

**Consultation response on Transport for London plans for a new North-South Superhighway****1. Introduction**

London Cycling Campaign is the capital's leading cycling organisation with more than 12,000 members and 40,000 supporters. We welcome the opportunity to comment on proposals for the new North-South cycle superhighway.

We are pleased to see these plans and believe they represent a major step forward in creating streets that are safe and inviting for cycling. We note that the public consultation received over 14,000 responses, 80% of which were positive.

We understand that a small minority have expressed concerns regarding the impact on journey times shown by Transport for London's modelling. We believe that the modelling critically overstates the likely impacts.

The likely impacts are minimal and we urge decision makers to recognise that modelling techniques used do not take into account the reduction in traffic levels as a result of people changing their behaviour, which is often the result of reallocation of road space of this kind.

There is also no attempt to balance any possible disadvantages against the huge benefits in casualty reduction, better health, quicker cycle journeys and cleaner environment that the Mayor's plans will bring to London. The Department for Transport recently published figures showing a likely Cost Benefit ratio of 5:1 for cycling infrastructure projects. New York has recently published evidence that shows that since installing protected bicycle lanes throughout the city, there has been a reduction of vehicle volumes as road users shifted to other modes – and journey times have improved in many areas. In New York's Central Business District, travel speeds have remained steady as protected bicycle lanes are added to the roadway network.

Concerns expressed by the minority also appear to overstate the impact of the superhighway proposals on London's network. There are approximately 1,450 miles of main road in London. Of those 1450 miles, the N/S, E/W cycle superhighways and the upgrade to CS2 combined represent about 9 miles. The Mayor's Vision for Cycling includes £913m for cycling over the next 10 years. Twice this amount will be spent on road assets including resurfacing carriageway, modernising traffic signals and renewing and refurbishing and upgrading structures and tunnels.

Those raising concerns about the impact on journey times also fail to acknowledge the positive impact that a reduction in cyclist casualties could have on existing congestion. A report to the TfL board estimated that 28% of the congestion in London is the result of crashes. If a cyclist is seriously injured there can be huge delays. Where segregated cycle tracks have been implemented elsewhere, for example in New York, Cyclist injuries have decreased even as bicycle volumes have dramatically increased. At the moment there are over 600,000 cycle journeys a day in London. That is predicted to rise to between 1.2 and 1.5 million, which will include significant modal shift and reductions in the

pressure on other modes, bus and rail. Seven out of ten people who do not cycle now say they would be prepared to consider cycling if the safe facilities were available for them.

We have made efforts to mobilise our supporter base to participate in this consultation and have seen overwhelming support for the plans from thousands of Londoners, as well as the large number of high profile employers who have voiced their support through CyclingWorks. We hope that the small minority in opposition will not sway the Mayor from his promise to create high quality cycle superhighways.

It is absolutely essential to ensure that this route is implemented to a high standard. We therefore urge you to take on board the following recommendations, which have been identified through our Infrastructure Review working group process and in collaboration with LCC local groups, and which we would be willing to discuss in more detail with you.

We have split our consultation response into the following sections:

- Section A: General comments on the proposals
- Section B: Detailed comments on sections of the proposed route
- Section C: Comments on the alignment of the route

## **Section A: General comments**

### **Connectivity and alignment**

For a major cycle route directness and access to other routes is essential. A circuitous route or one that adds junction delays to journeys will not be used. Excessive delays will lead cyclists to use less protected routes. We have highlighted specific issues in Section B, but the principle across all routes is that directness, access to key destinations and connectivity with other routes must be considered as a priority.

We comment on alignment in more detail below, including some alternate routes. The critical difficulty is the failure to provide a direct link between Elephant & Castle and St.Georges Circus. Maintaining the one-way gyratory road system in this area concentrates motor traffic on fast one-way links that increase hazards to vulnerable road users.

As presented the route is incomplete and a fully worked solution is required providing a protected cycle route to and through the Kings Cross area.

### **Banned turns**

Cyclists should be exempt from banned turns across the route.

### **Buses and bus stops.**

LCC welcomes the use of bus and coach stop by-passes throughout this route. These are essential to maintain separation from motor traffic while minimising the risk of conflict with pedestrians. At some points the two-way cycle track width at bus stops is reduced to 3 metres which creates

unnecessary hazards. We have not seen cross section detail but we note that the high kerbs with vertical faces as used on Stratford High street create extra hazards for both pedestrians and cyclists. To minimise conflict the speed of cyclists should be low and there should be a lot of space for pedestrians to cross the track.

The illustration here shows a bus stop with elements showing a clear designated crossing point but still allowing pedestrians choice of access easily at either end of the bus stop, cyclists can slow down without causing too much congestion on the track.



#### **Drainage and maintenance.**

Pooling and drainage issues will need to be managed. The detailed design should ensure ease of cleaning especially to manage snow and ice as well as seasonal leaf fall on the sections with many trees.

#### **Impact assessments and traffic capacity modelling**

London Cycling Campaign notes the detailed report and modelling data relating to the proposed designs. It is clear that the base line times are based on modelled optimum flows which assume no unusual or external influences on the traffic flow. In reality these conditions rarely or ever occur. The reported model outcome timings are the worst case scenario, In practice if these 'worst' impacts happened regularly there would be a natural re-assignment of traffic routes and modes.

We also note that the modelling is based on weak assumptions that traffic volumes will stay at current levels. Inner London and other UK cities have experienced falling motor traffic levels for over a decade, this is associated with increasing population density in these areas. As the purpose of the

Cycle Superhighway is to encourage modal shift by allowing more people to choose cycling then it is reasonable that this shift should have been included in the modelling calculation. It should be noted that cycling invariably allows shorter journey times for the majority of trips that use these roads. If a cycling choice had been included in the assignment model a far more realistic set of outcomes would have been produced.

We are confident that with careful traffic management and signal timings that the problems highlighted by the modelling can be kept to a minimum. At some of the major junctions we propose simpler traffic control schemes that will enable more route flexibility than the consultation proposal.

### **Inclusivity**

Cycle superhighways, and indeed all cycle tracks, must be suitable for people using all types of solo bicycles, but also adapted bicycles, upright and recumbent tricycles, handcycles and tandems, as well as trailers, trailer bikes and cargo bikes. Widths of cycle paths and filtered permeability arrangements, lengths of waiting areas, and areas for the swept paths of these various types of cycle need to cater for this variety and need to allow space for solo bicycles to pass too. We understand that Wheels for Wellbeing have submitted a response and we urge you to take their comments on board.

### **Junctions**

Over 70% of the most serious injury collisions to cyclists in London happen at road junctions. Poor design of junctions, even where there are segregated routes for cyclists has been highlighted as a concern by the recent study into cyclists' fatalities in London (Pedal Cyclist Fatalities in London: Analysis of Police Collision Files (2007-2011) Thomas, R et al. 2014)

There is a need to ensure priority for cyclists at all junctions as well as providing protection along links. A segregated cycle route can only be considered safe for cycling if all the major junctions are also segregated.

The Mayor's vision for cycling highlighted the introduction of safer junction designs which separated the flow of cyclists from other traffic. We welcome the limited introduction of separated junctions in the plans for the North-South superhighway but have reservations about the detail and timing. At many junctions risks remain from turning traffic on some arms and the signal stages seem very complicated. We are particularly concerned with the use of the 'Early Start' arrangement for cyclists on and coming into the route. This design has failed to protect cyclists where there is a high proportion of motor traffic turning left or crossing the cyclists' desire line. This should not be used at Borough Road and Lambeth road which together constitute an effective east west cycle route.

Generally not enough consideration has been given to cyclists crossing and joining the route. All cross roads carry cycle traffic and there are some with high numbers of cyclists. At many junctions there are plans for the 'early start' design which lets cyclists move off before other traffic. By using the 'hold the left' protected turn (detailed below) there is no need for 'early start' at any signalised junction on this route.

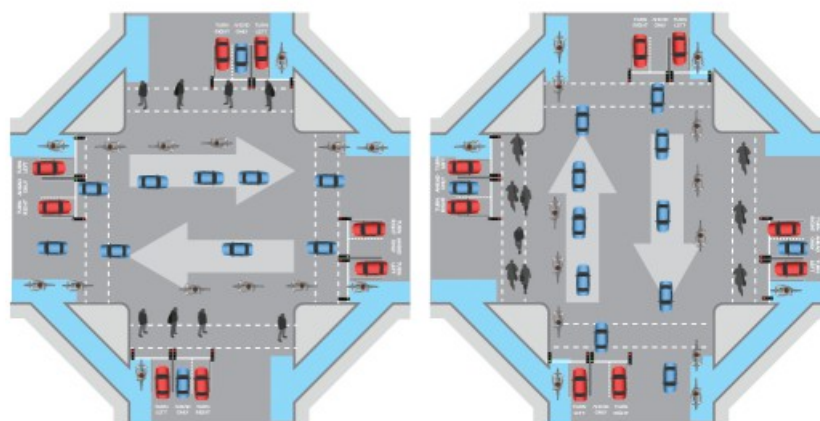
### **Minor Junctions**

There are a number of unsignalised junctions along the route. Cyclists are given priority over turning traffic at these junctions but not enough protection is provided to ensure motor traffic has time to see cyclists and is going slow enough to give way. The junction designs used on the existing superhighway 2 route on Stratford High Street have shown several high risk locations where traffic exits the main road at speed without giving way to cyclists. All the minor junction entries must be designed to make it clear to drivers that they are crossing cycle and or pedestrian priority spaces. This is particularly important because of the choice to use a two way track on one side of the carriageway. This arrangement is recognised to greatly increase the risk of collision at unsignalised junctions.

### **‘Hold the Left Turn’ Safer junction design scheme**

London Cycling Campaign has proposed a safe junction design for large signalised junctions which separates all turning movements from the straight ahead movements, for all traffic including pedestrians. This is shown schematically below for a four arm junction. We welcome the introduction of signal separated left turns for cyclists but it should be used more widely and on the access roads joining the route as well as along the route. Variations of this design should be introduced at the junctions where there is a lot of road space such as at Southwark St./Stamford St. and at Borough Rd and Lambeth Rd. The variation for a narrower road crossing should be used at Ludgate Circus.

The main principle of this safe junction design is that turning motor traffic is separated from straight ahead traffic as early as possible. Cyclists are protected from left (and right) turn risks. Cyclists turning right make a two stage turn using a waiting area between going ahead and turning with the next change of lights. Cyclists turning left may be able to by-pass the signals if room permits. Where pedestrian flows are high cyclists may have to wait until for the crossing to clear.

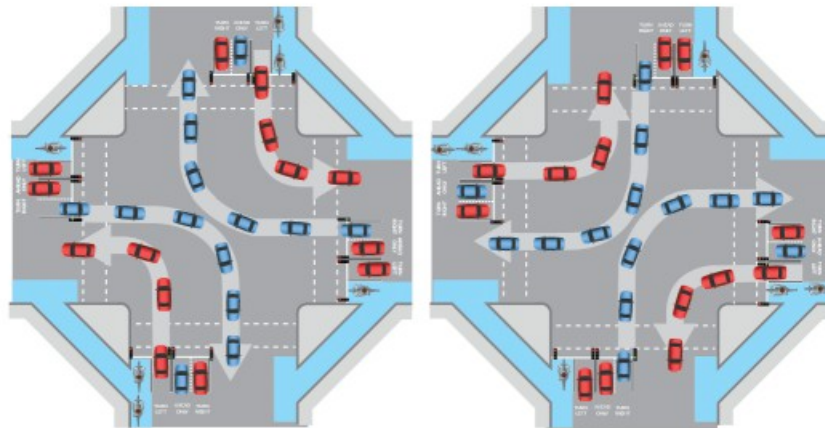


Stage 1: In this diagram traffic lights are red for traffic turning left and right, and green for traffic – drivers, cyclists and pedestrians – going ahead.

East and west-bound traffic can go at the same time, and pedestrians can cross at the same time as the ahead traffic.

Stage 2: At the next phase, the North and south-bound traffic can go.

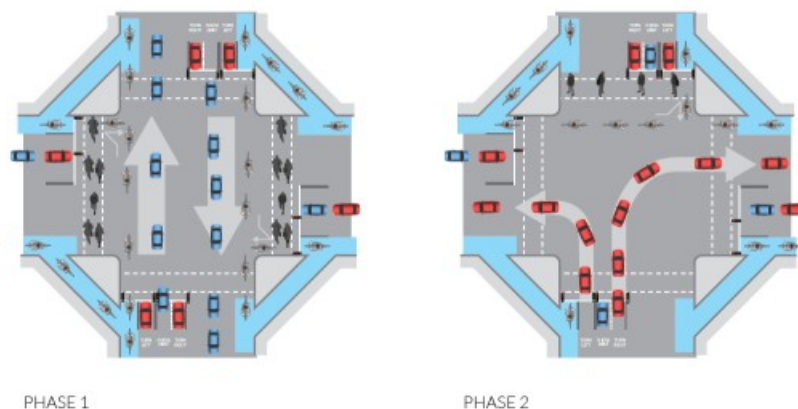
Result? No risk of traffic turning across the cyclists' path – therefore no left hook.



Stage 3: Next, the traffic lights go green for north and south bound left turns, and east and west bound right turns. All this traffic can go at the same time.

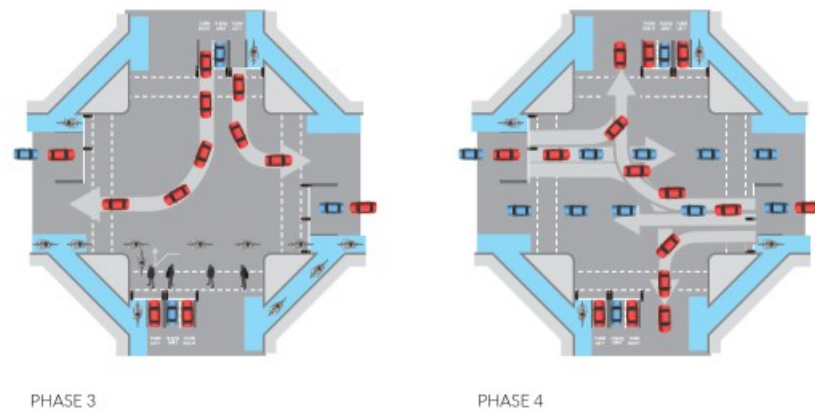
Stage 4: Now the other turns can be made. Further comments on each junction are included in the detailed route notes.

'Hold the Left' scheme major and minor roads meet



On Stage 1, all north and south ahead traffic goes. At Stage 2, rights and lefts go together, and eastbound cyclists can go.





At Stage 3, southbound rights and lefts go together, and westbound cyclists go ahead. During Stages 2 and 3 east and westbound pedestrians can cross safely at the same time. At Stage 4, east and westbound traffic can go.

This model allows the same number of phases as currently, but gives more time for pedestrians and cycles to cross. As shown there are cycle by-passes for left turns at the lights, the actual layout of these turns will depend on the available space and pedestrian flows.

More detail and further information on these layouts on the LCC website at

<http://lcc.org.uk/pages/better-junctions>

### Lane widths, section and kerbing

The draft London Cycle Design Standard makes strong recommendations about effective lane width. The design aim should be to provide routes that allow side by side cycling and stress free overtaking. For cycle superhighway routes with a 2 metre width is seen as the minimum for a one-way track and 3 metres (ref. LCDS draft Chapter 3: Cycle lanes and tracks 3.1.15) for a two-way track, anything less fails to score in the Cycling Level of Service matrix. On the North-South Cycle Superhighway where high volumes of cyclists are expected in each direction 4 metres width is needed for safe and inviting cycling. The reduction to only 3 metres wide north of Charterhouse Street is not acceptable. The Standard also notes how high kerbing, vertical upstands and proximity to other obstacles significantly reduce the effective width for cyclists (ref. LCDS draft Chapter 3: Cycle lanes and tracks 3.1.18). The current consultation gives very little information on the proposed cycle lane section but LCC is concerned that the design seen on the Stratford High Street of this route with high vertical upstands is not repeated. The risk of striking a pedal on high kerbs means that the effective width of the lane is reduced by about 300mm. An example of low upstands and splayed kerbs being used to maximise effective width can be seen in Oxford St in the Oxford Circus area. The upstand between carriageway and footway is generally less than 50mm and the central median strip has splayed kerbs throughout. Splayed kerbs have angled faces at least 45° from vertical and should be able to be sensed by a blind

or visually impaired person along the route. Kerbs should not prevent disabled riders from pulling over to stop or from getting out of the way of other bikes or other traffic, or from accessing cycle parking or amenities on the footway.

At no point on this route should it be possible for a cyclist's pedals to strike the kerbing while riding in a cycle lane.

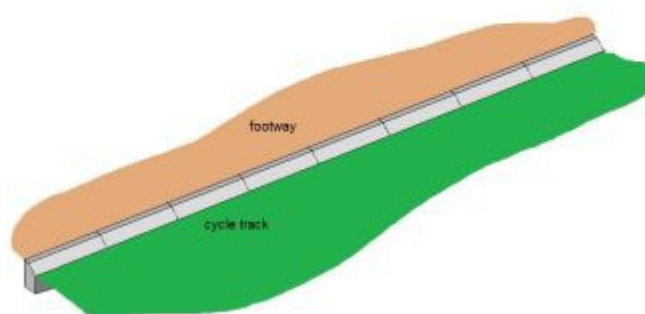
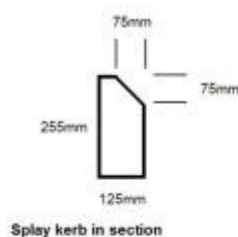


Image from

Splay kerbs laid in a line

<http://therantyhighwayman.blogspot.co.uk/2013/08/kerb-your-enthusiasm.html>

There is no need for more than 50mm vertical separation between the cycle track and footway, as is the norm in the Netherlands and Denmark. All the kerbing at the edge of the cycle lane should be splayed. For most of its length the cycle lane should be at an intermediate height between the road and footway. Where the lane crosses minor junctions it should form part of the raised junction treatment with a very clear change of level from the roadway.

The deep trough with vertical edges as on Stratford High Street creates a hostile environment for cycling it also adds to the difficulties in keeping a lane clear of snow, fallen leaves and litter.

### **Pedestrian crossings**

Pedestrian crossings should be direct, rather than two stage, throughout the route. This would prevent risky informal crossing, which could put pedestrians into conflict with other road users, and allow for more space for protection for cyclists at junctions. The 'Hold the Left' junction design detailed above allows more time for pedestrian crossing as the pedestrian stage runs at the same time as motor traffic in a different direction.

### **Signage**

Route signs and the route on the ground itself needs good visual contrast so all cyclists, including visually impaired cyclists, can be sure they are on a safe cycle path/route. A measure of visual



contrast is difference in Light Reflectance Values (LRV levels) of adjacent surfaces. While a 30 point LRV level difference is considered sufficient in an internal environment, a much higher LRV differential is required in an external environment with lower lighting levels and with glare in the sunlight.

#### **Speed reduction and surface treatments**

A full width sinusoidal profile with a smooth surface should be the only surface treatment used for speed reduction and for transitions to raised tables.

## **Section B: comments on sections of the N-S route**

This section has been collated with input from Southwark Cyclists, the LCC local group.

### **Section 1a:**

1. Directness of route is critical. We understand that the decision to locate the superhighway around St George's Rd and Lambeth Rd rather than the most direct route from Elephant and Castle to St George's Circus (London Rd) is because of the bus routes on that road. Planners should not assume creating space for cycling threatens buses. It should be considered an opportunity to prioritise both buses and cycles over less efficient modes. Where a planned cycle route coincides with a bus route, cycles should be separated from buses either at route or street level. At route level this can mean re-routing buses (for example, to create a cycle-only street, as in The Narrowway, Hackney), or re-routing the core cycle network. If the second option is chosen, this must maintain network density and directness, and access to key destinations. Re-routing the cycle superhighway around two sides of a triangle (St George's Rd and Lambeth Rd) does not meet this requirement. We therefore suggest London Rd is used, with protected space which must continue safely through junctions and past bus stops, on either side of the road.

If St. George's Rd is used the junction entries at Hayles St. and West Sq should be narrowed to less than 6 metres and 3 metres respectively so that cycles exiting are not caught to the left of motor traffic when they are heading across St. Georges Rd to the cycle track. The entry treatments on these and all minor unsignalised junctions must be designed to make it clear to drivers that they are crossing cycle and or pedestrian priority spaces.

### **Section 1b:**

1. If St George's Rd must be used, the risk of vehicles turning across the path of cyclists at the junction of Lambeth Rd/St George's Rd must be removed. This is a large junction and the early start facility is not adequate to address risk of conflict. Lambeth Rd – Borough Rd is an important cyclists' desire line south of the river, linking South East London to West London by less hazardous river crossings. Resolving some of the difficulty at St. George's circus will lead to even higher levels of

cycling on this route. An 'Early Start' facility where well over 90% of the motor traffic is turning left is an unsafe solution. A variant of the 'Hold the Left' junction design shown above should be used to facilitate two way cycle flows across the junction on Lambeth Rd.

2. One-way streets joining St George's Road in this section should allow two-way cycling.

#### **Section 2a:**

1. The consultation information states: "Although Westminster Bridge Road is not on the North-South Cycle Superhighway, changes are required to facilitate proposals at St. George's Circus." Changes must extend to creating protected space on Westminster Bridge Rd, rather than expecting cyclists to mix with buses (including tour buses) in this section. The current environment is hostile and unsuitable for those who would like to cycle, but currently feel unable to – the audience that the superhighways aim to serve.

There is insufficient protection for cyclists leaving and entering Waterloo Bridge Rd. A protected cycle lane should run southbound through this junction and northbound from Westminster Bridge Rd. The shared bus/cycle lane northbound from St. Georges Circus to Waterloo Road should be less than 3 metres wide or over 4.5 metres as per LCDS guidance.

#### **Section 2b:**

1. By the time cyclists using the early start facility on Borough Rd have reached the point of conflict, motor traffic will have caught up with them. We would suggest as a long term goal replacing the roundabout with crossroads. We understand that this option was considered but rejected because of the obelisk.

If the roundabout must be retained, improvements proposed by Southwark Cyclists in their response to this consultation should be implemented. In summary:

- a. Tighten Junctions further to slow traffic and bring pedestrian crossings closer to the desire line.
- b. Extend the CSH to the north end of London Road and provide a light-controlled cycle crossing of London Road.
- c. "Square up" the Waterloo Rd-WBR junction and remove the triangular pedestrian island.
- d. Create an off road cycle path taking eastbound cyclists from WBR and Waterloo Rd directly to the NS CSH using some of extra pavement space created on the northwest side of SGC.
- e. Signal left-turning and straight on traffic separately at the Waterloo Rd:WBR junction
- f. Provide a separate straight on signal phase for cyclists at the Borough Rd exit.

### **Section 3a:**

1. While we support the bidirectional track (as long as it does not go below 4m), A bidirectional track on the other side of Blackfriars Bridge should be implemented in the future.
2. A lot of cyclists will come from Webber St east arm (Quietway 2) to CSH going north in the am peak. There is very little motor traffic exiting the west arm of Webber St during the am peak (28/hour, counts on Wednesday 27 August 2014). So most cyclists will turn directly on to the CSH. However, to be consistent it may be worth marking a 2 stage right turn here. This junction could be simplified using a modification of the 'Hold the Left Turn' junction design. As shown at <http://lcc.org.uk/pages/better-junctions> with the variant for major / minor road intersections modified for two way cycle tracks.
3. Waiting area for the 2-stage left from Blackfriars Rd north arm to Webber St east will need to be larger as a lot of cyclists will use this route to cross to the east side of Blackfriars Rd. This is because cyclists wanting Borough Rd can avoid an awkward manoeuvre at St Georges Circus by doing the last part of Blackfriars Road on the main carriageway. This may also prove popular with some cyclists heading for London Rd. Additionally, with the new square planned for the 128-150 Blackfriars Rd development, cyclists will cross at Webber St to get to that.
3. We support the banned right turn into Webber St, but suggest Webber St is filtered.

### **Section 3b:**

1. Minor road entries and exits need to be calmed as described above. There is no safe access to/from the Superhighway to Pocock street. This access should be provided or sufficient signage provided on the minor roads directing cyclists to the Surrey Row junction.

### **Section 3c:**

1. We support the banned left turn onto the Cut. Union St should be filtered. The two stage right turn from Union St to the superhighway should be clearly marked. It may be necessary to move the pedestrian crossing on the south side of the crossing 2 metres south to make room for a waiting area north of this crossing for right turning cyclists.
2. There is potential for left hooks by vehicles coming out of the Cut onto Blackfriars Rd. This should be addressed with a variant of the 'Hold the Left' junction shown at <http://lcc.org.uk/pages/better-junctions>

### **Section 3d:**

1. Meymott St should be closed to through motor traffic.
2. The squeezing of the width of the two-way cycle lane to 3 metres is likely to lead to increased conflict where bus passengers are crossing to the bus stop area.

### **Section 3e:**

1. The crossing at Upper Ground must continue to be for cyclists as well as pedestrians. Many cyclists heading for National Route 4 going east will prefer to cross here and go on the carriageway to the junction.

2. Cyclists should never be required to cross to a mid-traffic position as per the proposal on Stamford St. As Stamford St has high volumes of motor traffic protected space must be provided, and the junction redesigned to avoid collision with left-turning traffic (separate signal phases for left turning and straight on traffic).

3. Getting from Southwark St on to the CSH requires a two stage right turn which must be clearly marked and an extra stop line marked north of the pedestrian crossing on the cycle superhighway, plus if needed a suitably placed signal.

#### **Section 3f:**

No comments.

#### **Section 4a:**

1. We welcome the conversion of the slip road to two way cycle only.

2. There is no protection for cyclists turning from Queen Victoria St onto the superhighway. This junction should be redesigned to avoid conflict, particularly as it will link the superhighway to the proposed Quietway here.

#### **Section 4b**

The following sections have been prepared in collaboration with Camden Cycling Campaign, the local LCC group in this area.

Junction at Fleet Street and Ludgate Hill:

The proposal shows:

- two-stage staggered pedestrian crossings on all four arms with central islands
- "cyclists run ahead with traffic to minimise green time" which eliminates left hooks on the primary roads only (New Bridge St and Farringdon St)
- no protection from left hooks on the secondary roads (Fleet St and Ludgate Hill)
- two stage right turns from the A201 (only).
- no left filters for cycles, despite ample space here
- no improvement in pedestrian provision (as The City have highlighted)

TFL signal stages:

1. Cycles on New Bridge Street and Farringdon Street get a green signal; northbound motors get green ahead filter arrow

2. Cyclists get a red signal; NB motors get a full green signal. SB motors get ahead and left turn filter arrow (SB right turning motors held).

3. NB motors get a red signal and SB motors get a full green signal so that right turning traffic can proceed into Fleet Street.

4. All NB and SB traffic get a red signal and Fleet Street and Ludgate Hill get a full green signal.

Comments:

a. This means that N-S drivers get three green stages but cyclists only get one.

b. The service for cycles here and elsewhere on this CSH is inferior to that which TFL is providing at other major junctions by "Hold the left turn" in which cycles can GO straight ahead during the entire straight ahead stage for motors, and pedestrians can cross straight over in a single stage;

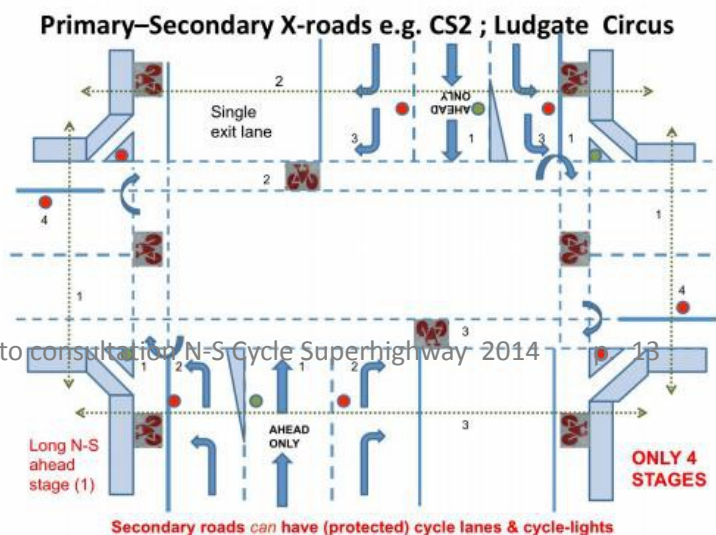
c. Just because there is not space to separate Left/Ahead/Right-only traffic on the minor roads does not mean that safe cycle facilities can't be provided. Cycles must be provided with protection from left hooks and facilities for two-stage right turns on all four arms of the junction – there should be no ASLs.

d. Left turning cycles should have a left filter before the lights.

### LCC's proposal - see the diagram

On the primary roads (New Bridge Street/Farringdon St):

- Implement 'hold the left turn' for N-S traffic as per other major jcts (Stage 1) but note that the turning stage is different – see below
- Take out all the pedestrian islands and re-allocate the space to narrow signal (only) islands. Note : pedestrian islands are NOT needed. Pedestrians will have ample time to cross straight over the two secondary roads in a single stage and we believe they should also have time to cross over the primary roads at Ludgate Circus in a single stage.
- On the secondary roads (Fleet Street and Ludgate Hill) implement LCC's new major-minor junction design that prevents left hooks for cycles on all 4 arms by providing a separate cycle-light and upgrading the kerbside cycle lane (lighter protection will suffice e.g. armadillos / wands).
- In Stage 2 left and right turning motors from one primary road only (not both)
  - e.g. N-bd share the same green phase with cycles from one secondary road only (not both)
  - e.g. E-bd who can now GO straight ahead safely at the same time because there is no conflict with the turning motors from the primary road on their right (so can parallel E-W pedestrians)
- In Stage 3 S-bd left & right turners time-share with W-bd cycles going straight ahead and pedestrians (E-W). Then in stage 4 the motors (only) on the two secondary roads share the same green, as now, but without the current conflict with VRUs.



*In this proposal cycle turning movements are as follows:*

- Left turns: as shown in the diagram, cycles have a filter on all four arms
- Right turns: these are carried out in two stages, e.g. in stage 1, NB cycles wait by the triangular refuge until EB cycles get a green signal.

LCC Signal Stages for the Fleet Street–Ludgate Circus junction:

1. NB and SB straight ahead only for all modes; pedestrians across Fleet Street and Ludgate Hill. NB and SB cycles move to the corresponding waiting area for a 2-phase right turn into Ludgate Hill or Fleet Street respectively. To facilitate these turns and to provide waiting space, the segregation needs to be made shorter.
2. NB motors turn left and right; EB cycles straight ahead only; pedestrians cross Farringdon Street (E-W)
3. SB motors turn left and right; WB cycles straight ahead only; peds cross New Bridge Street (E-W)
4. EB and WB motors (only) all directions (not cycles nor peds).

#### **Section 4 c and 4d**

Two options are presented for this section of the route allowing for the change over from a single two-way cycle track to two one way tracks either at Stonecutter Street or further north at Greville Street. No detail of the latter crossing is given and it is not possible to comment without proper stakeholder engagement with the designers.

1. In both schemes the cycle access at Snow Hill and West Smithfield is inadequate. It is grossly complicated by the location of loading bays with cyclists expected to enter and exit the route in gaps between large vehicles. Cyclists turning right into West Smithfield will not be seen by northbound motor traffic on Farringdon road. Cyclists crossing Farringdon Road from Snow Hill will be at risk from right turning motor traffic. The loading bays need to be re-located further north and a protective island is required for cyclists crossing from Snow Hill. The exit from Snow hill needs protected space for cyclists and should be re-designed with a junction table to facilitate pedestrian movements while allowing cyclists space and time to be in the right position for crossing Farringdon Road.
2. The Charterhouse street junction needs to be designed to give protected movements for cyclists in all directions. This will be a major link with east-west cycle flows between the City and West End. A



variation on the 'Hold the left turn' design is required suitable to the choice of single or double cycle track layout.

## **Section C: Alignment of the North South route**

The critical difficulty with the suggested alignment is the failure to provide a direct link between Elephant & Castle and St. Georges Circus. Maintaining the one-way gyratory road system in this area concentrates motor traffic on fast one-way links that increase hazards to vulnerable road users.

As presented the route is incomplete and a fully worked solution is required providing a protected cycle route to and through the Kings Cross area.

### **Suggestions for the routing between Greville Street and Kings Cross**

This section has been prepared in collaboration with Camden Cycling Campaign and ICAG, the local LCC groups in Camden and Islington respectively.

1. The draft route shown in the consultation diverges from the main desire line which is along Farringdon Road and Kings Cross Road. Those roads will be used by large numbers of cyclists because:
  - The proposed routing puts the superhighway on quiet streets some of which (Saffron Hill, Herbal Hill, Ampton Street) are too narrow to carry the anticipated cycle traffic.
  - The CSH has been advertised as going to Kings Cross, but the draft route alignment doesn't do so.
  - Kings Cross and St Pancras stations and the new development on the Railway Lands site just north of them will be key destinations for very large numbers of cyclists. We estimate that the Railway Lands site alone will generate at least 4500 cycle journeys daily. 2000 could well use the N-S CSH if they could cross Euston/Pentonville Road and continue on York Way by a safe and direct route.
2. While recognising that achieving safe cycling on all of the streets that form the extended gyratory at Kings Cross is beyond the scope of this project, we consider it essential that:
  - Cyclists using Farringdon Road and Kings Cross Road between Greville Street and Pentonville Road are protected by the continuation of the segregated bidirectional track northward as far as Lloyd Baker Street and by the construction of safe junctions at all of the intersections up to Pentonville Road.

- As an interim solution to the problems caused by the Kings Cross gyratory, two safe routes northwards should be developed as a part of this scheme:
  - I. A protected route to Midland Road via Judd Street (as already planned by Camden). This route could use either Calthorpe and Guilford Street or Cubitt Street, Ampton Street and Sidmouth Street. The latter is more direct and therefore preferable if it can be upgraded to carry the anticipated traffic.

II. A protected route to Caledonian Road either via Lorenzo Street and Calshot Street or via Northdown Street. The link should then continue via Wharfedale Road to reach York Way.

3. The lack of any cycling provision at the intersection of York Way, Gray's Inn Road and Euston Road has resulted in many tragic KSIs. It must be addressed, even if its use on the main CSH routing is delayed until the gyratory is dealt with. As an interim we propose that this direct route be addressed by the re-design of the Kings Cross junction to make it safe for cyclists.

In the medium term, as and when the Kings Cross gyratory is redeveloped, the CSH must be re-aligned to follow the clear desire line on Gray's Inn Road and across Euston Road to York Way.

Further details:

1. The route should continue on Farringdon Road to at least the junction with Calthorpe and Lloyd Baker St
  - There is road space to achieve this, even with bus stop bypasses at each existing stop.
  - The Bidirectional track could continue up the west side of Farringdon Rd.
  - This continuation would ensure the CSH linked in with other key grid routes, including Clerkenwell Road and QW 38.
  - The junctions at Clerkenwell Road, Rosebery Avenue and Lloyd Baker/Calthorpe St would require a redesign to provide safe cycling.
  - Lloyd Baker and Calthorpe are an important E-W alignment that already carry

Substantial cycling flows and are likely to form a part of Quietway 38. It is imperative that the safety of this E-W flow is fully considered in the redesign for the CSH of this five-way junction with Farringdon Road.

Clerkenwell Road carries one of the largest peak-hour cycling flows in London. It is the subject of a 'Cycle Boulevard' study by Islington and Camden aimed at reducing motor flows to ensure safe and protected conditions for the huge number of cyclists that use it. Its intersection with Farringdon Road is a straightforward four-arm signalised junction and it will require safe cycling facilities on all four arms.

## 2. Two continuations northwards

- Link to Midland Road via Cubitt, Ampton, Sidmouth and Judd Streets
  - A design for the crossing of Euston Road at Judd Street/Midland Road is under development by Camden/TfL and is in Camden's plans. The cycle track through a small section of Ampton Street has a pinch point that requires attention. Sidmouth Street is low traffic but the junction with Judd Street would require attention.

- Link to Northdown St and York Way through Wharfdale Rd
  - This would be an obvious desire line for many cyclists going to the Railway Lands and beyond to the north east of Kings Cross.
  - The bidirectional track would continue along the west side of Kings Cross Road.
  - The southbound bus stop on Kings Cross Road between Cubitt St and Frederick St may need to be removed or moved elsewhere. The two nearest stops are within 400m of one another.
  - Wharfdale Rd, would need filtering, as there is not sufficient space for segregation.