



Cycling Embassy of Great Britain

Investigation into Cycling in London - Submission

Summary:

The question of barriers to cycling in the UK is a one which has been asked and answered many times over the past few decades. The main barrier which prevents people from cycling in London is that it is too often an unpleasant, stressful experience. Riding a bicycle in London simply feels far too unsafe for the overwhelming majority of the public to ever wish to do it. To address this, we need to learn from best practice from around the world, with particular focus on the nation with the highest rates of cycling; The Netherlands. London can only make meaningful gains in the numbers of people cycling by providing the safe and convenient infrastructure its current and countless would-be cyclists deserve. London has everything to gain from ensuring that riding a bicycle is safe and inviting for residents, workers and visitors of all ages.





The Cycling Embassy of Great Britain is a campaign group comprised of both current cyclists and non-cyclists but representing everyone, young or old, fit or not, who wishes to use their bicycle as a means transport. We believe that:

- Britain's planning and transport policies to date have served to confine cycling only to the quick and the brave, leaving everyone else behind.
- Enabling cycling for transport would solve many of the problems that London, and the wider UK, faces; from transport and congestion issues to public health and wellbeing.
- Current rates of cycling in this country are too low and the present targets for cycling rates lack ambition.
- The increase in cycling rates, with the accompanying benefits it brings to both the individual and society as a whole, can only be achieved by the provision of dedicated cycle infrastructure, which simultaneously increases the comfort, safety and convenience of cyclists, in line with the best practice found around the world.

We are grateful for the Assembly Transport Committee's continuing focus on cycling as a means of transport in London. We submit responses to the Committee's questions below, but first submit some brief comments on the scope and focus of the investigation:

It should be noted that issues facing current cyclists and barriers to potential cyclists, though overlapping categories, are not entirely synonymous, and that, although both can and should be addressed in tandem, solutions that are proposed to cater for one will not automatically satisfy the other.

While tackling the issues that current cyclists face is important, tackling the barriers to cycling should be London's top priority. The extensive benefits of enabling cycling for the city should by now be well established, but at all levels of government it has rarely been taken as seriously as it deserves. We know that cycling can have a large positive impact on many of the greatest issues that Londoners face — on cost of living, quality of life and our health timebomb — and on the wider problems for London — on congestion, productivity, quality of the environment and remaining an attractive and competitive place both to live and to do business. Although the barriers to cycling are high and in some cases removing them may be expensive or difficult, the case for doing so is overwhelming and the return far larger than the initial investment.



1. Current issues and barriers to cycling

The Committee seek “**to understand the issues facing current cyclists and the barriers to potential cyclists,**” and specifically ask:

What is the impact of recent cycle safety infrastructure improvements on the number of cyclists and cyclists’ safety?

What are the main safety concerns of cyclists in London?

The Embassy submits that:

The barriers to cycling in the UK are already well understood. As the Transport Committee note, TfL themselves regularly investigate this in their annual *Cycle Attitudes* report. TfL’s own research is consistent with a large body of research into the barriers to cycling, from a wide variety of sources and methodologies.¹

Concerns about safety are a major part of the barrier to cycling, but it should be noted that the barrier is somewhat broader than this. It is not simply that the conditions in which cycling take place are (or are perceived to be) *unsafe*, but that they are stressful and generally less pleasant and less attractive than alternative modes of transport.

The major barrier to cycling would therefore best be described not in terms of concerns about safety, but in terms of the physical design of our streets and the nature of the traffic on them.

London’s main roads in particular, as they are currently designed and used, require of existing cyclists a high rate of complex interactions with motorists in fast and large vehicles. The resulting experience is stressful and unpleasant. The volume of motorised traffic, the style and speed of driving, and volume of large and heavy vehicles make main roads especially unappealing, but these barriers can also extend to minor streets where they are used as rat runs or by large vehicles, and increasingly apply to all streets due to speeding and distracted and aggressive driving. London’s confusing and complex array of non-standardised road layouts also contribute to these unattractive conditions and stressful experiences.

¹ Research summarised on the Cycling Embassy website: <http://www.cycling-embassy.org.uk/node/1926>



2. The Mayor's proposals for cycling

The Committee seek **"to examine the plans proposed by the Mayor and TfL to improve cycling safety and increase cycling modal share,"** and specifically ask:

What is the impact of recent cycle safety infrastructure improvements on the number of cyclists and cyclists' safety?

What lessons have been learnt from the introduction of the first 4 Cycle Superhighways, and how will these lessons be applied to those still to be built?

What action is TfL taking to improve junctions following the junction review process?

What priority is given to cycling in TfL's spending decisions?

How does the cycle safety agenda fit with the Mayor's agenda to smooth traffic flow?

The mayor has set a target of 5% modal share for cycling by 2026, described as a fourfold increase on 2000 levels. This target is not ambitious at all. TfL's own analysis of cycling potential suggests a potential for 23% modal share were we to enable a shift away from short journeys being made by private car where a car is not necessary.² This is consistent with the cycling rates observed in countries which have used high-quality infrastructure for cyclists to enable cycling as a mode of transport.

We worry that even this target is in danger given the lack of ambition shown in current cycling projects as well as conflicting policies, such as "smoothing traffic flow," which serve to reinforce the barriers to cycling.

The mayor cites a number of initiatives intended to increase the number of cyclists in London. However, many of these fail to address the barriers to cycling:

1. Some initiatives are blind to the barriers to cycling: mass participation events (notably "Sky Ride") in particular are very well attended on the day, when roads are closed to motor traffic, but have no lasting effect.
2. Some initiatives address only minor barriers to cycling or issues facing existing cyclists. Schemes to increase the availability of bicycles (notably the Cycle Hire scheme), cycle parking, and tackling cycle theft fall into this category. These may be welcome and worthwhile schemes but will have extremely limited impact on numbers cycling.
3. Another initiative — free cycle training — attempts to help people to scale the barrier to cycling, rather than to remove that barrier; to enable cycling it requires acquiring a confidence in traffic which many will never attain. The unattractive conditions for cycling prevent most people from ever attempting cycle training, while many of those who do try it give up.³

The barriers to cycling are the design of our streets and the frequency and the nature of interaction between cyclists and motor traffic, and so it is these that must be addressed. We discuss how this might be done in section 3. The mayor has initiated or is developing infrastructure projects which have the potential to address these areas. However, his record on infrastructure so far is disappointing. The mayor's flagship Cycle Superhighways infrastructure project is intended to make a selection of TfL-controlled main roads a more attractive place for cycling.

² TfL 2010 "Analysis of Cycling Potential" <http://www.tfl.gov.uk/roadusers/cycling/15459.aspx>

³ TfL 2010 "Analysis of Cycling Potential" <http://www.tfl.gov.uk/roadusers/cycling/15459.aspx> The report notes that 'although many people have taken up cycling in the past decade, a similar number have stopped cycling - i.e. there has been "churn" but no change at an aggregate level.'



On announcing the details of his CSH programme in 2009, the mayor said:

“...Superhighways are central to the cycling revolution I’m determined to bring about. No longer will pedal power have to dance and dodge around petrol power – on these routes the bicycle will dominate and that will be clear to all others using them. That should transform the experience of cycling – boosting safety and confidence of everyone using the routes...”⁴

Kulveer Ranger added that CSHs would “give many more people the confidence to ride.” These comments hinted that the CSH design would reduce the frequency and/or change the nature of interaction between cyclists and motorists/vehicles on the affected main roads. However, this has not been the case, and, as the Committee’s own *Pedal Power* report showed, because there is no restriction on motorists driving or parking in the cycle lanes and little or no improvement for cyclists at complex junctions, the CSHs are considered something of a joke.⁵ Over 80% of cyclists using Superhighways 2 and 8 were already cycling, and had merely changed their route; likewise 89% of cyclists using the Superhighways describe themselves as ‘confident cyclists’.⁶ This is suggestive that the appeal of Superhighways is currently limited to those who are already confident about cycling on London’s roads, rather than representing a useful provision for those who did not already use a bicycle for transport.

In addition to deficiencies in his cycling-specific policies, it is clear that the mayor’s wider policies on streets have detrimental effects on the attractiveness of cycling:

“Smoothing traffic flow” is marketed as a policy to reduce congestion and improve journey time reliability for motorists and bus passengers, as well as to improve air quality, by reducing “stop-start driving” conditions. This policy conflicts with the policy to increase cycling in several ways:

1. In practice reducing stop-start driving primarily means reducing queues at signal-controlled junctions by increasing the junction capacity. This reinforces barriers to cycling when it takes the form of, for example, increased speeds through junctions, or the addition of queuing lanes that are greater in number than those lanes leading out of the junction, causing road users to jostle for space, as was the case at the York Way junction where Deep Lee was killed in 2011.
2. The prohibition on reducing road and junction capacity for motor vehicles acts as a barrier to the introduction of dedicated cycling infrastructure, even though to do so would enable modal shift and a reduction in demand for motor vehicle capacity.
3. Given that junctions are the limiting factor for motor traffic capacity on London’s road network, this policy effectively amounts to a city wide increase in traffic capacity and so, given the elasticity of road demand in London and the tendency of traffic volume to adjust to capacity, this policy is almost certain to lead to an increase in motor traffic and any benefits to journey times and air quality will therefore soon be lost.

⁴ Mayor of London (2009). “London’s Cycle Superhighways - First two routes unveiled” (Press release)

⁵ London Assembly Transport Committee (2010). *Pedal Power*. <http://www.london.gov.uk/publication/pedal-power>

⁶ Travel in London, Report 4 (2011) <http://www.tfl.gov.uk/assets/downloads/travel-in-london-report-4.pdf>



3. Recommendations

The Committee seek “**to generate recommendations to the Mayor and TfL to improve the cycling environment and cycle safety in London,**” and specifically ask:

What lessons can be learned from national and international best practice?

The cycling environment should be improved with the specific goal of removing the barriers to cycling and enabling cycling for all. The only proven method for achieving this is to provide high quality dedicated space for cycling so that cyclists are not asked to negotiate and compete with high volumes of motorists in large and fast vehicles.

The best international example for enabling cycling is undoubtedly found in the Netherlands, and many of the principles and practices of that country can readily be applied in London with similar effects. The Dutch practice of separating cycle space from traffic takes several forms. Key solutions which should be adopted are shown in the appendix. In brief, the main principles are:

1. On main roads and on roads which routinely cater for buses and large vehicles, the Dutch typically provide dedicated cycle tracks. Unlike the typical British cycle lane, these are kerb separated and routed behind parking bays and bus stops, so that parked cars act as a protective barrier for the cycle track rather than *vice versa*. The Dutch cycle tracks are not merely conspicuously safe, they are obviously attractive, being of a sufficient width and quality, maintaining priority across side-roads, and backed-up by changes to the geometry of side road turnings, roundabouts and junctions which prevent motor traffic crossing the cycle tracks at speed. The result is that cycling is always a more inviting proposition than riding with traffic, regardless of one's speed, age, riding style, or tolerance for busy roads.
2. At signal-controlled junctions, cyclists are separated from traffic in space and/or time, with clear cycle space continuing through junctions. Sometimes this requires a lower capacity for motor vehicle flow than is typical on London's junctions; however, arranging signal phases into separate forward and turn phases enables junctions to be used very efficiently while eliminating conflict between cyclists and motorists.
3. On minor roads, including residential streets and town centres, traffic should be separated through filtered permeability measures, such as selective road blocks which enable streets to be used as through routes by cyclists and pedestrians, but by motorists for property access and deliveries only, eliminating rat-running. Filtered permeability is now a well tested and quite widely applied principle in some British cities and London boroughs, notably Hackney, Camden and Southwark, applied not specifically to aid cycling, but because of the wide benefits to residents and businesses of removing rat-running from minor roads. While filtered permeability is likely to be of most relevance to borough roads, it can be of additional benefit when applied at the junctions of main roads with minor roads, eliminating the conflict of motor vehicles turning into side roads across the paths of pedestrians and cyclists continuing along the main road.

If he is to achieve his “cycling revolution”, the mayor must commission replacements for TfL's design and engineering guidelines for roads and cycling infrastructure. Current guidelines contain many serious defects which contribute to the proliferation of poor quality and dangerous cycle facilities, while at the same time standing in the way of adoption of international best practice design. This process may require working with the Department for Transport on revision of national standards and regulations which, for example, currently prevent London from trying solutions such as eye-level cycle-specific traffic lights, which could have reduced confusion at the new Bow Roundabout “head start”, where currently seven almost indistinguishable sets of traffic lights, applicable to three different scenarios, vie for attention within a few feet of each other. The remaining Cycle Super Highways must be built to the updated design standards, with the existing CSHs brought up to the new standard as a priority.



Appendix: Cycle infrastructure design recommendations

Cycle tracks

London has very few good examples of cycle tracks, in part due to their absence from the design guidance. LB Camden, however, has demonstrated the key principles: that cycle tracks should be protected from traffic with a kerb, and that car parking should be positioned on the outside.



Skinner Street, Clerkenwell



Cycle track, Rotterdam



Where cycle tracks have been constructed in London, they have typically been too narrow to meet demand comfortably and safely, and suffer from design defects, especially that of disappearing at every junction and side-road:

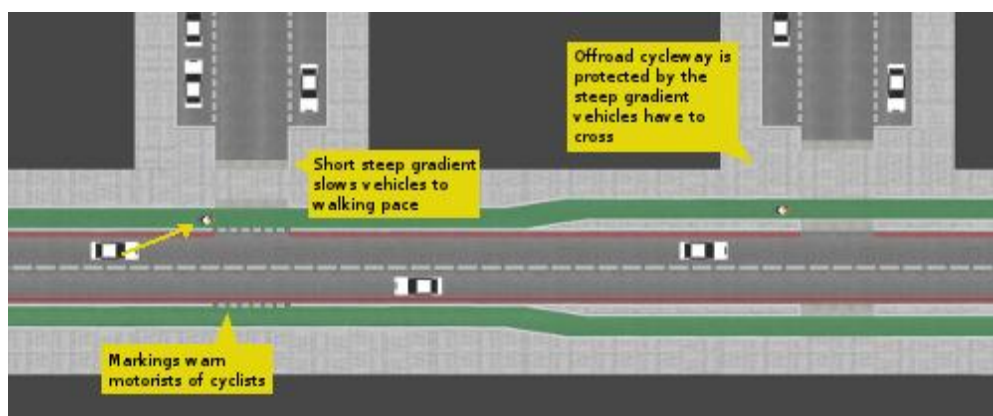


Problem: lack of priority across side road, and inappropriately wide side-turning geometry. L: South Lambeth Rd; R: Cable St.



L: Royal College Street, Camden; R: a typical Dutch cycle track.

Priority across the side roads is reinforced with raised tables, coloured surfaces, and road markings. The Dutch rule is typically that traffic continuing straight along a main road, regardless of mode and including pedestrians, has priority over traffic entering or exiting a minor road, and this raised table junction design can therefore also benefit pedestrians.



Cycle lanes



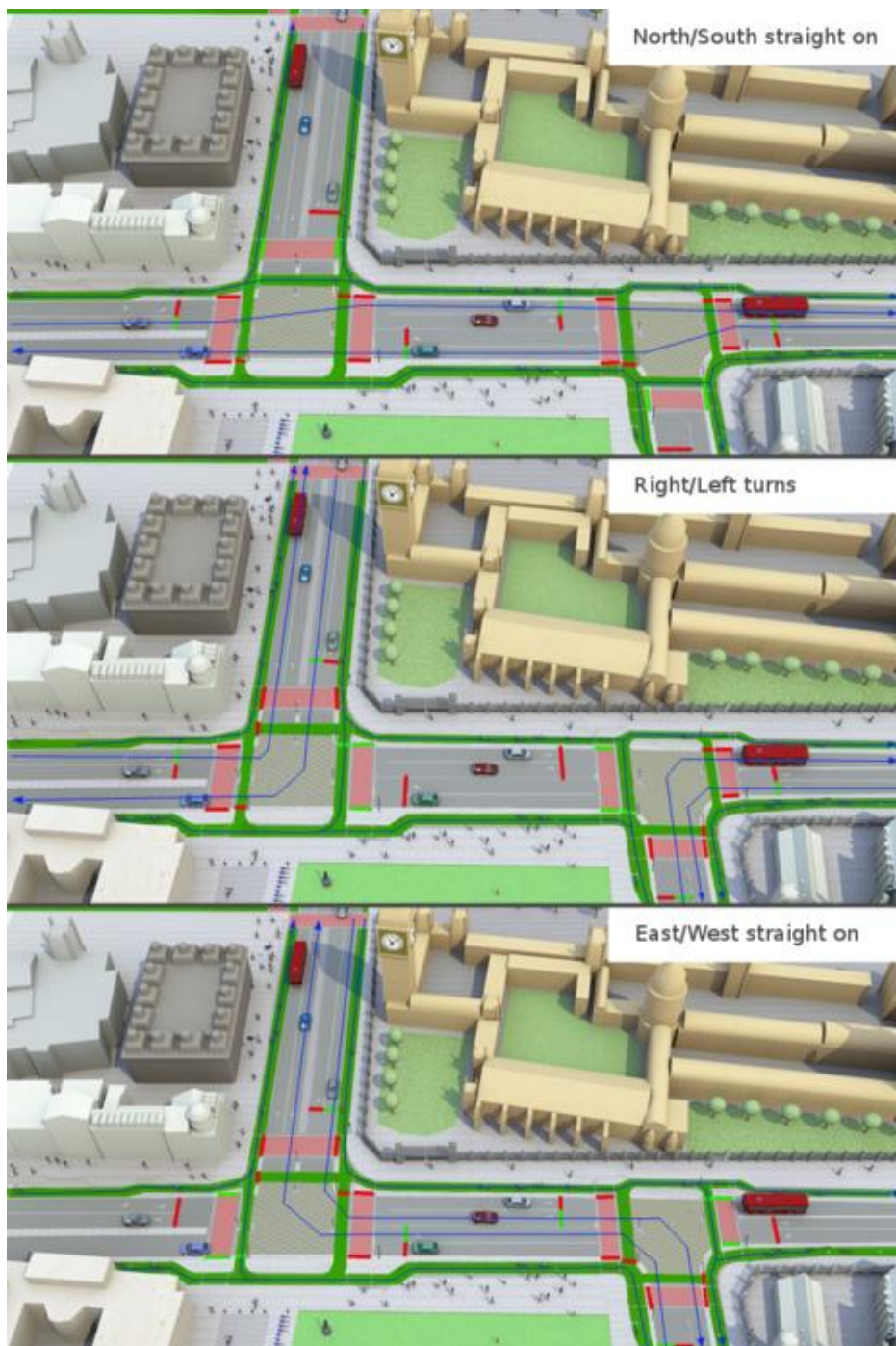
Dutch examples - note continuity, absence of parking on lane and lack of conflict at 'pinch' points



In this example, from Utrecht, NL, space for cycle lanes of adequate width is achieved through making the street one-way for motor vehicles

Signal-controlled junctions

At signal-controlled junctions, cyclists continue to have separate dedicated cycle tracks, with clear cycle space continuing through junctions. Sometimes this requires a lower capacity for motor vehicle flow than is typical on London's junctions; however, arranging signal phases into separate forward and turn phases enables junctions to be used very efficiently while eliminating conflict between cyclists and motorists. For example -





3-D model of a possible UK traffic-controlled junction, with separate cycle tracks. Signal arrangements keep the movements of motor vehicles and cyclists separate. Courtesy of LCC Croydon Cycling Campaign



Dutch minor signal-controlled junction, in Assen. Motorists and cyclists move through the junction in separate phases

Cycle paths

Cycle paths away from roads can make for especially pleasant cycle routes. Although situations where such paths could be implemented are limited, and off-road paths can never make complete routes in London, those opportunities that do exist are often the “quick wins” that could be implemented cheaply and with relatively little controversy. As with cycle tracks there are important design considerations which have traditionally been ignored and which are not adequately specified in existing design guidance, including the need to ensure sufficient width to accommodate growing demand and the variety of riding styles, the need to ensure that cycle paths do not conflict with pedestrian paths, the need for easy access to the path, and features such as lighting which are important for safety.

The East London Greenway and the paths through Hyde Park, though not without design faults, demonstrate the principle of using otherwise unused or underused corridors for cycle routes. There are still many such opportunities left untapped in London, and each major redevelopment project (such as at Nine Elms) presents an opportunity to plan in good quality cycle paths from the start. While these paths are usually in the jurisdiction of the boroughs, the mayor could do more to enable them, to ensure that they are high quality, and to incorporate them into useful through routes.



A wide, two-way cycle path, with smooth surface, and lack of obstacles on entry. Cycle paths like this should serve as shortcuts, routes that are not available to motor vehicles. Note also a clearly demarcated pavement, which should be present where pedestrian and cycle movements are high, as is typical throughout London, to prevent conflict. This example is from a new development in Assen, the Netherlands.

An example from Edinburgh: note that with high volumes of foot and cycle traffic the two need adequate space and separation. Our recommended minimum would be 3.0m for a two-way cycle path in an urban area, not including the associated footway. This allows safe passing and allows, for example, parents to ride alongside young children.

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Cycle streets

Cycle streets are roads on which bicycles have priority over cars. No overtaking is allowed. Typically they are found in residential areas, and are combined with filtered permeability to serve as through-routes for bicycles, but not for motor vehicles. This may be an appropriate solution on those sections of the Cycle Superhighways which use minor streets.



Filtered permeability

The intention is to prevent the use of a street as a through-route by motor vehicles, while still allowing (direct) access by bicycles. Typically this is achieved by the use of bollards. The principal advantage is that the number of motor vehicles using the street becomes significantly reduced, ideally (on a residential street) to only those accessing properties on the street itself. Filtered permeability has the added advantage of privileging bicycles over motor vehicles, in terms of trip distance.

While filtered permeability is likely to be of most use on borough roads, it can also be applied to good effect where side streets meet TLRN roads. This has wider benefits, for example, eliminating turning conflicts where cycle lanes/tracks or bus lanes run alongside the main road, and reducing the complexity of vehicle movements on the main road, thus smoothing traffic flow.

Some examples from London and Brighton & Hove –



Chadwell Street, LB Islington.



Ampton Street, LB Camden.





Filtered permeability where a residential side road meets a cycle track on a main road (under construction on Old Shoreham Road, Brighton). Not only does this arrangement remove rat-running on the residential street, it also eliminates turning conflicts across the cycle track.