

Elephant and Castle – Has peninsularisation made life better for cyclists?

Southwark Cyclists audit of the changes to the northern roundabout, drafted by Bruce Lynn

Verdict

Cyclists overall think the new peninsula layout is an improvement. The A3 route, the one with the highest cycle flows, is clearly safer now and more cyclists are using it. The route to St George’s Circus via London Road remains popular with cyclists, but is compromised by a poorly-designed junction. The southeast-northwest route between New Kent Rd and St George’s Rd has not become widely used.

Full report

In December 2015 the Elephant and Castle Northern roundabout was consigned to history and a new 2-way road layout was introduced. This followed many months of road works and several years of consultation. Southwark Cyclists provided a lot of input to the consultations, much of it critical of the plans of Transport for London (TfL). We have now had time to get used to the new layout and decided to do an audit. To ask whether it is now better for cyclists. Is it safer? Does it feel safer? Does it provide a quicker route? Which features are used by cyclists, which are ignored?

A note about road names. Link Rd. This report calls the straight stretch of road (A3) between the northern and southern junctions the Link Road. Peninsula (Rd), we use this term for “the bend”, what used to be roundabout, from the Link Rd to the New Kent Rd. Usually without capitals.

The big picture – opinions, numbers, collisions

1. Do cyclists think it is better or worse than before?

A small poll was conducted of cyclists at the stop lines on Newington Causeway and London Rd during the evening peak. Cyclists were asked whether they had used the route when it was a roundabout. If the answer was yes, they were asked whether they considered the new layout better or worse. Responses were obtained from 128 cyclists (see Table 1). 81% percent said the new layout was better. There was a higher proportion of “better” responses at Newington Causeway (86%) than at London Rd (71%). Note there is an 7% chance that this difference is just due to random variation with quite a small sample. But it is an interesting trend.

Table 1. Responses to question asking if new layout better or worse than before, Cyclists asked for instant verbal reply while waiting at the stop line. 17:30 to 18:45, Wednesday April 5th 2017.

Location	Better	Worse	% Better
<i>Newington Causeway</i>	<i>68</i>	<i>11</i>	<i>86%</i>
<i>London Rd</i>	<i>35</i>	<i>14</i>	<i>71%</i>
<i>Both locations</i>	<i>103</i>	<i>25</i>	<i>81%</i>

Overall there is no questions that a random selection of cyclists who use the Elephant northern junction overwhelmingly view the route as being better than before peninsularisation.

2. Number of cyclists before and after peninsularisation

On the main A3 route between Newington Butts and Newington Causeway numbers of cyclists are well above pre peninsula levels (Figure 1). The increase northbound on the Link Rd are 79% from 2013 to 2017. This is well above the 9% reported by TfL for the main road network in Central London over this period. The increase southbound is 22%, much less. It is easy to see why. The northbound A3 route is well designed. The south bound route is good at the Newington Causeway/Peninsula junction and round to the Link Rd. But the Link road is horrid around the bus stops and then cyclists have to get into a centre lane at the Walworth Rd junction. Any route is only as good as its worst part. And leaving the poor environment for cyclists on the link road southbound is probably why we see a smaller increase southbound than northbound.

On London Rd and St George's Rd we have fewer counts pre-peninsularisation. Comparisons are also complicated because cyclists can now cycle both ways on St George's Rd whereas before it was 1 way northbound. Flows are similar before and after the changes. Flows on London Rd exceed those on St George's Rd, this despite the new segregated bidirectional path on St George's Rd (CS6). In the light of comments below about the southbound junction between London Rd and the Peninsula, interesting to note this is the only route to show a fall in flow.

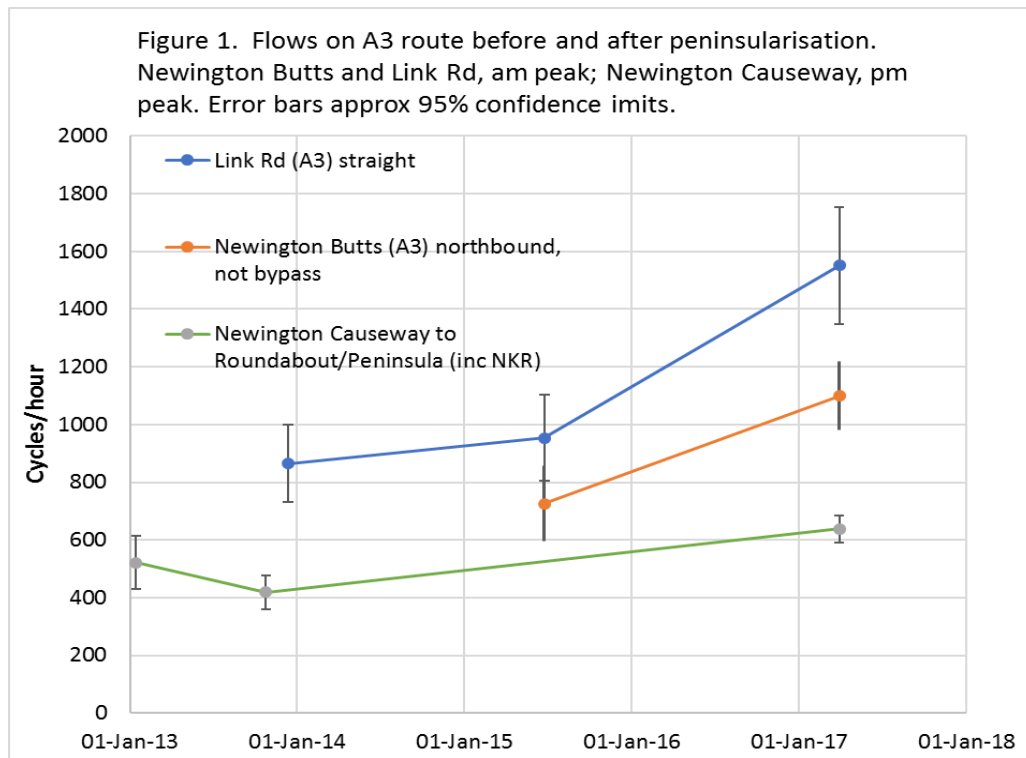


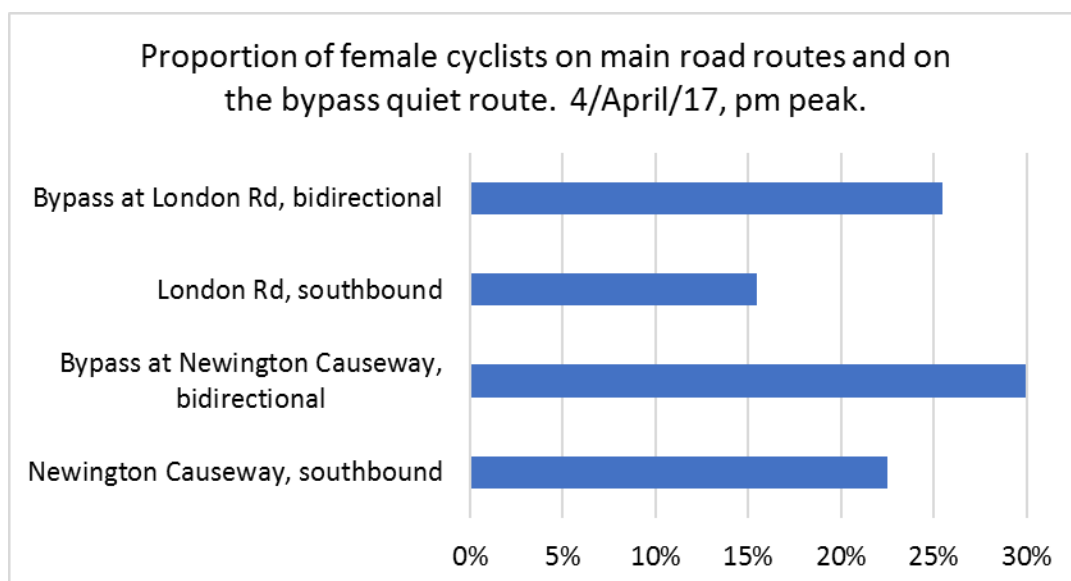
Table 2. Cycle flows on London Rd and St George's Rd. Flows all converted to cycles/hour and adjusted to July. Note St George's Rd southbound was not possible before 2016. Total counts were low in most cases and are shown in brackets. All counts are for the top sections of the roads, between the bypass and the peninsula/roundabout. June 2015 was during Phase 1 of the work, before major changes had been made to the layout.

Location	Direction	am/pm	29/30 March 17	Jan 13	June 15
London Rd	Northbound	am	501 (92)		393 (131)
St George's Rd	Northbound	am	270 (26)		192 (48)
London Rd	Southbound	pm	521 (213)	592 (71)	
St George's Rd	Southbound	pm	38 (28)	Not possible	Not possible

3. Gender split between main roads and the bypass route

Male and female rides were counted separately at 4 locations, 2 on main roads and 2 on the bypass (Figure 2). 27.6% of cyclists were female on the bypass routes compared with 19.6% on the 2 main road locations. This was a statistically significant difference ($p=.006$). However, note the difference between the 2 main road sites. 22.5% female riders on Newington Causeway using the peninsula route compared with only 15.5% on London Road. This again is a significant difference ($p=.025$). So if the proportion of female riders is an indication of whether a route is perceived as safe, this may indicate an important contrast between the way the design of the Newington Causeway route is perceived compared with that of London Rd. This will be discussed later when we look at specific junctions. But note it fits with the poll results given earlier where it was found that cyclists on London Rd were less happy with the changes than those on Newington Causeway.

Figure 2. Counts of male and female cyclists at 2 sites on main roads and 2 on the bypass route. During pm peak on Wednesday April 5th. Total numbers counted: Bypass London Rd, 157; London Rd, 297; Bypass NC, 147; Newington Causeway, 413.



4. Have there been more collisions?

Table 3. Collision data for the northern junctions. 2013-2016. During most of 2015 the northern roundabout was a road works with abnormal traffic conditions. 2-way working began in December 2015.

<i>Level</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>Jan-Aug 2016</i>	<i>2013/14 average</i>	<i>Equivalent yearly rate</i>	<i>% change, 2013/14 to 2016</i>
<i>Fatal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<i>Serious</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	
<i>Slight</i>	<i>16</i>	<i>13</i>	<i>10</i>	<i>6</i>	<i>14.5</i>	<i>9</i>	
<i>Total</i>	<i>17</i>	<i>13</i>	<i>10</i>	<i>6</i>	<i>15</i>	<i>9</i>	<i>-40%</i>

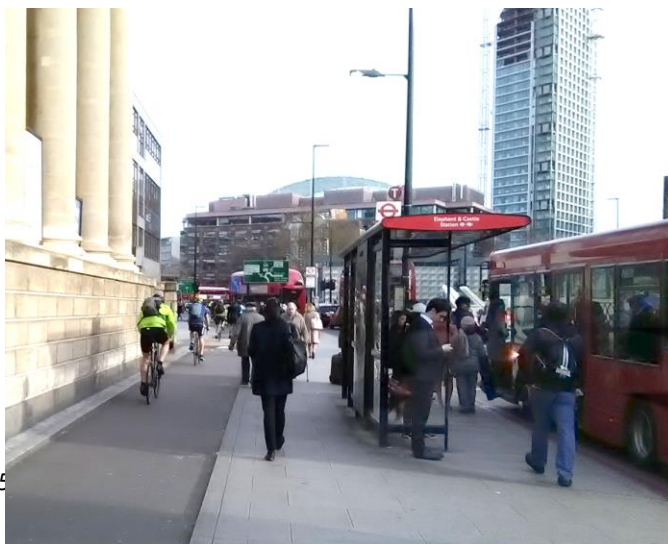
Data about collisions involving cyclists was obtained for the northern junctions up to August 2016. This covers 9 months from the start of 2-way working (Dec 5th 2015). Table 3 shows the numbers for the first 8 months of 2016. The collision rate was slightly down on the level in 2014-14. This is reassuring, especially as cycling numbers are not down and that over London as a whole cyclist collisions were not falling over this period. However data from just 6 collisions is not enough to draw any proper conclusions.

The six collisions so far comprised 2 left hooks at the Link Rd/St George’s junction (see discussion of this junction later in the report), 3 mid-carriageway collisions on the peninsula road where Newington Causeway joins, and one shunt involving a reversing goods vehicle on Newington Causeway at the junction with the peninsula road.

Specific elements

1. Link road cycle path (Figure 3 below)

We were critical of the design of this path during consultation. It was felt that the large numbers of pedestrians, especially at the am peak, would be in continual conflict with cyclists. In consequence,



our view was that many cyclists would stay on the carriageway, a route that is also a bit more direct. We counted 1441 cyclists through the am peak. Of these 90% were on the path and only 10% on the road. So we were certainly wrong in our prediction there!

So cyclists seem to like the pavement path, but what about pedestrians? During the peak they mostly kept well clear of the cycle path. The demarcation by a small

depth change works. The way that cyclists tend to arrive in groups also helps. We did not see any collisions during the 1.25 hours of counting. However some local residents have found the presence of so many cyclists on the pavement unsettling.

We continue to have reservations about this path, and the crossings of the path. The crossings are not very visible. There will also be more problems as the number of cyclists and pedestrians increases, as it is likely to do with the increased development of housing around the Elephant and the increasing popularity of commuting by bike. However, for the moment, for cyclists, it is working.

2. St George's/Link Rd junction

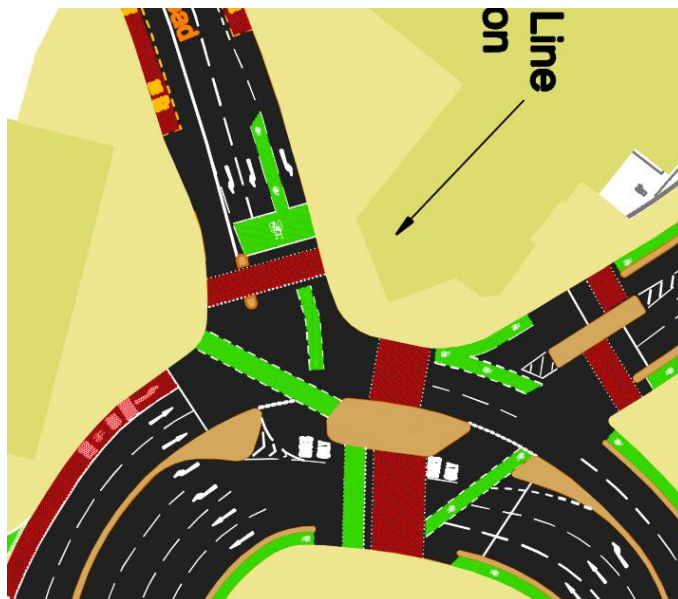
The St George's/Link Rd junction was another aspect of the plans that caused us a lot of concern because of the left hook risk to cyclists heading to the peninsula road. Significant numbers of motor vehicles turn left on the St George's Road and cross the path of the many cyclists going straight on. The lack of any give way lines or signals at the junction itself looked dangerous.

In practice it looks much less dangerous than we thought. The main reason is that, as noted in the previous section, 90% of cyclists have opted to use the pavement path and the crossing to reach the peninsula road. This immediately reduces chance of a collision by a factor of 10. In addition, the combination of a crossing at the end of the link road and another just a short distance into St George's Rd keeps motor traffic speeds low. There still is a left hook risk here, but it now appears relatively slight. However note that as described above, in the first 8 months of 2016 two left hook collisions were reported and resulted in slight injuries.

3. Newington Causeway to Peninsula Junction

Southbound this works nicely. The modest left hook risk has been removed and the segregated near side cycle lane has a clear crossing route to the segregated lane around the peninsula. Northbound the approach around the peninsula requires cyclists to avoid buses turning into London Road. Once into Newington Causeway there is a short stretch of segregated lane. This ends close to a bus stop so can require cyclists to move sharply out into the traffic, especially if 2 or more buses are at the stop (a regular occurrence).

4. London Rd to Peninsula Junction (Figure 4)



First let us look at the south and eastbound route on to the peninsula road. We were critical of the mid road cycle lane during consultation, and we were right. The large numbers of cyclists heading south make a right turn next to the motor traffic with no protection. They have to get across a motor traffic lane to reach the cycle lane. Because there is a bus stop close to the junction, many left-turning vehicles end up in the middle or even the outer lane. Cyclists using this junction tell me there have been many collisions and they are

regularly held up due to these. So it is not just cyclists who have problems here.



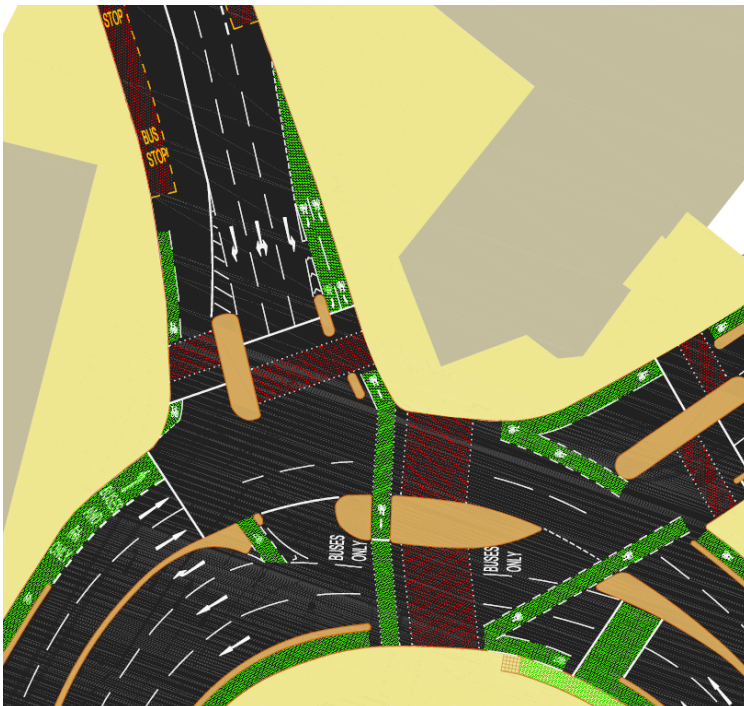
The image on the left shows the view across the nearside carriageway from the London Rd exit. Note the blue track going to a gap in the segregated path that was not on the original drawings. Also the break in the pedestrian island to accommodate the cycle

crossing has been added. Note that the dividing island to the west of the junction and shown on the drawing has been constructed somewhat smaller allowing more room for motors to turn.

When cyclists at the London Rd stop line were asked whether the changes had made riding through the Elephant better, a relatively high proportion said no (see above). It was also notable that female riders avoided this junction, again detailed above. This sort of design, with cyclists having to move away from the left side and no protection from left hooks, fails to provide a safe environment.

Early in the consultation a much better design was proposed. This kept cyclists on the left. It would have required separate signaling for left and right turn traffic from London Rd. However, motor traffic, cyclists and pedestrians could still have been safely managed with 4 stages in the light sequence.

Figure 5. Alternative design for the London Rd junction proposed by TfL in 2013.



5. Peninsula road to London Rd

The movement into London Road for buses and cycles is easy from the west. But from the east it is very complicated. 65% of cyclists stay on the carriageway, working their way across to the right hand bus lane (Figure 6). Then they go with the motor traffic into the bus right turn pocket and turn directly into London Road from there. Another 30% use the segregated cycle lane to the stop line, wait for the traffic to stop, move across to the bus lane and proceed via the bus right turn pocket. Two cyclists did basically the same as the last group, but instead of the bus right turn pocket, they used the special cyclist pocket with its own light. Finally, 2 Deliveroo riders actually did what we think TfL intended. They used the segregated cycle track but pulled off via the dropped kerb just before the pedestrian crossing and cycled behind the waiting pedestrians. Then they crossed on the

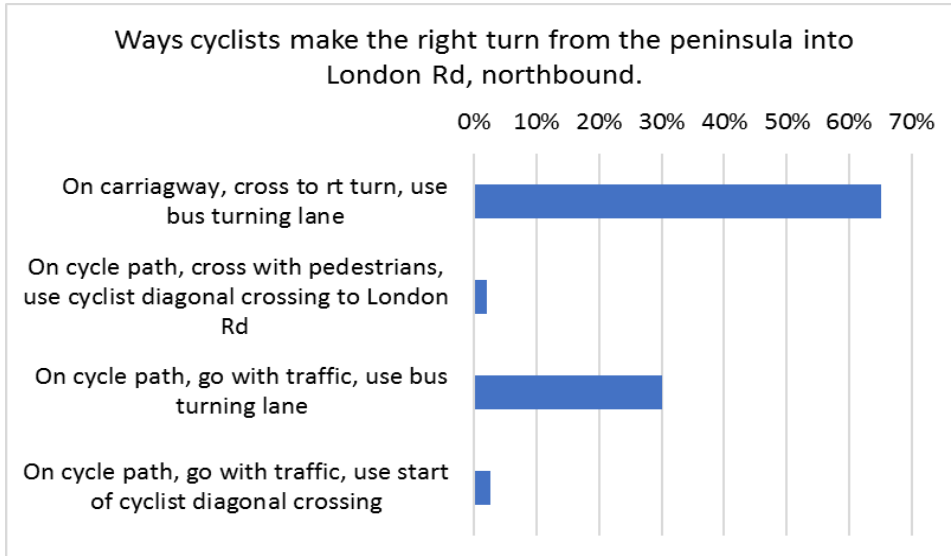


Figure 6. Ways that cyclists use to make the right turn into London Rd. AM peak, March 2017. Total of 87 cyclists counted.

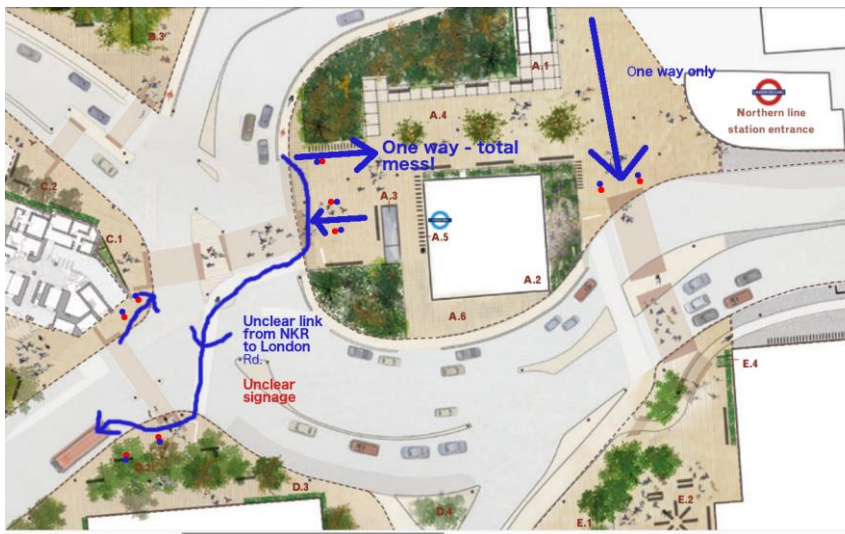


Figure 7. Probable intended route from Peninsula to London Rd. No cycling signs also indicated by red/blue dots

(<https://groups.google.com/forum/?hl=en-GB#!topic/southwarkcyclists/3HGkcOPRp-s.>)

cycle crossing adjacent to the pedestrians to the middle and waited in the special cycle pocket. When the special cycle light went green they crossed all the way on the diagonal white dotted crossing to the pavement. They then went along the pavement behind the pedestrians waiting to cross London Rd and entered the northbound bus lane on London Rd.

The diagonal crossing was a late addition to the design. It is a complete waste of time. Only 4% of cyclists use it and half of them only used it at the start, turning off and going directly into London Rd. The majority of cyclists do the obvious and use the much more direct bus route. But you need to be a confident cyclist to do this. There needs to be a much simpler safe option if this route is to be attractive to more cyclists. And it needs to be clearly signed (more on signage later).

Taken together with the previous section, the overall verdict on the new layout at the London Rd-Peninsula junction is that it fails.

The segregated cycle lane leading to this junction is only used by 35% of cyclists. The segregated lane on the other side going east between Newington Causeway and New Kent Rd is used by even fewer cyclists. These segregated lanes are a good idea, but need to be wider and more obvious. But until there are segregated tracks along New Kent Rd leading to them they will continue to be greatly underutilized.

6. Peninsula to/from St George's Rd

The route from New Kent Rd to the cycle superhighway (CS6) on St George's Rd is an important one and will become more so when cycle lanes on Old Kent Rd are implemented and the Lambeth Rd/St George's Rd junction is improved. At present this route is used by few cyclists. Heading south-

eastward on the new layout it is possible to ride round the peninsula from St George's Rd, although it is necessary to avoid the left hooks at London Rd and Newington Causeway. If starting from the Link Rd, going across St George's Rd then round the peninsula is a big diversion (see Figure 8).

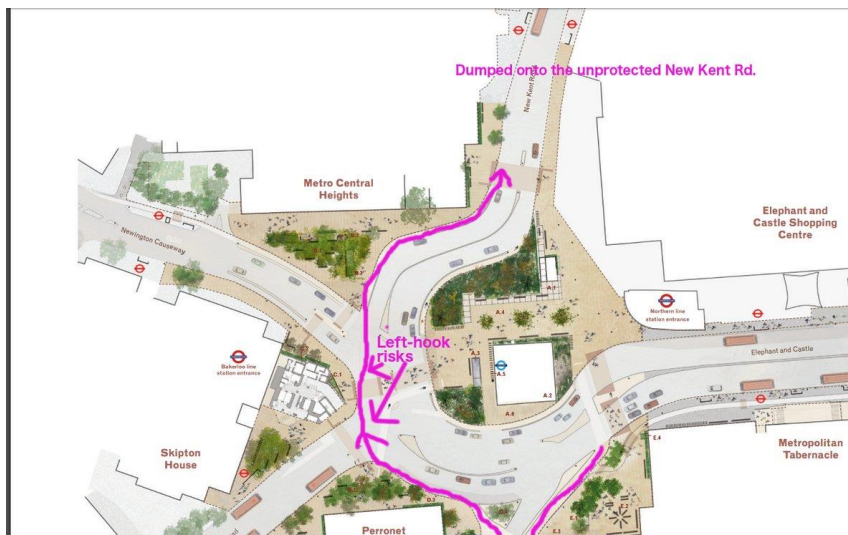
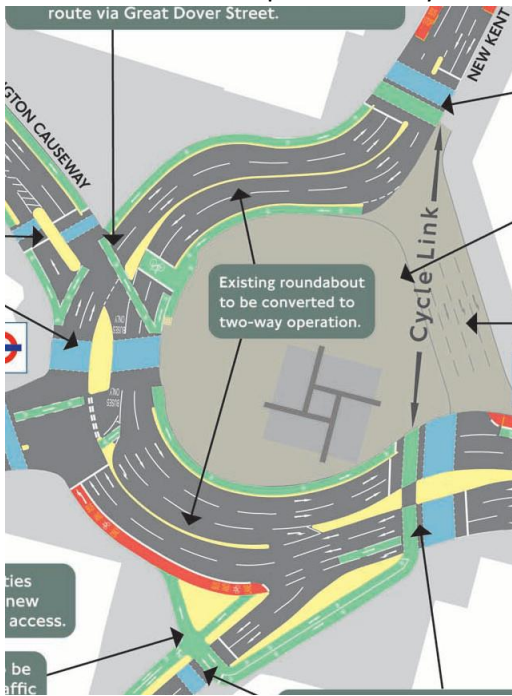


Figure 8. Without a route across the peninsula this is the alternative eastbound.

Heading north-westward there is no obvious route. At present cyclists ride with the motor traffic in the righthand lanes and cross with them into St George's Rd. You need to be a confident cyclist to do this! It would be possible for cyclists to stay in the anti-clockwise cycle lane as far as the crossing



at the end of the Link Rd, then use this crossing to join the cycle path to the St George's Rd crossing. This would be a relatively slow and we did not observe any cyclists using this route.

On the 2013 consultation drawings a cycle link was indicated across the peninsula (Figure 9). This is clearly a very good idea. It provides a convenient, safe route for northwest bound cyclists heading towards St George's Rd. We counted 12 cyclists do this over 28mins. "No cycling" signs have recently been installed. We have no idea why these no cycling signs appeared.

Figure 9. First version of TfL peninsularisation scheme showing cycle link across peninsula from New Kent Rd to Link Rd.

7. Cycle paths across the peninsula between New Kent Rd and the Link Rd

As discussed in the previous section and shown in Figure 8, there is a safe, direct route from the New Kent Rd to the Link Rd across the peninsula. Counts were made of pedestrian and cyclist movements at the am and pm peaks. Pedestrian flows across the peninsula are modest. Highest flows (1040/hour) occur between the New Kent Road bus stops and the Northern Line ticket office. These pedestrians are not affected by the cycle link. Pedestrian flows north-south between the 2 underground stations were 709/hour. For pedestrians walking at 4km/hour this means an average gap between them of 6 metres. In practice walkers appear in small groups, and much of the time the E-W route is clear, even at peak time. There is also a small E-W flow of pedestrians from the Link Rd crossing to the New Kent Rd, approximately 123/hour. Given these levels of pedestrian movement it is hard to see why cycling is not allowed. If the route proved popular, then some demarcation of the cycle link might be desirable.

8. Link Rd southbound and the Southern junction

Some bus stops were moved from the Link Rd east side to a location just past the southern junction on Walworth Rd. However, there are still a lot of buses on the Link Rd and cyclists heading south are forced to move out into the traffic. There should be a segregated cycle path on the east side of the Link Rd, matching the one on the west side. With the shopping centre about to be flattened and redeveloped it should be possible to create enough space for this and to give pedestrians much more space too.

At the southern junction, our requests for separate signaling of turning traffic to remove the left hook risk were ignored. As at London Rd, the design here breaks a basic rule: always keep cyclists on the left (near) side of the road. Cyclists have to move across a busy traffic lane to a central position

to avoid the large numbers of left-turning motor vehicles. In practice, due to stationary buses, quite a bit of traffic turns left from the middle lane. The small cycle lane sandwiched between the motor lanes is also frequently blocked by motor vehicles trying to regain the left turn lane after passing buses.

9. Signage

There is a lot of poorly located and inconsistent signage. Some of the on road markings are also confusing.



- i. A3 route northbound. Sign on the Link Road path shows route to CS6/7, but not to London Bridge, where most users of the Link Road path are headed (Figure 10, left). Sign at the St George's Rd crossing does have London Bridge indicated, but this part of the sign is small. CS6/7 parts of this sign have too much information (Figure 11, below)



- ii. A3 Southbound. On to and around the peninsula this route is clear and does not need signage. However, at the Walworth Rd junction (the E&C south junction) there is no indication of the

need for A3 riders to use the middle lane. Also the pavement cut-across to Walworth Rd is marked only by grey lettering set into the pavement. This is not seen by most pedestrians who are therefore not expecting to meet cyclists there.

iii. Walworth Rd northbound. Only sign is on the west side of the junction. Need clear signs of the approach. These should indicate that northbound cyclists cross to the middle cycle lane. At present some use the obvious nearside lane, thus exposing themselves to danger from left turning motors.

iv. Exit from London Rd to Peninsula. No signs for cyclists on the approach.

v. New Kent Rd to the peninsula. No signs for cyclists. May be part of the reason few use the segregated cycle lane.

vi. Peninsula to London Rd. No signs to help cyclists find the safe route shown above (Figure 7).

vii. Peninsula to St George's Rd/CS6. No signs for safe route using the Link Rd crossing.



- viii. St George's Rd to Link Rd southbound. Clear sign showing the route (Figure 12, to left). But on reaching the far side of the crossing of the Link Rd, there is no indication of how to proceed. Probably meant to go on to the pavement, past any pedestrians, and back on to carriageway south of the pedestrian crossing. But no dropped kerb for this. Or are you allowed to ride carefully through any pedestrians on the crossing?

ix. Bypass signage. The two Bypasses are not the main subject of this audit, but we noted that bypass signage is inconsistent and in places obscured or out-of-date. There is also no signage at some places, for example the Ontario St/Keyworth St junction heading east.

10. Bypass Route

Although we did not look in detail at the bypass as part of the audit, we want to stress here the importance of offering cyclists a convenient route that avoids the busiest intersections. The current bypass is slow: too many twists and turns; very slow crossings; crossings often blocked by queuing motor traffic. Southwark Cyclists have campaigned for some years to open up a better eastern bypass utilizing Elephant Rd and the service road north of this to Rockingham Rd, plus a high capacity crossing of New Kent Road at the appropriate location. This route needs to be built. All the main road crossings on the bypass require “Keep Clear” markings. All the light timings on the bypass require to be speeded up. It is not necessary to increase the percentage of time for the bypass, just to shorten the overall time for the light sequence so that cyclists do not have to wait more than 45sec. The short-comings of the bypass signage are mentioned in the previous section.

Verdict *[this section included here again as well as at the start]*

Cyclists overall think the new peninsula layout is an improvement. The A3 route, the one with the highest cycle flows, is clearly safer now and more cyclists are using it. The route to St George’s Circus via London Road remains popular with cyclists, but is compromised by a poorly-designed junction. The southeast-northwest route between New Kent Rd and St George’s Rd has not become widely used.

What next

Quick fixes

Improve signage

Delineate and sign a bicycle link across the peninsula

Improvements medium term

1. Redesign the London Rd junction to (a) keep cyclists on the near side of the road and (b) eliminate the left turn/right turn conflict by separately signaling right and left-turning traffic.
2. Do the same at the southern junction. Keep cyclists on the left and separately signal straight on and left turning traffic.
3. Create the alternative eastern bypass from Elephant Rd to Rockingham St
4. Create a segregated cycle path on the east side of the Link Rd as part of the shopping Centre redevelopment.

Acknowledgements

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