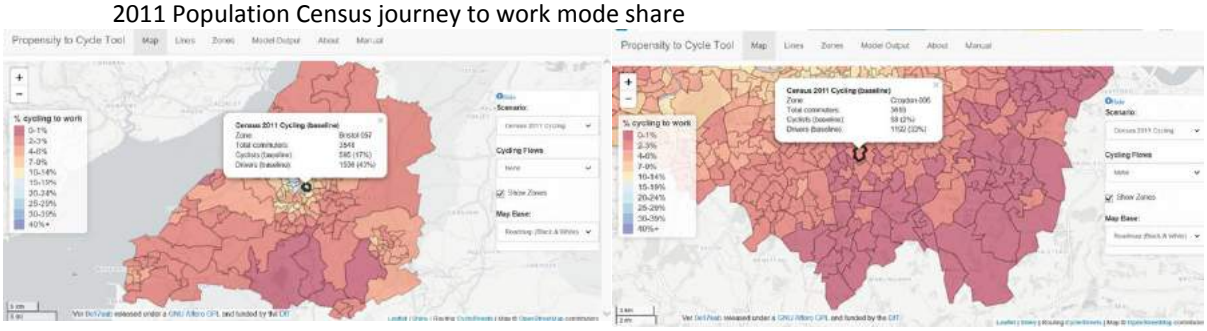
This evidence also highlights sections of the draft Mayor's Transport strategy showing that it is outer London that will be required to do the major part of the hard work to achieve the 80% sustainable travel mode share target proposed for London by the draft Strategy.

It is understood that the Transport Committee is gaining separate evidence on Fiveways. Hence Fiveways is not addressed in this Croydon officer submission.

Croydon and its Walking and Cycling Potential

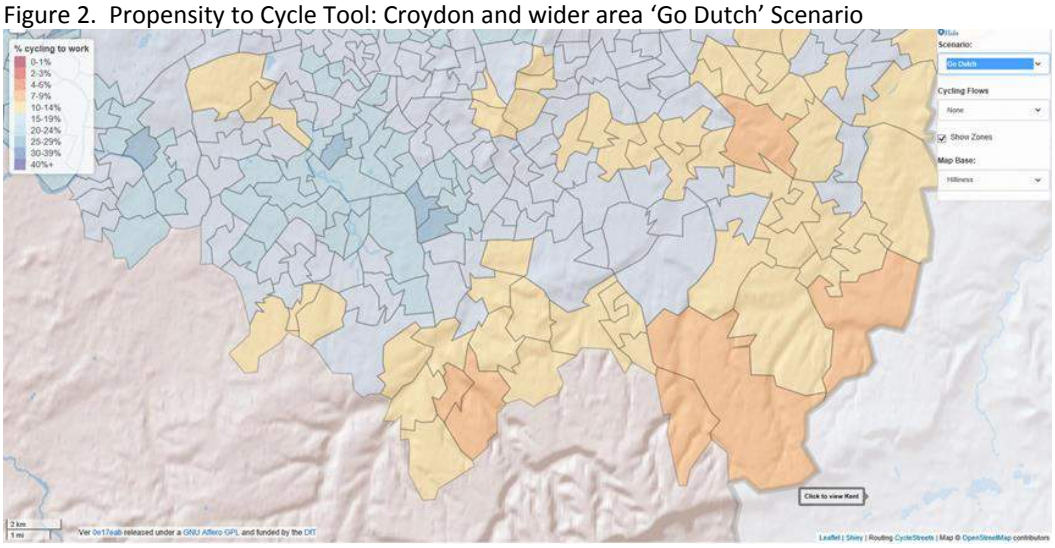
Croydon Borough sits in southern outer London. Its population is currently 387,000. Were it ouside London, it would be a city in its own right. Croydon is predicted to grow to the size of Bristol (population 450,000 and one of the ten 'Core Cities' in Great Britain) by 2036. When it comes to cycling, the comparison with Bristol ends. 2011 populaion census data indicates some areas of Bristol having a cycle to work mode share as high as 17%, whilst Croydon is generally 1%, a few areas managing 2%. TfL monitoring confirms that the Croydon cycle mode share has remained at 1% despite huge investment in a major cycle training programme in Croydon over many years and widespread school and workplace travel planning.

Figure 1. Propensity to Cycle Tool: Bristol and wider area and Croydon and wider area
2011 Population Census journey to work mode share



Croydon however has great cycling (and walking) potential due largely to the high number of short trips curently made by car. If we can help Croydon residents make these same journeys like the dutch do, then we could see areas of Croydon with cycle to work mode share of over 30% (Propenstity to Cycle Tool 'Go Dutch' journey to work scenario)

Figure 2. Propensity to Cycle Tool: Croydon and wider area 'Go Dutch' Scenario



TfL's research confirms Croydon as the London Borough with the greatest cycling and walking potential.

Figure 3. (Source: Analysis of Cycling Potential 2016, TfL)

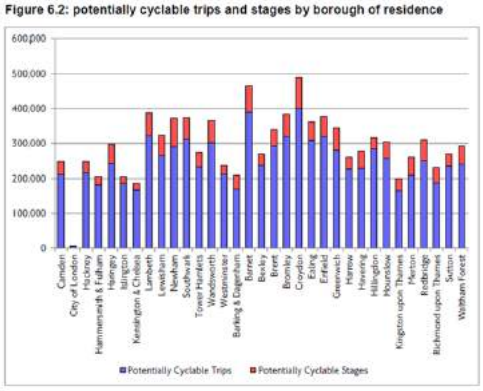
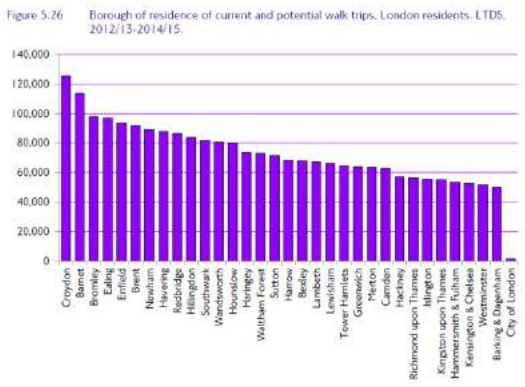


Figure 4. (Source: Travel in London Report 9, TfL)



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TfL's research also indicates that in inner and central London, the routes along which the greatest potential for cycling lie are numerous. However, in outer London they are much coarser grained. The same research indicates the routes of greatest cycling potential in Croydon cut through the areas where groups of residents with the greatest propensity to cycle live.

Figure 5 (Source: Strategic Cycling Analysis, TfL, 2017)

Identifying potential cycle demand

To identify broadly the kind of network London would need in order to attract new people to cycling, and to allow a wider range of trips to be cycled, data from the Analysis of Cycling Potential was routed through Cynemon.

The top 20 per cent of links for potential cycle demand were highlighted. This identified the cycling connections needed to provide for a large number of cyclable trips. This only shows potential demand – it isn't necessarily choosing the best route from a planning perspective.

The map in Figure I.2 shows much of the top potential cycle demand is on London's strategic road network. Analysis of origins and destinations shows 33 per cent of cyclable trips start or finish on major roads, while many more cyclable trips would be made using the strategic road network in spite of not starting or ending on it. This has obvious challenges when considering interventions that might unlock this demand.

Figure I.2: Roads and paths hosting the highest potential cycle demand

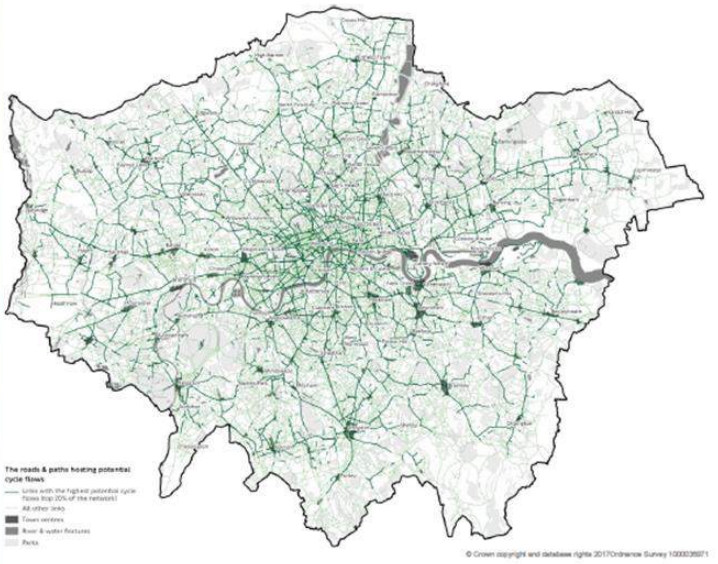

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Figure 6 (Source: Strategic Cycling Analysis, TfL, 2017)

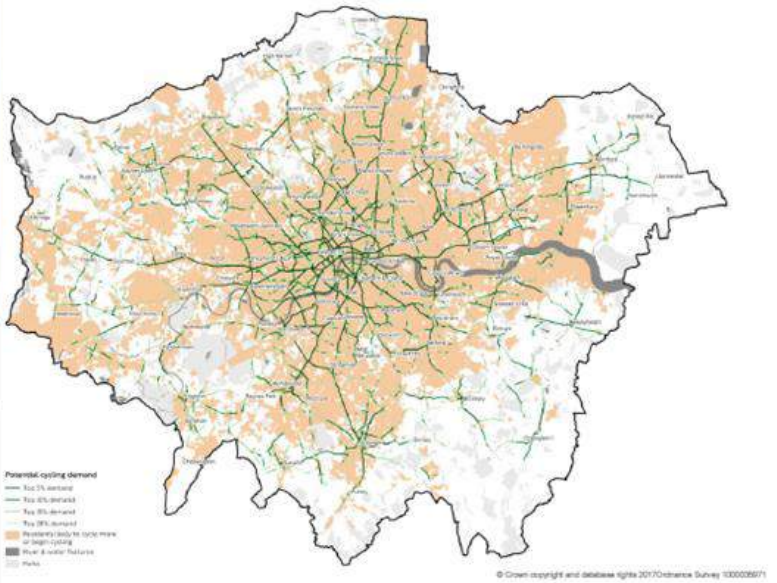
Figure 2.2 shows the top 20 per cent of busiest connections for potential cycling demand, subdivided into four categories.

It also shows areas where residents are more likely to cycle, or begin cycling.

This allows better understanding of which connections carry the highest numbers of cyclable trips, and where Londoners have a greater propensity to cycle. Connections with the greatest potential to enable cyclable trips can then be identified.

	Top 5% busiest connections (cyclable trips)
	5-10% busiest connections (cyclable trips)
	10-15% busiest connections (cyclable trips)
	15-20% busiest connections (cyclable trips)

Figure 2.2: Categorisation of potential cycle demand with high propensity to cycle areas



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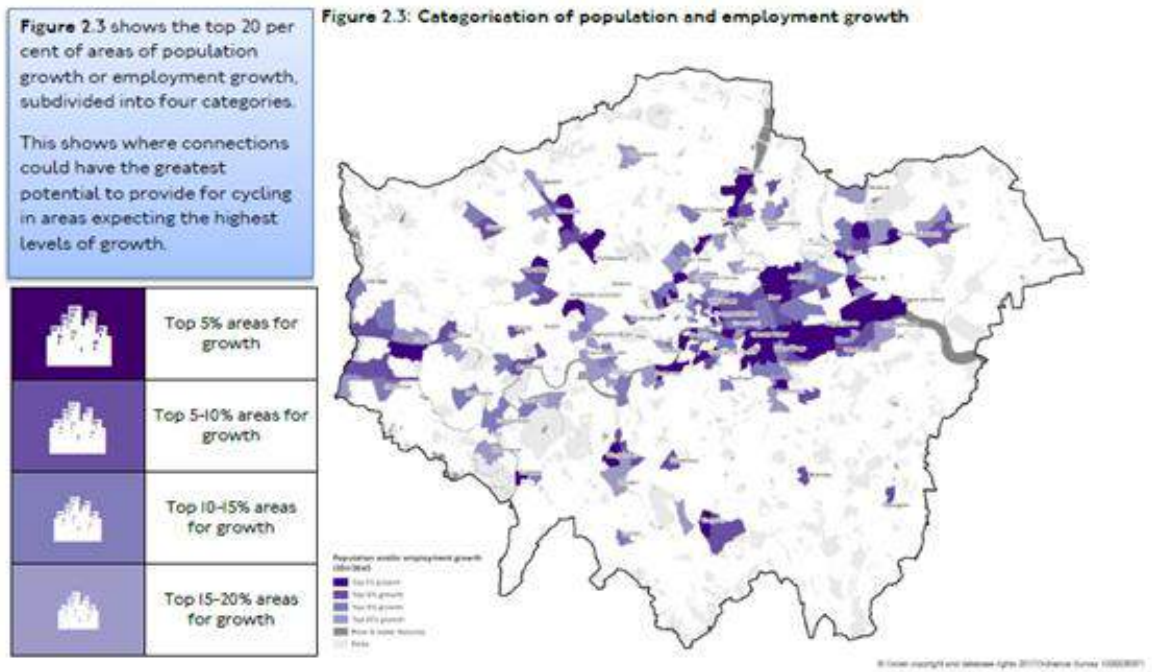
The Croydon Opportunity Area Case Study

The Croydon Metropolitan Centre is one of the London Plan Opportunity Areas. It is one of London's places accommodating the highest levels of population and employment growth.

Figure 7 ((Source: Strategic Cycling Analysis, TfL, 2017)



TfL has identified the Croydon Opportunity Area as one of the Metropolitan Centres with the highest potential for cycling (currently 40,000 potentially cycle-able trips each day, mostly made by car). As an Opportunity Area, the Mayor of London's draft Transport Strategy expects the Croydon Town Centre to go beyond the draft Strategy's general 80% sustainable travel mode share target. However, releasing the cycling and walking potential poses some significant challenges.

The Croydon Centre was reconceived along functionalist lines in the 1960's and 1970's. The Centre was reimagined as a place for work and retail. People would live outside of the Centre, travelling in on urban motorways and parking at the destination car park. There would be no need to walk or use the outmoded cycle. Hence there would be no need to cater for walking or cycling. Multifunctional streets would be done away with and be replaced by mono-function roads designed solely to distribute motor traffic. The failure of this modernist vision quickly became apparent.

Putting right the mistakes of the past began with a Space Syntax analysis of the Town Centre's urban form (January 2007) highlighting its failures and suggesting solutions. This then informed a series of master plans and the Opportunity Area Planning Framework (adopted January 2013) for the Town Centre. These propose creating new cycle and walking links, breaking through large city blocks and overcoming barriers created by the railway and 'urban motorways'.

The most obvious and pressing issue to address is the pedestrian and cycle severance effect of the Wellesley Road/Park Lane corridor. This is the 'urban motorway' cutting through the Town Centre, splitting it in two (and was one of the Roads Task Force case studies, the Task Force recommending it be made a 'City Street' (2013)). The cycle and pedestrian desire lines cross the corridor at each of its main junctions. Action began on site in October 2012 at the Park Lane Gyratory, junction of A232/A212.

Figure 8. Wellesley Road

Figure 9. Park Lane Gyratory

The challenge for pedestrians and cyclists posed by this junction was similar to that at the Elephant and Castle. Pedestrians were required to use subways. There were no facilities for cyclists. Where subways did have ramps, the gradient of the ramp was far in excess of that capable of being negotiated by wheelchair users. Our proposal was to remove one traffic lane from Park Lane to create a widened shared use pedestrian/cycle footway and landscaped strip and replace subways on two arms of the gyratory with at grade pedestrian/cycle crossings. Although on the TfL Road Network (TLRN), the project was designed and delivered by Croydon Council using national 'Connect2' funding and Council own funding.

Getting the necessary approval from the custodians of TfL's 'Network Management Duty' was highly challenging.

Figure 10. Crossing at the Park Lane Gyratory

Before

After

Figure 11. Turning a traffic lane into widened shared footway/cycleway and soft landscaping

Before

After

Before

After

6

As we turned our attention to the Wellesley Road, the challenge increased. Potentially taking time away from motorised traffic at junctions to allow pedestrians and cyclists to cross at grade, TfL was concerned that our proposals would impact on general traffic, bus and tram journey time. Effects on bus journey time could reduce the attractiveness of buses and cumulatively may lead to TfL needing to fund additional buses. Any delay to trams would be very difficult to manage on a system operating beyond its design capacity. In September 2014 we escalated our request to be allowed to proceed with creating pedestrian/cycling crossings to the then Mayor of London. This resulted in a site visit by the Deputy Mayor and a compromise whereby we would be permitted to proceed with the crossing at the Bedford Park junction. The crossing at the Lansdowne Road junction would need to wait until a second tram 'loop line' could be constructed in the Town Centre to mitigate any effects on tram journey time.

The Bedford Park pedestrian/cycle crossing has just been completed (March 2017), the removal of the old subway stairs and ramps allowing footways to be widened significantly and generous tree pits to be provided.

Figure 12. Creation of the Bedford Park crossing.

Before

Subway taking pedestrians under the Wellesley Road

During

Subways disappearing and new pedestrian/cycle surface level crossings with connecting contraflow cycle lanes going in

After

Elsewhere in the Opportunity Area different approaches have been taken at different junctions. At the junction of Lansdowne Road / Dingwall Road, a new pedestrian access to East Croydon Station has been created. This is a key part of creating a new pedestrian route across the railway, across the Wellesley Road east/west through the Opportunity Area. The Lansdowne Road / Dingwall Road junction appeared to have previously been designed to A Road standard with a very large central island. This encouraged / enabled motor vehicles to traverse the junction at speed, but also meant that the central island was 'unusable public realm'. When redesigning the junction, we resisted providing traffic signals. Instead a much smaller island was created. The space gained by shrinking the central island was then moved to the edges where it became widened footways and seating/residing space. With the opening of the new entrance to East Croydon Station the junction has become busy with pedestrians. However the new junction seems to work well, having improved conditions for pedestrians and cyclists and (other than removing excess speed through the junction) has had no impact on general motor traffic.

On the Connect2 cycling/walking route, at the junction of Charles Street and Exchange Square, the solution implemented was a fairly simple one, namely a wide zebra crossing leading to a widened shared use pedestrian/cycle footpath. Further east on the Connect2 route at the junction of the four lane dual carriageway Roman Way A236, a more significant intervention was required, namely replacing the pedestrian subway with a pedestrian / cyclist Toucan crossing.

Figure 13.

Lansdowne Road / Dingwall Road

Before

After

During

After

Figure 14. Charles Street crossing

Figure 15. Roman Way crossing

Response to the Transport Committee's Questions

Previous junction improvements

1. **What lessons can be learned from previous junction improvements, either in London or in other cities?**

A key lesson to be taken from Croydon is the level of challenge faced in trying to bring about improvement for pedestrians and cyclists at junctions on strategically important road corridors. We have been trying to put surface level pedestrian/cycle crossings on the Wellesley Road/Park Lane corridor for eight years. We still have to complete the task. The southern part of Park Lane is part of the TLRN. Croydon Council is Highway Authority for its northern part and for the Wellesley Road, but both are part of the Strategic Road Network. As such the Network Management Duty for the corridor sits with TfL. TfL is also Traffic Authority for all traffic signals in London. TfL has to agree their design, implementation and operation.

In setting the Network Management Duty, the Traffic Management Act states:

> '16. The network management duty
>
> (1)It is the duty of a local traffic authority **[**or a strategic highways company ("the network management authority")**]** to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives—
> (a) securing the expeditious movement of traffic on the authority's road network; and
> (b)facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority'

However, being primarily a transport authority, TfL is perhaps not best placed to balance the expeditious movement of traffic against all the local authority's obligations, policies and objectives including the walking and cycling route objectives in the Croydon Town Centre Master Plans, and its relatively recently acquired Public Health responsibilities. It proved highly challenging making the case to TfL that at a road environment where there are currently few pedestrians and even fewer cyclists, the large volume of general motor traffic should potentially experience delay in order to provide facilities to cater for pedestrians and cyclists.

Complex and costly SATURN modelling (at the Park Lane Gyratory) and VISSIM modelling of the whole corridor was needed by TfL to inform its decision making as to the acceptability or otherwise of providing pedestrian and cycle crossings at the various junctions. At the Park Lane gyratory a considerable amount of time and money was spent modelling the proposals. At the end of process TfL's internal report to its Network Management Group concluded 'cannot recommend for approval'. The scheme went ahead (and managed to meet the Connetc2 funding delivery and spend deadline) because two particularly courageous officers in TfL had the same belief in the scheme being able to work as we did, and gave the approval. The scheme has operated without any apparent issues for the last five years.

2. **How successful have recent junction improvements been in improving safety for pedestrians and cyclists?**

Taking pedestrians out of subways and allowing them to remain at street level (with the natural surveillance the street provides) can only improve personal safety. Where the subways were provided (and at the Lansdowne Road junction they remain the only means of crossing the Wellesley Road) some people chose to (and at the Lansdowne Road junction still choose to) cross seven lanes of traffic, the tramway and the central guard railing rather than use the subway. Note the sign to the left of the image below on the Wellesley Road at the junction with Lansdowne Road, stating 'WARNING People have been killed crossing here. Use the Subway.'

Figure 16. Location of the Lansdowne Road subway

At the Wellesley Road/Bedford Park Junction people frequently crossed at grade rather than use the subway. This can still can be seen on Google Street View past images.

Figure 17. Historic Google Street View image of the Bedford Park junction with no pedestrian/cycle facilities

Prior to the surface level crossings being opened, there were no crossing facilities at all for cyclists. Cycle casualties may well have been low before these crossings were opened, as the environment was so difficult to negotiate by bike.

3. **How successful have recent junction works been in increasing the take up of walking and cycling?**

The Croydon Opportunity Area is growing and changing. The creation of 13,000 new homes in a growing employment and retail centre mean that a great many more people will be within easy walking distance of the jobs and services they need. The ongoing programme of junction works in the Opportunity Area is critical to ensuring that people can walk and cycle within the Opportunity Area and is fundamental to improving the Area's 'liveability'.

TfL's monitoring (small sample and averaged over three years) however, indicates that across the Borough the cycling mode share remains at 1%. Our belief is that we still have a good way to go overcoming the barrier effect of junctions and creating good quality cycle routes between them, if we are to overcome people's concerns about cycling and road danger (see response to question 5.)

4. **Are there any examples of low cost solutions that could be rolled out across a large number of junctions?**

The Croydon Opportunity Area case study suggests that there is probably no one solution that can be rolled out across a large number of junctions. Each will require its own tailored solution. However, all may well be low cost relative to the cost of the Elephant and Castle junction remodelling. Some can be as low cost as a zebra crossing.

Ultimately, failing to improve conditions for pedestrians and cyclists will cost society much more than the cost of pedestrian and cycle infrastructure improvements, as health care services struggle to treat and manage the health effects arising from sedentary lifestyles.

The following section suggests one low cost solution that could be successfully rolled out across large areas of local streets (and hence a large number of smaller junctions) namely 20mph speed limits plus their full enforcement.

Encouraging people to walk and cycle

5. **What are the biggest barriers to people walking and cycling in Outer London?**
6. **What would enable people to walk and cycle more in Outer London?**
7. **What changes to roads and paths would make it easier or more appealing for people to walk and cycle in Outer London?**

TfL's regular 'Attitudes to Cycling Reports' consistently report fear of road danger and high traffic volumes being the main deterrent to people cycling more. The summary of the most recent report (September 2016) concludes:

> 'Improved infrastructure seems to be playing a key role in encouraging Londoners to cycle more and compared to two years ago, fewer non-cyclists now say poor infrastructure is deterring them from getting on their bike. However, fear of being involved in a collision and the volume of traffic in London remain the key deterrents to increased cycling among cyclists and non-cyclists alike.'

In the light of our long term major cycle training programme appearing not to have influenced the level of cycling in Croydon to any significant degree, we have concluded that there must be significant investment in a core network of quality cycle routes focussed on the Opportunity

Area. The Croydon Cycle Forum has suggested that it is important to pursue a parallel approach, namely to try and develop a cycling culture within Croydon. The aim would be to normalise cycling. This would not just be about enabling most people to think that cycling is for them. It would also be about drivers understanding the needs of cyclists, respecting cyclists and taking care around cyclists.

The call for evidence began by highlighting the perceived challenge posed by outer London, namely its large area and consequently large number of junctions. Its large size however, is also a potential strength. Croydon is a large area borough. Like many outer London boroughs it includes a large number of green spaces providing a number of pleasant and safe cycle routes and potentially many more. We recently extended 20mph limits across the Borough with the exception of main roads/streets. Potentially Croydon has a wide network of pleasant and safe cycleable and walkable streets if all drivers can be convinced to respect speed limits and the needs of pedestrians and cyclists. Additional enforcement (speed limits, close passing etc) is likely to have to play a major role in adjusting driver attitudes and behaviour. The cost of enforcement based solutions relative to the cost of infrastructure based solutions should be considered in outer London.

The needs of different road users

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

The different examples of crossings at the Park Lane Gyratory, Charles Street and Roman Way are all part of the shared pedestrian and cycle 'Connect2' route. We have no evidence of conflict between the two user groups on the route. This however may be a function of the current low level of cycling in Croydon. When the levels of cycling at the Croydon Opportunity Area reach or exceed those currently observed in central London, the shared facilities may need to be revisited.

The crossing on the Wellesley Road at Bedford Park is an example of the needs of one group helping provide the solution for the other group. The crossing was originally conceived as solely for pedestrians. Part way though the design process the junction became part of the proposed Thornton Heath to Sutton Quietway. It was a challenge to change the design to accommodate cyclists part way through the design process, but one well worth rising to.

9. How might junction improvements that help pedestrians and cyclists affect other road users?

As the Wellesley Road/Park Lane corridor shows, if you are going to provided controlled crossing facilities for pedestrians and cyclists at junctions where currently there are none, you are potentially needing to take time away from motorised traffic potentially causing some journey delay to that traffic. The decision to do so becomes harder when the vehicles that may experience increased journey time are buses and even more so when they are trams.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?

Being able to cross at grade is vital to users of wheelchairs, hand-bikes and other non-standard bikes. On the Wellesley Road/Park Lane corridor, the junctions had no facilities at all for cyclists. Where subways did have ramps, the gradient of the ramps was far in excess of that which a wheelchair user could negotiate.

TfL's Attitudes to Cycling Report 2016 indicates that proportion of regular cyclists amongst non-disabled people has remained fairly constant at around 14% since 2011. Over the same period the proportion of disabled people cycling regularly has increased from 4% to 12%. This suggests that improving conditions for cycling is increasingly improving conditions for disabled people.

Implementation

11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists, and how could these be addressed?

The main challenge is prioritising transport funding for outer London. The junction improvement projects in the Croydon Opportunity Area were delivered with GLA Mayor's Recovery Fund, Connect2 and Croydon Council funding and a limited amount of S106 funding. With the exception of the Wellesley Road/Bedford Park crossing (which received a contribution from Quietways), there has been limited TfL funding.

A good example of the prioritisation and funding challenge for outer London is the Lombard Roundabout. This is at the junction of the A23/A236. Improving the junction is critical to:

- making it easier for people to access the Opportunity Area from the northwest by bike and on foot; and
- allowing the growing residential and schools' population around it to walk and cycle between home, school and other places.

It is also on one of the routes of highest cycling potential identified by TfL.

Figure 18. The Lombard Roundabout

In 2004 Lynne Featherstone AM asked the then Mayor of London:

> *'Since the Lombard Roundabout, Croydon (junction of A236 and A23) has been highlighted in Transport 2000's recent national children's competition 'It makes me CROSS !' as one of London's most dangerous intersections for pedestrians, will you report on what action Transport for London has taken or plans to take to make crossing the road safer at this roundabout ?'*

Ten years later, the then Mayor of London announced £200m of improvements at 17 locations across the capital, including the Lombard Roundabout and *'Funding for these schemes would be covered by the Transport for London (TfL) Business Plan and through third party contributions.'* It is the 'third party contributions' that is the challenge for outer London. As Figure 18 suggests, there is unlikely to be development at Lombard Roundabout on a similar scale to that at the Elephant and Castle. Development is unlikely to make a significant financial contribution to improving cycling and walking conditions at the junction.

The introductory part of this evidence highlights:

- the potential for walking and cycling in Croydon;
- the level of growth at the Croydon Opportunity Area,
- the great potential for cycling and walking at the Croydon Opportunity Area; and
- the draft requirement to go beyond the 80% sustainable travel mode share draft MTS target at the Opportunity Area.

This all might suggest that Croydon and the Croydon Opportunity Area would be top priority for cycling and walking investment.

TfL's Strategic Cycle Analysis (SCA) report sets criteria for prioritising cycle connections differentiating between inner and outer London.

Figure 19.

Table 2.1: Criteria for categorising potential connections

	Inner London criteria	Outer London criteria
Top potential connections	• Connections among the top 5 per cent busiest for both current and potential trips • Connections among the top 5 per cent busiest for potential trips and areas among the top 5 per cent for growth	• Connections among the top 5-10 per cent busiest for both current and potential trips • Connections among the top 5-10 per cent busiest for potential trips and areas among the top 5-10 per cent for growth
High potential connections	• Connections among the top 5-10 per cent busiest for current trips, but the top 5 per cent for potential trips • Connections among the top 5-10 per cent busiest for potential trips and areas within the top 5-10 per cent for growth • Connections among the top 5-10 per cent busiest for potential in areas with a high likelihood to start cycling or cycle more	• Connections among the top 10-15 per cent busiest for current trips, but the top 10 per cent for potential trips • Connections among the top 10-15 per cent busiest for potential trips and areas within the top 10-15 per cent for growth • Connections among the top 10-15 per cent busiest for potential in areas with a high likelihood to start cycling or cycle more
Medium potential connections	• All other connections identified in the Strategic Cycling Analysis.	

The SCA report shows the:

- Croydon Opportunity Area being among the top 5% areas for growth (figure 2.3 of the SCA report),
- routes to the Opportunity Area having the highest potential cycling
- clusters of pedestrian and cycle casualties at the Opportunity Area and on the routes to it.

However, Croydon (like most of outer London) does not features on the map (figure 2.1 of the SCA report) of current cycle levels/demand. As a result the top potential cycle connections (and presumably the junctions along them) recommended for further study by the SCA report, nearly all fall within inner or central London. None are in Croydon. Boroughs like Croydon, with high cycling potential but low levels of cycling are always going to struggle to compete when it comes to prioritisation with areas of lesser potential but with high current levels of cycling. A means needs to be found to break Croydon and the rest of outer London out of the 'releasing the Cycle Potential chicken and egg' situation.

Figure 20.

Figure 3.2 shows where the potential connections identified by the SCA could contribute to addressing walking and cycling safety.

The 20 per cent poorest performing areas for walking and cycling safety have been identified, based on the total number of collisions (all severities) involving people walking or cycling.

SCA connections can deliver improvements at these locations and help create a safer and more attractive environment in which to walk and cycle.

Additionally, TfL's Safer Junctions programme will improve road safety for all vulnerable road users at a number of TLRN junctions across London, with many of them located in areas identified on this map.

Figure 3.2: Potential to improve road safety for people walking and cycling

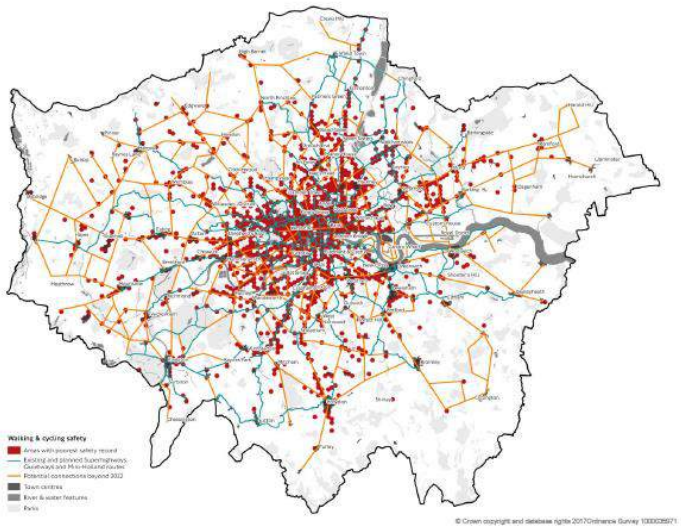
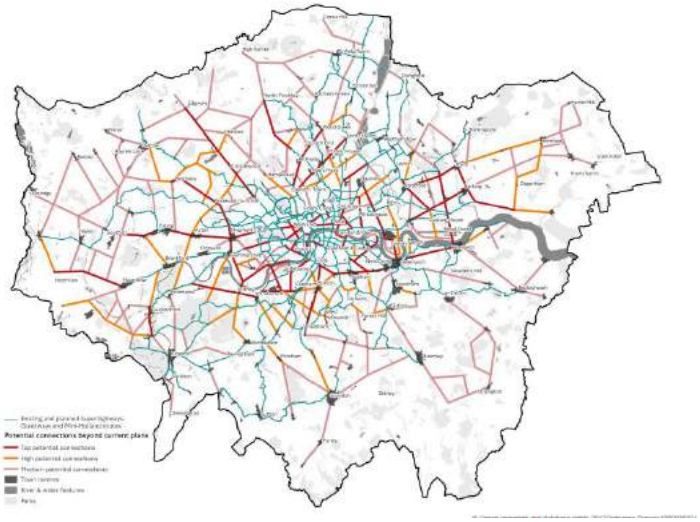


Figure 2.4 shows the priority levels assigned to each cycling connection, based on their potential contribution to addressing London's greatest cycling needs. Each connection is shown as a direct 'crow flies' line between origins and destinations and would be subject to further refinement.

This map does not represent specific alignments for routes, or a delivery plan.

These corridors are only prioritised from a cycling perspective. Under the Healthy Streets Approach, they would need to be considered in terms of their wider impacts and deliverability.

Figure 2.4: Prioritised Strategic Cycling Connections



12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?

TfL's SCA report reveals the routes/corridors/lines of greatest cycling potential and hence junctions on them that need to be addressed if the cycling potential is to be released. This network is far coarser than that in inner London and should be the focus for prioritised investment. We have researched and costed (initially as part of our Mini Holland Expression of Interest) a core network of cycling/walking routes focussed on the Opportunity Area following the lines of highest cycle potential identified by TfL , plus two more routes. We estimate the cost of delivery of the network to be the same order of magnitude cost as rebuilding the Elephant and Castle junction and similar to that of delivering each of the outer London Mini Hollands. This suggests to us Mini Holland levels of funding being required to begin to tap the walking and cycling potential in each outer London borough.

We have investigated ways to fund the delivery of the core network of cycle/walking routes serving the Opportunity Area. Last year (prior to the publication of TfL's Liveable Neighbourhoods funding guidance), we were directed to the forthcoming Liveable Neighbourhoods funding. Now that the guidance has been published, we are not confident (based on wording of the guidance and total level of funding available) that Liveable Neighbourhoods would make a contribution towards the delivery of this network. We are in the process of discussing our first Liveable Neighbourhoods bid with TfL.

13. Is there a need for a bigger overall budget to improve junctions in Outer London?

Questions 12 and 13 are clearly linked. From an outer London perspective, there is no need to increase the overall budget, if considerably more of the existing budget can be prioritised for outer London.
TfL's Press Release announcing the Strategic Cycling Analysis report proclaimed:

> 'London's Walking and Cycling Commissioner, Will Norman, has today named the 25 corridors in London with the greatest potential for cycling as he revealed the unprecedented analysis being used to map out the future of the capital's cycling network.'
>
> 'TfL will now work with London boroughs to conduct feasibility studies in these areas and develop cycling schemes that will help to deliver a long-term Strategic Cycle Network for London, as part of the Mayor's forthcoming Transport Strategy.'

However, as reported earlier in this evidence, they are not necessarily the 25 corridors in London with the greatest potential (many of those are in outer London) they are corridors with high potential and current high cycle use/demand.

The press release contains a quote from TfL's Director of Surface Strategy and Planning

> "This exciting analysis will help to transform cycling in all four corners of our great city, making London greener, healthier and less congested"

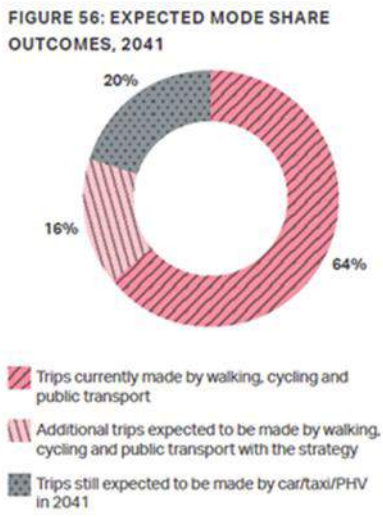
If the cycling is to be transformed in all four corners of London in any meaningful timeframe, then the overall budget needs to be increased.

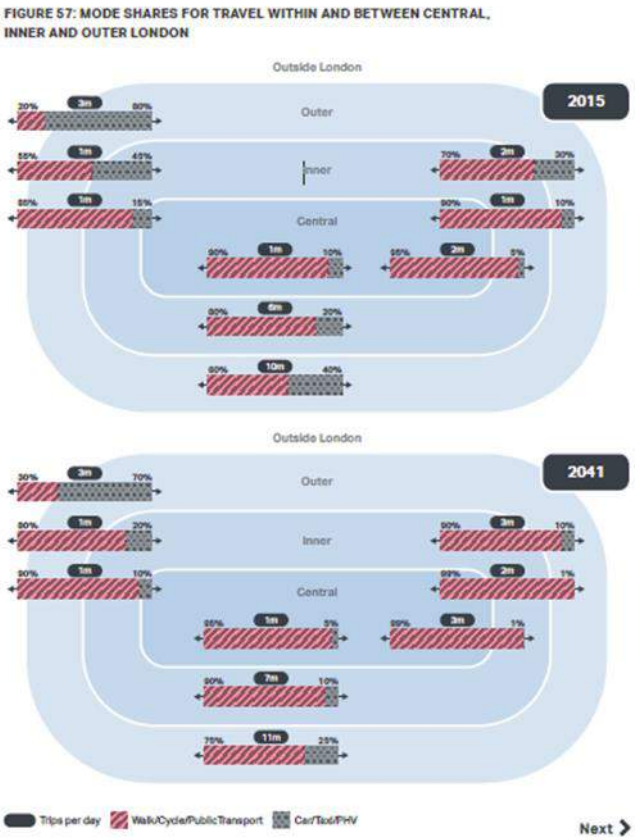
Page 277 of the Mayor's draft Transport Strategy summarises the expected outcomes of the Strategy stating:

> *'The strategy has set out a range of policies and proposals aimed at creating Healthy Streets and healthy people, providing a good public transport experience and new homes and jobs. The aim is for 80 per cent of journeys to be made by sustainable modes – public transport, walking and cycling – by 2041, compared to 64 per cent today. The expected outcomes of the strategy are summarised in Figures 56, 57 and 58.'*

It also shows that the hard work would be required in outer London. Outer London accommodates a major proportion of journeys made in London. Journeys made in central London are already beyond the draft Strategy mode share target, with currently 90% of trips made by sustainable modes. The draft Strategy expects central London to achieve a further 5% shift to sustainable modes by 2041. Similarly inner London is already at the 80% sustainable mode share target and expected to achieve a further 10% shift to sustainable modes by 2041. According to figure 57 of the draft Strategy, the number of trips made in outer London is greater than the number made within central and within inner London combined. It is also outer London that would be asked to achieve the largest shift in travel mode, outer London expected to increase its sustainable mode share by 15% by 2041.

Figure 21. Expected Mode Share Outcome of the Mayor's draft Transport Strategy





In Croydon, we have worked innovatively with the GLA to try to:

- increase the overall budget available for walking, cycling and other infrastructure investment; and
- lift Croydon up the 'third party contribution' prioritisation ranking

by creating the Croydon Growth Zone (GZ) at the Croydon Opportunity Area. The Growth Zone is a Tax Increment Financing (TIF) model which harnesses business rates growth to enable borrowing to fund infrastructure. It would enable around £307m of additional investment in infrastructure in the town centre. In essence, it proposes to borrow to fund infrastructure projects (including walking and cycling) which are essential to growth, with the costs of borrowing repaid by future uplift in the business rates base.

This investment in transport, public realm, smart city and social infrastructure projects will support the regeneration of the town centre, providing fundamental benefits to both new and existing residents and businesses to accommodate the future growth. However, the Growth Zone is at the town centre/Opportunity Area and Croydon is a large borough requiring significant investment in cycling and walking across its entirety. Growth Zone borrowing is also intended to supplement and help attract funding from TfL and other sources. Not to fully replace it.

Ian Plowright

Head of Transport

From: Gemma Hearsum <[redacted]>
Sent: 11 August 2017 10:45
To: Transport Committee
Cc: Jane Sherry
Subject: Walking and Cycling at Outer London Junctions

Morning,

Please find below the London Borough of Waltham Forests feedback.

These comments have been made based on London Borough of Waltham Forest planning and implementation of the Enjoy Waltham Forest Scheme (Mini Holland). Waltham Forest is an Outer London borough with an overarching priority to increase walking and cycling within the borough.

Previous Junction Improvements

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

* Space is a commodity that has competing demands. Funding streams and approval processes generally dictate the level of bias afforded to either the boroughs aspirations or towards TfL's aspirations

* New junction improvements that incorporate segregated cycle facilities will inherently impact on motorised vehicles due to the necessary reduction in road space available to implement cycle measures

* 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

* New innovative traffic signal infrastructure designs are required to smooth cycle flows and provide more footway and cycle space for measures which may reduce the requirement to encroachment into the carriageway. New initiatives such as "Turning the Corner" which is exploring the possibility of turning vehicles giving way at traffic signals would be a significant step towards providing the necessary separated time and space for pedestrians and cycles with reduced impact on buses and general traffic

* Junction improvements for cyclists should generally not be implemented in isolation and should be considered on a local or strategic route basis to ensure connectivity safety, and segregation are maximised. However, it is acknowledged that there are circumstances when 'isolated' junctions should be looked at due to high collision statistics or other issues

* Close proximity of bus stops to junctions makes designing and implementing cycle tracks difficult in urban environments due to space constraints and passenger volumes

* More work needs to be done to reduce servicing and delivery activity through consolidated servicing centres, consolidated last mile deliveries, local green courier schemes, etc, to both reduce the volume of commercial traffic using the highway and reduce pressure on kerbside space

* Light cycle segregation at junctions is not as effective in providing cycle safety as fully segregated infrastructure and may prove to be a costly long term maintenance issue,

but does offer a lower capital cost and can be a very useful tool for trialling schemes to understand the impact or reallocating road space to non-motorised modes

* Continuous footways, also known as blended 'copenhagen' crossings can be very effective at reducing vehicle speeds, controlling vehicle turning movements and providing greater pedestrian/cycle priority at side road junctions. Treatments of this nature are however generally suited to lower flow side road junctions where addi tional measures have been introduced to reduce traffic volumes in the area. User perception of continuous footways is varied.

2. How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

* To be confirmed through post scheme monitoring once complete.
* Emerging monitoring from Waltham Forests pilot "Walthamstow Village" scheme appeared to show that collisions on side road junctions where blended crossings have been introduced have reduced.

3. How successful have previous junction works been in increasing the take up of walking and cycling?

* To be confirmed through post scheme and general ongoing monitoring. However junction improvements alone cannot easily be assessed in terms of impact on walking and cycling levels as volumes through a particular junction can be influenced by a huge range of route choice factors. Assessing overall increases in cycling and walking levels are best looked at a borough wide level in the context of route and cordon surveys combined with qualitative monitoring to understand local travel behaviour changes.
* If the routes to and from a junction do not have acceptable cycle levels of service then junction changes alone may have no discernible impact on cycling levels.

4. Are they any examples of low cost solutions that could be rolled out across a large number of junctions?

* Two stage right turns have been introduced by some Highway Authorities and may be a solution however further assessments on actual versus perceived safety would need to be undertaken prior to introduction at a borough level at more constrained sites. Two stage right turns do however result in increased journey time for cycles and offer limited physical protection
* Low level signals, with or without early starts, are being introduced more frequently but further monitoring is required to assess the benefits, perceived and real, of this solution
* Allowing turning vehicles to give-way at traffic signals could provide a relatively low cost step change in cycle and pedestrian priority at junctions

Encouraging people to walk and cycle

5. What are the biggest barriers to people walking and cycling in Outer London?

* Whilst implementing the Enjoy Waltham Forest scheme, many perceived barriers to both walking and cycling in Waltham Forest (an outer London borough) have emerged. The implementation of the scheme aims to reduce these barriers. Attitudinal barriers towards cycling and walking include fear of traffic and feelings of vulnerability, moving away from convenience of car use, concerns over other road users' attitudes to

cyclists and uncertainty that cycling and walking will be compatible with their complicated lifestyles.

* Physical barriers also hinder people walking and cycling in Outer London, these include high traffic speeds, road layouts, severance (e.g. major roads and lack of permeability), lack of healthy street approaches (lighting, noise, perception of safety) and limited or no cycle parking.
* Waltham Forest is one of the most diverse boroughs in the population, and is the 35th most deprived borough therefore one large barrier to cycling is that residents do not own their own bicycle.

6. What would enable people to walk and cycle more in Outer London?

* To enable more people to walk and cycle within in the borough of Waltham Forest the barriers which have emerged need to be addressed.
* Infrastructure changes to create low traffic areas alongside dedicated, separated space on busier roads are key to addressing concerns over safety – both real and subjective.
* Sufficient and secure cycle parking has been shown to be a key barrier and the borough has a number of cycle parking programmes to significantly increase the number and range of cycle parking facilities available – conventional stands, secure bike parking for residents (Cycle hangars), Cycle hubs at stations for multi-modal journeys, etc
* Waltham Forest council are currently trying to aid people to start walking and cycling through a variety of complementary measures; these include free cycle training for anyone who lives studies, or works in the borough, free led walks and cycle rides across the borough, events such as Le Tour de Waltham Forest which encourage people to challenge themselves whilst cycling, extensive engagement with schools and community groups.
* Waltham Forest is also aiding people to start cycling through the 'try before you buy scheme'; the council have cargo bikes available for hire, a community bike scheme where bicycles can be hired and pool bikes for staff use.

7. What changes to roads and paths would make it easier or more appealing for people to walk and cycle in Outer London?

* Waltham Forest has designed a best practice design guide which ensures all schemes aid all road users, including cyclists and pedestrians.
* Changes to roads and paths which would make it easier or more appealing for people to walk and cycle could include the implementation of cycle infrastructure, reallocation of road space and streets which are designed and developed using the Healthy Streets approach.
* Dedicated cycle parking such as cycle hubs, residential cycle hangars and also Sheffield stands could make cycling more appealing in Outer London.

The needs of different road users

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

* Where space is restricted pedestrians and cyclists may have an element of interaction when choosing their desired route and cross paths whether it be crossing a segregated cycle track or travelling through a shared space

* Unless space provides for a bus stop bypass cyclists may interact with passengers boarding and alighting form buses in close proximity to a junction i.e. bus stop boarders

* Unless parallel cycle/pedestrian crossings are provided with fully segregated two stage movements then cyclists and pedestrians will interact when crossing the junction through the use of Toucan Crossings

* As junctions are generally pedestrian dominant cycle tracks may be required to be reduced below acceptable widths (1.5m) or the space designated as shared space to allow for both pedestrian and segregated cycle movements

9. How might junction improvements that help pedestrians and cyclists affect other road users?

* Due to the general requirement to build out into the carriageway there is a corresponding impact on bus and general traffic journey times

* Unless space provides for a bus stop bypass cyclists may interact with passengers boarding and alighting form buses in close proximity to a junction i.e. bus stop boarders

* Due to the general reduction in carriageway space waiting and loading restrictions are usually required to be strengthened which may impact on business and residents in close proximity to the junction

10. What need to be in place to support the needs of those with disabilities and visual impairments?

* A best practise design guide for cycle schemes needs to be developed to address areas of interaction, differentiation of pedestrian and cycle spaces through grade changes and/or material uses and colour differentiation.

* Current central government and local guidance on inclusive design and measures to support the needs of those with disabilities and visual impairments is outdated, piecemeal and often conflicting.

Implementation

11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists, and how could these be addressed?

Impacts on bus and general traffic journey times:

* Assessment of cycle and pedestrian safety and growth needs to be assessed against perceived loss of bus revenue and customer satisfaction
* Bus contracts scheduling needs to be reviewed against each new scheme to ensure that the bus services being provided are fit for purpose to accommodate necessary improvements for cycle and pedestrian growth

Borough needs before TfL needs

* Approvals processes are biased towards achieving TfL aspirations and objectives vs local needs
* TfL should provide greater support for borough level issues

Forward Planning / Funding

* Due to uncertainty around year on year funding for cycling and walking improvements it is difficult for boroughs to plan or prioritise long term strategies

* Longer term funding allocations should be provided to enable boroughs to deliver meaningful lengths of infrastructure and/or junction benefits across the length of a route(s) as opposed reactive and isolated improvements across many routes

12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?

* Direct point to point journeys to schools, public transport, and town centres should be prioritised over convoluted routing through residential areas

13. Is there a need for a bigger overall budget to improve junctions in Outer London?

* Yes
* Scheme development and approvals costs are often lengthy underestimated which results in a reduced works budgets

Kind regards,
Gemma Hearsum
Enjoy Waltham Forest | Neighbourhood and Commercial
Argall Avenue, Leyton, London, E10 7AS
Phone: [redacted] | walthamforest.gov.uk

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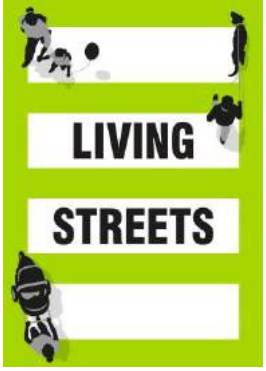
Visit www.enjoywalthamforest.co.uk, email enjoy@walthamforest.gov.uk

If you live, work or study in Waltham Forest then why not book a free cycle training lesson? Please visit www.cycleconfident.com/sponsors/waltham-forest , or telephone 0203 031 6730 for more details



Call for evidence: Walking and cycling at Outer London junctions

About Living Streets

We are Living Streets, the UK charity for everyday walking. We want to create a walking nation, free from congested roads and pollution, reducing the risk of preventable illnesses and social isolation and making walking the natural choice. We believe that a walking nation means progress for everyone. Our ambition is to enable people of all generations to enjoy the benefits that this simple act brings and to ensure all our streets are fit for walking.

Previous junction improvements

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

TfL and boroughs need to move beyond simply providing more crossings. Desire lines need to ascertained and should be followed as closely as possible to avoid people taking risks by being frustrated at large, complex junctions with indirect crossings.

Try wherever possible to reduce crossings stages for pedestrians and cyclists, even if this impacts traffic throughput. If multi-stage crossings are absolutely necessary, ensure the stages allow for continuous crossing for pedestrians and cyclists rather than long waits between stages.

2. How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

It is too soon to judge how successful recent junction improvements have been because there is not enough of the usual safety data available.

3. How successful have recent junction works been in increasing the take up of walking and cycling?

It is too soon to judge how successful recent junction improvements have been because there has been no collection of data relating to the increase in walking at these locations. TfL should collect this quantitative data in order asses take up.

Success can also be measured in terms of perceptions. A significant challenge with getting people to take up walking and cycling is their perception of safety i.e. the psychological effect of road crossings. Anything that looks like a big road, even if it has good crossings, will still be a barrier to those who perceive it as unsafe. Crossing infrastructure that is visually obvious (zebra crossings, Belisha beacons, wayfinding, surface level crossings), along with

traffic calming/speed enforcement and where possible, reducing width of carriageway, is essential to promote the idea that a road can be safely crossed and isn't a barrier. TfL should collect this qualitative data in order asses take up.

4. Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

Increased time to cross and all-pedestrian green phasing at crossroads i.e. pedestrians can cross diagonally where junction geometry permits it is easy to achieve and potentially makes a two-stage crossing into a one stage crossing for pedestrians.

Ideally pedestrians would like to cross on the surface, but where this is not possible there are some simple improvements that can be made to subways. London Borough of Barking and Dagenham upgraded the pedestrian underpasses to improve the function for pedestrians crossing large main roads such as A12 and A13. Examples include:

- Thames View pedestrian tunnel connecting Charlton Crescent with Alfreds Gardens with sequenced LED lighting bands running the length of the tunnel – under the A13.

- Upgrade of the pedestrian tunnel near Marks Gate Estate under the A12 as part of Sustrans' DIY streets programme and the follow on of the Living Streets project in Marks Gate.

Thames View pedestrian tunnel under the A13

Encouraging people to walk and cycle

5. What are the biggest barriers to people walking and cycling in Outer London?

A mix of perception and built environment factors prevent people walking in Outer London. The quality of the walking environment can change perceptions of the length of time a trip will take. Large roads and dominance of vehicles can cause both and physical and perceived barrier to walking.

Poor quality streets and walking routes that suffer from noise and air pollution from traffic, have insufficiently wide footways, lack footways, have a lack of consistent dropped kerbs, or have cracked and otherwise dangerous footways will all create physical and perceived barriers to walking

Walking should also be encouraged as a stage of a longer journey. Where the footway is of poor quality and wayfinding is poor or not present, barriers will be perceived to walking as part of a longer trip involving heavy rail or London Underground.

6. What would enable people to walk and cycle more in Outer London?

There should be better connectivity between neighbourhoods and better provision for walking, for example wider footpaths and reduced emphasis on motor transport. Wayfinding information should be provided with walking distance and cycling times.

There should be more pedestrianised zones in outer London town centres to make walking around towns and between transport modes. This can be linked to regeneration, such as in Barking town centre.[i]

7. What changes to roads and paths would make it easier of more appealing for people to walk and cycle in Outer London?

To make walking more attractive there should be wider and better maintained footpaths, with smoother and more even surfaces. There should be dedicated cycle lanes or shared use spaces where appropriate.

Introduction of 20 mph limits, which is now effectively the default in Inner London, should expand to all Outer London boroughs.

The needs of different road users

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

Shared use footways and stepped cycle lanes should be planned so that pedestrians have priority as the most vulnerable user. Cycle lanes should not require cyclists to cross pedestrian footway without either adequate warning and indicators to give way to pedestrians, or a segregated lane.

An example of this being done poorly can be seen at the corner of Royal Mint Street and Mansell Street (just north of Tower Bridge) – CS3 runs along Royal Mint Street but becomes segregated shared use (contraflow) along Mansell Street. There is no warning for either

cyclists or pedestrians that cyclists turning right onto Mansell Street will cross the footway and the direct desire line of pedestrians continuing to the crossing at Royal Mint Street. The cycle lane should continue throughout the corner with clear give way markings to enable pedestrian priority.

Corner of Royal Mint Street and Mansell Street

9. How might junction improvements that help pedestrians and cyclists affect other road users?

Providing more for pedestrians and cyclists at junctions could potentially lead to slightly longer waiting times for motor traffic at traffic signals. However, such improvements will increase the general safety of streets for everyone.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?

There must be appropriate and consistent use of tactile street paving at junctions for those with disabilities and visual impairments. Footways must be wide enough for those with disabilities, at an absolute minimum providing 2 metres of clearance at all times, and taking into account street furniture, to allow two wheelchairs to comfortably pass each other.

Adequate time to cross at green pedestrian phases must be provide to allow safe crossing at desired speed. Formal crossings are preferred, rather than informal refuges that require visual negotiation with drivers.

Implementation

11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists, and how could these be addressed?

The biggest challenge is the willingness for councils to reallocate road space from motorised traffic to walking and cycling. Financial incentives should be used to achieve this.

In addition to the built environment interventions, behaviour change interventions are needed to encourage mode shift to walking and cycling. Early interventions are critical and cost effective, such as WOW, the school based walking incentivisation programme.[ii]

12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?

Prioritisation could be developed using a network planning approach, which looks to prioritise funding in core walking/cycling zones. These are the 400m radius around major trip generators.

13. Is there a need for a bigger overall budget to improve junctions in Outer London?

More funding is unquestionably needed for active travel in London. Central and Inner London have been the focus of recent interventions. Outer London is larger, has more of the London population and has more challenging junctions and road layouts.

September 2017

Steve Chambers
Policy and Research Coordinator
Living Streets

[i] https://www.london.gov.uk/what-we-do/regeneration/regeneration-project-barking-town-centre
[ii] https://www.livingstreets.org.uk/what-we-do/projects/wow

transportcommittee@london.gov.uk

Walking & Cycling at Outer London Junctions

11 August 2017

Please find below the London Cycling Campaign's response to the London Transport Committee's investigation into Walking & Cycling at Outer London Junctions.

Junctions are of vital importance to understand and improve to unlock the potential for much more walking and cycling in London. Junctions are the most dangerous places on the transport network for vulnerable road users. They also represent the largest barriers to uptake of active travel modes.

Most collisions with vulnerable road users, and the fatalities and serious injuries arising from them, happen at junctions. A disproportionate amount of these come from turning lorries, and within that a disproportionate amount from high-cab construction lorries.

Compared to many European cities and countries, the way we design junctions is markedly different. Junction design in the UK and London is, at the moment, primarily concerned with maintaining motor vehicle "capacity" – in other words, the number of motor vehicles that can pass through a junction per minute. This is, allegedly, to avoid increasing congestion in the short term.

Many other countries and cities in Europe – markedly those with far higher rates of walking and cycling as a proportion of all travel journeys – prioritise safety and comfort for those walking and cycling. Looking at comfort as well as safety is vital to fully understand junctions. Cycling and walking in London are objectively, statistically very safe activities. But they often don't feel very safe. They feel terrifying. Subjective safety is arguably a larger issue than actual objective safety in terms of who does or doesn't walk or cycle or take the car.

We cannot expect to generate mass levels of cycling, or significantly boost walking rates, unless we are willing to change the way junctions are designed. They must increasingly be designed for vulnerable road users as the priority. And that may mean accepting congestion impacts in the short term to some junctions and some roads in order to relieve congestion in the medium to long term by accelerating the switch from motor vehicle transport to other, more sustainable and active modes.

European approaches, centred less on modelling and more on safety – perceived and actual – both in Europe and when used here, often are found not to cause the impacts on traffic congestion in the medium and long-term they're initially predicted to have. Modelling can be a "worst case scenario" system, and "traffic evaporation" and "modal shift" are not included in such models anyway. So there has to be a shift in priorities – to enable safer and safer-feeling junction design – by moving away from blanket adherence to modelling without reducing motor vehicle traffic capacity.

Making walking and cycling safe, comfortable and convenient will particularly boost walking and cycling rates when these modes feel more safe, comfortable and convenient than alternatives such as driving. In other words, as well as creating space for safe and comfortable walking and cycling art junctions, reducing capacity for motor vehicles is also a positive step for creating modal shift – by

ensuring that walking and cycling are and are seen as more comfortable, safer and more convenient than driving.

Unless TfL and boroughs are willing to embrace an approach that tackles this primary issue, and deliver funding to achieve it, there is little likelihood that the Mayor and London will achieve the targets laid out in the new Transport Strategy.

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

a) Junctions that create cycle movements that are fully separate from motor traffic lead to much higher increases in cycling – e.g. on the East-West and North-South Cycle Superhighways at Blackfriars Bridge and Embankment.

b) The design of some junctions has improved substantially in London in recent years– so we know it can be done properly. Designs in Waltham Forest and along the East-West Cycle Superhighway in particular, demonstrate this.

c) Junction “improvements” which leave gaps where people cycling have to mix with traffic are much less effective at providing a feeling of safety and subsequently enabling modal shift. Examples of incomplete junctions, which haven’t seen as high take up as they might have done if completed to a higher standard, include Elephant and Castle and many on Cycle Superhighway 2. There is therefore a high risk that many junction improvements will fail to create the modal shift London needs and the Mayor is aiming for.

d) "Two-stage right" turn junctions with large time delays to those cycling mean many people put themselves at risk and turn right in one stage, often against opposing streams of motor traffic. The capacity for people to wait is often too low to accommodate the number of people making the manoeuvre. This is visible at junctions of the A23 and A202.

e) “All ways green” junctions create a combined cycling and pedestrian phase, where motor vehicle traffic does not move, but where those walking and cycling can move in all directions, from all directions, simultaneously. These junctions both have an excellent safety record where used on the continent, and enable a very large number of pedestrians and cyclists to pass through the junction with each cycle of the lights, as well as motor vehicles – in other words, the junction makes walking and cycling feel safe and comfortable, without impacting on congestion. Again, the current understanding from discussions with borough and TfL engineers and officers is that the current DfT framework and approach is not allowing them to even trial such junction innovations and designs.

With innovative, European junction designs currently off the table at a national level, and capacity restraints ensuring that only a small number of London junctions are likely to be successfully treated to fully remove barriers to walking and cycling, we see the results in the schemes that have come forward in the last few years: most junctions that are a barrier to walking and cycling (through danger and/or hostility) remain untreated; and the remainder have been treated but in the vast majority of cases partially, with some collision risks or uncomfortable elements retained.

2. How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

There are copious examples of recent junction schemes that have boosted walking and cycling rates in the vicinity significantly. These should be viewed as “successful”. But it is worth asking how successful they are compared to the potential for walking and cycling trips in the area? In other words, while there are examples of junction designs that deliver a step change in walking and cycling rates in areas, even these do not go as far as they should – again, far too often due to concerns over motor vehicle capacity.

Concerns over motor vehicle capacity have had the effect that most junctions that have, for instance, successfully eliminated turning risks for those cycling through it (via “hold the left” design, or other methods) have had some negative impacts for pedestrians (staggered crossings, more wait time, more complex routes etc.) and/or bus journey times through the junction. The same is, of course, true in reverse. Nearly every junction that has offered significant gains for pedestrians has done so with some negative effect on those cycling or on buses etc.

Again, without the will to reduce motor vehicle traffic capacity and dominance, in a constrained, congested and dense city like London, the primary way to increase capacity or safety for one sustainable transport mode currently appears to be to take some capacity, safety or comfort from another. This is a failure of political will and nerve, as well as engagement with the general public, on issues of traffic management, and should not be tolerated.

Staggered crossings are unpopular with pedestrians and encourage people to cross “against” the lights. They can also introduce such complexity to crossings that pedestrians can easily lose track of which light etc. they are looking at. Similarly, for those cycling, narrow lanes that “stack” up excessively during the peak hours, and long wait times at the lights are common signs that motor vehicle capacity is being prioritised over cycling safety and comfort.

Two-stage right turns that feel unsafe and introduce often excessive delays to wait times; unprotected cycle lanes and cycling in bus lanes; “Advanced Stop Lines” (or “ASLs”) that are often encroached on and offer no safety benefit while motor vehicle traffic is moving; “Early Release” cycle-specific lights that offer some protection for cyclists caught at the lights, but nothing for those arriving to a green signal; and "two-stage right" junctions delay those cycling and see many taking risks to cross against traffic in one stage – these are tools designed primarily to ensure motor vehicle capacity is not impacted by cycling infrastructure, offering a very small amount of safety or comfort.

That said, we are increasingly seeing junction designs that do offer benefits for all bar private motor vehicle drivers – Blackfriars Bridge on the North-South Cycle Superhighway, for instance. But even at these exemplars there are signs that overall comfort and convenience of active travellers is impacted on to maintain capacity.

On top of this, it’s vital that safety is seen in the context of subjective safety and comfort. In other words, for junctions to not be significant barriers to the potential for walking and cycling in the area, they can’t just “be” safe, they have to “feel” safe. An objectively safe junction that is still terrifying to navigate will remain a barrier.

In this context, it's also important to understand that the analyses which underpin the "Better Junctions" programme and its new replacement, the "Safer Junctions" programme miss out many important junctions. By looking at collision numbers alone, any junction programme automatically misses those junctions which are such a barrier to walking and cycling, so subjectively unsafe, that few people dare walk and/or cycle through them. A lower collision rate comes not from safety, but lack of users.

It is vitally important then, that junctions are not solely prioritised on safety grounds alone. The work TfL has done with its Strategic Cycling Analysis is a good example of a way forward on this – by modelling corridors of potential cycling, or areas of high potential to boost walking and/or cycling rates, it is possible to appropriately prioritise junctions that feature low collision numbers but remain significant barriers to walking and/or cycling uptake currently.

3. How successful have recent junction works been in increasing the take up of walking and cycling?

TfL will have the best data on specific junctions and their individual impact on walking and cycling rates. However it is clear from TfL data that high-quality cycling routes, including appropriate solutions at key junctions, do rapidly increase cycling rates.

International evidence points to the creation of a safe and comfortable network of criss-crossing routes connecting as many key amenities and start points as possible as the single largest factor in increasing walking and cycling. For walking, this doesn't just mean junction design but also wider pavements, reduced motor vehicle dominance etc. For cycling this also means physically separate space from those walking and those driving on any busy (>2,000PCUs) and/or fast roads (>20mph).

In other words, individual junctions are unlikely in isolation to produce large rises in walking or cycling numbers. But removing the barriers these junctions represent in a walking and/or cycling network is key to the functioning of the network and overall walking and/or cycling rates in the area.

4. Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

a) Push for changes in law via Parliament and in regulations via the Dft to enable more trials of innovative junction designs and to enable signalised junction designs where "give way at turn" is used.

b) Using "modal filter cells", banned turns, construction logistics plans, timed restrictions for certain modes (such as at Bank junction) and other motor traffic volume and/or speed reduction strategies to remove or dramatically reduce motor vehicle (turning) movements is the single cheapest and most important approach that can be adopted throughout London. Tackling motor vehicle dominance is the key.

c) With low traffic movement and speed junctions, reinforce pedestrian and cycling priority – for instance by use of "continuous crossings".

d) Eliminating parking spaces in the vicinity of the junction.

e) There are low cost solutions to theoretically improve the cycling environment that are often used in outer London aready. For instance, it's common to see shared space areas around junctions and “toucan” crossing solutions. But these inconvenience walking and cycling to preserve motor vehicle capacity and fail to remove barriers to walking and cycling in the area. Even such measures that are of such low value, offer no impediment to motor vehicle journeys and inconvenience pedestrians and those cycling can still prove controversial – this points to another major issue: one of the reasons why there appears to be such little will to embrace motor vehicle capacity reduction and/or journey restriction is because local residents and some key stakeholders tend to vociferously oppose schemes with these elements. Properly fixing major junctions, major barriers to walking and cycling in outer London (or indeed anywhere) costs money and takes political will – it will require engagement with the public, and in most cases schemes which reduce motor vehicle capacity.

5. What are the biggest barriers to people walking and cycling in Outer London?

Motor vehicle dominance and lack of a coherent network of high-quality walking and/or cycling routes that enable travel via such modes in comfort and safety.

Most collisions with pedestrians or those cycling happen on or near junctions. Junctions represent the single largest barrier to more cycling and walking in London, because any walking and/or cycling route is only as attractive as its least attractive junction. However, the goal of improving cycling and walking conditions – most notably the perception of safety – at junctions is beset in London by many difficulties currently.

For junctions to be safe, to feel safe and to feel comfortable – in other words, for junctions to cease to be a barrier to uptake of walking and cycling – they require the following: separation in time and/or space for those cycling from motor vehicle traffic; clear priority and design to slow and calm driving behaviour where volumes of motor vehicle traffic are low enough to avoid the need for separation (LCC policy puts this as below 2,000 PCUs daily); capacity to cope beyond current numbers of those walking and cycling to fulfil future potential and avoid overcrowding; low wait times and little delay in progressing through the junction for those who are walking and cycling; high comfort levels in terms of pedestrian crossing times for a wide range of users, crossing width to avoid jostling etc.

TfL and the boroughs’ ongoing approach of maintaining motor vehicle capacity as its primary focus, with assumptions set during the modelling process, essentially ensures that it is very difficult to achieve the above conditions. Without significantly reducing the motor vehicle capacity (particularly private motor vehicle capacity) of most junctions in London, there is little ability to gain enough benefits for both pedestrians and those cycling for the junction to cease to be a barrier to either transport mode.

Motor vehicle capacity is here defined as the maximum number of vehicles that can theoretically pass through a junction/area per minute, according to modelling and other technical calculations. Concerns about motor vehicle capacity ensure that junction designs that remove motor vehicle lanes or reduce time in signals given to motor vehicles are rare.

Most large and/or dangerous junctions in London are nearing full capacity – modelling and the current approach does not allow for anything beyond marginal reductions in private motor vehicle capacity, and therefore changes for those walking or cycling are often physically pushed to the margins of the scheme or diluted. Because of this, even after redesign, these junctions will still remain a barrier.

On top of this, the regulatory framework of the DfT, and its apparent approach to trials, as well as British law, remains another barrier. Without the ability to create junctions where users "give way at turn" according to vulnerability (as per British Cycling's "Turning The Corner" campaign), then motor vehicle turning movements – the greatest cause of collisions with vulnerable road users – must be signal controlled.

To separate, for instance, left-turning motor vehicle movements from those walking and/or cycling ahead, currently requires both valuable time in terms of extra signals "phases" and also physical space for signal heads, islands etc. The result is that TfL has been able to, for instance, only implement its "Hold The Left" junction design at a handful of junctions without running out of either signal time (capacity) or space in terms of road width available. The DfT will also not approve trials for other forms of junction design, such as "all ways green" designs, that are viewed by the Dutch and other countries as a very vital solution.

6. What would enable people to walk and cycle more in Outer London?

Removing walking and cycling barriers by creating a network of high-quality routes connecting low-traffic residential neighbourhoods with local transport hubs and other key amenities is vital.

The density of the cycling network should be a high-quality route every 200-400m. The Mayor's Transport Strategy aligns with this, with a target of 70% of residents living within 400m of a route by 2041. These routes would, it is expected, largely be direct and on main roads with cycle tracks and junctions, where cycling is fully separated from traffic in time and/or space. And between these routes would be low-traffic residential streets. This would allow far more people to walk and/or cycle from their front door to destination without encountering hostile and offputting traffic conditions.

The Dutch plan suburban environments around 2km walking and 6km cycling radii – beyond these distances, usage of each mode falls off. The mini-Holland boroughs, particularly the currently most mature – Waltham Forest – demonstrate that this approach has value. So in outer London, safe routes towards transport hubs and other amenities should be created with these walking and cycling radii in mind.

7. What changes to roads and paths would make it easier of more appealing for people to walk and cycle in Outer London?

A network of high-quality cycling and/or walking routes including, but not limited to, wider pavements, more frequent, comfortable and safer junction crossings, more "no traffic" and "low

traffic" high streets, shopping precincts, developments and neighbourhoods (for example, modal filter cells with streets designed to keep motor vehicles below 20mph), cycle tracks separate to and/or physically protected from motor vehicle traffic primarily along main roads and combined with main road walk/cycle crossings to enable those walking and cycling to cross from one low traffic area to another.

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

Unless there is a far more widespread willingness to reduce motor vehicle movements and capacity at junctions, it is nearly inevitable that any cycling, walking or public transport improvements come at some cost to the other of those modes. This issue is visible on most major junction schemes that have come forward in the last five years.

In the current climate, the question might better be thought of as which junction designs introduce too many negatives to other modes they drop below a minimum threshold of acceptability, and which don't. There are now demonstrably junctions that improve cycling without causing unacceptable negative impacts to pedestrians or bus users.

9. How might junction improvements that help pedestrians and cyclists affect other road users?

See above. On most London junctions, outer, inner or central, in order to deliver significant enough benefits for those walking and/or cycling, significant levels of private motor vehicle traffic reduction are required.

If "give way at turn" and/or other innovative approaches to design are enabled, then it will become far easier for officers, engineers and designers in London to create Highways schemes that do not unnecessarily or excessively disadvantage any mode – whether walking and/or cycling as experienced in most current schemes, or private motor vehicle traffic in schemes which do remove barriers to walking and/or cycling for a wide range of age and ability of users. Of course, traffic reduction will remain a desirable outcome even if it is not required to create the required space for walking and/or cycling.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?

Those with mobility, visual impairments or other disabilities are particularly negatively affected by motor vehicle traffic dominance. They need more time to cross, better and safer crossing designs and are more likely to suffer the worst impacts of motor vehicle dominance in other ways too. The majority of those who are registered disabled in London do not have access to a motor vehicle. And they are also less likely to be as mobile as the general population.

As the work of Wheels for Wellbeing demonstrates, cycling is easier than walking for many people with disabilities, surmounting some of the barriers the built environment provides and enabling independence for personal journeys in ways even a car cannot. However, enabling that range of cycling needs thinking beyond the bicycle to encompass a wider range of cycle form factors and design parameters.

Design guidelines are catching up to recognise this with concepts like the Cycle Design Vehicle which generalises the needs of wider and longer cycles. However, it is not clear that these guidelines are being taken up widely, away from the highest-profile routes such as the Cycle Superhighways. In particular where cycling is thought of as an activity of the fast and the fit, barriers are often put in place even in new schemes that actually then block their usage by a wider audience who would benefit from them.

It should also be remembered that facilities designed well for cycling (especially those that may be shared close to a junction or to pass over a road) are often used by a wider range of disabled people not cycling, including those in wheelchairs and on mobility scooters who have similar design needs. As well as designing for such users, there should also be consideration of legal changes to allow them into cycle tracks.

Of course, the interface between those walking and cycling needs to be designed with care and to reduce conflict as far as possible between those modes. A design preference to avoid shared facilities can help, along with clear visual and physical delineation between spaces, even if it is just with coloured surfaces and a height difference with kerb. But it is rare for anyone to be killed, seriously injured or collided with by someone cycling. The primary risk those with disabilities face is motor traffic.

11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists, and how could these be addressed?

London's political framework is very different from other cities in the UK and beyond. As well as 33 boroughs, and TfL, there are numerous other stakeholders and Highways authorities that operate within Greater London too. The result of this is that while some outer London boroughs are showing signs that they understand and embrace the Mayor's draft Transport Strategy, the idea of "Healthy Streets" and the principles (including motor vehicle traffic reduction) enshrined in these, there are many other outer London boroughs who, by deed, clearly do not agree with these. Political will, then, is a major issue for improving junctions for those walking and cycling.

A multi-pronged approach to the lack of political will is urgently required. Primarily, TfL and the Mayor must be far more robust and prescriptive about funding streams. Funding should only be made available to high-quality Highways schemes that significantly advance the area on the basis of the principles and targets of the Mayor's draft Transport Strategy.

On top of that, more work must be done across the board to train and inform Councillors and officers, to have a broader discussion with residents in each borough and begin to dismantle some of their opposition to walking and/or cycling improvements, to provide clear evidence and guidance on

the benefits of walking and/or cycling and motor vehicle traffic reduction strategies, and the disbenefits of private motor vehicle use – to residents, businesses, areas, councils etc.

TfL and the Mayor must also show greater political leadership in its approach to schemes. It must set and stand by a quality bar for schemes and show that London can build truly transformative schemes.

12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?

Spending should be prioritised on where it is likely to have the most impact in "mode shift" – in moving journeys from one mode of transport to a more sustainable and active one. The priority here is removing private motor vehicle journeys. But there is also potential to shift journeys from private hire vehicles and taxis and from buses, tubes and trains to walking and cycling.

As well as identifying corridors, areas etc. where a scheme is likely to trigger maximum mode shift (for instance using TfL's new "Strategic Cycling Analysis"), schemes should be analysed (probably via TfL's "Healthy Streets Check") to ensure they deliver maximum benefits for those walking and cycling (and not just, for instance, public realm benefits), and councils should be assessed on their willingness and ability to deliver such schemes, and to a budget.

There are plenty of examples of junctions that together make up much of a route. Spending should be prioritised so that these junctions can be designed as part of a coherent route. This is important for what sort of designs get progressed – i.e. "with flow" tracks or "bidirectional" tracks – and in terms of being able to effectively model the changes as a whole.

13. Is there a need for a bigger overall budget to improve junctions in Outer London?

Yes.

There is a need to be far more holistic and strategic about money spent. Junctions should not be considered in isolation. Instead TfL and the Mayor should start to produce its vision of a network – of not just cycling routes, but of bus routes, and private motor vehicle routes. Some bus and cycle routes may overlap (although remaining physically separate on the same street), and some routes featuring different modes may happen in parallel. But if junctions and corridor schemes are only studied in isolation, then these network opportunities may be lost. In other words, the first question any planner should be asking, before a scheme comes forward is: "where should the cycling go in this area?", followed by "where should the buses go" and finally, "where should the cars go?"

Nationally we are at a point where we spend, compared to those countries with high walking and/or cycling modal shares, far too little on schemes for walking and/or cycling and far too much on schemes for driving. The picture in London is much better. However we still face a huge imbalance and decades of underinvestment in active travel. There is a clear need then, that the budget for junction improvements should be improved. But it is vital that any increase doesn't come at the

expense of other important elements of walking and/or cycling infrastructure in London – both modes require far more than just more and faster junction solutions.

Ongoing issues such as modelling and capacity also ensure that even with the extra money, we are not seeing schemes of sufficient quality advance often. Political will, resident engagement and other issues will continue to negatively affect schemes if we do not also tackle them as well.

London Assembly Transport Committee's Walking and cycling at Outer London junctions call for evidence submission prepared by The Licensed Taxi Drivers Association

Introduction

The Licensed Taxi Drivers Association (LTDA) has served as the professional and authoritative voice of London taxi drivers for over 50 years. We are committed to ensuring that our members' voices are heard, protecting the interests of the taxi trade and maintaining the high professional standards that have become synonymous with London taxi drivers.

Our taxi drivers prioritise the safety and comfort of their passengers, and the LTDA is committed to working with public bodies and other key stakeholders to ensure this continues. As such, it welcomes the Transport Committee's launch of its investigation into walking and cycling at Outer London junctions, and looks forward to assisting the Committee in its investigation. It is the LTDA's ambition to continue dialogue with the Transport Committee in order to deliver improvements which reflect a fair balance between the diverse needs of different road users.

Impact on other road users

The LTDA commends the Transport Committee's ambition to increase walking and cycling, and more generally to reduce the usage of private vehicles, therefore taking active steps to improve London's poor air quality. The proliferation of private vehicles, particularly private hire vehicles (PHVs), has contributed to increased levels of congestion on London's roads, significantly worsening the capital's air quality, and reducing standards of safety for passengers and the public.

The LTDA recognises the health and wellbeing benefits of walking and cycling, but these modes of transport may not be practical for road users with disabilities or visual impairments, and may not be feasible for people in certain professions or those with young children. With this in mind, measures aimed at improving walking and cycling at Outer London junctions should not create unnecessary barriers to modes of public transport, but should instead support a vibrant and high-quality transport system, which provides a range of options that suit a diverse population and its needs.

Taxis form an important part of the public transportation system, providing a door-to-door service for passengers. It is imperative that taxis continue to have a key strategic role in any solution. Improvements to the Inner and Outer London Junctions must not involve the loss of taxi ranks, nor should they make it harder for those that wish or need to do so to make journeys by taxi in Outer London.

Impact on road users with disabilities

Black cabs play a crucial role in London's transport system, as they are all 100% wheelchair accessible and are provide the only fully accessible form of public transport. Taxis provide a door-to-door service and therefore serve as a crucial lifeline to people with restricted mobility, enabling them to travel safely, comfortably and with minimal disruptions to their journeys and everyday lives. Ensuring that passengers with restricted mobility continue to have access to these vital services should be a priority for Transport for London and the Mayor of London, to ensure that all Londoners have fair and equal access to public transport.

One way in which taxis currently provide this is through the operation of Transport for London's Taxicard scheme, which provides door-to-door transport for disabled and older people who have impaired mobility and difficulty using public transport. In 2015-2016, over 688,535 trips were taken in Outer London boroughs using a Taxicard; this compares to 634,039 trips taken in Inner London boroughs using a Taxicard over the same period. Put simply, there are more journeys taken using a Taxicard in Outer London boroughs than in Inner London, and therefore it is vital that measures designed to increase take-up of walking and cycling at Outer London junctions do not do so to the detriment of disabled and restricted mobility persons making their journeys by taxi - either by reducing taxi ranks or by limiting the ability of taxis to provide a door-to-door service.

Furthermore, as the Committee's Call for Evidence notes, the coverage of tube, rail and bus services in Outer London is lower, increasing the demand for alternative forms of public transport. This demand is amplified in the case of restricted mobility road users, as public transport is often either not fully accessible, or a convenient and comfortable mode of travel.

Safety

Appendix 1 to TfL's *Casualties in Greater London during 2015* report notes that dangerous junctions deter people from walking and cycling. In principle, the LTDA welcomes measures introduced with the objective of improving safety around London's most dangerous junctions. However, it is important to ensure that any measures adopted as a result of the committee's investigation, or under the Safer Junctions programme, are targeted towards the modes of transport that cause the most collisions and incidents.

With this in mind, it should be noted that licensed taxis are amongst the safest forms of public transport. Transport for London's own data shows that taxi and private hire vehicles cause amongst the lowest numbers of collisions in Outer London. Indeed, taxi and private hire vehicles were involved in no fatal or serious collisions at all in fifteen Outer London boroughs in 2015, the most recent data available[1]. Further, the data currently held by Transport for London does not distinguish between incidents involving licensed taxis and incidents involving private hire vehicles, meaning that the numbers of incidents specifically involving taxis is likely to be even lower than this.

Improving the safety of Outer London junctions and improving the travel experience of all road users are both of utmost importance. However, there must be a sufficient evidence base for any measures adopted by the Committee. The data currently available suggests that junction improvements which have the effect of restricting or limiting taxi access or mobility are unlikely to improve road safety, and thus are unlikely to encourage greater take-up of cycling.

[1] Transport for London, 'Casualties in Greater London during 2015' (June 2016). See also: https://tfl.gov.uk/corporate/safety-and-security/road-safety/london-collision

From: Chris Medland [redacted]
Sent: 11 August 2017 12:15
To: Transport Committee
Cc: Caroline Pidgeon; Caroline Russell
Subject: How can we enable more people to walk and cycle?
Attachments: 3R.JPG; Bridge 1R 2.jpg; 2 R.JPG

Dear Transport Committee

How can we enable more people to walk and cycle?

Over 1.4 million journeys a year can be shortened and taken off main roads, busses and cars by the completion of the Diamond Jubilee Bridge, connecting Battersea with the Fulham, and the over ground station at Imperial Wharf.

The bridge is included in the Mayor's Transport Plan and has the backing of the GLA through the motion agreed last year. Wandsworth Borough Council are progressing the scheme steadily but despite the bridge being in the London plan and the past 2 mayors transport plans no TfL funding has been forthcoming. TfL's assistance in gaining a naming rights sponsor will be key to ensuring progress this decade however and I ask that you keep this project on the agenda to ensure that assistance is forthcoming.

Planning & Business Case Summary
* 1924, Viscount Curzon MP calls formally for a bridge for pedestrian access situated between Wandsworth Bridge and Battersea Bridge
* A bridge, adjacent to the Cremorne rail bridge, is called for in 2009 in the Transport Committee's review into the delivery of improvements to the orbital rail network which calls for it to link Battersea to the Overground network at Imperial wharf (rather than a new station in Battersea).
* The first Business case was produced by consultants appointed by the two borough councils in 2003; it was then updated in 2012 and the proposal was shown to have Benefit/Cost Ratio of 2.0:1, representing high value for money. The site is selected and established by both councils in these documents.
* The bridge is adopted policy in both Hammersmith & Fulham and Wandsworth
* The bridge is part of the London Plan and is specifically called for in the Thames Strategy Policy Recommendation M7.
* Hammersmith and Fulham's South Fulham Riverside SPD calls for the delivery of the bridge
* Wandsworth councils Riverside SPD calls for the bridge and makes provision for funding contributions through CIL payments.
* The Bridge is included in TfL's (Transport for London) Connecting the Capital Plan of December 2015
* The Bridge is included in TfL's transport plan for London, issued June 2017
* The GLA (London's elected Council) have agreed a cross party motion of support for the bridge
* The Bridge has planning consent and pre-commencement condition 13 has been discharged (pile design)
* TfL have completed their November 2016 cost analysis and business case which confirms its value for money and need.
* Piles have been installed and the bridge has now started on site so the consent is secured

Construction & Cost summary
* Piles are already in the ground in Battersea (procured through a S106 agreement with housing developer Barratt London)
* Once funded the bridge can be delivered within 18 months. (seasonally dependent river works to avoid fish spawning season).

* It is envisaged that the next stage will be procured via an open Design and Build competitive tender process.
* The Transport for London (TfL) cost plan shows the construction cost at £30m plus risk
* Wandsworth Council have around £10m assigned to the construction of the bridge in future CIL monies (development Tax)
* Wandsworth Council have agreed in principle to adopt the completed bridge in order to maintain it

Environmental Summary (as ascertained by Wandsworth's independent report)
* This true infrastructure project will have over 1.4 million users per annum (according to independent business case)
* It will help air quality by shifting modes of transport from cars and busses
* It will ease congestion on local busses
* It will reduce the overcrowding at Clapham Junction
* It will encourage more walking and cycling on local and commuter and business journeys
* It will save time on local and commuter journeys
* It will improve connectivity between existing public transport nodes by bus, rail and river

More information about the bridge can be found at the below websites:
http://diamondjubileebridge.london/
https://en.wikipedia.org/wiki/Diamond_Jubilee_Footbridge
http://www.one-worlddesign.co.uk/portfolio-view/diamond-jubilee-bridge/
http://www.londonsociety.org.uk/the-diamond-jubilee-bridge/

The GLA motion of support is here for reference: https://www.london.gov.uk/press-releases/assembly/assembly-push-for-diamond-jubilee-bridge

Yours sincerely

Chris

Chris Medland RIBA
Director
www.one-worlddesign.co.uk

[redacted]

one-world design architects
Architecture, Interior Design, Project Management

PHIL JONES ASSOCIATES

Emily Hopkinson
London Assembly
City Hall
The Queen's Walk
London
SE1 2AA

11/08/2017

Our Ref: 1368

Dear Ms Hopkinson

Walking & Cycling at Outer London Junctions

Introduction

Phil Jones Associates (PJA) is pleased to make this submission on behalf of British Cycling to the investigation being carried out by the Transport Committee of the London Assembly into walking and cycling at Outer London junctions.

Our submission focuses on British Cycling's 'Turning the Corner' campaign, supported by Living Streets, London Cycling Campaign and Sustrans, which proposes changes to the Highway Code, Regulations and Statute Law to give unambiguous priority to pedestrians and cyclists over turning traffic at junctions.

This would bring the UK into line with other countries such as Denmark, Sweden and the Netherlands, which have all succeeded in achieving much higher levels of active travel.

We believe that the resulting changes in driver behaviour would greatly improve safety and comfort for walking and cycling at existing junctions. Furthermore, they would enable world-class pedestrian and cycle facilities to be introduced at many junctions in a cost-effective and efficient manner, without unduly affecting capacity for general traffic.

Traffic capacity concerns, particularly impact on bus journey times, is a major barrier to the provision of more and better pedestrian and cycle facilities at junctions across London, particularly Outer London.

In summary, this would enable junctions to be created that are:

- Safer
- Simpler and
- More Efficient

In this submission we also explain the role that GLA and TfL can play in helping to achieve these regulatory changes. In the attached appendix, we provide summary answers to the questions asked by the Transport Committee.

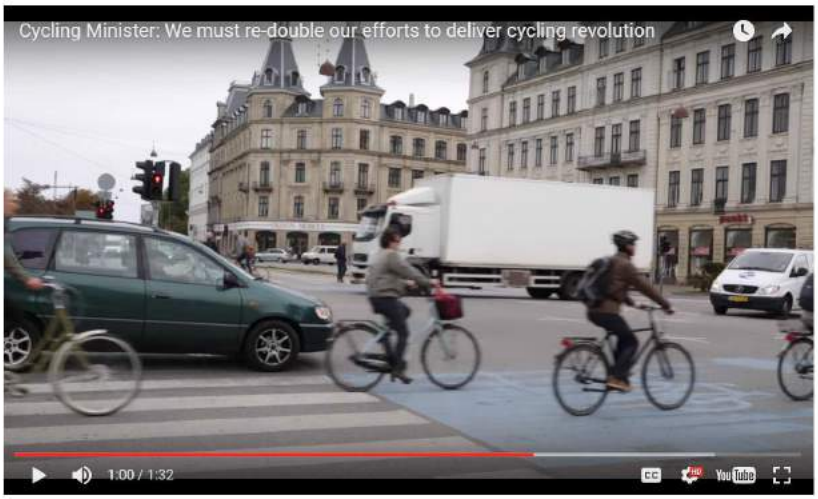
Background to the Research Study

Although TfL has been successful in improving conditions for cycling in central London, we know from direct experience on working on cycle superhighways and through our International Cycling Infrastructure Best Practice Study for TfL (2013), that there are significant regulatory barriers preventing UK authorities providing infrastructure that meets world class standards.

This is largely because the UK, unlike most other countries, does not have clear rules requiring motor vehicles to give way when crossing the paths of pedestrians and cyclists when turning at junctions.

In 2016 British Cycling commissioned PJA to conduct research on how the UK could achieve such rules within the UK legal framework. The need to investigate how this could be done stemmed from a series of study tours to Denmark and Sweden in 2015, including with the then Transport Minister, Robert Goodwill. A video summarising that visit can be seen here, including a comment by the UK Ambassador to Denmark on the importance of having clear rules of behaviour for drivers.

https://www.britishcycling.org.uk/campaigning/article/20151012-campaigning-news-Cycling-Minister--We-must-re-double-our-efforts-to-deliver-cycling-revolution-0



Driver in Copenhagen waiting to turn right across the path of cyclists

The PJA report[1] considers how possible changes to UK priority rules and laws at side roads and traffic signal junctions could be introduced, which would bring significant benefits to all road users, particularly people making journeys on foot and cycle.

Subsequent to that report we have carried out some initial traffic modelling of a traffic signal junction in Outer London which shows the significant scale of the efficiency gains at that could be achieved if these rules were adopted. Our technical note summarising the work done is also appended to this submission.

Problems and Benefits

Strengthening the rules requiring drivers to give way to pedestrians and cyclists when turning at junctions will address a number of linked problems:

- The existing Highway Code rules are unclear and unenforced, which results in real and perceived road safety problems
- There are practical difficulties in making good provision for pedestrians and cyclists at both side road and traffic signal junctions
- There is significant time wasted at UK traffic signals, compared to how they operate in other countries, which results in excessive congestion and air pollution.

Unclear and Unenforced Rules

Our report found that the Highway Code, both in its wording and its application, is very unclear on what behaviours are expected when vehicles turn across the path of pedestrians and cyclists at junctions. Only one rule (Rule 170) requires drivers to give way to pedestrians crossing side roads and this requires people on foot to already be in the carriageway at the time. It is therefore little more a rule that says 'don't run people over in this situation'. The rule is not enforced and is widely disregarded.

For cyclists, whether or not they are in a cycle lane, there is no clear rule preventing drivers from turning across their path when cyclists are passing, approaching or leaving junctions. Collisions with left-turning HGVs accounted for around 60% of cycle fatalities in London, even though over three-quarters of the junctions had Advanced Stop Lines.

[1] Sent separately via email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21 October 2014 Last updated at 21:25

Cyclist in fatal lorry collision on Ludgate Hill named

Janina Gehlau, from Dusseldorf, Germany, was in London completing a dissertation project

A cyclist who died three days after a collision with a lorry in the City of London has been named by police.

Janina Gehlau, 26, was on Ludgate Hill, close to the junction with Farringdon Street, when the crash happened at about 11:30 BST on Friday.

She was taken to the Royal London Hospital where she died on Monday with her family at her bedside, police said.

Ms Gehlau, from Dusseldorf, Germany, was studying for a Masters degree and completing her dissertation in London.

Related Stories

Cyclist dies three days after crash

Janina Gehlau was fatally injured by a left turning lorry at Ludgate Circus, London when cycling in a cycle lane.

The judge commented that the differing rules of the road from Germany may have been a factor in the collision.

Our study has shown that although the UK has a good road safety record in terms of overall numbers, it compares poorly to other European countries in terms of death and injury to pedestrians and cyclists.

Practical Difficulties in Making Good Provision

At side roads, in order to encourage drivers to observe Rule 170 and to give greater confidence to pedestrians crossing, some London authorities have begun to use 'continuous footways', as in the example below.

Continuous Footway, Clapham Old Town.

Although these can work well in practice, some vulnerable pedestrians have concerns over this design and authorities are often reluctant to use them until they are sure that drivers will give priority to people crossing. Strengthening the law and giving a clear enforceable requirement for drivers to give way would assuage these concerns. It would also mean that pedestrian priority could be achieved across side roads at a much lower cost.

There is no equivalent to Rule 170 for cyclists and so authorities often struggle to find a way of giving priority for off-carriageway cycle tracks when they cross side roads. As a result, it is very common for cyclists to be required to give way at every side road, which makes cycling much less attractive as a mode of transport.

Some authorities have begun to use the 'elephant's footprint' marking at side roads (see photo below), but this is not permitted under current DfT Regulations. We believe this would be a simple and effective change to make which would bring the UK into line with other European countries.

Cycle track across side road using 'elephant's footprints' marking, Waltham Forest (and continuous footway)

Safety for pedestrians and cyclists at signalled junctions requires a degree of separation from traffic, including using physical demarcation. The UK is in a very small minority of nations that does not have rules requiring drivers to yield to pedestrians when turning across marked crossings. The effect of this is to make it very difficult and complex to introduce good quality and direct crossings without having an unacceptable effect on traffic capacity.

As a result, is not uncommon for pedestrians to have to cross complex junctions (which are prevalent across Outer London) in several stages, causing them significant delay and inconvenience. Even worse, at many junctions authorities consider it impossible to introduce controlled pedestrian crossings without causing an unacceptable reduction in traffic capacity. Even when crossings are provided, capacity concerns often mean that the time given to pedestrians to cross is short. Living Streets' 'Time to Cross' campaign notes that around 80% of people over 65 walk more slowly than the 1.2 m/s normally used when setting green man times.

On several of the Cycle Superhighways, TfL has been able to remove conflicts between turning traffic and cyclists by signalling them separately (the so-called 'Hold the Left' arrangement). While this has been successful in addressing road safety concerns, it has introduced further complexity which has had impacts on general traffic capacity and therefore overall delays to all road users. Furthermore, these solutions tend to require additional islands for signal posts which cannot always be fitted into the space available.

In most other countries the ability to run flows of pedestrians, cyclists and general traffic travelling in the same direction at the same time means that much simpler, clearer and less costly layouts can be designed which still make full provision for pedestrians and cyclists. No complex staggers (with the attendant guardrailing and extra signal heads) are needed. Pedestrians have a much longer time to cross. Paths for cyclists can be provided through the junctions which drivers must still give way to, but less time is 'lost' because the traffic signals do not have to operate completely separate sequences for pedestrians, cyclists and general traffic.

Large signal-controlled junction, Copenhagen, showing priority pedestrian and cycle crossings.

Wasted Time, Congestion and Air Pollution

Because of our rigid staging rules, UK traffic signals are much less efficient than those in almost all other countries, to a significant degree. This causes increased congestion and, due to the greater time spent queuing, more air pollution.

In order to quantify these benefits we prepared an initial analysis of a traffic signal junction in Waltham Forest, comparing a proposed 'Mini-Holland' improvement scheme with the type of world-class design that would be possible if give-way on turning were allowed in the UK. This allowed the junction to operate on two signal stages rather than three, resulting in less time in every cycle when no-one is moving through the junction.

This analysis confirmed that the benefits to all users are substantial. How the efficiency gains are allocated between pedestrians, cyclists and general traffic would be a matter for the highway authority, but our initial design achieved the following gains:

	Parameter	3 stage junction	2 stage junction	Efficiency Gain
Motor vehicles	Average Queue Length (m)	154	88	43%
	Delay per vehicle (s)	126	81	25%
Pedestrians	Delay per person (s)	48	29	38%
Cyclists	Delay per person (s)	38	30	21%

Modelling results, Outer London junction

The Role that GLA/TfL Can Play

We have identified a series of changes to the Highway Code, Traffic Regulations and Statute Law that would clarify and strengthen the rules on turning at junctions and bring the UK into line with international best practice. We do not underestimate the challenge of changing road user behaviour, however, and understand that there would be a need for Government to carry out a major public information campaign to embed the new rules, as well as a commitment to enforce them.

To take this forward will therefore require strong Government action, initially including further research into the benefits of the changes, the potential impacts on vulnerable road users and how to minimise them, and the best combination of road markings, signs and signals to achieve the desired behaviours. It will therefore need the Department for Transport to take ownership of this proposal, and we are seeking the support of major local authorities in making the case to Government for them to do that.

We see the efficiency gains at signals as an important part of our case, and we are in discussions with TfL over the initial modelling we have carried out. We ask that GLA commit TfL to provide additional resources to assist us in assessing the traffic benefits of the proposed changes across a wider area, including in Outer London where traffic volumes are higher and the most substantial gains could be achieved.

PHIL JONES ASSOCIATES

Summary

In summary, we believe that we have identified the need to bring the UK up to international best practice in terms of traffic rules and road user behaviour, which would bring about a step change in the quality of provision for pedestrians and cyclists, as well as benefiting general traffic. The reduced queuing and delay would also lead to improved air quality around busy signalised junctions.

It would improve safety and comfort for people on foot and cycle at thousands of junctions without any changes to infrastructure at all; and would enable facilities to be introduced at many more junctions than at present, consistently and cost-effectively.

We believe the evidence for change is already strong, and look for the support of the GLA and TfL in helping us, and our campaign partners, to continue to make that case to Government.

Yours sincerely

Phil Jones
Managing Director

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Annex: Responses to Key Questions:

Previous junction improvements

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

That our regulatory regime makes it difficult to provide world-class walking and cycling infrastructure and needs to be changed to enable London to reach its full potential for active travel in a cost-effective and timely way.

2/3 How successful have recent junction improvements been in improving safety/the take up for pedestrians and cyclists?

They have been successful, but have tended to be over-engineered and costly, with some negative impacts for other modes and other considerations – for example the quality of the public realm and delays to general traffic. As a result there has been some resistance from some groups to these changes.

4. Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

Regulatory change would be a low cost solution with substantial benefits across all junctions.

Encouraging people to walk and cycle

5. What are the biggest barriers to people walking and cycling in Outer London?

Fear of traffic is the main barrier, but in many areas walking and cycling are made much more unattractive and inconvenient by the difficulty and delay in negotiating major junctions.

6. What would enable people to walk and cycle more in Outer London?

Reduction in exposure to traffic, but critically in a way that minimises delay to active travel journeys. In Outer London the main roads are often the only direct route between places and have to be tackled, which means improving the quality of provision at major junctions.

7. What changes to roads and paths would make it easier of more appealing for people to walk and cycle in Outer London?

Consistent provision meeting the 5 principal needs of people on foot and cycle – routes that are:

- Direct

- Coherent
- Safe
- Comfortable and
- Attractive

The needs of different road users

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

The introduction of more complex junction layouts and staging to reduce conflicts between cyclists and general traffic can increase pedestrian delay and reduce legibility.

9. How might junction improvements that help pedestrians and cyclists affect other road users?

They have the potential to increase delay for general traffic, which is why the overall increase in efficiency gained by requiring giving way on turning is so important.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?

Longer crossing times and more direct crossings for less able people are important. It must also be recognised that disabled people cycle, and that enabling elderly and less able people to become more active through cycling will improve their health and increase their active life.

We are aware that some groups may have concerns about the introduction of signalised crossings where vehicles are allowed to turn across them (with pedestrians having priority). We see this as an important area for further research, focusing on how this issue is dealt with in the many countries that have such traffic rules.

Implementation

11. What would be the main challenges of improving Outer London's junctions for pedestrians and cyclists and how could these be addressed?

The main challenge is political – making the case for reallocating road space to cycling and walking where currently few people use these modes. Having recourse to more efficient junction solutions will help to solve this difficult problem.

12. Should spending be prioritised, for instance on certain areas of Outer London or certain types of journey?

Investing in this rule change would have benefits at every junction in Outer London (and indeed the UK as a whole).

13. Is there a need for a bigger overall budget to improve junctions in Outer London?

Yes – but with these rules in place more can be achieved for that budget, enabling more change to take place, more quickly.

PHIL JONES ASSOCIATES

Technical Note

Project: Turning the Corner

Subject: Give Way on Turning at Traffic Signals - Proof of Concept Modelling

Client:	British Cycling	**Version:**	1
Project No:	1468	**Author:**	P Jones
Date:	May 2017	**Approved:**	P Jones

1 Introduction

1.1 Phil Jones Associates (PJA) has been commissioned by British Cycling to provide technical advice on the feasibility of giving priority to pedestrians and cyclists going ahead over traffic turning across their path, at all types of junctions. This advice has underpinned British Cycling's ongoing campaign for changes to the Highway Code, 'Turning the Corner'.

1.2 As part of that study, significant potential advantages have been identified of extending the give way on turning principle to crossings at traffic signal-controlled junctions. This form of operation would involve pedestrians and cyclists being given a green signal at the same time as motor traffic travelling in the same direction. Any vehicles turning across the path of pedestrians and cyclists would be required by law to give way to them.

1.3 Traffic signals with give way on turning are used in most other countries, whereas in the UK no traffic movements are allowed to be in conflict with pedestrians or cyclists. This often means that 'All-Red' stages need to be included in the method of control to enable all pedestrian and cyclist movements to take place. While this may appear on first inspection to bring safety benefits, this staging tends to result in long wait times and short green times for pedestrians and cyclists, which may encourage them to cross on red. It also reduces the overall capacity of the junction to motor traffic, increasing queueing, delays and air pollution.

1.4 This technical note outlines the results of a micro-simulation modelling exercise for a junction in Waltham Forest, London, which demonstrates the impact of removing a traffic 'All Red' phase from the staging sequence of a four-arm signalised junction and replacing it with an arrangement that requires vehicles to give way to pedestrians and cyclists when turning.

1.5 Investigations into feasibility of changing road user behaviour, as well as the potential effects on people with disabilities would need to be undertaken as part a further research study. Such considerations are outside the scope of this initial work.

2 Typical Layouts

2.1 Layouts which enable pedestrians and cyclists to cross junctions in parallel with motor traffic are commonplace in other countries, and have been used to inform the preliminary design of the alternative Waltham Forest scheme.

2.2 In many cases the design is quite similar to UK practice, with the exception that zebra markings are normally used at the pedestrian crossing points to indicate to drivers that they must give way to them as they turn. .Elepha ts Footpi ts hite su a es ae often used to indicate the cycle crossings.[1] Figures 1 and 2 show typical junctions in Vienna and Copenhagen.

Figure 1 - Vienna

[1] These markings are not yet commonplace in the UK but were authorised for use at traffic signals by the March 2016 version of the Traffic Signs Regulations and General Directions.

Figure 2 - Copenhagen

2.3 With these layouts, cyclists normally make a right (UK) turn in two stages, rather than having to weave across motor traffic to reach the centre of the junction. The fact that shorter signal cycle times can normally be achieved with this method of control means that the additional time required to make a two-stage turn is relatively short.

2.4 In some countries, small kerbed islands are placed in the corners of the junction to give additional protection to cyclists waiting at a red light, either to go ahead or to complete their turning movement. These islands are very commonplace in the Netherlands, but are also used in Germany (Figures 3 and 4).

Figure 3 – Amsterdam

Figure 4 – Munich

2.5 In the United States it is also normal for parallel streams of motor traffic and pedestrians to run together (Figure 5) and in some cities designs are being introduced which follow the Dutch model (Figure 6). The website http://www.protectedintersection.com provides guidance to designers on how Dutch-style junctions can be introduced in the US context (Figure 7).

Figure 5 – New York

Figure 6 – Davis, California

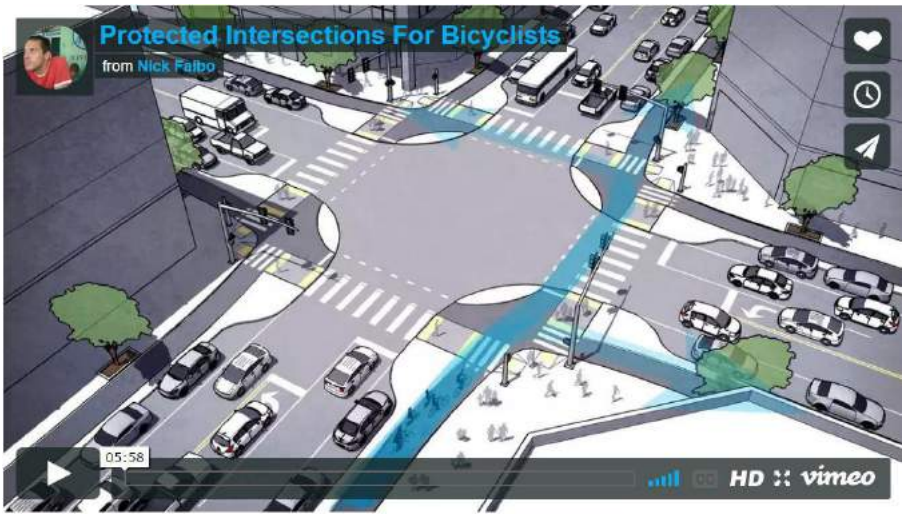

Figure 7 – www.protectedintersection.com

2.6 In some countries flashing amber aspects (sometimes with arrows) are used to indicate to turning drivers that they must give way to pedestrians and cyclists who are crossing (Figures 8 and 9).

Figure 8 – Munich

Figure 9 - Dublin

3 Proof of Concept Modelling

3.1 In 2013 the London Borough of Waltha Fo est as sue ssful i ei g aaded M i i-Holla d funding by Transport for London to introduce world-class cycling facilities across major parts of the borough. Measures have included filtered permeability to reduce motor traffic in residential areas and segregated tracks on major roads.

3.2 The A104 Lea Bridge Road passes through the southern part of the borough on a north-east to south-west axis, linking the North Circular Road, Whipps Cross and Blackhorse Road areas and linking through to Hackney. It carries significant volumes of traffic and the Mini-Holland project involves adding segregated cycle tracks along its length through the borough.

3.3 The existing junction of Lea Bridge Road with Orient Way is near to the western boundary of the borough and is a complex traffic signal layout with poor provision for pedestrians and cyclists (Figures 10 and 11).

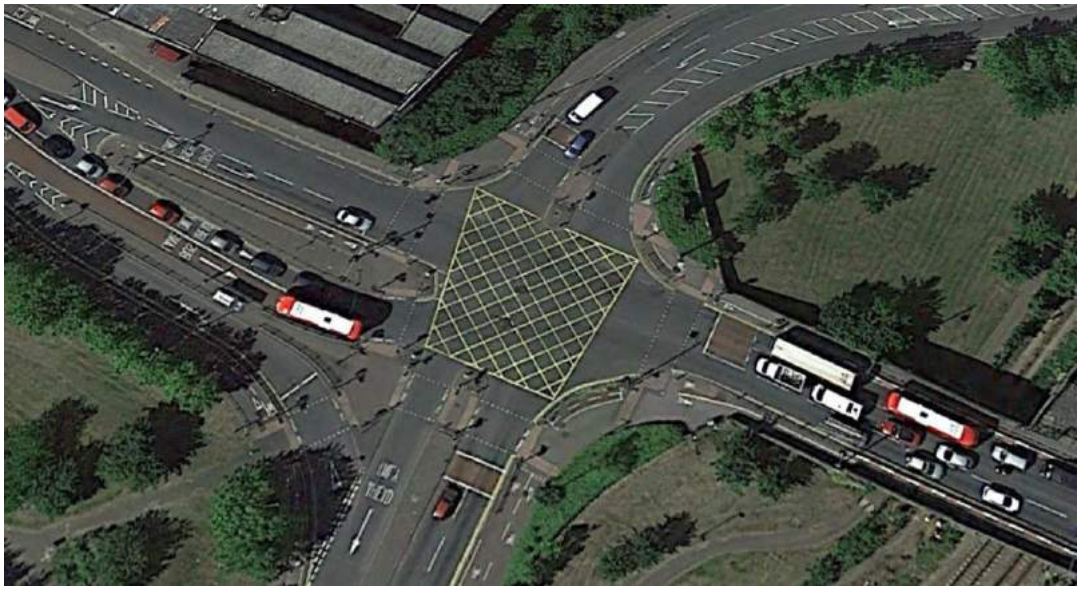

Figure 10 – Existing Lea Bridge Road/Orient Way junction

Figure 11 – Existing pedestrian facilities

3.4 As part of the mini-Holland project the layout is to be improved significantly for pedestrians and cyclists by reducing the extent of the carriageway and providing direct crossings of all arms of the junction (Figure 12). As a result of these changes the capacity of the junction to motor vehicle has been reduced which is expected to lead to some increases in journey times, including for buses.

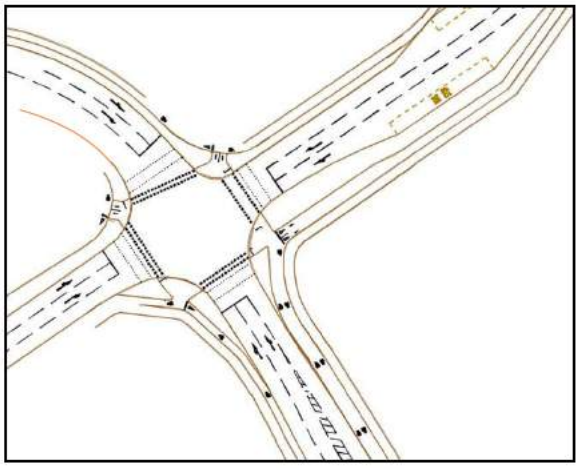

Figure 12 – Approved mini-Holland junction layout

3.5 The improved junction will operate on three signal stages:

- Stage 1 – East-West motor traffic
- Stage 2 – North-South motor traffic
- Stage 3 – Pedestrians and cyclists

3.6 During Stage 3 motor vehicles will receive a red signal on all approaches to the junction (All-Red period). Pedestrians and cyclists will be able to cross all arms, with cyclists being required by zebra markings to give way to pedestrians as they enter and leave the junction. This type of protected layout is being pioneered in Waltham Forest and is based on a concept design that was included in the updated London Cycling Design Standards published in December 2014 (Figure 13).

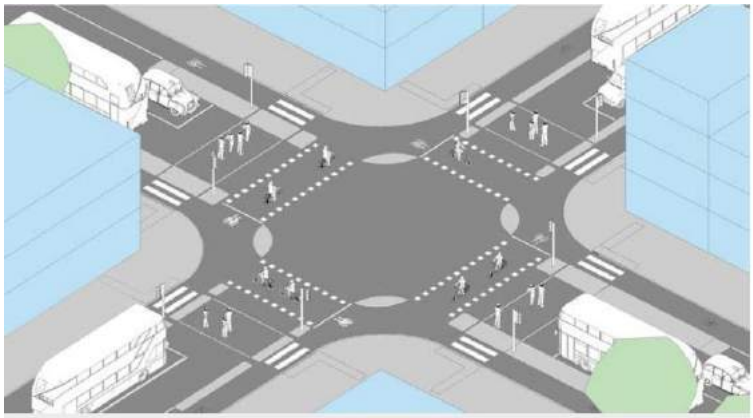

Figure 13 – Concept design for protected junction, LCDS

3.7 This type of desig seeks to epl iate the p otete d i tese ti o s that ae o o plae i the Netherlands (Figure 3) and are being pioneered in the US (Figures 6 and 7). Crucially, however, under UK regulations it is not possible to run these layouts in an efficient two-stage arrangement.

3.8 Drawing on international best practice, a slightly modified version of the approved layout has been designed which would operate on two stages (Figure 14).

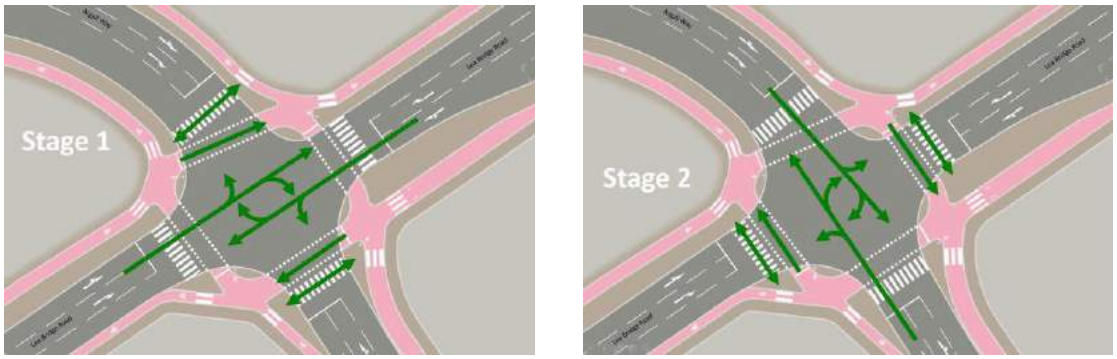

Figure 14 – Alternative design and signal staging

3.9 LB Waltham Forest provided PJA with the AM Peak VISSIM microsimulation model for the proposed layouts for the whole of the Lea Bridge Road corridor. The Lea Bridge Road/Orient Way junction was then abstracted from the corridor model so that the effects of changing the junction layout from the three-stage to the two-stage design could be assessed.

3.10 The Lea Bridge Road corridor has been assessed on a 104 second cycle time, and this was retained in the stand-alone junction model. It may be that a lower cycle time could be used if give way on turning staging was permitted, which could improve the efficiency of the network, but this refinement was beyond the scope of this initial exercise.

3.11 The hourly design motor traffic flows at the junction are shown in Table 3-1 below.

Table 3-1: AM Peak - Motor Traffic Flows

	North	East	South	West	Total
North	0	46	67	53	166
East	52	0	97	371	520
South	114	90	0	224	428
West	63	306	173	0	542
Total	229	442	337	648	1656

3.12 Pedestrian and cycle flows throughputs at the junction are 216 and 280 per hour respectively.

3.13 I ao d a e i th esta lished US pati e, a l eadi g pedesti a /y l e i te al of 3 seo ds was used. This gives pedestrians and cyclists a head start over motor traffic so that they are established on the crossings before motor vehicles move off. To achieve an optimum outcome for each type of user, the pedestrian and cycle phases were closed down before the end of the parallel motor traffic phase to clear any turning vehicles held in the junction.

3.14 The signal timings are shown in Figure 15 below.

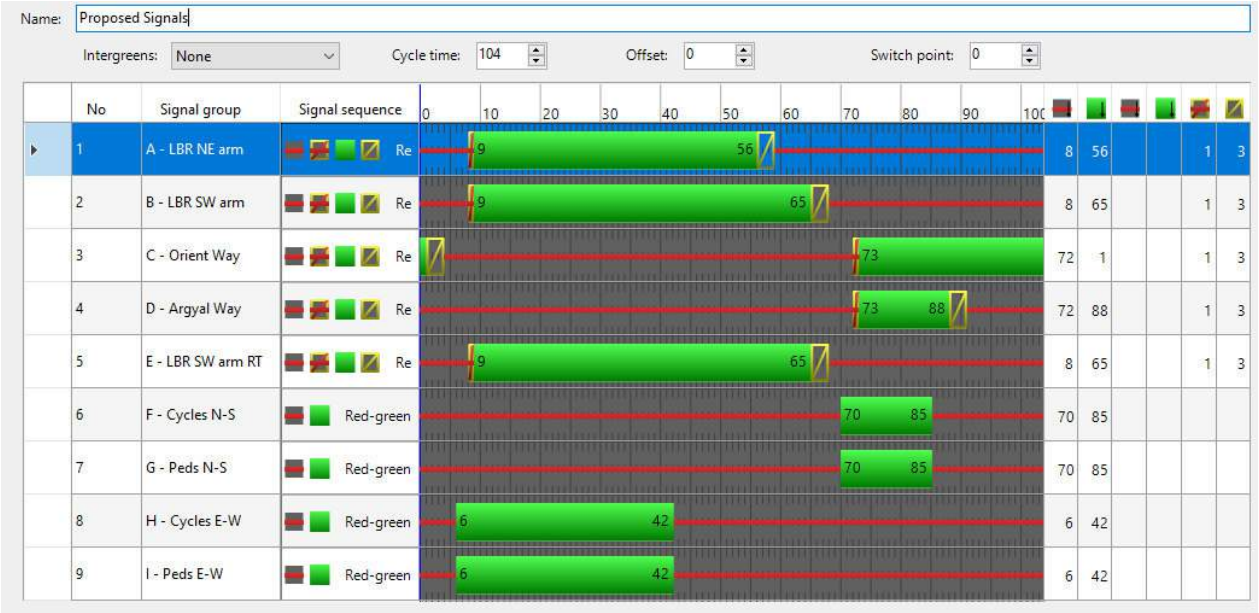

Figure 15 – Modelled Proposed Signal Timings

Modelling Results

3.15 The VISSIM model has been set up and run multiple times for outputs to determine the effects on all traffic. The results are shown below.

Table 3-2: VISSIM Results

	Parameter	3 stage junction	2 stage junction	Improvement
Motor vehicles	Average queue length (m)	154	88	43%
	Average delay per vehicle (s)	126	81	23%
Pedestrians	Average delay per person (s)	48	29	38%
Cyclists	Average delay per person (s)	38	30	21%

3.16 In terms of environmental impacts, Figure 15 shows the average difference in exhaust emissions, along with the average difference in fuel consumption.

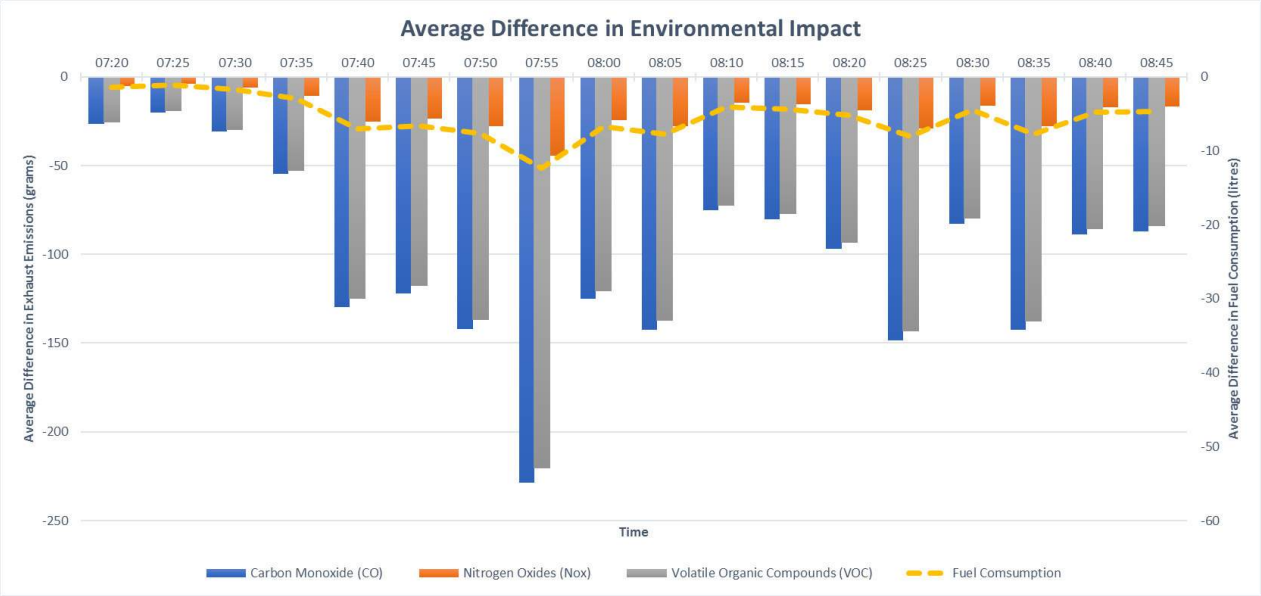

Figure 15 – VISSIM Results – Environmental Impact Comparison

3.17 Figure 15 shows that the exhaust emissions (left hand axis) and fuel consumption (right hand axis) are all lower in the revised arrangement.

4 Conclusions

4.1 This initial design and modelling exercise has confirmed the large scale efficiency gains that would be achieved if traffic signal staging arrangements used in the UK were brought into line with those of most other countries. These benefits accrue to all types of user – motor vehicle occupants, pedestrians and cyclists.

4.2 The reductions in congestion and queueing lead to significant improvements in air quality and fuel consumption.

4.3 The benefits shown here were derived from modelling a single junction in isolation. Further efficiency gains could be demonstrated if complete corridors and networks were modelled, including by reducing overall traffic signal cycle times.

4.4 The introduction of give way on turning rules will also enable pedestrian and cycle facilities to be introduced at many more junctions than is presently possible, since they have a lower impact on motor vehicle capacity and require less space than under UK rules. Providing more complete

networks will make walking and cycling much more attractive in urban areas, helping to reduce the number of short car journeys and further reducing congestion and air pollution.

4.5 Moving away from a fully-separated crossing system would undoubtedly be a major change for the UK, however. Extensive research would need to be carried to establish the feasibility of successfully altering road user behaviour, including the design of appropriate road markings and signals. Concerns have also been expressed by groups representing disabled people and this would be a further area for careful study.

4.6 Notwithstanding these issues, the considerable potential advantages to all types of user mean that these further investigations should take place.

WALKING AND CYCLING AT OUTER LONDON JUNCTIONS
CALL FOR EVIDENCE

Submission from Publica

6 September 2017

1. INTRODUCTION

1.1. Publica is a London-based public realm and urban design consultancy, specialising in research, strategy and design for public space, urban design and masterplanning. Since Publica was formed in 2010, every project we have worked on has centred upon improving the experience of the public realm and has aimed to improve the conditions for active travel. We welcome the opportunity to provide views and information to the London Assembly's Transport Committee with regard to walking and cycling at outer London junctions.

1.2. Our response to the call for views and information relates to the key questions covering 'Previous junction improvements' (see section 2 below), 'Encouraging people to walk and cycle' (see section 3), 'The needs of different road users' (see section 4) and 'Implementation' (see section 5), as these most closely relate to Publica's areas of work and expertise.

1.3. The material shared in this submission is underpinned by our belief that the future success and sustainability of London lies in compact urban growth, and recognises the importance of density and intensification in the development of high quality urban neighbourhoods. This focuses on the relationship between active travel, infrastructure, urbanism and liveable cities, and is based on evidence from Publica's surveys and projects in 74 neighbourhoods across London as well as local and international case studies, and our advisory work for the National Infrastructure Commission.

2. PREVIOUS JUNCTION IMPROVEMENTS

2.1. Junctions designed to prioritise and optimise the flow of motor vehicle 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. It is, however, clear that this status quo is beginning to change in both central and outer London.

2.2. Mini-Holland projects were initiated in the last Mayoralty and being continued through the current administration under the Healthy Streets[1] agenda. These have begun to tackle junctions of various scales through realised and proposed changes, that prioritise the safe and efficient movement of those walking and travelling by bicycle in three outer London boroughs: Waltham Forest, Enfield and Kingston.

2.3. The draft Mayor's Transport Strategy[2] cites these three schemes, and states the Mayor's intention to build upon the best results of each.

2.3.1. In Waltham Forest a large number of minor junctions have been improved through the use of 'blended Copenhagen crossings' – the continuation of the footway, in terms of both material and level, across a minor road at the junction with a major road. This provides a more continuous walking experience, providing pedestrian priority across all minor roads, as well as slowing vehicle traffic and increasing driver awareness of the presence of pedestrians at these junction points.

2.3.2. 'Copenhagen crossings', have also often been combined with modal filtering, a practice becoming increasingly common in residential areas across Greater London; for example, in the boroughs of Hackney and Walthamstow this has been applied extensively in residential areas. This improves the conditions for pedestrian and cycle movement by restricting the turning of motor vehicles at junctions and decreasing traffic volumes and 'rat-running' on certain streets.

2.3.3. Waltham Forest is currently embarking on their most ambitious mini-Holland project in the transformation of Whipps Cross. This is the first traffic junction of this scale in outer London to be tackled with an active travel approach at its core. These works represent a step change in the approach to junctions of this scale. The proposals, when realised, will present a step change in the approach to junction improvements by using pedestrian and cycling priorities to overcome severance and drive significant positive change to motor vehicle dominated and hostile environments. The performance of this new junction arrangement should be closely monitored to provide tangible evidence that can influence future projects in outer London.

2.3.4. In Enfield, works have been carried out to improve walking and cycling conditions at the A105 junction with Church Street and Bush Hill Road. This project separates the movements of those walking or travelling by bicycle from motor vehicle traffic. Physical segregation has been used on approaches to the junction, and the junction itself features a 'scramble junction' (featuring

[1] Transport for London, 2017. *Healthy Streets for London*. London: Transport for London
[2] Greater London Authority, 2017. *Mayor's Transport Strategy: Draft for public consultation*. London: Greater London Authority, p47.

simultaneous green lights for those walking or travelling by bicycle in all directions); this is one of the first of its kind in the UK. Similarly to the Whipps Cross example, the performance of this new junction arrangement should be closely monitored to provide tangible evidence that can influence future projects in outer London.

2.4. Through the mini-Holland programmes, individual boroughs have been able to develop unique and innovative approaches to improving conditions for those walking or travelling by bicycle at outer London junctions of a variety of scales.

2.5. It is vital that the ongoing performance of the junctions improved through the mini-Holland programmes are monitored and information and evidence gathered to support future projects. There is also the potential to use them as catalyst projects to inform an approach to junction design that can be adopted by other outer London boroughs in order to develop a coherent approach to junction design and prevent a piecemeal and inconsistent approach that varies from borough to borough. TfL could play a valuable role in facilitating and coordinating this learning process.

3. ENCOURAGING PEOPLE TO WALK AND CYCLE

3.1. The choice to walk or to travel by bicycle is fundamentally driven by two factors: first, the perceived ability to undertake the desired journey safely, conveniently and efficiently; and, secondly, the ability to do so through the physical transport infrastructure provided. A thorough understanding of the existing conditions of the physical transport infrastructure is crucial, in order to best address the challenges and maximise the opportunities to improve conditions for those walking and travelling by bicycle. Publica's methodology begins with a wider area survey to look carefully at existing spatial, network, and social conditions. The knowledge gathered during this survey then informs all subsequent aspects of the design process.

3.2. Publica has identified four significant barriers to people walking and cycling through a number of projects including surveys and wider area strategies in both central and outer London.

3.2.1. Lack of network

The lack of a clear, well-defined network of routes such as this means that walking or travelling by bicycle may not be seen as viable journey options. Larger distinct areas or neighbourhoods are divided into smaller areas or 'cells', defined by less permeable boundaries such as major transport infrastructure or natural features, which are connected by a legible, coherent and direct network of routes. These routes must respond to the conditions in which they are

implemented and will be facilitated by a combination of hard and soft segregated routes, quieter (<2000pcu's[3]) roads, modal filters and wayfinding.

3.2.2. Severance

It is essential that network cells are connected and at these connection points the conditions for those walking and traveling by bicycle are prioritised. Network cells will often be defined by points of significant severance such as large road junctions with poor and convoluted crossing conditions for those walking or travelling by bicycle. The ability to overcome these severance points is essential to facilitate commuting, school runs, shopping trips and local journeys.

3.2.3. Hostile and dangerous conditions

The lack of appropriate infrastructure as well as the volume and type of motor vehicle traffic can give rise to hostile and dangerous conditions in which to travel by foot or by bicycle. A lack of physical infrastructure designed for safety, priority and convenience such as signalised crossings, direct crossings, protected space and low-level signals, amongst others, often highlights these conditions.

3.2.4. Perceived distance and wayfinding

The perceived distance between origin and destination is often a significant barrier to walking and cycling in outer London. Without access to a legible, coherent and direct network of routes, distances can appear to be disproportionately long and convoluted. The ability to cover distances by foot or bicycle is overlooked when the instinctive transport choice has been by private motor vehicle or public transport. The ability to see and understand the potential journey and for it to appear straightforward and convenient is essential in overcoming this barrier. A lack of consistent and coherent wayfinding for those walking or travelling by bicycle in outer London is intrinsic in reinforcing the perceptions of distance, severance and lack of network as outlined above. The success of the Legible London wayfinding system in Central London should be seen as the model to adopt and develop in all outer London boroughs to ensure consistency and legibility across boroughs.

3.3. Overcoming the barriers outlined above is essential in order to enable people to walk and cycle in outer London. The Mayor's Transport Strategy (draft, 2017) highlights that there are a potential 5 million journeys per day currently made by car that could be made by foot or by bicycle. Addressing the above barriers and making travel by foot or bicycle the preferred option due to its convenience and simplicity will allow this modal shift to be made on those journeys.

[3] PCUs refers to 'passenger car units', and is a form of measuring the impact that that a mode of transport has on traffic variables such as type, speed and density.

3.3.1. A primary enabler will be the creation of a network of active travel routes throughout outer London. The Dutch *Design Manual for Bicycle Traffic*[4] defines five key elements in creating a network: cohesion, directness, safety, comfort and attractiveness. These same factors are reflected in the London Cycling Design Standards[5] and should form the basis for any works. There is, however, the need for consistency in their application across schemes and a joined up holistic strategy should guide delivery of schemes across outer London.

3.3.2. The adoption of an 'eight to 80' model of suitability would be beneficial in delivering a consistent standard of interventions across outer London. This would mean that all schemes provide an inclusive walking and cycling environment that is suitable to all users between the ages of eight and 80 years old.

3.3.3. Networks should be created that take in key routes to schools and areas designated as town centres, so that the concepts of walking or travelling by bicycle are instilled as viable transport options from an early age and active travel is built into the everyday routine.

3.3.4. The point at which to introduce different levels of intervention would also benefit from a standardised approach. A matrix, that correlates place function and traffic volume could be developed in this regard based around one recommendation frequently made by the London Cycling Campaign (LCC), amongst others, and used in Holland, the adoption of the 2000pcu tipping point at which bicycle and motor vehicle traffic become segregated by time or space.

3.4. There are a number of changes that could be made to existing roads and paths that would make it easier and more appealing for people to walk and cycle in outer London. These changes will vary in the nature and scale of intervention, as they should respond appropriately to their context, while also being part of a coherent and holistic strategy. No changes should be carried out in a piecemeal or isolated manner. All interventions should contribute to the creation of a comprehensive, direct, legible and safe network of routes with 'eight to 80' suitability. The scale of these interventions can range from simple wayfinding solutions to full cycle segregation or pedestrianised areas but must contribute to the wider network and not be carried out in isolation.

3.4.1. A clear modal hierarchy should be established that places walking, cycling and public transport at the top, in that order. All interventions should aim to deliver roads and paths that respond to this hierarchy in a clearly defined way.

[4] CROW, 2016. *Design manual for bicycle traffic*. Ede, Netherlands: CROW.
[5] Transport for London, 2014. London Cycling Design Standards. London: Transport for London.

3.4.2. Interventions that strive to provide the best possible levels of comfort, safety and convenience should provide benefits for all road users. For example, continuous footways at minor side-road junctions, as described in 2.2.1, can help to maintain the continuity of pedestrian routes whilst also working to reduce the speed of motor vehicle movement at junctions and increasing driver awareness. These could also be combined with a modal filter to reduce motor vehicle volumes.

3.4.3. The highest level of change and intervention will likely occur on those routes or junctions where motor vehicle use exceeds the 2000pcu volume and protected space on routes and at junctions is required. Bold changes in these areas are necessary in order to fundamentally change peoples' travel choices and make active travel options the most appealing and viable choice.

3.4.4. A relatively simple intervention is modal filtering (as described in 2.2.2 above), which works to reduce motor vehicle traffic on certain routes while maintaining permeability for those travelling by foot or by bicycle. An appealing aspect of these types of scheme is that they are a relatively simple intervention carried out easily and at very low cost on a temporary basis, as demonstrated by Waltham Forest in the early stages of the mini-Holland scheme.

4. THE NEEDS OF DIFFERENT ROAD USERS

4.1. Many schemes, current and proposed, in both the Quietway programme and in other borough-delivered projects, apply shared areas of footway at certain junctions to simplify the junction crossing functions. Shared spaces at junctions create ambiguity and a lack of coherence for the user, placing the needs of those walking and travelling by bicycle in direct conflict, particularly when these junctions are fed into by a clear, well-defined route. It is therefore important that the application of shared areas is properly considered, and its use at junctions, where priorities and functions should be most clearly defined, should be avoided. Examples of junctions with conflicted shared areas are found throughout the Olympic Park, and also outside Finsbury Park station on the CS1 route.

4.2. Publica's work in central London for the Northbank BID has found that junctions function best for both those walking and travelling by bicycle when priorities are clearly defined and a modal hierarchy is established at the junction. An example of a junction improvement in this regard can be found at the bottom of Wellington Street in the City of Westminster, where a previously ambiguous cycle crossing has been altered to provide clear definition between cycle track and footway, mitigating the conflict between those walking and travelling by bicycle.

5. IMPLEMENTATION

5.1. The delivery of any project presents significant challenges, and these are inevitably unique to each project; often, however, these fall into similar categories that can be understood and addressed through common principles. A thorough understanding of these challenges, obtained through an extensive survey of the existing context, will not only highlight the opportunities available but also the ability to pre-empt and mitigate potential conflicts with stakeholders (often including local residents, workers, business owners, amenity groups and societies).

5.1.1. The main challenge of any scheme to improve outer London junctions for pedestrians and cyclists will be the building of consensus on the scheme, and the engagement of the wide range of stakeholders with vested interests in the project. Careful communications of the project scheme are vital, with particular care and attention paid to the language used to describe the scheme benefits; ensuring it clearly demonstrates how it delivers benefits for all without marginalising stakeholder groups. Publica works extensively to build consensus across our projects by ensuring that all appropriate stakeholders are engaged in the design process from the initiation of a project. Engaging stakeholders through the vision and concept design process helps to ensure project backing and support through to delivery.

5.1.2. The draft Mayor's Transport Strategy (2017) sets out that "walking, cycling and public transport should be prioritised, taking space from less efficient general traffic where required to minimise conflicts between complementary active and sustainable modes." This recommendation forms the basis for a change to the modal hierarchy that currently exists at the vast majority of outer London junctions that prioritises the movement of private motor vehicles above other modes. Any changes to the modal hierarchy of any junction should result in meaningful change and improvement and these benefits should be clearly communicated and present viable choices to walk or travel by bicycle.

5.1.3. Providing improvements to outer London junctions for pedestrians and cyclists presents a significant challenge in ensuring that these improvements are part of a comprehensive network of routes. Any scheme that is delivered in isolation will present a negligible contribution to wider goal of driving active travel choices. It is therefore imperative that schemes transcend borough boundaries and are delivered as part of a wider strategy.

5.2. The prioritisation of spending on junction schemes should aim to benefit the types of journey that deliver the largest potential long-term benefits and facilitate active travel as the easiest, safest and most direct journey option built into everyday routines.

5.2.1. Spending priority should be given to schemes that result in the creation of networks of routes for waking and travelling by bicycle that are based around

schools and town centres, and everyday journeys that can be undertaken through active travel. Coherent networks developed in cells centred on town centres and schools should then connect and overlap to create wider area networks enabling longer journeys.

5.2.2. Alongside the prioritisation of projects that create coherent networks, those that identify the key severance points between network cells should be prioritised for improvement. These are potentially the most complex projects with the largest challenges to overcome.

6. CONCLUSIONS

6.1. Publica supports the intention to continue to build on the success of improvements like the existing mini-Hollands, but these should be monitored and evaluated

6.2. An in-depth understanding of the existing conditions of junctions will allow challenges to be better anticipated and met.

6.3. Improvements to outer London junctions should take a joined-up, co-ordinated approach, with collaboration and learning across borough boundaries.

6.4. Improvements to outer London junctions should be clearly positioned in relation to broader policies and programmes across TfL and GLA to promote active travel.

6.4.1. While it is clear how the aim to improve outer London junctions contributes to the Healthy Streets approach, the intention to improve junctions is not clearly linked to the more recent 'Livable Neighbourhoods' scheme, nor the 'Healthy Routes' noted in the Draft Transport Strategy (Proposal 1). This inconsistency means it is unclear how these plans and approaches relate to one another. It should be made clear whether, and how, the improvements link to TfL and GLA's wider efforts to improve active travel, create dense urban neighbourhoods, and to ensure a joined-up approach to transport and other services.

From: Rochelle Keenaghan [redacted] on behalf of Consult [redacted]
Sent: 04 August 2017 09:20
To: Transport Committee
Cc: Consult; Jon Houghton [redacted]
Subject: Walking and cycling

Follow Up Flag: Follow up
Flag Status: Flagged

Dear all

The RCP is grateful for the opportunity to respond to the above consultation.

We have liaised with our Sport and Exercise Medicine Committee and would like to make the following suggestions.

1) More cycle lanes should be separated from traffic by a physical barrier such as a kerb
2) Have lights at junctions that allow bikes to go before vehicles
3) Increased traffic calming speed measure at major junctions
4) Extend the Santander cycles initiative to ensure more docking stations in greater London
5) Extend the government cycle to work scheme for tax efficient cycle purchase
6) Campaign for schools to encourage parents walking to work with children and not driving
7) Campaign a 'get off the tube one stop early and walk the rest' on the daily commute. This would increase walking by around 20-30 minutes per day

I would be grateful if you could confirm receipt.

Best wishes

Rochelle Keenaghan | Committee manager
Membership Support and Global Engagement Department| Royal College of Physicians
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Please note that this email is not always monitored as I work flexibly and part time. For consultation issues please email [redacted] or for urgent issues email [redacted] or call Simon on [redacted].

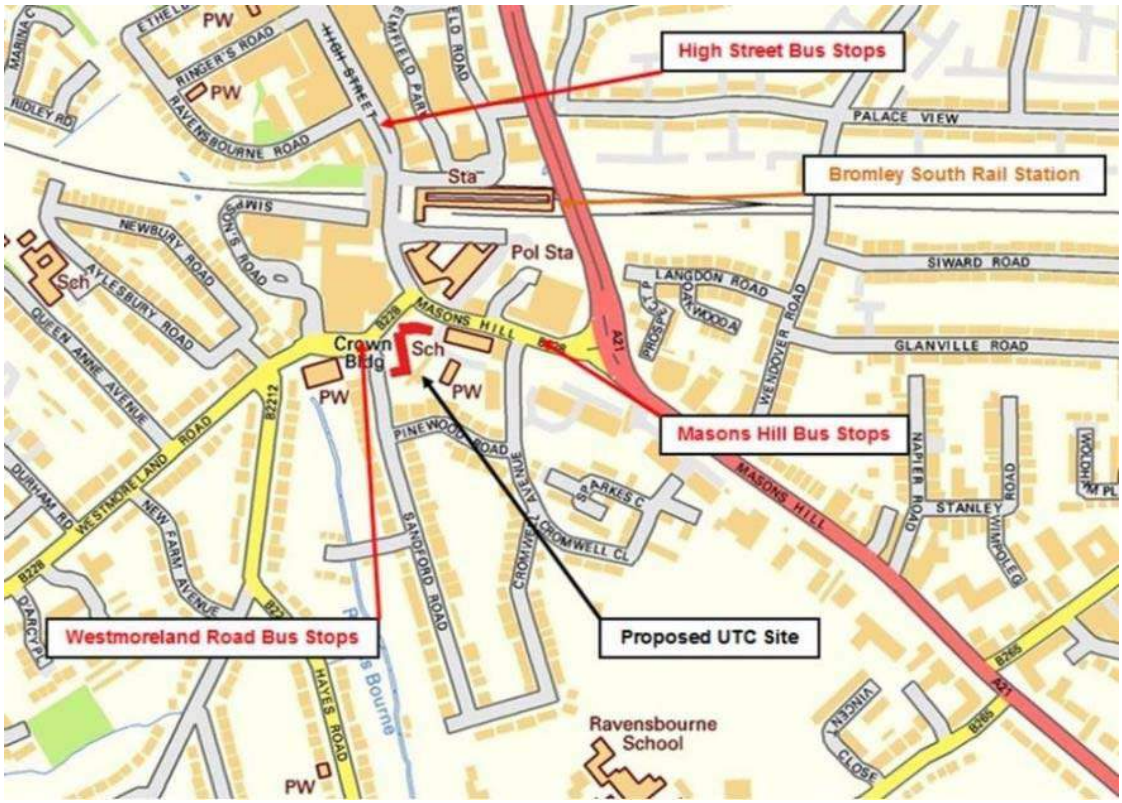
SHaW Futures Academy Action Group

Submission to TfL Consultation on Walking and Cycling at Outer London junctions

Introduction

We are a group of Bromley residents either opposed to, or with serious concerns about, an application by SHaW Futures Academy to build a secondary school for 1,260 children and with 150 staff at one of Bromley's busiest junction, at the corner of Westmoreland Road and Masons Hill. We henceforth refer to this as 'the Junction'. The Junction is moreover the entrance to Bromley High street, and on the main access route to Bromley South station, the borough's busiest railway station which has non-stop services to Central London and is on the Thameslink line.

SHaW Futures Academy site Location, at Junction of Westmoreland Road, Masons Hill and Bromley High Street



Source: SHaW Futures Academy Transport Assessment, Mott MacDonald consultants, Jan 17

An outline to the school concept can be found here. It is to be a "vertical school", ten stories high, and is to be built on a small plot belonging to the Educational Funding Agency (EFA). It will have a strong vocational orientation, focusing on health, wellbeing and science. It will have no playing fields, but children will have access to other sports facilities in the Borough.

In writing to TfL we have two objectives: (a) to have the case considered under the above-mentioned consultation process, and; (b) to prompt TfL's proactive involvement in the planning process as soon as possible, with a view to addressing the problems we raise below.

The planning process

The planning application can be found here, along with many[1] of the written objections to it. There is a growing shortage of secondary school places in Bromley Borough, and it is forecast that an extra 34 forms of entry will be needed by 2022, and for this reason the Council is very keen to approve applications. However, the Council has identified a number of issues with the application, notably the likelihood of traffic congestion at the Junction and near the school, the risk of flooding from a culvert under the school, and the environmental impact on the local residential area. Local residents also point to the lack of outdoor space and poor air quality, making this an unsuitable site for a secondary school.

The application is to be considered by the Council's Development Control Committee on September 6th, and the Council expects the promoters to come up with satisfactory answers, and presumably S106 finance, that will address these issues to its satisfaction.

Our concerns

Our group members have varied concerns about the school. A number live close by and think that it will blight their neighbourhood, while some with backgrounds in education have serious concerns about the physical layout and/or lack of playing fields. The Bromley Civic Society has protested to the Council that the high-rise development will cause a loss of the view from the High Street to Keston Ridge. All of us, including those living further afield, are concerned about the prospect of growing congestion at the Junction and in the streets close to the school, and ***this aspect is the subject of our submission to TfL***. One of our members is with Bromley Cyclists, which has particular concerns over transport matters.

Bromley Council has designated central Bromley a zone for high-rise development, the school being a case in point. Others include the close-by 20-storey St Marks Place development, which is approaching completion, the already approved 17-storey development of the H.G. Wells Centre site, the 'Site G' 16-storey development adjacent to the Library Gardens which is coming up for consideration by the Council and the 20-storey 'Site A' development behind Bromley North station on which consultation is to start in September. We are concerned that this densification will put increased strain on transport links. Public transport at the Junction is already at capacity during peak hours, and we believe the combined effect of growing population, the school and other high rise developments will intensify the problem.

[1] Many comments, such as TfL's and Bromley Cyclists' critical comments about transport aspects, of 3 and4 April respectively, are not shown on the planning website.

Bromley South and the need to change the modal split

However, this is only part of the problem. The Junction is close to Bromley South station, where commuter traffic is growing. This puts increasing strain both on the under-dimensioned station, which is widely acknowledged to be in need of redevelopment, and on the access routes down the A21, Hayes Road and Westmoreland Road, all of which funnel traffic through the Junction into the High Street and towards Bromley South station.

Here we need to consider both the volume of traffic, which will increase in line with population, and the modal split. The Mayor's transport strategy involves greatly increasing the overall share of public transport, walking and cycling by the year 2041, with a view to improving public health and reducing congestion. The need is particularly pronounced in outer London where car usage is greater and we find that TFL research has established that people tend to walk less than those who live in inner London, and that there is much greater potential for growth in cycling.

Public transport and walking are already major means of access to Bromley South, but cycling has a very small share, with about 0.4% of commuters leaving their bikes at the station. There is major potential for increase, but this will require radical improvements in cycling infrastructure and thereby road safety[2]. Such a change requires much forward planning with a view to putting the necessary cycle lanes and other infrastructure into place. A modest start is being made with the approval of a route from Bromley South to Shortlands, but there are no plans for cycle paths through the Junction and southwards towards Farnborough, Hayes and West Wickham.

Pedestrian access is also restricted around the Junction. The pavement on Westmoreland Rd leading to Masons Hill is extremely narrow, only 1m wide, and with street furniture such that pedestrian access often needs to be single file and therefore only one way, especially to allow those with impaired mobility or children in buggies to pass. The road crossing over Westmoreland Road is very narrow with a centre split that gets congested and dangerous at peak times. The design is incapable of safely handling large numbers of pedestrians as it stands and will become worse when the St Marks Square development opens.

East-west road traffic

The Junction is also on the main east-west thoroughfare for the southern end of Bromley and drivers use this intensively. The only possible alternative is via Hayes Road/Hayes Lane, a route which is impeded both by a width restriction to calm traffic outside Ravensbourne School and a 4-way traffic-lighted junction with Bromley Common and Homesdale Road which is both notoriously slow to cross and also a traffic accident blackspot. The Junction and route needs urgent attention as matters can only get worse.

[2] These are the findings of a short research exercise that one of our members led in 2016, and which involved interviewing commuters who were cycling to rail at Bromley South.

Enter SHaW Futures Academy

The new school will increase the traffic in an area where there are already the above-mentioned stresses and challenges. The promoter's travel assessment presents a benign picture whereby there will be negligible impact, but this is simply not credible to the people living nearby and who have witnessed the relatively minor impact of the Harris Academy (around 150 children) which was temporarily located at the site. Sarah Hoad of TfL has also seriously critiqued the travel assessment, in her comment of 3 April, finding that it had:

- significantly underestimated trips – the number made by bus and car would be higher and those by rail and cycle lower than the developers assume – this raises concern for the capacity of the bus network;
- failed to account for 2-way trips by car of parents dropping off/collecting pupils and underestimated the level of pick off and drop off by car. There is some potential for overspill onto Westmoreland Rd which could block traffic flow and buses on this busy route, making the proposals incompatible with the London Plan.
- not provided sufficient information on the catchment area for the school, or parental expressions of interest (we are not aware of this);

On the basis of a traffic modelling exercise, Hoad forecasted that the development would impact on the operation of the junction between A21 Kentish and the B228 Masons Hill, "pushing one arm over capacity in the pm peak hour". In view of this, there was a need for further discussion once developers had re-run trip calculations on more reasonable assumptions.

A major plank in SHaW Academy's platform is that it will promote healthy lifestyles by causing students and staff to walk and cycle to the school. However it provides for no infrastructural improvements that would facilitate these travel modes, except for the installation of some bike racks at the school. Worst of all it assumes parents will allow their children along very busy, hazardous and sloping roads that lack cycle lanes, i.e. Masons Hill and Westmoreland Road. These roads are "marked for use by cyclists" on TfL's Local Cycling Map (no 11), but SHaW's Travel Assessment uncritically assumes that they are suitable for children.

The new school will exacerbate obstacles and danger for pedestrians and traffic on the Westmoreland Road approach to the Junction. There are bus stops on both sides of the road right next to the crossing and the proposed school will add to congestion as buses deposit passengers. Sandford Road is immediately next to the pedestrian crossing, a bus stop and the proposed school, and we foresee that once parents start depositing children (as they certainly will), many vehicles will turn into it causing mayhem.

Planning implications of the above

The proposed location of the SHaW Futures Academy will not only cause congestion and delay the flow of buses but, if the current plans go ahead before a comprehensive review of possible transport infrastructure improvements in the immediate vicinity, the chance for such improvements may be lost, because some of the land set aside for the school may be needed to improve access for

pedestrians, cyclists and vehicles, notably buses. As such it is imperative that transport planning should come before a decision is made about the school.

Apart from that, we think that TfL needs to give early consideration to the development of segregated cycle lanes on the roads for which it has responsibility, notably Masons Hill and the A21, which lead cyclists to the Junction. The A21 is the key road cutting through the Borough from north to south, and is connected to Bromley South which has non-stop service to central London. TfL's recent Cycling Analysis document rates the A21 as a "medium potential connection" for upgrading, as opposed to the "top" or "high potential" assigned to many inner London roads. We think this rating should be checked out, as it may reflect the nature of assumptions TfL used in its modelling. Rather surprisingly, it has excluded multi-modal trips like cycling-to-rail, and of demand from people living more than 400 metres from the road targeted for upgrading. Here, we draw your attention to Peter Murray's analysis showing that cycling can dramatically increase the catchment area of stations, provide greater employment opportunities and reduce Londoners' dependence on private motor vehicles.

There are other possible ways of improving access for cyclists and walkers, for example developing a 'green route' that roughly follows the line of the Ravensbourne, connecting Hayes and Keston to the Junction, passing via Bromley Common, and building on the success of the 'Waterlink Way' which follows the Ravensbourne and Pool Rivers from Lewisham to Beckenham. This would require some study of the planning issues involved.

Our recommendation

It is our contention that there needs to be much more joined-up planning about transport links around the Junction and, and that ***the planning proposal for the school should be put on hold until this has been done***. This should also include planning of such cycling and walking facilities that will facilitate and speed access within the catchment area of Bromley South, particularly from the south side, as well as east-west traffic.

We also ask that TfL reviews the way the Strategic Cycling Analysis has rated the potential of the A21 and other roads in Bromley Borough.

The planning decision is nearly upon us (September 6th), so we shall be grateful if TfL can kindly deal with our request as a matter of some urgency.

Deborah Williams, [redacted] tel. [redacted]

Note - this document is based on a final draft approved by the following members of our group, subject to minor edits:

Jonathan Coulter
Sam Caethoven
Jerry Barnard
Richard Coughtrie
Rhian Kanat

Walking & Cycling at Outer London Junctions

Sustrans' submission to the London Assembly's Transport Committee

Previous junction improvements

1. What lessons can be learned from previous junction improvements, either in London or in other cities?

Consistent danger-reduction design principles

1.1. The biggest barriers to uptake in cycling that Londoners consistently cite are *fear of being involved in a collision* and *too much traffic.*[1] This is consistent across both the UK[2] and Europe.[3] Investment must therefore address this, in emphasising consistent, danger-reduction design principles of separation and slow / low traffic environments.

1.2. When considering junction improvements on busy roads where traffic levels cannot be reduced, the only effective solution to overcoming these barriers is separation. The best junction improvements often include a mix of separation both in space (i.e. physically segregated cycling tracks) and time (i.e. different traffic signal phasing to segregate motorised traffic and cyclists movements, for example, that prevent 'left-hook' movements, etc.).

1.3. Cycle Superhighway 2 (Stratford to Aldgate) is a good case study as the route was originally unsegregated at major junctions when it was built in 2011. However, increased volumes due to cycling take-up, combined with higher risk at those major junctions, resulted in numerous casualties.[4] In response, Transport for London (TfL) undertook a substantial upgrade of the route in 2015, meaning that 7 of the 21 junction improvements made over the last three years were on CS2 alone, with most prioritising separation for cyclists in space and/or time.[5] Recently completed schemes at Oval, Elephant & Castle and future proposals for Old Street and Highbury Corner all apply these principles, with minor exceptions.

1.4. From a walking perspective, many outer London junctions already have a significant form of separation for pedestrians, in the form of subways and bridges. Neither are desirable segregation solutions in city centres, but they can be well designed at outer London junctions should road space re-allocation not be acceptable. There are challenges in finding a balance between the poor pedestrian experience, inconvenience and lack of personal safety of subways, against having to wait at signals and providing adequate crossings where there may be a lack of space. However, subways and bridges should only ever be a second choice of crossing option, with crossings at street-level in the open providing a far better and preferred

pedestrian experience.[6] Nevertheless, the issues previously listed still need careful consideration.

Take a holistic approach

1.5. There has been the perception that many junction improvements made over the last three years have been solely for cyclists at the expense of other users.

1.6. We believe that widening the scope of schemes to properly value pedestrian, environmental or urban realm improvements is paramount, as it increases buy-in from those in favour of improved pedestrian safety, better air quality, or greener streets. For this reason, we have welcomed the London Mayor's Healthy Streets approach, whereby walking, cycling and public transport are prioritised to improve the health of all Londoners.[7]

Integrate improvements within the development of a wider walking / cycling network

1.7. From a cycling perspective, isolated improvements have been shown to have little value on take-up, and schemes need to be designed with the whole-route in mind to realise the most benefits.[8]

1.8. Route-based investment programmes have the potential to prioritise works at multiple junctions concurrently. Out of the 21 junctions that have had significant improvements made over the last three years, 15 of those junctions (71%) were improved as part of either new or upgraded cycle superhighways.[9]

2. How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

2.1. 3-5 years' worth of safety data are usually required to get an accurate picture of pedestrian / cyclist safety. Most improvements at 21 junctions through TfL's Better Junctions (now Safer Junctions) programme have only been completed within the last three years, and so there is still not adequate safety data available to confidently answer this question across multiple junctions.

2.2. However, there are several junctions with enough safety data to provide an emerging picture. At the Kennington Oval junction on the A3 for instance, there have been no fatalities or serious injuries since 2014 when the junction improvements were completed. Between 2005 and 2013 there were 14 serious injuries and one fatality (1.67 killed or seriously injured per year on average).[10]

2.3. Perception and anecdotal evidence gained through surveys also show a similar emerging picture that improvements have had a significant impact on safety. A clear majority of cyclists surveyed across London say that route improvements have improved their perception of safety.[11] Given that improving perceptions of safety can be just as important as improving actual safety in encouraging broad and inclusive cycling take-up, this is likely a significant factor behind the marked increase in cycling seen across London.

3. How successful have recent junction works been in increasing the take up of walking and cycling?

3.1. While no comprehensive monitoring update has been provided from TfL regarding improvements through the Better Junctions programme, the substantial increases seen on the recent generation of cycle superhighways provide some indication that junction improvements along those routes have significantly increased cycling levels.[12]

3.2. Monitoring data released by TfL have shown a 55-70% increase in cycling numbers along the East-West, North-South and Vauxhall Bridge cycle superhighways, routes that include major junction improvements at Blackfriars, Parliament Square and Vauxhall Cross Gyratory.[13] Lower cost interventions at junctions made through the Quietways programme have also had similarly significant impact on cycling levels, with certain sections of Quietway 1 seeing a nearly 40% increase.[14]

4. Are there any examples of low-cost solutions that could be rolled out across a large number of junctions?

4.1. There are several low-cost solutions that benefit pedestrians without substantial changes to infrastructure or road-space allocation. Pedestrian countdown timers are one example, and further roll-out across outer London junctions would be welcome. Another low-cost solution that holds potential is 'simultaneous green' crossing, where pedestrians and cyclists get a dedicated 'all-green' phase while all motor traffic is stopped. The London Borough of Richmond upon Thames is currently trialling this innovative approach. Improving the maintenance and cleanliness of subways, alongside better lighting, can improve both safety and perception of safety amongst pedestrians.

4.2. However, it is vital to emphasise that there are no 'silver bullet' low-cost solutions that will have a truly transformative impact on walking and cycling in outer London. More overall funding for walking and cycling is needed. Yet this could come as a 'low-cost' solution to the public sector through the expansion of alternative or third-party funding. This would allow for better, higher-cost interventions while costing the public less, for instance using Section 106 money or having schemes designed and seeking nearby planning contributions to match-fund.

Encouraging people to walk and cycle

5. What are the biggest barriers to people walking and cycling in outer London?

5.1. The main barrier to people walking and cycling in outer London is the perception of safety, as it is in central and inner London.[15] This safety barrier is compounded with the increased presence of main roads, leading to greater severance.

5.2. Severance can have a negative impact on pedestrians and cyclists alike, diminishing not only their mobility and accessibility, but also their health and wellbeing.[16]

Sustrans' Connect2 work is a great example of a transformative project that aimed to tackle severance in many car-centric communities across the UK, with nearly all 80 schemes facing the challenges of crossing major roads, railways or rivers.[17] Connect2 was able to deliver three times as many benefits as the typical road scheme in half the time, while removing upwards of one million car journeys from busy roads.[18]

5.3. Many outer London residents are characterised by two factors that pose a challenge to increasing walking and cycling: (1) high to very high car usage, and (2) below average to very low levels of willingness to change travel modes.[19] The convenience of the car is currently much greater in outer London compared to inner / central London. Inner and central parts of the city have had various strategies to deal with congestion for many years now, including the congestion charge and highly controlled parking, whereas the density and distance to services (i.e. out-of-town style retail) in outer London poses many challenges.

5.4. Overall, living car-free in outer London is seen as more challenging. There is a lack of convenient public transport combined with the challenges of delivering effective public transport in low-density areas. Household car ownership is 26% higher in outer versus inner London while the mode share for active travel (walking and cycling) is 13% lower.[20]

6. What would enable people to walk and cycle more in outer London?

6.1. Infrastructure which enables safe, convenient and easy travel is the key factor behind people cycling more in London[21] and throughout the UK.[22] Crucially, this can also be seen to be the case across Denmark, Germany and the Netherlands[23], which experience greater proportions of walking and cycling. London-wise, this is as true for the outer boroughs as it is for the central and inner areas. Infrastructure makes it fundamentally safer, makes it feel safer and increases its status as an everyday choice.

6.2. However, the majority of investment has been targeted at central and inner London. Of the 21 junctions that TfL have made significant improvements on over the past three years, only 3 are located in outer London. Similarly moving forward, only 2 of the 33 junctions targeted within TfL's business plan (2017-2022) are in the outer boroughs.[24]

6.3. This substantial difference in funding is at odds with the cycling/walking potential of the outer boroughs, where it is estimated that 55 per cent of cyclable trips[25] and 62 per cent of walkable trips[26] take place. Significant funding for cycling and walking infrastructure, beyond the Mini Holland programme launched under the previous mayoralty, is paramount in order to realise some of outer London's great untapped active travel potential. Given that TfL are playing catch-up with existing demand it is also important to clearly recommend more overall funding rather than a redistribution of existing funding.

6.4. More specifically, having a town-centre focus is the best approach moving forward. Through the Strategic Cycling Analysis, TfL has identified that a significant

opportunity exists for both cycling and walking around metropolitan town centres such as Croydon, Bromley and Kingston.[27] Realising these opportunities would certainly involve dedicated infrastructure leading into and within the town centre itself, but also require other schemes such as town-centre specific cycle hire programmes or cycle parking superhubs at rail or underground stations.

7. What changes to roads and paths would make it easier or more appealing for people to walk and cycle in Outer London?

7.1. Broadly the same approach is needed for outer London that has worked in central, inner and Mini-Holland boroughs. At a neighbourhood-level, 20mph speed limits and filtered permeability are necessary for reducing volumes and slowing down traffic. At a corridor or junction level, full on-road separation for cyclists is crucial where volumes and/or speeds of traffic are high. Improving the pedestrian environment also requires shortened crossing distances, accessible transitions (for example flush kerbs), countdown timers, or increased improved crossing time.

The needs of different road users

8. Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

8.1. In the past there have been many examples of poor design where high volumes of pedestrians and cyclists are forced to share limited space (for instance at toucan crossings over main roads). Good design will limit the pedestrian/cyclist conflict zones, so long as road space is adequately reallocated to represent actual / potential use.[28]

9. How might junction improvements that help pedestrians and cyclists affect other road users?

9.1. Gains for bus users can be rolled into junction improvements for pedestrians and cyclists, such as bus priority schemes, modal filters, etc. Bus users will also gain from an overall improved pedestrian environment, with shorter crossings, accessible transitions and decluttered pavements.

9.2. Junction improvements for walking and cycling can also improve the safety and stress for drivers, with fewer things to keep an eye on and less mental load. This factor is particularly important for lorry / bus drivers who face a range of added pressures.[29] Designing safer interactions between heavy goods vehicles and vulnerable road users is vital, given that HGVs cause the majority of cyclist deaths and nearly a quarter of pedestrian deaths in London.[30]

9.3. Space trade-offs that come from road-space reallocation often do have a short-term impact, especially during the construction phase, however these are usually offset by traffic evaporation, rerouting and/or retiming over the medium and longer term.

10. What needs to be in place to support the needs of those with disabilities and visual impairments?

10.1. Close collaboration with organisations such as the Royal National Institute of Blind People, Wheels for Wellbeing and Age UK is vital, especially in the pre-consultation / design phase. For example, Sustrans works with Wheels for Wellbeing on the Quietways Programme to ensure that schemes benefit the widest range of users.

10.2. Existing design guidance is of high-quality regarding disability and visual impairment (see the London Cycle Design Standards or TfL's Streetscape Guidance), and it is crucial that this guidance is followed. However, consistent use in design and build is still needed, meaning that quality checks on final schemes must be in place to ensure that contractors have done the job properly.

Implementation

11. What would be the main challenges of improving outer London's junctions for pedestrians and cyclists, and how could these be addressed?

11.1. Reallocation of road-space is certainly a challenge for improving junctions in outer London, given the high demands for travel, often lukewarm political support and the more limited travel choices that many residents face. However, walking and cycling improvements have consistently been shown to either (a) have no impact on congestion or to (b) actually reduce congestion.[31]

11.2. Given the average cost of junction improvements through the Better (now Safer) Junctions programme, and the sheer number of junctions in outer London, there is no question that financial resources are a challenge. This could be addressed by prioritising funding for areas of outer London that have high cycling/walking potential or high risk of walking/cycling casualties. It is also important to stress that walking and cycling are two of the most efficient areas of focus for improving transport, both in terms of efficiency of people movement and of average spend per person.

11.3. Walking and cycling may not be a high priority for some outer London boroughs. In some cases boroughs have not been able to implement high quality walking and cycling schemes as they lack leadership that supports such change, or object to change. This could pose a significant challenge moving forward. However most, if not all, have issues with congestion, physical activity levels, and air pollution, and so more could be done to sell schemes as holistic improvements involving benefits for all. The move towards a Healthy Streets approach should improve this process while opening up additional funding streams to deal with limitations on borough resources.

12. Should spending be prioritised, for instance on certain areas of outer London or certain types of journey?

12.1. Yes; as previously shown the clear majority of potentially cyclable or walkable trips are in outer London, however, there is an uneven distribution of those trips across the outer boroughs.[32] Given that so much of the potential is also focussed near town

centres, it would be worth prioritising from an outer London town-centre perspective.

12.2. It is also recommended to prioritise spending based on type of journey, given that (a) almost half of all potentially cyclable trips are made for shopping and leisure purposes[33] and (b) much of the walking potential for outer London comprises people making short car trips to and from their home, typically for leisure or shopping reasons.[34] This conveniently overlaps with arguments made in point 12.1., as outer London town centres are the destinations for many of these shopping and leisure trips.

12.3. Another main prioritisation criteria should be risk, as in the number of collisions per distance walked or cycled. Based on research that we have conducted in Scotland, cycle collision hotspots can be identified, not only based on sheer casualty numbers but by accounting for the amount of cycling being done.[35] This provides a more accurate 'relative risk', and would certainly be useful for prioritising junctions in an area such as outer London where absolute cycling volumes are relatively low.

13. Is there a need for a bigger overall budget to improve junctions in outer London?

13.1. There is no question that more funding is needed overall for active travel in London, and more of that funding needs to be directed towards junction improvements in the outer boroughs. Only through realising some of the great potential in outer London will the Mayor reach his active travel targets. As the Mayor committed to during the 2016 election, funding needs to be extended to every borough in outer London for Mini-Holland style schemes.

13.2. It is worth reiterating that there has been a disproportionate focus on central and inner London due to the pressures of current demand. However, given the areas for greatest potential uptake in walking and cycling can be found in outer London boroughs, there is a need for significant, committed, long-term funding across the whole of London.

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Sustrans is the charity making it easier for people to walk and cycle. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Join us on our journey. **www.sustrans.org.uk**

London Assembly inquiry into junctions in Outer London – response from Transport for Charlton

Contact: Stephanie Godbold / John Tidy (co-convenors)

Transport.for.charlton@outlook.com

Thank you for the opportunity to respond to your call for evidence. We understand that the focus on your inquiry is on outer London boroughs – but you've confirmed you're interested in views from inner London boroughs: in our case, Greenwich. Without a detailed knowledge of past junction improvements and their impact, our comments here are relevant to questions 5 and 6:

5. What are the biggest barriers to people walking and cycling in Outer London?

6. What would enable people to walk and cycle more in Outer London?

We hope our insight is helpful and we'd be happy to provide more detail as your work progresses.

About Transport for Charlton

We aim to be a voice for everyone who needs to get around the Charlton area – whether they're rush hour commuters, parents, retired, have specific accessibility needs, or any combination of these. We began as the Charlton Rail Users' Group, but relaunched with a broader scope in October 2016 – in recognition of the fact that rail forms only one part of a very complex transport mix in Charlton. The interface between different modes, and their integration into a holistic system, is crucial to both maintaining quality of life *for Charlton residents, as well as to* ensuring a successful future for *the area*.

Thinking about Charlton and its connections, we believe cycling and walking could be encouraged by:

Improving local junctions and streets

In Charlton, there are a number of junctions and streets that aren't currently pedestrian or bus-user friendly. Small improvements would make a big difference in helping people access important local facilities. Our list here isn't exhaustive, but a few examples of current issues include:

- A pavement that disappears completely on the south side of Charlton Park Lane, making it dangerous for people wanting to access Queen Elizabeth Hospital by foot. A track has appeared in the grassed bank where the more agile have created their own route. The situation is made worse by a bend in the road which obscures the view of drivers heading westward.

- At the junction where Woolwich Road is crossed between Anchor and Hope Lane (to the north) and Charlton Church Lane heading south and up to Charlton Rail Station and Village. Negotiating this junction is known colloquially at "the dance of death" (see below)!

- Very narrow pavements on Charlton Church Lane – this is a long and very busy road both in terms of pedestrians and traffic with Charlton Rail Station and several bus stop shelters on each side which accommodate two bus routes. The pavement is narrow on the east side along almost the entire road, and is extremely narrow at the top on the west side (enough for one person only, forcing passing pedestrians into the roadway).

- Traffic lights in Charlton Village that are frequently jumped by drivers.

Consider re-routing buses to safer, more practical stops

If train services are disrupted, commuters at Charlton Station wanting to connect to the TfL network can get the 486 from Charlton Station, or walk further down to Woolwich Road to get the 161, 180 or 177 bus (the 177 and 180 goes to Greenwich for the DLR), or go further to Anchor and Hope Lane, where both the 472 and the 486 stop on the way to North Greenwich. We've pointed out before that these options cause some people to attempt a "dance of death" – waiting at the corner or on the traffic island and then dashing across these extremely busy roads to catch the bus that comes first. Until the point they access public transport, rail and bus commuters are pedestrians – and their safety is currently being compromised.

The bus services along Woolwich Road are already being consulted on as part of preparations to Crossrail. We'll reply to this separately – but we'd suggest that the very time-limited re-routing of the 472 to Charlton station should be extended, and the possibility of other buses doing the same re-routeing should be seriously considered.

Improve pedestrian access to local retail and leisure facilities

The Charlton area is subject to substantial and ongoing development: for example, new retail units on Woolwich Road (including a new Marks and Spencer and a relocated Sainsbury's supermarket) and a new Brocklebank Retail Park on Busgsby's Way.

Unfortunately, the rise of these new facilities doesn't seem to have been accompanied by improvements to access for people wanting to use them. This is despite Royal Borough of Greenwich variously receiving funds from Transport for London's Local Implementation Plan scheme, as well as monies linked to developments (Section 106 and the Community Impact Levy). Improving the quality of disclosure and public engagement around the use of these funds would help to ensure they're managed in a transparent and informed way.

Local media have covered these issues extensively, and some helpful further commentary and photographic evidence can be found at:

https://fromthemurkydepths.wordpress.com/2017/01/04/greenwich-council-and-11-4-million-income-from-developers-wheres-it-going/

https://fromthemurkydepths.wordpress.com/2017/03/16/charltons-next-retail-park-nears-opening-will-things-improve-for-pedestrians/

Put public cycle docking stations in the South East

Parts of Greenwich, an inner London borough, suffer from the same lack of transport integration as many outer London boroughs. We've recently responded to the DfT's South Eastern rail franchise consultation, pointing out the financial and practical penalties of our rail services being outside the TfL network. A glance at the map of Santander cycle docking stations shows we're suffering from the same isolation in this respect too; the nearest station as the crow flies is north of the river in Cubitt Town, and the 'nearest' south of the river looks to be nearly at City Hall.

Many people in Charlton commute into Docklands – typically via by rail and DLR via Greenwich, or by bus and tube via North Greenwich – and might prefer to cycle for all or part of their journeys if only they were able. Thinking more broadly about ways to cross the river, we note the proposed Silvertown Tunnel is car-only, with no special provision for buses and none at all for cyclists or pedestrians.

Regarding the south side of the Thames, creating local docking stations – eg Charlton to North Greenwich, Woolwich, Greenwich town centre, Lewisham and into outer London – would open up new options for a range of journeys that currently have to be made by bus or car. With some careful planning, gateways to the Green Chain could be made accessible by bike.

Transport for London

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[redacted]

Caroline Russell AM
London Assembly Transport Committee
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2 November 2017

Re: Outer London cycling

Dear Caroline

Thank you for the opportunity to contribute to your investigation into Walking & Cycling at Outer London Junctions. We welcome your work on this issue. My response to the Committee's questions, as the Mayor's lead on walking and cycling, are enclosed.

As you know, we are committed to getting Londoners walking, cycling and using public transport. The Mayor's draft Transport Strategy sets an ambitious target for 80 per cent of all journeys to be on foot, cycles or public transport by 2041. I look forward to working with colleagues to achieve this.

I enjoyed our recent visit to the Mini-Holland scheme in the London Borough of Waltham Forest. It was a great example of the work we need to keep doing across the capital, particularly in outer London Boroughs where there is so much potential to get people out of their cars.

Yours sincerely,

Will Norman
Walking and Cycling Commissioner

Previous junction improvements

What lessons can be learned from previous junction improvements, either in London or in other cities?

Over the past four years, Transport for London (TfL) has undertaken some ground-breaking and innovative projects to improved junctions, leading to transformative change in areas like Oval, Archway, Vauxhall and Blackfriars.

TfL has worked closely with the Department for Transport to share knowledge gained from trials and lessons learnt from delivery.

TfL commissioned a thorough investigation into cycling infrastructure international best practice in 2014, and used the findings from this report to inform their own planning. This report concluded that safety, or the perception of safety, is the main barrier to cycling. The Cycle Superhighways infrastructure addresses this barrier through an emphasis on separation from other road users in time and space on both links and at junctions.

Through the Cycle Superhighways, TfL has separated cyclists from general traffic at more than 50 junctions (where the majority of cyclist collisions occur), including through the use of new low-level traffic signals for cyclists; separating cyclists from left turning traffic to avoid conflict; 'early start' cyclist traffic signals to allow them to enter junctions ahead of other vehicles; and providing two-stage left and right turns to avoid cyclists crossing traffic.

Pedestrian facilities have largely been protected, and in many cases enhanced, providing additional space for pedestrians and an improved layout. While delivering the Cycle Superhighways, TfL increased the number of pedestrian crossings along the routes. This includes 23 new pedestrian crossings alongside upgrading 37 existing crossings. Pedestrians have also benefited as vehicles have been relocated further away from the pavement, reducing the impact of air and noise pollution.

In the last year, TfL completed improvements at over 100 sites on the Transport for London Road Network (TLRN). These improvements ranged from small scale local improvements to major infrastructure changes such as those at Elephant and Castle, Stockwell, Bow Roundabout and Archway.

The new Safer Junctions programme uses collision data at junctions to identify those locations where investment can be best targeted. Once these locations have been identified, a Healthy Streets approach is adopted to ensure that not only is safety improved, but enhanced facilities for

pedestrians, cyclists and public transport passengers are central to the approach.

Our International Cycling Infrastructure Best Practice Study looks in detail at methods used in other countries to improve both signal-controlled and priority junctions for cycle users.

How successful have recent junction improvements been in improving safety for pedestrians and cyclists?

A review of road safety statistics is carried out at each junction on the TLRN where a scheme has been implemented to assess whether the change is making a difference. The standard review period for safety improvements is three years from the end of construction, when enough data has been collected to make an accurate assessment.

A number of Better Junctions schemes, such as Stockwell, Archway and Oval, have been delivered in the last year. Without a full three years of data, it is too early to draw statistically sound conclusions about the changes at these locations. However, the data that has been collected is fed into the Traffic Accident Diary System (TADS) and we use this to monitor the safety impacts of schemes. More general findings from previous safety schemes suggest average reductions in the number of people killed or seriously injured of 24 per cent over the three years following the end of construction.

Cycle Superhighways (CS) are expected lead to over 110 fewer cycling collisions each year. Early monitoring has demonstrated that the perception of safety has improved along the completed routes. Prior to the construction of the existing CSHs, only 15% of people cycling on those routes chose to because it felt like the safest route. This increased to 50% after the schemes had opened. Perception of safety is an early indicator of actual safety and the CSH road safety data will be closely monitored as it becomes available on the recent schemes.

How successful have recent junction works been in increasing the take up of walking and cycling?

The junction improvements that have been delivered through the Cycle Superhighways programme play a critical role in improving the safety of the routes and have encouraged more people to cycle. Sections of the North-South Cycle Superhighway are already among the busiest cycle lanes in the country, with over 2,000 people cycling northbound during the peak hours.

Following junction improvements at Oval, the number of cycle journeys has increased from 3,100 to 4,300 a day on Camberwell New Road to the east of Brixton Road, and from 8,300 to 11,200 on Kennington Park Road to the

south of Kennington Road, compared to the same counts a year earlier. It should be noted that these counts were conducted three months after the full opening of Oval and will also reflect the annual increase in cyclists across London and other factors.

Early monitoring of the Better Junction has demonstrated that over 90 per cent of those cycling through the locations are using the Cycle Superhighway infrastructure where available. The table below shows the increase in kms cycled each day along four of the CSs across London and Quietway 1 (Q1).

Cycle Route	Average kilometres cycled per day (2014)	Average kilometres cycled per day (2016)	% Increase
East West Superhighway from Parliament Square to Tower Hill	22,500	35,000	54
North South Superhighway from Elephant & Castle to Stonecutter Street	13,000	17,000	32
CS2 from Aldgate to Bow	18,500	23,000	23
CS1	13,000	15,500	21
Q1	9,500	15,000	56

Across London, TfL's cycling monitoring programme shows a 15 per cent growth in cycling in central London compared to the Q4 2013 baseline.

We expect these trends to continue, as we continue to attract large numbers of new cyclists through investment in infrastructure. We will continue to analyse the trends, and new data will be available in TfL's quarterly performance reports.

A significant number of smaller improvement projects – those costing less than £1m – have also encouraged more people to walk, cycle, use public transport and move around in a safer and more pleasant environment. Examples of recently implemented projects for which we have before and after user counts are:

- **Commercial Street junction with Quaker Street**

We installed a pedestrian refuge on Commercial St junction with Quaker Street to ease movement from Shoreditch Overground station to the City. There was a more than 350 per cent increase in pedestrians using the crossing.

- **A102 Homerton High Street junction with Ponsford Street**

A new pedestrian crossing phase increased pedestrians using the junction by 32 per cent.

Are there any examples of low cost solutions that could be rolled out across a large number of junctions?

Each scheme is unique and during the planning and design process we seek to balance the needs of all users around a particular junction. The Regional Improvement and Road Safety Programmes typically employ low-cost solutions to address problems at junctions as well as key problem areas across the network. This can include, for example, cycle gates, changes to road markings and signage, minor changes to kerb lines and junction layouts, as well as changes to traffic signal timings.

Investment on the network needs to be prioritised by using the expertise and knowledge of those responsible for specific areas.

We consider the need, outcomes and benefits, strategic fit and alignment, support for the scheme from local stakeholders, such a councillors and businesses, and the public.

Examples of low cost solutions that have been rolled out include informal pedestrian islands at the following locations. They have made it much easier for pedestrians to cross busy roads where it was assessed that formal crossings could not, on balance, be provided owing to the impacts on other road users.

- A21 London Road in the London Borough of Bromley, where wider island have been installed
- A24 London Road by Oaks Avenue, North Cheam in the London Borough of Sutton
- A232 Wickham Road near Bethlem Hospital in the London Borough of Croydon, this includes a new shared cycle rack

<u>Encouraging people to walk and cycle</u>

What are the biggest barriers to people walking and cycling in outer London?

Reducing Londoners' dependency on cars and improving the safety of our

streets is essential to achieving higher levels of walking and cycling across all of London.

Across London, the main barriers to cycling are safety related, specifically the fear of being involved in a collision and the amount of traffic on the roads. This is particularly significant in outer London, where there is much greater car dependency than in central or inner London. There are also barriers in the form of social or cultural norms and personal attitudes or beliefs towards cycling and lack of confidence, a preference for other modes and fear of cycle theft.

Safe, attractive, and accessible streets are needed to make walking the most obvious choice for short trips or as part of longer multi-modal journeys. Giving greater priority to the needs of those on foot will encourage more walking, alongside more information to help people plan and complete their walking journeys. For disabled Londoners the condition of pavements is a barrier to walking, as are obstacles on pavements. Older Londoners are less satisfied than all Londoners when it comes to their last walking journey made on London's streets, reporting a lack of care and consideration in the way our streets are designed and managed as a key barrier.

TfL is tackling these barriers through a range of schemes.

More CSs are being invested in, which provide safer and direct routes for cyclists by segregated them from other vehicles. They have been designed to encourage the large numbers of people who would like to cycle, but currently feel unable to, to do so. The CSs are the most ambitious of their kind for improving cycling infrastructure in London and the UK. We are also delivering more Quietway routes. These are both radial and orbital cycle routes that link key destinations and are designed for cyclists who want to use quieter, low-traffic routes. They also deliver improvements for those on foot. Over the next five years, 250km of Quietways will be delivered across London, including across many parts of outer London.

Mini-Hollands are continuing to transform the local environment for those who chose to walk and cycle in the three outer London boroughs of Enfield, Kingston and Waltham Forest.

TfL is complementing its infrastructure delivery with a range of other initiatives to help people cycle, including funding free cycle skills training, working with workplaces to encourage more people to commute by cycle and installing more cycle parking across London. TfL is working with local schools to provide cycle skills training to children to help them to cycle on the new infrastructure.

An example of combined measures to remove barriers to more walking and cycling is Quietway 1, from Greenwich and Waterloo, where we have seen a 56 per cent increase in cycling along Quietway 1 since 2014, before the route was established.

The infrastructure measures include junction improvements, traffic calming to

reduce speed and/or volume of motor traffic, improving layout design and resurfacing. We accompanied the improvements by communicating the changes to the local area to increase awareness of the route.

What would encourage people to walk and cycle more in outer London?

The Mayor has set out how he intends to make London better for walking and cycling in his draft Transport Strategy. The strategy has at its centre the Healthy Streets approach, which will be applied at the street, network and strategic level to help deliver our aims. These include a 75 per cent target for walking, cycling and public transport journeys taking place solely in outer London. Currently this is 60 per cent.

People across London would be more willing to use cars less if there were better alternatives available. We must make alternative transport options safer, more accessible and appealing to reduce car dependency in outer London. This means making it more attractive to walk and cycle by delivering the infrastructure improvements we have detailed above.

Creating 'Liveable Neighbourhoods' and 'Healthy Routes' will improve people's experiences of walking and cycling. The Liveable Neighbourhoods programme will provide funding for boroughs to address safety at junctions which will improve the roads for pedestrians and cyclists. The Healthy Routes initiative aims to tackle the issue of children being driven to school, a behaviour which generates a substantial amount of traffic in London. The initiative seeks to improve the safety, accessibility and attractiveness of local walking routes, including routes to school as well as other local destinations such as shops, parks and public transport. It will also reduce traffic, making it even more attractive to walk and cycle.

Making good use of land will also be pivotal to encouraging people to walk and cycle. People living in more densely populated areas are more likely to change their travel behaviour, so as London's growth increases population density, more and more people could choose to switch from the car to other modes.

What changes to roads and paths would make it easier or more appealing for people to walk and cycle in outer London?

TfL is delivering a range of programmes that are changing roads and paths to make it easier and more appealing for people to walk and cycle in outer London. More than 20 Quietway routes will be planned or rolled out during this mayoral term.

Other initiatives in outer London include the Mini-Hollands, which are radically improving the environment for pedestrians and cyclists in the three outer London boroughs of Enfield, Kingston and Waltham Forest and new Liveable Neighbourhoods. Liveable Neighbourhoods schemes will deliver attractive,

healthy and safe neighbourhoods for people. They will involve changes to town centres and their surrounding residential areas to improve conditions for walking and cycling and reduce traffic dominance.

In June, TfL published the Strategic Cycling Analysis (SCA). The SCA provides an indicative network of potential strategic connections across central, inner and outer London and is being used to identify where the next generation of cycling provision could make the biggest impact on the capital.

The Healthy Streets Approach provides a framework for putting human health and experience at the heart of planning the city. Assessment against the ten Healthy Streets Indicators is our way to see if a street is a more or less appealing place to be, particularly if you are walking or cycling. Vehicle volumes and speeds are at the heart of what makes streets unappealing and dangerous. Spaces dominated by vehicles deter people from walking and cycling, and give rise to poor air quality, noise, difficulty crossing and the impression of a dangerous place to be. Therefore, it is important we reduce vehicle dominance. This may involve a combination of dealing with traffic volumes and speeds, and also changing the design of the street so that there is a better balance between users.

There are a number of measures that can help make it more appealing for people to walk and cycle, including introducing more crossings, more continuous footways, reduced speed limits and traffic calming. Liveable Neighbourhood schemes will be among the best examples in London of how the Healthy Streets Approach can be applied to enable active, inclusive and safe travel.

The needs of different road users

Are there any examples where the needs of pedestrians have come into conflict with the needs of cyclists at junctions?

In the design of a scheme, there are sometimes compromises that need to be made in order to provide the best balance between the needs of all road users. Very often the needs of cyclists and pedestrians are aligned – calmer, safer, more pleasant, few spaces dominated by vehicles that benefit all.

In specific situations, we have to balance the benefits for one group against the dis-benefits for another. In most cases there is only a finite amount of time and space at a junction and often high demand from multiple users. We have a range of tools and techniques that we use to help manage competing needs, including:

- New traffic signal technology that can react more dynamically to flows of cyclists and pedestrians.
- Innovative designs such as early release for cyclists and holding left-

turning traffic to separate cyclists physically and in time from other users including pedestrians.

- Crossing points that are at the same level as pavements, tactile paving, wide segregated bus stops, and new street furniture have been included in the Cycle Superhighway designs to improve accessibility for pedestrians along the routes and at junctions.

How might junction improvements that help pedestrians and cyclists affect other road users?

The effect on other road users depends on what has changed and the junction's location. Many improvements for pedestrians and cyclists have been made without changing signal timings or impacting negatively on other traffic. Where there is an effect, for example, through introducing new crossings or straight-across rather than staggered crossings, then we prioritise mitigating the effect on bus journey times and reliability.

Junction improvements that help pedestrians include:

- Tightening corners to reduce the crossing width for pedestrians and also to encourage drivers to turn into a junction more cautiously.
- Raised junctions to create a feeling of priority for pedestrians and to encourage drivers to pass through a low speeds.
- 'Continuous footways' that allow pedestrians uninterrupted movement across a minor road junction.

The explicit aim of most cycle and pedestrian-friendly interventions is to encourage more people to walk and cycle rather than to drive, particularly for shorter trips. If the intervention is very successful, there should also be some benefit to people using their cars as it should reduce congestion.

As outlined above, we continue to develop and put in place innovative technology to improve signal junction efficiency. Where possible technology is being used to limit the negative impacts improved pedestrian and cycling facilities might have on other road users.

- Pedestrian Call Cancel technology allows green man time to be cancelled if pedestrians cross the road early preventing unnecessary vehicle stops.
- Cycle Split Cycle Offset Optimisation Technique (SCOOT) is being used at junctions to allow green time for cyclists to be varied dependent on demand.
- Pedestrian SCOOT is allowing crossing junctions with high footfall to extend the green man invitation if needed.

All new scheme locations use well established SCOOT technology as standard to manage congestion.

What needs to be in place to support the needs of those with disabilities and visual impairments?

The dominance of vehicles must be addressed. The main sources of road danger are risky behaviours demonstrated by motorists. These behaviours put road users at risk, particularly those that are more vulnerable. Reducing vehicle dominance will help us to support the needs of those with disabilities and visual impairments.

In the delivery of schemes, early engagement with key user groups is vital. TfL undertake an Equality Impact Assessment at every stage of the scheme design process to assess the impact of the proposed changes to the road layout to all user groups including those with disabilities and visual impairments. This process is designed to ensure that schemes do not discriminate against any vulnerable road user group. A public consultation takes place on the majority of TfL's schemes and TfL consults key user groups as part of this, including the Royal National Institute of the Blind.

TfL acknowledges that more work needs to be done to consider the needs of people who use cycles as mobility aids. There is significant potential for people to cycle who have difficulty walking but infrastructure is often very difficult for people with 'non-standard' cycles to use. Any sections that require cyclists to dismount, for example, will exclude most of these users, as will barriers that are too close together, while poor quality riding surfaces can make it very uncomfortable.

Shared use between pedestrians and cycles can put pedestrians at a disadvantage, particularly people with visual impairments, who generally rely on hearing traffic but find cycles too quiet to hear. We should not expect pedestrians to share with cycles unless there are no reasonable alternatives. If good facilities are provided for cycles on-carriageway, or using former carriageway space, then people will not be tempted to ride on the pavement. If, however, the infrastructure consists of disconnected sections of shared space, then cycling on the pavement becomes more common.

Where there is dedicated cycle infrastructure, cycle tracks and pavements will intersect in many places. Typically, pedestrian crossings of cycle tracks are uncontrolled or informal, meaning that neither user has formal priority. To cross, either pedestrians will wait for cyclists to go past or cyclists slow or divert around pedestrians. With higher cycle flows, however, this can become uncomfortable for pedestrians, especially people with visual impairments. TfL is currently trialling the use of fully enforceable zebra crossings over cycle tracks, focusing on bus stop bypass locations, to see if they can help people cross with more comfort and certainty making it safer fir both pedestrians and cyclists. We're working on this with stakeholders representing accessibility and cycling groups, including representatives from RNIB, Guide Dogs, Transport for All, London TravelWatch, London Cycling Campaign and Cycling UK. The results of the monitoring will inform our guidance and the

design of future schemes.

Crowding creates a feeling of intimidation and raises personal safety concerns, particularly for those with disabilities. This is why comfort level assessments are embedded in the design to ensure they are considered when improving junctions.

Implementation

What would be the main challenges of improving outer London's junctions for pedestrians and cyclists, and how could these be addressed?

As most people still travel by car travel in many parts of outer London it can be a challenge to get local agreement for measures that might affect their car usage or journey times. Trips wholly within outer London are most likely to be made by car, which makes up 45 per cent of all trips. However, walking is the second highest mode of transport for journeys in outer London. There is the greatest potential for cycling growth within outer London, where 55 per cent of car trips take place could be cycled.

Working in partnership with London Boroughs will be critical to delivering improvements. Political support for investment in walking and cycling is needed from local councillors so that both borough and TfL funding can be used to prioritise Healthy Streets initiatives. For example, local political support has been critical to the success of Mini-Holland schemes in outer London.

TfL support local authorities to make the strategic case for investment in walking and cycling. TfL provides them with evidence of the economic benefits for such investment and London-wide case studies of where improvements have been made.

Large improvements at some outer London junctions where cycle and pedestrian flows are low may be difficult to justify using the traditional business case methodology. Therefore small-scale incremental improvements at these locations may be more are suitable.

Should spending be prioritised, for instance on certain areas of outer London or certain types of journey?

To support the planning of projects, we offer strategic analysis and data to boroughs giving them key information to identify potential areas for investment. For example, TfL published the SCA in June which identifies where to expand the cycling network, using growth forecasts, demographic changes, safety data and existing and potential demand.

The SCA allows us and boroughs to plan for cycling in a more strategic way that aligns with the Healthy Streets approach, and design cycling infrastructure that is best suited to the location. We will work with the boroughs over the coming months to develop proposals for potential connections identified by the SCA. Local priorities will be different in different boroughs and the SCA should be combined with specific local data and knowledge to refine priorities.

Is there a need for a bigger overall budget to improve junctions in outer London?

Some £1bn of Healthy Streets funding has been committed to borough schemes over the next five years. All of this funding will go towards delivering improvements under the Healthy Streets approach. Streets will be safer, cleaner and more attractive as a result and this will encourage more people to walk and to cycle and to use public transport. Some of this funding will be directed towards delivering improvements where our strategic analysis has identified the greatest need and/or potential for change including new Liveable Neighbourhoods; some will ensure that the boroughs continue to deliver improvements for walking and cycling through their existing Mini-Hollands, Quietways, Central London Grid and core LIP programmes.

From: Rachel Aldred <[redacted]>
Sent: 10 August 2017 16:51
To: Transport Committee
Cc: Rachel Aldred
Subject: Outer London Junctions investigation

Follow Up Flag: Follow up
Flag Status: Flagged

Dear members of the Transport Committee,

I am writing briefly in regards to the Outer London Junctions Investigation.

I want to make a few points, around approaching the issue of improving Outer London Junctions for walking and cycling – especially around data and how we think about risk and safety.

We need a rate-based measure of cyclist and pedestrian risk, rather than prioritising junction improvements based only on KSI casualties. KSI casualties (i) are relatively small in number (considered in relation to the number of junctions in London), so if you have a lot of equally dangerous junctions, you will randomly get KSIs at some of them, but this will not alert you to many dangerous junctions where you just don't happen to have any KSIs in a given period, and (ii) will not tell us about those dangerous junctions where people are too frightened to walk and/or cycle.

Cycling

1. Junctions are associated with a substantially elevated risk per cyclist compared to link sections, in both Outer and Inner London.
2. My research has found that while some Central London junctions have high cyclist KSI numbers, Outer London junctions are not necessarily safer – they simply have fewer cyclists. In fact, when London boroughs are mapped by risk per cyclists (I've done this in a couple of different ways) most Outer London boroughs are actually more dangerous for people cycling than most Central and Inner boroughs.
3. We need to look at different road environment/infrastructure factors that affect cyclist and pedestrian risk, taking area-based factors and cycling volumes into account. My recent work starting to do this has found a range of factors associated with a lowering of cycling injury odds, at links and at junctions. These include 20mph limits, lower motor traffic volumes, and roads being residential rather than primary, secondary etc. Interestingly although the research only includes the period before London's recent, high-quality cycle infrastructure was built, on faster arterial roads (more characteristic of Outer boroughs) even the relatively poor quality infrastructure then present on some sections seems to have a protective effect. These findings are currently being written up but can be shared with the Committee more fully in due course.
4. More research specifically into junctions is needed, even given a rate-based approach. My research has not yet looked into junction characteristics but this would be an important area of research. In particular – as more are built and as recent injury data begins to become available – the impact of new higher-quality protected junctions on cycling injury risk.
5. Perceived safety is also important. My published research has found that crossing a busy road is seen as highly unsuitable for child cyclists, even by adult cyclists who themselves are confident to do so. If we want to increase cycling levels, we must build the kinds of junctions that people feel are safe for all ages and abilities.

Walking

1. Less work has been done on walking than cycling, partly because data is even worse. Thus investment in data analysis and collection is even more necessary to develop a rate-based measure of pedestrian risk, in relation to road environment characteristics.

2. There is currently no published measure/estimate of walking taking place within a local authority, while this can be generated for cycling using publically available data (e.g. via pct.bike, or by using DfT counts – TfL's Cynemon model can also be used for this but is not publically available). Hence we cannot easily compare walking risk by borough, as looking just at walking levels of residents (e.g. via Census, APS) would dramatically under-count the large amount of walking done in Central London by people living outside it (e.g. by people walking from a Central London bus stop to their workplace) and hence under-count risk in Outer boroughs.
3. A first way of looking at this might involve using protected LTDS/NTS data on trip origins and destinations, to make an estimate based on where London residents' travel takes place (although even this would still be an under-estimate in central areas, due to tourism). TfL should have done this as part of the Walking Potential analysis, and if this data could be made available it could be used to compare walking injuries per trip or trip stage starting or ending within a borough. In the medium term, new research is likely to be needed to look at pedestrian risk at a more granular (street) level.
4. While – unlike cyclists – pedestrians often have some level of protection at junctions, delays are often substantial and can lead to unsafe crossings. Research is needed to look at the impact of pedestrian crossing delays, which could encompass both the impacts regarding unsafe crossings, and the levels of delays experienced by pedestrians in different parts of London. (The latter could be used to estimate the economic cost of pedestrian delays, something under-researched by contrast to the economic cost of motorist delays – yet most Londoners walk and the MTS seeks to encourage an increase in walking alongside a decrease in car use).
5. Related to (3) and also relevant for cycling, we need to re-think transport appraisal, and how different costs and benefits of junction improvements are modelled, calculated and prioritised. Appraisal often causes problems because benefits and disbenefits for walking and cycling – such as pedestrian delays – are often poorly understood, poorly modelled, and poorly (or not at all) valued.

I am happy to provide updates or further information/explanation about any of this.

With best wishes

Rachel Aldred

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Featured article: Cycling provision separated from motor traffic: a systematic review exploring whether stated preferences vary by gender and age
R Aldred, B Elliott, J Woodcock, A Goodman
Transport Reviews, in press

From: Paul Gasson <[redacted]>
Sent: 11 August 2017 14:28
To: Transport Committee
Subject: Walking & Cycling at Outer London Junctions

Hello,
Many thanks for inviting feedback on the potential to improve Outer London junctions.

Are there lessons to be learned from previous junction improvements?
Conventional highway engineering approach to junction improvements is the optimisation of carriageway space to increase motor vehicle capacity & speeds, often at the expense of footway capacity or facilities for cycles. A key measure routinely adopted is swept curves designed to accommodate turning movements of large vehicles creating wide junction mouths. These are more intimidating and take longer for pedestrians to cross, as well as encouraging higher speeds from motor vehicle as they make left or right turns. These higher speeds also increase road danger for cycles in the vicinity of such turning traffic.
In contrast, in Waltham Forest the standard approach is now to 'tighten' junction geometry as much as possible to reduce vehicle speeds and free up carriageway space for active travel modes, A key learning for officers has been the importance of making use of street furniture to physically 'bracket' the junction and reduce the incidence of overrunning onto the footway.
The adoption of blended crossings on the larger through roads around the residential cells, which reinforces the pedestrian priority in highway code rule 170 for vehicles turning into side roads, and pulls the give way line back from the junction, means that pedestrians gain priority over other traffic when the crossing side roads, delivering a substantial improvement to the urban walking experience.
For predominantly residential areas (ie excluding major roads) arguably the most effective measure of all is the removal of through traffic through filtered permeability, coupled with sinusoidal speed humps (which in stark contrast to speed cushions do reduce vehicle speeds considerably). The consequential drop in motor traffic volumes & speeds, and improvement in driver behaviour (due to the removal of 'rat runners' who represent a very high proportion of those exhibiting poor driving standards), means that junctions in the residential areas need considerably fewer measures to make them easy to negotiate for active travel modes.
My own personal story of living & cycling in a newly filtered area (Walthamstow Village & Blackhorse Village) is close passes or other intimidating experiences with drivers have dropped dramatically - from 1-2 per day to 1-2 per month. This represents a massive step change improvement in the experience in travelling around by cycle.
How can we enable more people to walk and cycle?
Waltham Forest has demonstrated that you do not need massive Mini Holland funding to deliver high quality protected cycle facilities. They are in the process of completing a LIP funded and almost uninterrupted 2 mile stepped cycle track (with-flow tracks on each side of the road, so this represents 4 miles of track) connecting Blackhorse Road tube station to Crooked Billet roundabout. This scheme also features a number of tiger crossings.

How can we make our streets and junctions less hostile to people getting around by bike and on foot?

A key to improving street design for pedestrians is to treat the footway as we do the main carriageway in terms of designing for flow, attractiveness & safety. Relocate street furniture to the back of the footway wherever possible, run decluttering exercises on routes with higher pedestrian flows, install planters or plant trees, crack down on A-boards, and only allow those big advertising displays (which masquerade as phone boxes that few use) where footways are exceptionally wide.
For people on bikes, the adoption of the Waltham Forest Mini Holland strategy of removal of through motor traffic from residential cells, and the provision of high quality physically protected tracks along the main roads around the cells (and time separated phases across the junctions), and frequent tiger or toucan crossings of those roads (to support permeability between residential cells).

Crossings of main roads should be no more than at 400m metre intervals, and ideally no more than 200 metres. Wherever possible, signalled controlled toucan, pelican and puffin crossings should be replaced by tiger csossings.

In terms of the pedestrian & cycle experience at main road signalled junctions, I believe TfL should

* cease funding schemes which rely on guard railing
* make use of all green 'scramble' phases where pedestrian & cycles can cross in any direction at once.
* where scrambles aren't used, 'sacrifice' motor traffic capacity in favour of pedestrian & cycle capacity by allocating more phase time to active travel flows.
* upgrade junctions to use camera detection of pedestrians & cycles waiting to cross.
* reduce the time active travel users have to wait to cross

How do you get all road users on board?

Trying to get ALL road users on board will not happen, especially for private motor vehicle users & private hire vehicles - there will be some uses of these 2 modes who will never concede on the value of limiting motor vehicle access or a better use of carriageway space. If you aim for across the board agreement you'll simply end up watering down schemes to the point of ineffectiveness, which in terms of livability is what has held back our towns and cities for decades.

In terms of private motor vehicle users, there are a number of different messages that can be used to ease the pain - eg

* you are working to reduce unnecessary PMV trips in order to free up road space for those who have to use this mode for their journey.
* motor traffic carriageway capacity is reduced there is traffic evaporation, so the impact on your car journey will be relatively insignificant.

Paul Gasson
Council Liaison Officer
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WFCC is part of London Cycling Campaign - if you want to support our work, please become a member of LCC!