



# **Elephant & Castle Northern Roundabout**

Proposed new road layout at Elephant and  
Castle

Response to issues raised

August 2014

## **Transport for London's response to main issues raised during consultation**

The proposed works at Elephant & Castle should reduce the impact traffic has on the area, by making it more attractive and balancing the needs of motorists with those of pedestrians and cyclists. It is anticipated that accidents will fall by 33 per cent after the changes have been implemented.

Over 80 per cent of members of the public that responded to the consultation stated they supported the key elements of the design and 53 per cent supported Option B (34 per cent supported Option A and 13 per cent did not answer the question). Concerns were raised over the impact of the changes on all users including cyclists, drivers, pedestrians, bus users and also people interchanging with other public transport modes.

For some users there will be potential impacts, such as increased journey times, but Transport for London (TfL) feels that these impacts are fairly balanced out, and that the overall improvements justify these impacts.

This report records TfL's responses to the main issues that respondents raised during the consultation, outlining why decisions have been made and how they are justified, as well as explaining where we have been able to make changes to the design in response to issues raised.

### **Cycling related issues**

#### **Concerns design needs to do more to resolve cycling conflicts**

A particular area of concern was left hook conflicts between cyclists and traffic, especially at the St Georges Road junction. This was noted as a problem in the Option A proposal but some respondents also felt many cyclists may choose to stay on the carriageway and therefore would also be an issue under Option B.

We have decided to progress with Option B with some modifications (these are explored further in the report). Option B was the most popular choice from respondents and we feel it offers the best protection against left hook risk as cyclists can choose to be off carriageway. We will look at a number of options to minimise cycle/pedestrian conflict as this was raised as a particular issue with Option B. We recognise that some cyclists will wish to remain on the carriageway and we will be considering potential improvements such as:

- Widening the carriageway northbound on the Elephant and Castle Link Road to allow for a 4.5 metre bus lane to offer space for cyclists to overtake buses

- Introducing a new cycle feeder lane on the approach to St Georges Road to offer protection to cyclists approaching the junction
- We are also considering introducing a 20mph zone, which will lower traffic speeds and improve conditions for cyclists

We were asked to consider signalling the St Georges Road junction but this would not be possible, as it would adversely affect the operation of the junction leading to increased journey times for all modes of traffic and unacceptable queuing through the area. We also considered banning the turn into St Georges Road but this was shown to have a significant adverse impact on the surrounding road network.

It is impossible to design out all possible cycle/traffic conflicts. Providing off carriageway provision is the best option given the constraints of the junction and the need to maintain traffic flows along this key arterial route and the Inner Ring Road. Our proposal offers much better protection to cyclists than the current situation. It should, however, be noted that for cyclists wishing to minimise cycle/traffic conflicts then the safest option will be for them to utilise the off carriageway provision, Cycle Superhighway 7 or the proposed bypass through the redeveloped Heygate Estate to the east.

Respondents were also concerned about the interaction between buses and cyclists at bus stops and called on us to provide more bus stop bypasses, as proposed northbound on Newington Causeway.

We recognise cycle conflicts at bus stops are an issue, particularly where cyclists are required to negotiate a long bus cage which a number of buses can serve at the same time. Under our current proposals cyclist will have the off carriageway option northbound on the Elephant and Castle Link Road to avoid this situation and southbound we are considering relocating the busier stop to the Walworth Road to improve conditions there.

On London Road, due to space constrictions it has not been possible to re-locate stops or provide an off carriageway facility. However a new North/South Cycle Super Highway is proposed for St Georges Road. It's envisaged that the number of cyclist using London Road will significantly reduce in favour of the better cycling facilities on St Georges Road.

Although a bus stop by-pass will be provided southbound on Newington Causeway, space restrictions mean it is not possible to provide this provision northbound. Similar space constraints rule this out as an option for the bus stops on New Kent Road and Walworth Road.

Respondents were concerned about the lack of protected space for cyclists southbound on the Elephant and Link Road, and with the use of kerbs bordering the cycle lane. We have revisited our plans for the provision southbound. Instead of the cycle lane with segregated kerb line, we will widen the bus lane to 4.5m and will use

road markings to minimise the points at which buses can pull out of the bus lane. This will make potential conflict points clearer to cyclists and allow more room for cyclists to negotiate and pass buses away from general traffic lanes. In addition, we are still considering moving the bus stop serving routes towards Camberwell to the north of the Walworth Road. This would result in a considerable reduction in the number of buses for cyclists to pass. We recognise that conflict would still exist where cyclists exit the bus lane to enter the feeder lane to the advanced stop line. However, this is the same as the existing situation and no accidents have been identified under this arrangement.

There were a number of calls for an off carriageway provision southbound either on the footway or utilising the central reservation. However, current space constraints mean this is not an option. We will continue to work with the LB Southwark and the new shopping centre owners to see if it is possible to gain further footway width as part of the redevelopment of the shopping centre. This would allow the cycling provision to be re-assessed in the future, and improve bus stop waiting conditions.

Some respondents were concerned about the London Road junction, where southbound cyclists would need to negotiate two lanes of traffic to access the cycle lane/ASL. There were also concerns about the safety of the right turn into London Road for cyclists heading northbound. To address concerns about the right turn movement into London Road, we will provide a two stage cycle crossing which will enable cyclists to cross the carriageway in parallel and on the same signal phase as the pedestrians. In addition, cyclists wishing to turn right will be able to wait in the protective pocket. We have also revisited our plans to widen London Road; through more advanced modelling of the operation of the signals we are able to reduce it from four to three traffic lanes. This means cyclists will now only have to negotiate one left turn lane on the approach to the junction.

### **Further cycle lane improvements**

There were concerns about the lack of continuity of cycle lane provision and that the proposals were overly complicated. However, opinion was divided as to whether off or on carriageway provision is preferred. There were also specific requests for further cycle lane provision between St George's Road and Newington Causeway, cycle lanes on London Road and New Kent Road and a cycle lane to allow left turns from Newington Causeway into New Kent Road.

We are committed to transformational change at the northern roundabout. At the heart of this is a desire to improve cycle safety and we feel our proposals offer a marked improvement in the provision of cycling facilities through the junction. However, it is important to understand the constraints in place at this junction, both in terms of space and traffic capacity. For example:

- The narrow footway widths in many areas limit off carriageway options

- We cannot move the Faraday Memorial because it contains a London Underground electrical sub-station and the cost of re-location is prohibitive
- The junction is a key node on London's inner ring road so it is imperative to manage the impact on road network capacity
- It is a key bus corridor with very high numbers of buses using the junction, so journey time impacts need to be managed

These constraints present a number of challenges to delivering improvements for cyclists. However, we feel our plans provide the best balance between different user groups of the junction and where space has allowed we have worked to ensure consistency of approach. For example, with the exception of St George's Road, the other approaches have with flow cycle facilities and the cycle lanes are segregated, with the exception of the southbound Link Road cycle lane and a short stretch between St George's Road and Newington Causeway.

Following requests, we investigated adding an additional off carriageway cycle lane from St Georges Road to London Road to provide a more continuous provision. Unfortunately, the traffic modelling demonstrated that this was not a viable option because the footway would need to be widened to accommodate an off carriageway cycle lane which would require the removal of the bus lane. This proved to be unworkable due to the volume of left turning buses; under this layout, buses would create bus queues which would block the flow of vehicles through the wider junction. We will therefore need to maintain the original plan for a shared bus and cycle lane. This will have journey time benefits for cyclists as the off carriageway provision would have required an additional cycle signal phase.

It is not possible to provide cycle lanes on London Road and New Kent Road due to insufficient space. In the case of London Road, this would involve using carriageway space and initial assessments show the impact on buses would be too severe to be acceptable. On New Kent Road, the railway bridge and bus stops means there is not adequate width to provide a cycle lane.

There were also requests for a cycle lane to facilitate the left turn movement of cyclists from Newington Causeway into New Kent Road. We investigated re-instating the left turn for cycles from Newington Causeway into New Kent Road with an individual cycle signal phase. However, the impacts to the operation of the junction were too great. As such, we will propose a 'shared space' provision on the footway or a local cycle track by-pass to the traffic lights, to facilitate the eastbound cycling movement. This will be explored further as part of the urban realm design. However, cyclists are encouraged to use the bypass through Avonmouth Street and Meadow Row to make this movement.

There were a number of concerns noted about the safety of shared bus and cycle lanes, and about the safety of cycle lanes positioned between bus and traffic lanes. Almost all bus lanes in London permit cycles into them and this shared use is very

common place and considered a safe arrangement. The revision to the design now means most instances of cycle lanes between bus and traffic lanes have been removed.

The width of the cycle lanes was raised, with requests for 2.5m width to ensure adequate protection, to allow cyclist to overtake, and to ensure capacity for likely cycle flows. The current proposal is for 2m wide cycle lanes. This is a standard design width and is considered sufficient for cyclists to overtake one another. Where space allows we will look to increase this to 2.5m but this will not be possible in all circumstances.

Requests were made to re-visit the cycling provision at the southern junction and to make improvements to the current bypass to encourage better usage. This is in addition to requests for Elephant Road to be used as an eastern bypass option.

The new layout was put in place at the southern roundabout in May 2011. In the 32 months since then, the period for which data is available, there has been a 77 per cent reduction in accidents involving cyclists. This data excludes the tragic death of a cyclist in May 2014. Nonetheless, we are considering some adjustments to the cycle provision and now the proposed design for the northern roundabout has been confirmed, these can be progressed further. Please note that they remain separate to the work on the northern roundabout.

We feel our plans offer a marked improvement in the provision of cycling facilities through the junction. However, we are also committed to working with Southwark Council to improve and develop alternative cycling routes that allow cyclists to bypass the junction. We are working together to look at how we can make them quicker and more direct as well as reviewing the signage to encourage better use of the bypass options to avoid the junction. The alternative links will be further enhanced by the delivery of the new north south cycle superhighway with segregated cycle lanes on St George's and Blackfriars Roads. Attached in appendix J is a map which details how the northern roundabout relates to the alternative cycle routes, both existing and proposed including the proposed segregated North South Cycle Superhighway. The option of using Elephant Road as an eastern bypass is still under review as part of the Heygate Estate Masterplan and needs to be considered alongside plans for the re-development of the shopping centre site.

### **Option B**

We recognise that respondents raised a number of issues with the plans for the Elephant and Castle Link Road proposed in Option B, the option we are now progressing with. The most common issue was concern about how pedestrian/cycle conflict would be managed. Other issues included whether confident cyclists would find it too slow and indirect; whether the cycle lane widths would be sufficient to cope with likely cycle flows; and whether it could be made two way to improve the situation for southbound cyclists.

We will explore a number of options to manage pedestrian and cycle conflict. These will be looked at in more detail as part of the urban realm design but will include giving special consideration to the types of materials used as a method of alerting pedestrians and cyclists to look out for one other. Examples include using contrasting colours/materials to demarcate crossing points, marginally sinking the cycle lane into the footway, or using up-stands to draw pedestrians' attention to the cycle lane. As the majority of pedestrian movements on the link road are from the crossing to the bus stops, we will consider installing the new bus shelters, or other measures such as planters, along one edge of the cycle path to act as a barrier. We will also widen the footway outside the Tabernacle to create more space for pedestrians and bus passengers. We will also consider signage to advise both pedestrians and cyclists of the need to respect each other in when in close proximity.

We appreciate that a number of cyclists will wish to remain on carriageway regardless of the quality of the off carriageway provision. However, we are widening the cycle crossing at St Georges Road to increase capacity in order to maximise throughput of cycles at the green phase to minimise the cycle journey times. Additionally, the entry point for the off carriageway provision will allow cyclists to bypass both the signals at the southern junction and the pedestrian crossing south of St Georges Road, which may be considered beneficial. We are also exploring implementing a 20mph limit through the junction. This could help to regulate traffic speeds and improve overall safety conditions for all users of the junction.

Unfortunately, the space constraints mean it is not possible to implement a two way cycle lane. The proposed cycle lane will be two metres wide, which is the same width as the segregated cycling facilities that are being introduced elsewhere. This is wider than many cycle lanes in London, and because cyclists will also have access to the 4.5m wide bus lane there is in effect greater capacity.

### **Concerns about cycling and pedestrian conflict**

In addition, to the concerns raised about cycling/pedestrian conflict in Option B, the other area of concern is the proposed cycle link across the peninsula. This will also be looked at in more detail as part of the urban realm designs which will be consulted on later in the year. However, if we proceed with the link, similar measures to those identified above may be considered to ensure cycle speeds are not excessive and clear demarcation will be utilised to ensure inter-visibility is maintained and that respective spaces are respected.

### **Alternative proposals**

We received two detailed counter proposals for the cycling facilities. One from Southwark Cyclists (in conjunction with the London Cycling Campaign) and one from a blogger known as 'Maidstoneonbike' which several respondents asked us to consider.

The proposal from Southwark Cyclists comprises a single large signal-controlled crossroads junction near the Bakerloo Line Ticket Hall. There is also a separate junction to allow turning movements into St Georges Road.

Some of the principles of the design are similar to the southern peninsula proposal, such as combining turning movements into a single junction and the right turn into St Georges Road operating in the 'shadow' of the nearby pedestrian crossing, however the design raises a number of areas of concern which render it unworkable. These are summarised below:

1. The design has not been subject to detailed traffic modelling but TfL has given due consideration to the proposal, optimising the design in the absence of detailed design and modelling information. This has shown the main junction would need a minimum of five signal stages (4 for traffic and an 'all-red' pedestrian phase) to allow all traffic movements to take place safely. This decreases the journey time efficiency of the proposal and subsequent impact on the surrounding network
2. The five-stage signal phasing does not include the potential inclusion of separately/advanced signalised ahead movements for cyclists which have previously been discussed. The more signal stages that a junction has the higher the cycle time which results in longer wait times for all user groups. As a guide, this proposal would require a signal cycle time in excess of 100 seconds meaning it could take a pedestrian 4-5 minutes to cross two arms of the main junction
3. The northbound approach to the main junction has a very short right turn flare; this effectively reduces the Inner Ring Road to a single lane once this pocket for 2 to 3 vehicles has emptied. Similarly, the southbound right turn into St Georges Road has a short flare which will result in vehicles (especially buses) queuing back into the junction compromising its operation
4. It is our opinion that this junction would struggle to operate with as little as half the current traffic flows (not to mention increased flows from the 5,000 new homes in the area). To address the inefficiencies in the design more lanes would have to be added to allow more vehicles to pass through the junction each time a green light is shown
5. Pedestrian crossings appear to operate as 'straight across' crossings with no pedestrian islands. This again reduces the efficiency of the junction; pedestrian islands could be installed but would widen the carriageway footprint
6. It is unclear exactly how the St Georges Road junction is intended to operate. The crossing on this arm is too close to the mouth of the junction leaving little stacking capacity for right turning vehicles with the resulting queues

overrunning the bidirectional cycle lane, and impacting the junction through blocking other vehicles including buses. Due to the bus facility, this junction would be a crossroads not a t-junction

7. Road safety concerns are raised by the severe alignment issues with vehicles (buses, cycles) heading from New Kent Road into London Road directed at the middle lane of oncoming traffic from London Road
8. To enable the junction to operate as efficiently as possible the separate turning movements would need to be signalised. A key minimum requirement for this arrangement is to have a 2m traffic island in between different and/or opposing traffic flows, so for the New Kent Road approach an island would be needed between the left turn and ahead movements as well as along the centreline of opposing traffic flows
9. The introduction of the advanced reservoirs for cyclists at each stop line is not compatible with separately signalised left turns. It would also not be feasible to introduce this arrangement with the proposed signalling arrangement
10. The proposed cycle lanes marked in green appear to pass straight through bus stops
11. The geometry of the junction means that the predominant Inner Ring Road flow has to turn through approximately 100° from the E&C Link Road to New Kent Road. This is not realistic given the high numbers of buses and other large vehicles in the area
12. Although a bus / Tube interchange can be a very good facility, the northern end of this interchange would introduce what is in practice a second set of crossroads a short distance from the larger crossroads. In practice this may significantly delay traffic over and above the additional delays from the larger crossroads
13. This proposal removes the central hard-standing and guard-railing that are currently in place to prevent another fatality from pedestrians attempting to cross four to five lanes of traffic. There is unlikely to be sufficient carriageway width to accommodate two bus lanes, a new bus platform, and four to five lanes of general traffic, particularly with extra space required for the carriageway to in the turn
14. Operationally bus stations should enable buses to pass one another. In this proposal, should a bus break down within the bus lane, other buses would need diverting around the bus station inconveniencing passengers. Plans as for how to retrieve a bus would need careful consideration. At this location,

maintenance and freight vehicles would have difficulties accessing kerb side activities with a bus station on the eastern side, and cycle lanes on the western side and there are no locations for loading or wait

15. There are currently proposals for a cycle bypass to the east of the Elephant & Castle roundabout via the Heygate Estate. This route has not yet been agreed and the option of using Elephant Road as an eastern bypass is still under review as part of the Heygate Estate Masterplan and needs to be considered alongside plans for the re-development of the shopping centre site

The proposal from 'Maidstoneonbike' used the TfL Option A as a basis but added more cycle lanes, removed ASLs and relocated certain crossings and bus stops. It has been reviewed and a number of the suggestions have been incorporated in the design modifications, however, some suggestions were unworkable and these are detailed below:

1. The northbound off-carriageway cycle track on E&C Link Road is similar to option B which is now the preferred arrangement along this section but the suggested track appears to be drawn at 3m which leaves insufficient waiting area for bus passengers. The alignment of the track at the southern end also provides no waiting area for pedestrians at the crossing
2. The southbound off-carriageway cycle track on E&C Link Road has similar issues to the northbound with space for waiting bus passengers but the key issue is the need to separately signal cyclists at the southern junction. This will have an impact on network capacity
3. The shortening of the bus and cycle lanes and the introduction of an off-carriageway cycle track between St Georges Road and London Road has been explored but shown to be unworkable due to a lack of footway width and impact on journey times
4. The northbound off-carriageway cycle track on London Road provides insufficient waiting area for bus passengers
5. The southbound off-carriageway cycle track on London Road provides insufficient waiting area for bus passengers and will require the removal of at least two trees
6. The off-carriageway cycle track outside the Bakerloo Station will generate significant conflicts with pedestrians as the track is located tight up against the station exit. In addition, there is almost no waiting space for pedestrians waiting at the crossing to the peninsular. The build out shown on London Road to provide pedestrians with more waiting space has resulted in two very narrow

left turn lanes. If these lanes were provided to the correct width, it would result in a very narrow area for pedestrians to wait in for the crossing on London Road

7. The off-carriageway cycle track on Newington Causeway is shown going over the building line and if moved away from the building would leave insufficient footway as the area of build out shown is unlikely to allow large vehicles to turn into Newington Causeway
8. The off-carriageway cycle track provides no space for bus passengers at the bus stop. Space at this location was tight and by running the cycle track off-carriageway there is a need to provide at least 3m of waiting area between the cycle track and the bus cage. The only way to provide this space is by removing two trees. Another key issue with the off-carriageway track is the need to separately signal cyclists at the junction. This will have an impact on network capacity
9. We explored replacing the staggered crossing with a straight across crossing on Newington Causeway but it has been shown to cause severe network delays and is therefore unworkable
10. The diagonal off-carriageway shared space from Newington Causeway which enables cyclists to turn left at the junction has been incorporated
11. The New Kent Road off-carriageway cycle tracks are not possible as there is insufficient space under the bridge to facilitate them and provide enough space for waiting bus passengers and pedestrians
12. The off-carriageway cycle track running on the inside of the peninsular is too close to the crossing leading to the Bakerloo Station

### **Pedestrian related issues**

#### **Opposition to removing subways**

Whilst we recognise that some current users of the subway system would like to see it remain, over 80 per cent of those responding to the consultation did support the principle of replacing the subways with surface level pedestrian crossings. Of those that did object, one of the principle reasons given to objecting to their removal was that subways are convenient, faster, safer (no risk of conflict with cars/bikes) and better in bad weather.

Under our proposal we are looking to tackle the dominance of the car in the area and the local severance this creates, as well as address the significant collision issues under the current arrangement. Although pedestrians may experience a short wait at

the new surface crossing points this is common throughout London and is not unique here and ultimately, in trying to strike a better balance for all road users, there will inevitably need to be trade offs.

We feel this is acceptable as removing the subways allows us to create a more attractive, direct and safer environment for pedestrians. Similar types of schemes, such as at Marble Arch and Blackfriars have confirmed that pedestrians typically prefer surface level crossings. The current system at Elephant & Castle is confusing to navigate, presents challenges to those with accessibility issues as well as being a noted area for anti-social behaviour and crime. Our plans will allow pedestrians to cross directly between transport links and local amenities at safer and convenient surface level crossing points.

Evidence at locations where subways have been removed, such as the Southern Roundabout at Elephant & Castle and also Marble Arch, demonstrates that typically there is no increased likelihood of pedestrian collisions. We are exploring implementing a 20mph limit through the junction. This will help to regulate traffic speeds and improve overall safety conditions for all users of the junction.

The removal of the subways has also been a long term aspiration of Southwark Council, who consider them a legacy of the 1960's master plan and have been a primary factor in creating negative perceptions of the area and could be argued to have frustrated efforts to attract investment. Indeed the vision for the Elephant and Castle Opportunity Area includes the statement that "The existing subways will be removed and replaced by surface pedestrian crossings creating a more attractive and safe environment with priority for public transport users, cyclists and walkers over the car."

The removal of the subways also fits within TfL's policy framework which, since 2009, has been to remove subways where it is feasible to do so. It is TfL's view that subways present a number of dis-benefits to pedestrians and can deter people from walking.

The dis-benefits are wide ranging, and relate to accessibility, crime and convenience. Subways can be inaccessible to disabled people or those with mobility issues and can cause pedestrian detours and lengthen journeys on foot. The design of subways removes any natural surveillance which can act as a precursor to crime or fear of crime. Indeed, the consultation also highlighted concerns about personal safety for some who responded, given the isolated nature of many of the walking routes currently in use within the subway network.

The use of surface crossings also enables TfL to work towards its statutory duty as a service provider to make accessibility improvements. TfL's Disability Equality Scheme sets a requirement on TfL to remove obstructions and barriers to disabled people and install and upgrade surface crossings where feasible to do so. Replacement of

subways can also be an effective and practicable means of reducing community severance and promoting social inclusion.

There were a number of requests asking us to keep some of the subways (in particular the busiest ones between the Tabernacle and the shopping centre and across the New Kent Road) or to keep all of them and also have pedestrian crossings to create an integrated system. However, this is not possible as many of the access ramps will no longer be accessible under the design of the new road layout.

A small number of respondents were concerned that murals within the subways would be lost. We will discuss the future of the murals further with Southwark Council and if they are keen they are maintained, we would be happy to commission experts to advise on the possibility and practicalities of relocating or recreating the murals. In addition we have asked the urban design consultants commissioned to design concepts for the new public space, to explore how they could be incorporated or recreated.

Some respondents were also concerned about overall increase in journey times and the amount of time allocated to cross the road and saw this as a further reason subways should be kept. This is explored further in the section that follows.

### **Issues with location and type of crossings**

A number of respondents were concerned about the impact on overall journey times, as waiting at pedestrian crossings would increase journey times. Respondents were also concerned about the amount of 'green time' allocated to pedestrians to cross, with concerns this would not be sufficient to do so safely.

We have carefully considered concerns raised about impact on journey times. We acknowledge that most pedestrian journeys, which involve currently using subways, will have an increase in average journey time. This will be generated from time waiting at signals at pedestrian crossings. It will be similar to the wait time experienced at similar crossings at other busy junctions in London.

We have been clear that a key part of this scheme is to reduce the impact traffic has on the area by making it more attractive and balancing the needs of motorists more evenly with those of pedestrians and cyclists. In doing so, it is necessary to recognise that trade-offs between the impact on different road users is sometimes inevitable. However, overall pedestrian journeys will entail shorter distances, be more direct with clearer way finding and be more accessible for all users. Indeed, at Blackfriars, pedestrian crossings were installed alongside the subways and despite taking 25 per cent longer, it is preferred by 80 per cent of users. We therefore believe that the wider goal of providing direct, convenient and accessible links around the area for all who use it makes this the most effective approach for the greatest number of people.

Following concerns about crossing times at the new pedestrian crossings, we have re-visited the signal operations. The green man 'invitation to cross' times have been

increased on a number of the crossings, with most significant gains on what we expect to be the busy crossing across the Elephant Link Road and Newington Causeway.

It is also important to point out that the appearance of the green man is the first 'invitation' for the pedestrian to cross. They also have the subsequent 'blackout' period to complete a safe crossing. All traffic light phasing is carried out with adherence to the standard national Department for Transport guidelines, which use the minimum pedestrian walking speed of 1.2 metres a second and the length of the crossing as the basis for their calculations. It is important to note that signal timings will vary throughout the day according to traffic demand on the various approaches to the junction, ensuring the junction is as efficient as possible. Therefore, crossing time at each location will be calculated individually and will change through the day, but will always allow pedestrians sufficient time to complete a safe crossing.

There were a number of requests to remove staggered crossings or to consider introducing zebra crossings. Throughout the design process every effort has been made to provide high quality pedestrian facilities and where possible to make these direct crossings. Of the six crossings within the scheme's remit, only one crossing is a staggered crossing. Two of the crossings are two stage crossings where pedestrians are offered a large central island to make the crossing in two stages. And finally there are three straight-across crossings.

We investigated the possibility of changing the pedestrian crossing across Newington Causeway from a staggered to a straight across crossing. Unfortunately, the traffic modelling showed this would have a significantly detrimental impact on the operation of the junction, increasing overall journey times and queuing. The staggered crossing allows the southbound and northbound lanes to operate separately which allows greater throughput. In addition, the staggered crossing actually offers a better solution for pedestrians as the wait time at a straight across crossing would need to be considerably greater than crossing in stages.

Due to the nature of the network and the high pedestrian flows expected, the provision of a zebra crossing would be inappropriate as delays to traffic would be unacceptable.

There were requests for an additional crossing between north of St Georges Road/south of London Road and the new peninsula space as well as calls to move the crossings across New Kent Road and St Georges Road closer to the junction. We acknowledge the request for an additional crossing; however, this would be very close to the location of another crossing that would serve a key desire line for the Bakerloo and Northern Line Station as well as London South Bank University. We believe an extra crossing at this location would have an adverse effect on the overall operation of the junction, and therefore is not feasible.

We have also explored the possibility of relocating the crossing on the New Kent Road closer to Newington Causeway. However, this would have an adverse effect on pedestrian wait times. This is because the road is narrower where the crossing is currently located, so it is possible to maintain a straight across crossing. If the crossing were closer to the junction (where the road is wider) a staggered crossing would have to be installed. Similarly, it is not possible to move the St Georges Road crossing closer to the junction as it has been set back a specific distance to accommodate queuing vehicles when it is in operation. Moving it closer to the junction would present a blocking risk which could affect the operation of the wider junction.

### **Traffic related issues**

#### **Opposition to banned turn from New Kent Road into Newington Causeway and from Newington Causeway into New Kent Road**

Many respondents opposing the banning of these turning movements were concerned about motorists taking short cuts through local streets and the capacity of the junction at Borough High Street/Great Dover Street/Long Lane to cope with additional movements.

We have investigated the possibility of re-instating these turning movements. However, this would involve adding extra stages to the signal phasing. This was demonstrated to have a considerable detrimental impact to the operation of the junction and on journey times and queuing thus removing many benefits for other road users. It is therefore not possible to re-instate these movements.

It is important to note that traffic counts show these are not heavily used movements, with approximately 40 vehicles an hour in the AM peak and 30 vehicles an hour in the PM peak making these turns. In terms of traffic flows this is considered a very low figure and as such would not show up in a larger strategic traffic model, which assesses the impact on the wider road network. Flows like this should easily disperse into the wider network with negligible impact and it is therefore not possible for us to predict how many may use local roads. We have suggested that traffic could possibly use Great Dover Street as an alternative route, equally traffic can easily u-turn at the southern roundabout and head back towards either Newington Causeway or the New Kent Road.

Notwithstanding this, we appreciate local concerns about the possibility of motorists taking short cuts on the roads around Harper Road and we will monitor the situation. If it is an issue, we will work with Southwark Council to look at traffic calming or deterrent measures.

We recognise that the prospect of the banned right turn may represent an inconvenience for some in terms of longer diversionary journeys; however, the numbers affected are relatively low and as such we consider it an acceptable

restriction given that it allows the junction to operate more efficiently, minimising journey time impacts and eliminating the conflict between left turning traffic and the very high ahead cycle movement.

Some respondents were concerned that Heygate Street would be used as a short cut. Heygate Street is currently available to motorists wishing to avoid Elephant and Castle. Currently, at peak times extensive congestion develops along the New Kent Road as people wait to move through and yet Heygate is not used for short cuts. Under these proposals, although queuing at peak times will be expected, the journey times are envisaged to be similar beyond the signals towards the southern junction, meaning people would not need to use Heygate Street as a way of avoiding congestion.

Concerns were also raised about access to the Rockingham Estate. Access to the Rockingham Estate from the north and south will be unaffected; however, residents travelling from the east will need to use the old roundabout and then travel via the southern junction into Newington Causeway. However, for the small number of people affected by this, they also have the option of travelling along Great Dover Street and then turning left into Borough High Street.

Residents of Metro Central Heights have raised concerns about implications for Congestion Charge (CC) payments. They believed that as a result of these plans they would now need to pay, where previously they had not done so. This belief is mistaken and residents in fact should have been paying the charge regardless of these changes, as the zone begins immediately off the roundabout and not where the cameras themselves are situated. This is why residents have always been eligible for the 90 per cent resident's discount for the charge.

### **Impact on Traffic**

Respondents were concerned about the impact on journey times and congestion and questioned how replacing a roundabout with traffic lights would help to smooth traffic flow. Some were also concerned that the layout was very confusing.

We have been clear that a key part of this scheme is to reduce the impact traffic has on the area by making it more attractive and balancing the needs of motorists more evenly with those of pedestrians and cyclists. This scheme is being delivered in response to recommendations made in the Mayor's Road Task Force, which includes supporting the Borough's aspirations to revitalise town centres and looking to reduce community severance that major roads can create. In doing so it is necessary to recognise that trade-offs between the impact on different road users is sometimes inevitable.

Whilst it is acknowledged that a roundabout is a very efficient means of moving traffic, it also has the potential to compromise cyclist safety and users of powered two-wheel vehicles. The current driver experience is also daunting and the layout leads to high levels of lane changing collisions. Whilst we recognise that there will be an increase

in journey times under the two-way system, as drivers will need to stop at signals, we believe there will be a significant benefit in terms of reducing the number of accidents at the location as well as helping to provide a better balance for all road users.

The consultation also raised concerns about the capacity of the right turn pocket into St Georges Road with fears of congestion and queuing on New Kent Road. Latest traffic modelling has supported that this may be an issue and could block traffic on New Kent Road. As such, the decision has been taken to add an additional right turn lane into St Georges Road to ensure traffic can clear through this turn. We have also widened the mouth of New Kent Road (just before the Newington Causeway junction) to allow for an additional lane on the approach to the junction. This will increase capacity and generate a better throughput of traffic during the signal phase. The space for these additional lanes will be taken from the peninsula and will not move the highway closer to existing residential buildings.

Some comments also noted disappointment that little was being done to discourage traffic and reduce overall traffic levels. TfL is committed to continuing to invest in the public transport and cycling networks so that people have safe, reliable and regular alternatives to car travel. We are also working ever closer with the freight industry to minimise the impact of freight on the road network. Notwithstanding this, it is necessary to accept that demand for road travel will continue and the location of the Elephant and Castle junction, on London's Inner Ring Road, means it will remain a key junction on the Transport for London Road Network and demand will remain high.

There were a number of responses from residents of Searles Road who have raised concerns about the removal of the roundabout system as this would impact on their overall journey times. They are currently unable to turn right to head south and as such use the roundabout to u-turn. Whilst we recognise that this will mean an increase in journey times for those who will now need to travel to the southern junction to u-turn, we believe that the overall benefits of the scheme outweigh the inconvenience to a small number affected by this.

### **Impact on air and noise pollution**

Respondents were concerned that bringing traffic closer to residential buildings and the queuing at traffic signals would cause an increase in noise and air pollution. There were also concerns about increases in pollution away from Elephant & Castle as vehicles use alternative routes.

We commissioned an independent air quality and noise modelling appraisal of the design we consulted on. The appraisal considered detailed modelling for NO<sub>2</sub>, PM<sub>10</sub> and CO<sub>2</sub> transport emissions and detailed modelling for transport related noise. It found there would be an overall reduction in NO<sub>2</sub> emissions across the area, with the largest benefits to the south where the road is going to be closed off. There is likely to be a moderate adverse impact at Perronet House (east) as a result of carriageway widening and a major adverse impact at Strata (Walworth Road) as a result of bus stops relocation, however, this does provide corresponding benefits to the existing

bus stop location. The modelling found a negligible impact on both PM<sub>10</sub> and CO<sub>2</sub> transport emissions. It also found noise levels will be redistributed across the area, with an overall reduction in noise to a wide area to the south where the road is going to be closed and a slight worsening in noise levels as a result of carriageway narrowing at the corner with St Georges Road.

We have re-visited our plans for London Road and no longer plan to widen the carriageway there. This will mean we are able to retain the three mature trees and the impact at the eastern edge of Perronet House should now be negligible. The new highway alignment does bring the highway closer to the front of Perronet House and we are unable to mitigate against the impacts of this. The impact at Strata was predominately caused by the re-location of bus stops. New technology has allowed London buses in particular to become far more environmentally friendly, using as they do much of the latest hybrid and electric engines. It is hoped as technology advances, this will continue to have beneficial impacts and will assist in mitigating this impact.

As explored earlier, the number of vehicles impacted by turning restrictions is low and will be absorbed into the wider network with little noticeable effect. It is therefore felt that the new turning restrictions will have little effect on noise and pollution in the wider area. Although journeys will be longer through the junction we are not expecting queuing to be noticeably different from conditions today, apart from on the New Kent Road and London Road in the peaks. As such we are not expecting a major re-routing of traffic away from the area as alternative routes are limited. We are yet to complete a wider traffic re-assignment model but once completed, should it show an impact on traffic flows elsewhere, we will consider necessary mitigation measures to limit the impact.

### **Concerns with road widening**

Some respondents were concerned about the principle of widening the ring road and the impact this would have on speeds in the area, as well as specific impacts from the widening London Road. Our position on London Road has been explored in the section above.

Modelling has shown that speeds in this area should be slightly slower than at present. However, we are also considering introducing a 20mph speed limit which we believe will assist with ameliorating these concerns.

### **Request for 20mph zone (See above)**

We are considering introducing a 20mph zone and are currently undertaking a separate study to assess the feasibility.

### **Bus related issues**

**Object to relocation of bus stop/ congestion at bus stops/ impact on bus journey times**

Some respondents objected to the principle of re-locating the bus stop serving routes in the direction of Camberwell to the top of the Walworth Road, as they felt it would be too far from the other stops, the shopping centre and the Underground station. Some noted concern for personal safety at night in the new location. Other respondents felt more needed to be done to improve congestion at the bus stops outside the shopping centre and some were concerned that the new road layout would adversely impact bus journey times through the junction.

The main reason for relocating the bus stop to Walworth Road is to provide a less daunting environment for cyclists as they pass a very busy and long bus cage on the Elephant & Castle Link Road. Cyclists are often left in a vulnerable position as they overtake buses at the rear of the bus cage and then find a bus ahead of them pulls out, either forcing them to brake heavily or take evasive action with general traffic on their offside. Relocating the bus stop will reduce the length of bus stop that cyclists need to pass as well as reducing the risk of conflict. This offers cyclists better protection through this section.

The location of the current bus stop is in a heavily congested area that has insufficient footway; one of the benefits of this proposals is it should reduce congestion at the stops as moving one of them approximately 90m away will create more room. We also plan to continue negotiations with the new shopping centre owners to see if it will be possible to gain more footway width at this pinch point. We are also proposing to move the retained southbound bus stop further south to be closer to the relocated stop and helping passengers who are interchanging.

Plans to re-develop the shopping centre are also likely to bring changes to the current Underground station entrance as well as access to the new shopping facilities. As such, the impact on interchanging with the Underground station and accessing the shops may be mitigated. However, as the discussions are on-going with the owners of the shopping centre and will be subject to planning permission, we are still considering the re-location of the bus stop for services towards Camberwell to the top of the Walworth Road. Once more is known we will be able to make a firm decision.

If we do decide to proceed, the combination of increased pedestrian activity around the centre and improved lighting at the new bus stop location should also ameliorate any concerns regarding personal safety for all users. CCTV provision will also be maintained and enhanced in the area for further reassurance.

Journey times for all users of the interchange will be impacted by these plans. However, we believe the accident savings and urban realm benefits this scheme will deliver balance out any journey time dis-benefits.

## **Public space related issues**

### **Opposition to creation of public space**

Some respondents questioned whether people would use a public space beside a multi-lane road. There was a desire to understand its purpose and how it would link to the shopping centre. There were also concerns that the principle of creating a peninsula compromises the road layout and efficiency of the junction.

The Elephant and Castle presents one of the most exciting urban rejuvenation opportunities in inner London. Numerous large scale developments, including the re-development of the shopping centre site, meant that a change to the road layout would provide an opportunity to enhance the public realm at the heart of this key Opportunity Area which has a growth potential of 4,000 homes and 5,000 jobs.

Strategic policy programmes, such as the Roads Task Force and Better Junctions Programme, promote the role of streets as public spaces rather than being dominated by motorised traffic and as such provide the policy framework for TfL to consider a major transformative overhaul of the junction.

Whilst we acknowledge queries regarding the efficacy of having a public space in this location we believe it will significantly help the wider regeneration of the area. Creating a large peninsula space at the heart of the Opportunity Area allows the creation of a flexible public space as a focal point for the area. It also provides an opportunity to reduce the impact of motorised traffic on the public realm and to enhance the streetscape and landscape to improve the pedestrian environment. The uses for the space along with the wider landscaping and streetscape design is currently being developed and will be subject to consultation later in the year.

Whilst we recognise concerns about the impact of creating a peninsula on journey times, this scheme allows us to achieve a number of deliverables and as such needs to be considered as a whole package. For example, one of the key objectives is to improve cycle safety as the current arrangement has the worst accident record for cyclists in London. The driver experience is also daunting and the layout leads to high levels of lane changing collisions. These all affect the flow of traffic and the new arrangement directly tackles many of these challenges with a predicted accident saving of 33 per cent. We have explored many options, over a number of years, including different peninsula and cross road arrangements, and the southern peninsula option offered the best balance of outcomes for all users as well as providing a legacy to support the development of the Opportunity Area.

Furthermore, TfL has a policy to remove gyratories as they tend to be poor for moving pedestrians and cyclists around safely and normally have higher than average accidents statistics. Community severance and fast traffic speeds are also attributed to them. Despite their ability to efficiently move traffic, their dis-benefits usually outweigh their benefits. There is currently a strong link between the two Underground stations, the shopping centre and the rail station. Bringing this strong linkage together through the peninsula will help pedestrian movement through the area.

## **Concerns about management of the space**

A number of respondents were concerned about the management of the space, in particular with regard to anti-social behaviour and personal safety at night. Existing CCTV provision will be maintained and improved where necessary, along with enhanced lighting to address some of the public safety concerns raised. Wider questions about designing out opportunities for anti-social behaviour and crime will be considered as part of the brief for the urban design consultants.

## **General issues**

Some concerns were raised about a perceived lack of connectivity between modes and that National Rail connections were not part of the plans. It is hoped that connectivity with the National Rail station will be improved as part of the shopping centre development, alongside improved connections between buses, Tube and rail. Further information will be available once more is known about the proposals to redevelop the shopping centre site.

There were requests for more priority to be placed on vulnerable users with the suggestion the layout still prioritised traffic. The scheme seeks to improve safety for cyclists as one of its primary goals, as this group are adversely affected by the current design of the area. As a result of this emphasis, pedestrian movements are also likely to be significantly affected. Therefore, we have also focused strongly on how any changes to the area affect them. We are confident our plans will make the area as safe as possible for the greatest number of people, within certain constraints.

TfL must adhere to its Network Management Duty, which means that the needs of the motorist cannot ever be entirely disregarded. Elephant and Castle is also a key transport interchange for buses and therefore the road network must be protected. Meeting the needs of all road users is always a balancing act and trade-offs will have to occur.

Some respondents stated their strong opposition to the removal of some mature trees in the local area. We are committed to retaining as many of these as possible. We have re-worked our proposals for London Road which will see three mature trees retained; however, one or two will need to be removed in the local area to ensure the scheme can proceed. It is important to note that as part of these plans we are committed to planting a number of new trees (further details will be available later in the year as part of the Urban Realm consultation) and we hope to introduce far more than will be removed.

A number of people were also concerned about the impact on the area and on traffic during construction. The impact on the surrounding area, and the bus network in particular, will be reviewed by contractors on an ongoing basis to ensure that disruption is kept to a minimum. The work will be carefully modelled so that it can be carried out in phases, ensuring that the Inner Ring Road can be effectively managed

and work as well as possible at all times. However, it must be said that due to the scale of the work involved, some disruption is unfortunately inevitable.

There were also questions as to whether plans were future proofed in terms of likely increases in cycle demand. Our plans increase the cycling provision through the junction and all cycle lanes meet current standards for cycle lane widths; therefore it is the capacity of crossings in the area that will prove the true measure of future growth. We will continue to work with Southwark Council to improve bypass facilities to ensure adequate provision is in place to encourage cyclists to avoid the junction.

### **Consultation concerns**

A number of respondents felt that we should have consulted at an earlier stage, when designs were being formulated. The decision about when we begin to engage externally on plans for any project is always a fine balancing act. We need an opportunity to explore possibilities with key partner organisations, such as local authorities, to explore what might be feasible and what could be deliverable (both financially and ensuring we meet our duties under the Traffic Management Act). We actively carried out this background analysis before sharing the plans more widely. As always, we need to strike a balance between presenting proposals at a formative stage and presenting them at time when we are able to give respondents sufficient information to make an informed view.

It is also important to note that consultation is not in itself a referendum but an exercise in allowing the local community to shape and influence the design. Given the complex nature of the junction and the confines of the road space, the ability to offer a consultation on substantially different options was not possible. TfL are keen to ensure all users' needs are considered and addressed. As such, the consultation was designed to draw attention to the key changes and allowed people to state if they support the principles and provided an opportunity for comment.

There were also requests to pause our plans until more is known about the plans to re-develop the shopping centre, to allow everything to be consulted on as one package. We have already begun detailed discussion with the new owners of the shopping centre to ensure that our plans align and this dialogue will be on-going as their plans develop. We are also working very closely with them on the plans for the urban realm which we hope to share more widely with the public later in the autumn.

Issues were raised about the design of Questions 4 and 5 in the survey. Question 4 was structured to draw people's attention to the key areas of change within the design and to ascertain if they supported these or not. Question 6 allowed people to make any other comments; it was hoped that Question 4 would encourage people to consider the changes, and that they would use the free text box in Question 6 to note issues and concerns they had with the design. Some were concerned that there should have been an option to select neither Option A or B within Question 5. This

was not possible as we are committed to delivering change at the northern roundabout but were keen to understand the preference for on or off carriageway provision northbound along the E&C Link Road. As with Question 4, Question 6's free text box was the opportunity for people to note concerns they may have had with either option.

### **Alternative Proposals**

We received a number of suggestions for alternative solutions such as:

- Putting traffic underground
- Using the subways as cycle routes or creating cycle tunnel under the roundabout
- Creating elevated step free walking/cycling routes
- Excavating subways to build sunken public area or creating a single transport interchange between tube, bus and rail
- Using subways for shops/leisure space
- Using a more adventurous approach to the road layout such as implementing a Dutch style roundabout or closing St Georges Road to motor traffic to allow crossroads arrangement
- Maintaining current layout but signalling all arms of junction
- Creating a central bus stop interchange
- Diverting cyclists away and using Elephant Road as a bypass

We also received a detailed counter proposal from [ElephantandCastleroundabout.org](http://ElephantandCastleroundabout.org).

TfL first began to look at the northern roundabout in 2007 and undertook initial feasibility work to look at a range of proposals. In 2012, TfL were challenged to review all previous work and to develop new ideas, the only constraint being what is physically possible within the northern roundabout area. Numerous different combinations of tunnels and flyovers both for vehicles and/or cycles were explored, as were different peninsula and crossroads arrangements. Much of this work was subject to senior stakeholder workshops and comparative assessments. The outcome was that the southern peninsula offered the best balance of outcomes for all users as well as enhancing the local vitality.

At the very outset of the process, some options around tunnelling traffic under Elephant and Castle were briefly explored. However, it became apparent that pursuing an underground solution would not be a viable option. The access/exit bore ramps proved difficult to locate within the available space. The cost and the time needed would prove prohibitive and necessitate unacceptable delays to surrounding traffic and pedestrians at the location and in the surrounding area for quite some time. The nature of the London Underground infrastructure and other technical requirements at the location also rendered it unrealistic.

The main issue with the cycle tunnel option related to the complexity of services below ground as well as the underground infrastructure. In addition to the prohibitive costs involved, the entry and exit ramps required significant departures from design standards as well as the horizontal alignment within the tunnel. Around 3,000 cyclists/hour use the roundabout during peak times of which less than 1,000/hour head northbound from the link road to Newington Causeway so the tunnel would not serve the majority of cyclists. This would also be a significant traffic and civil engineering undertaking; relocating the bus stops to provide suitably sized portals for the tunnel, relocating the underground utilities (mains and waste water in particular), tunnel lighting and ventilation, all at a cost in excess of the southern peninsula but with limited benefits for other users.

Given the indirect nature of the subways, it is also unlikely that cyclist would utilise the current subway system and the entry and exit ramps would also require modifications.

The elevated footways/cycleways design option presented several complications in terms of access to the ramps for both cyclists and pedestrians whilst maintaining a benefit for both modes in both directions. To achieve acceptable gradients to current standards required lengthy ramps. Locating these within the approach roads proved to be too challenging, with issues relating to safety at the foot of the ramps a key concern. Again, the issue of cyclist and pedestrians choosing to use this facility was as questioned.

Excavating the existing subways or creating a whole new underground transport interchange would have involved significant diversion of utility infrastructure which would make it prohibitively expensive and wouldn't deliver the objective of improving cycle safety.

It is not possible to retain the subways for use as retail space as the access ramps are no longer accessible under the new road layout plans.

We believe the alternative proposal for a crossroads as part of a more radical road layout would provide far less capacity than the existing plans. The amount of space required for a crossroads makes the option unfeasible and would significantly reduce capacity.

The proposal to replace the roundabout with three T-junctions has been considered. However, it wasn't deemed a viable option as it was felt this would leave the area dominated by junctions, thereby reducing the directness of routes through the area for pedestrians – which remains a key aspiration for the these proposals through the Elephant and Castle area. Maintaining the current layout and reinstating two-way working would, we believe, create too much pressure around the Elephant and Castle Link Road, due to southbound traffic between St Georges Road and the southern roundabout. Signalising all junctions was considered but the results demonstrated a 20 per cent increase in traffic in the area as a result. London Road was considered

for two-way operation; however, due to space constraints and impact on bus services in the area, this was deemed an unworkable solution.

The possibility of providing a central bus stop interchange has previously been considered as part of a two-way system on St Georges Road. However, this option was not possible for several reasons. London Underground has expressed concerns that this option would place too much pressure on the Bakerloo Line station. The station is already an extremely busy destination and the interchange would be at the closest entrance to the station and risk putting the station over its capacity. It would also create extra pressure on the Elephant and Castle Link Road. Finally, it would not be possible to accommodate all bus routes serving Elephant and Castle into the one bus station.

It is important to note that high profile alternatives that enable cyclists to avoid Elephant and Castle Roundabout do exist today. However, a sizeable proportion still chooses to use the direct route through Elephant and Castle, despite safety issues. Due to the type of cyclist going through Elephant and Castle currently there is a strong possibility that they would not use an alternative route because whatever the risks, many simply seek the quickest and most direct route for their journey.

We are however committed to improving the bypass options for cyclists. We are working together with Southwark Council to look at how we can make them quicker and more direct as well as reviewing the signage to encourage better use of the bypass options to avoid the junction. The alternative links will be further enhanced by the delivery of the new north south cycle superhighway with segregated cycle lanes on St George's and Blackfriars Roads. Attached in appendix J is a map which details how the northern roundabout relates to the alternative cycle routes, both existing and proposed including the proposed segregated North South Cycle Superhighway. The option of using Elephant Road as an eastern bypass is still under review as part of the Heygate Estate Masterplan and needs to be considered alongside plans for the re-development of the shopping centre site.

The alternative proposal put forward by [elephantandcastleroundabout.org](http://elephantandcastleroundabout.org) has been considered in detail. Materially the proposal offers limited change to the existing roundabout design; there is some localised footway widening, sections of cycle lanes, two new crossings, and it is proposed that three subways are 'repurposed'.

The primary driver for the southern peninsula is the improvement in road safety as the junction has the highest collision rate in London. Collisions involving cyclists, as well as pedestrians, are a particular concern. With the exception of two short sections of cycle lane at Newington Causeway there are no other facilities for cyclists at the roundabout. Whilst we support the principal of encouraging cyclists to use junction bypass options, feedback from cycling stakeholders has been that confident cyclists will continue to use the junction in high numbers and if they are not provided for the collision rate will not reduce. We do not feel the plans in this proposal would deliver the accident savings needed.

Contrary to what has been suggested, the southern peninsula does not propose alterations to Cycle Super Highway 7. It does propose to bring the new North-South Cycle Super Highway to the Inner Ring Road rather than starting it at Princess Street.

The introduction of a (zebra) crossing on St Georges Road is not typically supported on such a heavily trafficked road on the exit arm of a roundabout. Either way, a crossing here would result in a substantial loss in efficiency of the roundabout. This is because when pedestrians are using the crossing traffic would queue back into the roundabout and prevent other vehicles from circulating the roundabout.

The proposal does not describe in any detail how the remaining four subways will be enhanced, or how the other three subways will be 'repurposed'. It is known that pedestrians currently cross the road injudiciously rather than use the subways and it is unclear how this will be effectively addressed in the proposal.