



## **Core Bus Corridor 14: UCD - Preliminary Submission**

### 1.0 Introduction

Dublin Cycling Campaign is a registered charity that advocates for better cycling conditions in Dublin. Dublin Cycling Campaign is the leading member of Cyclist.ie, the Irish Cycling Advocacy Network (ICAN). We want to make Dublin a safe and friendly place for everyone of all ages to cycle.

We look forward to future engagement with the NTA to refine the details in later stages so that we can produce a high-quality result.

### 2.0 General Observations

#### 2.1 There's a lot to love

Though we are critical of parts of the concept design there are huge improvements for pedestrians and cyclists within this concept design. These include:

- The realignment of the Shelbourne Road junction, which will make it more friendly to pedestrians and cyclists and improve the public realm
- The provision of segregated cycle tracks for almost all of the CBC

#### 2.2 Cycling For All

Dublin Cycling Campaign advocates for better cycling facilities that will enable people of all ages and abilities to cycle. Currently, the people who cycle in Dublin are not representative of the general population. Cyclists tend to be adult, male and brave. This is a result of the relatively poor quality of cycling infrastructure, and no coherent cycle network in Dublin.

There's no doubt that BusConnects will make cycling in Dublin safer and more convenient. However, it will not make cycling accessible to people of all ages and abilities because of the lack of segregation in places. There are many places where segregated cycle tracks become painted cycle lanes, or even disappear entirely. Usually, this loss of segregation occurs at the most dangerous parts of the road like junctions, bus stops, parking bays, and pinch points.

When evaluating the merits of these designs, it is important to consider not just the people who already cycle, but also the many thousands of people who would like to cycle but who are unable to do so because of safety concerns.

## 2.3 Primary Cycle Route Width

This CBC will deliver part of Primary Routes 13, 13A, and 12 of the GDA Cycle Network Plan (CNP). The target quality of service for primary routes in CNP is A+/A. Below is an extract from section 2.3 of the Written Report of CNP, which outlines the desired width of primary cycle routes as 2.5m.

### Basis for Target Quality of Service

ROUTE TYPE	PRIMARY / NATIONAL	PRIMARY	SECONDARY
Cycle Volume Existing (3 hour peak period)	n/a	200 -1000	100-500
Target QoS - Width Factor	A+ Two abreast + overtaking Width = 2.5m	A+/A Two abreast + overtaking Width = 2.5m	A/B Single file + overtaking Width = 1.75m
Target QoS - Other Factors	A	B	B

Unfortunately, the cycle track is never wider than 2 m on this CBC and there are some locations where it is even narrower than this. On Pembroke Road, the cycle track will be just 1.5 m in places. On parts of Merrion Road (maps 8 & 9), the cycle track appears to be even narrower, but no dimensions are provided. On Baggot Street bridge and on Merrion Road near Nutley Lane (map 9), no cycling infrastructure will be provided at all.

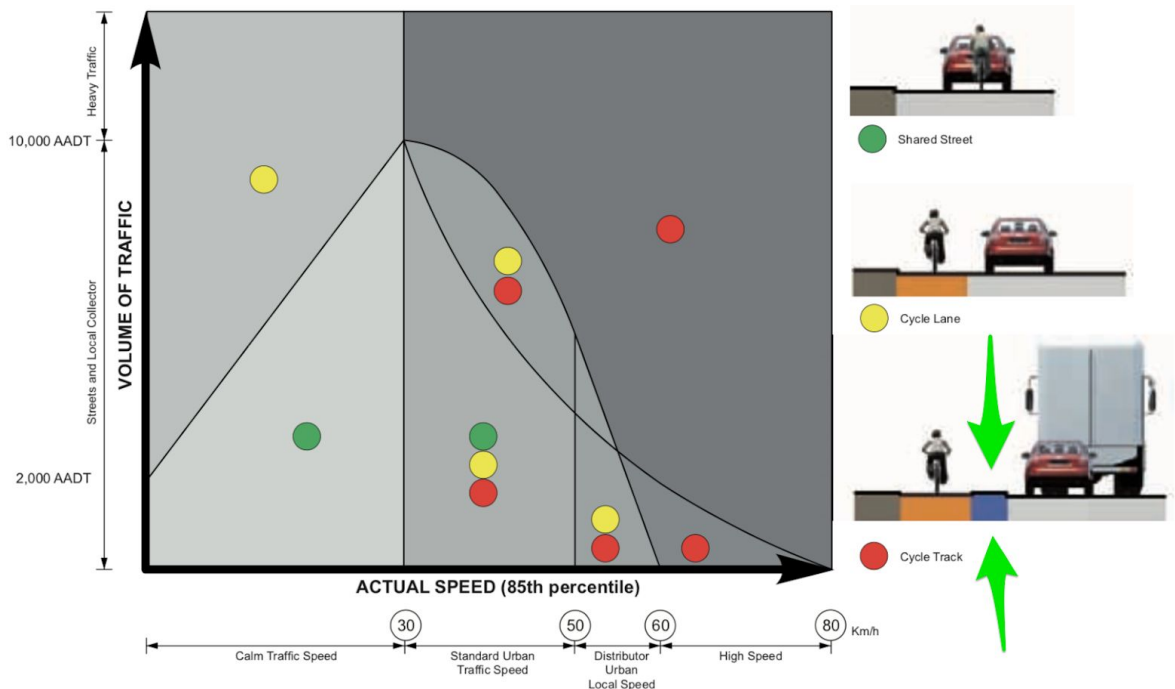
More effort should be made to eliminate these pinch points and widen as much of the cycle track as possible to 2.5 m. Section 2.2.2 of the Design Manual for Urban Roads and Streets recommends that pedestrians and cyclists should be prioritised before motor traffic. Therefore, where there is not enough space for appropriately wide cycle tracks, removing car parking or diverting traffic should be preferred over narrowing or removing cycling infrastructure and footpaths.

## 2.4 Buffer Space

The NTA's National Cycle Manual (NCM), section 1.7.4, requires that there is a buffer space of either a hard paved area or grass verge between the cycle track and the roadway when the AADT and 85th percentile speeds are both high.

This buffer space increases the comfort level for cyclists (one of the five needs of a cyclist). It also allows for overtaking using the full width of the cycle track, without partially overhanging the adjacent lane. Buffers also make junctions much safer for cyclists by making them more visible to turning vehicles.

We encourage the design team to, where possible, match the design of "Cycle Track Behind Verge" on page 67 of the NCM, which has grass/planted buffer between the cycle track and the road.



There is no guidance within the NCM for the size of this buffer space (the area marked in blue in the cycle track image above). However, this design guidance from the UK may be useful:

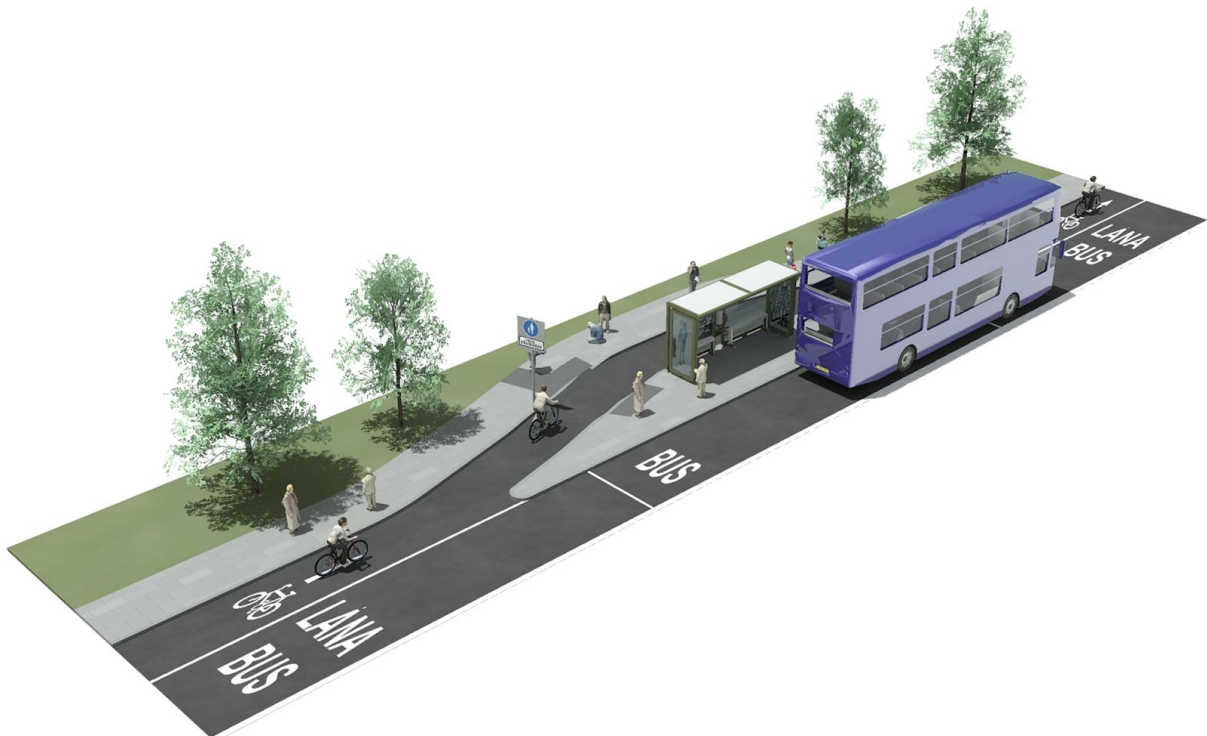
Speed Limit (km/h)	Desirable Minimum Horizontal Separation (m)	Absolute Minimum Horizontal Separation (m)
50	0.5	N/A
60	1.0	0.5
80	2.0 (including any hard strip)	1.5 (including any hard strip)
100	2.5 (including any hard strip)	2.0 (including any hard strip)
120	3.5 (including any hard strip)	3.0 (including any hard strip)

*UK Interim Advice Note 195/16 for Cycle Traffic and the Strategic Road Network*

## 2.5 Bus Stops

It is disappointing that island bus stops are being proposed only at the UCD flyover. For much of this CBC, the bus headway is less than five minutes, and island bus stops are the only design recommended by the NCM when the bus frequency is this high.

Many of the bus stops proposed in this CBC are much too close together. Rationalising the bus stop locations would improve bus journey times, and allow the stops to be located where the bus/cyclist conflict can be eliminated.



*The NCM recommends that island bus stops be installed on roads with a high frequency of buses*

## 2.6 Parking Bays

At all of the parking bays, the cycle track runs between the parked cars and the road. With only paint to mark the cycle lane, this creates numerous hazards for cyclists:

1. Drivers entering or leaving the parking bay might cross the cycle lane without looking
2. When the parking bay is full, vehicles such as delivery vehicles and taxis are likely to double park on the cycle lane. This practice is already widespread across Dublin, and this CBC should not be designed to encourage it
3. Cyclists are placed at risk of being doored, which can cause significant injury or force the cyclist to swerve into moving traffic. The buffer does somewhat mitigate this risk, but drivers often park in this buffer rather than moving into the parking bay properly, so the safety benefits are minimal.

We would encourage the design team to make every effort to put the cycle track between the parking bay and the footpath to allow the segregation to continue uninterrupted. The image to the right is taken from the section 4.3.5 of the DMURS.

Where this is not possible, the need for a parking bay at all should be reviewed. For example, on Pembroke Road, a 280 m long parking bay is proposed. This would narrow the footpath to less than 2 m and create a significant hazard for cyclists on a cycle lane that's only 1.75 m wide. There is an enormous surplus of parking on both Wellington Road and Raglan Road, so a parking bay on Pembroke Road is unnecessary.



## 2.7 Junction Design

One of the biggest risks to cyclists comes from turning vehicles, particularly HGVs which have large blind zones. Unfortunately, the proposed designs do little to mitigate this risk.

We are particularly concerned about the retention of slip lanes on Pembroke Road/Northumberland Road junction (map 4), and on Anglesea Road (map 5). The NCM advises against using slip lanes on urban roads because they allow drivers to make left turns at unsafe speeds. Also, the proposed number 7 bus needs to be able to continue straight onto Northumberland Road, and the slip lane makes this impossible.

The hazards from turning vehicles can be eliminated by installing protected junctions wherever possible. There are two types of protected junction that should be considered.

### 2.7.1 Segregation Through Time

The best way to avoid conflicts between cyclists and turning vehicles is simply to give them different green phases. This form of segregation is preferable because it does not depend on drivers or cyclists noticing one another and yielding where necessary.

### 2.7.2 Kerb Protected Junctions

This form of segregation is not as effective as the previous suggestion because you still have cyclists and motorists crossing the other's path. However, the kerb protection offers a number of important safety benefits:

- It keeps cyclists out of the blind zones of cars and trucks
- It ensures that cyclists and motor traffic meet at right angles, allowing eye contact to be made without the driver or cyclist looking backwards
- It gives cyclists and drivers more time to anticipate and avoid collisions
- It minimises the distance the cycle track spends on the junction
- It gives cyclists a safe space to wait at a red light where they are visible to stopped traffic and protected from turning vehicles



*Kerb protected junction proposed for the Clontarf to city centre cycle route. This design should be used wherever possible.*

## 2.8 Side Roads

There are plenty of side roads along this CBC. At these junctions, it is important that cyclists and pedestrians continuing straight along the main road have priority over motor vehicles turning onto or off the side road. This priority should be made clear with a raised table for cyclists and a continuous footpath for pedestrians.

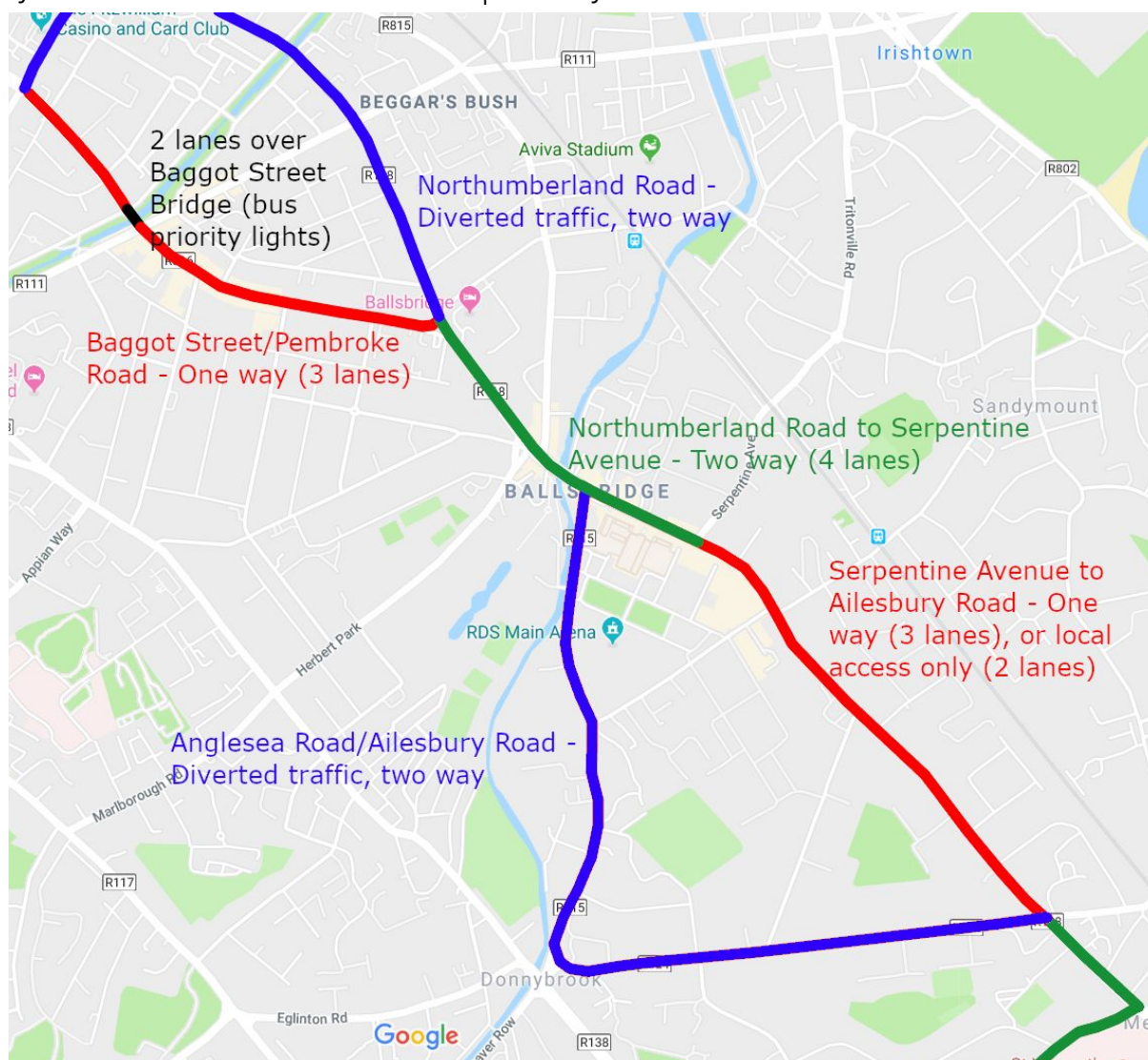
If space permits, the cycle track should also bend away from the road near the junction. This would keep cyclists out of blind zones and give cars on the side road a space to wait without obstructing the cycle track.



*The design team should use this junction on Churchtown Road Upper as the gold standard for side road junction design. There's space for turning cars to yield without obstructing traffic, and the priority of cyclists and pedestrians is made clear with the raised table and red brick. The only change we would recommend to this design is that the yield marking on the cycle track should be removed to give cyclists on the main road full priority over cars on the side road.*

### 3.0 Route Observations

Throughout this CBC, four lanes for motor traffic are proposed. The result is that all other road users are being squeezed and many mature trees are proposed to be removed. Fundamentally, this is the reason that there is not enough space to design this CBC to the highest standards. Reducing the road to three or even two traffic lanes would greatly improve the safety for cyclists and pedestrians, allow trees to be retained, and retain a sense of place. The map below shows how one way traffic systems could be introduced to require only three traffic lanes for most of the CBC.

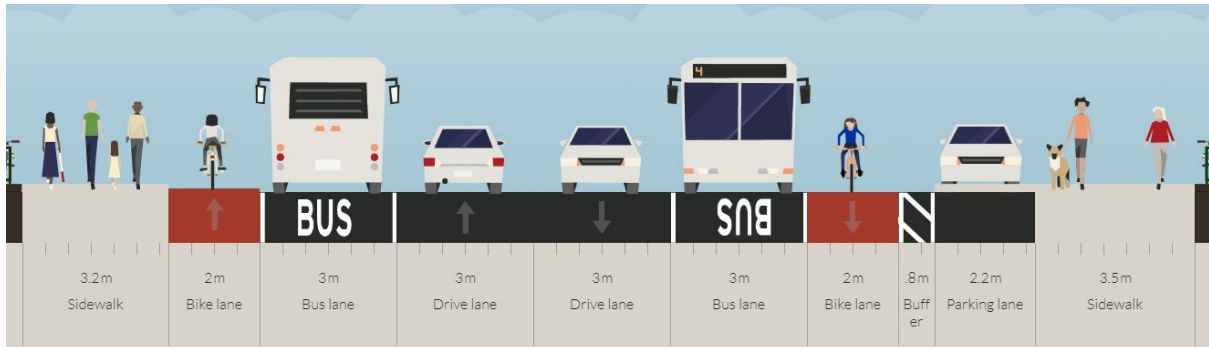


The above map shows that there are a number of possible private vehicular traffic diversions to minimise the need for four lanes of motor traffic throughout the CBC. Not shown in this map are other possible diversions such as the N11/Donnybrook Road, Shelbourne Avenue, and Strand Road.

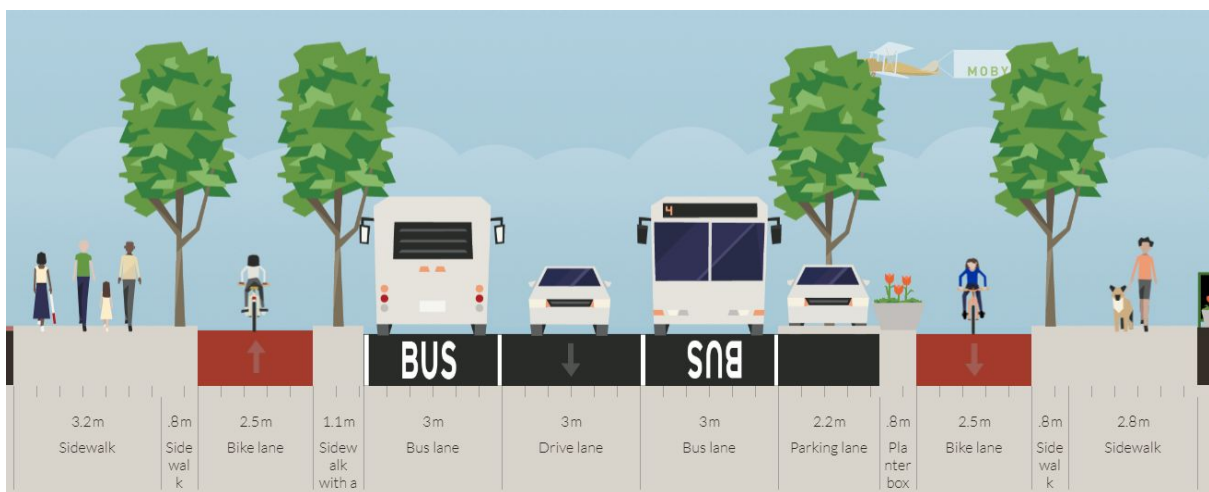


The following cross sections below suggest how the CBC could possibly be improved by reducing the number of standard vehicular traffic lanes.

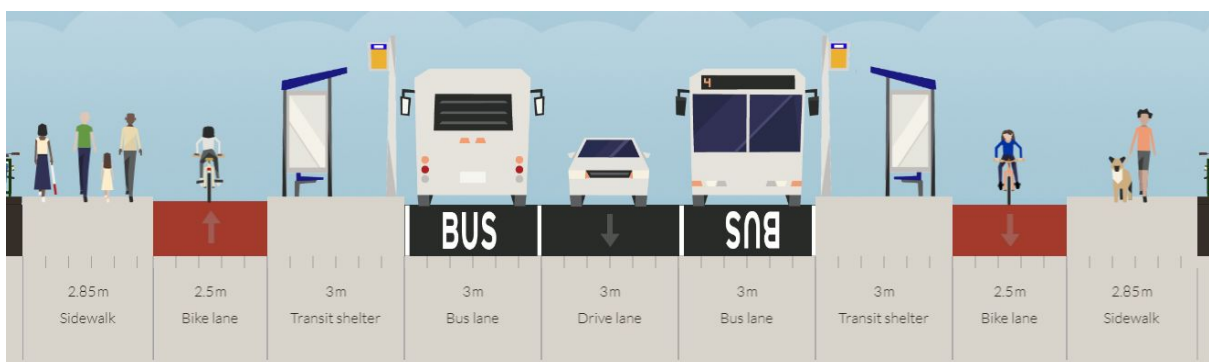
### 3.1 Baggot Street Lower



*NTA proposal for Baggot Street Lower*



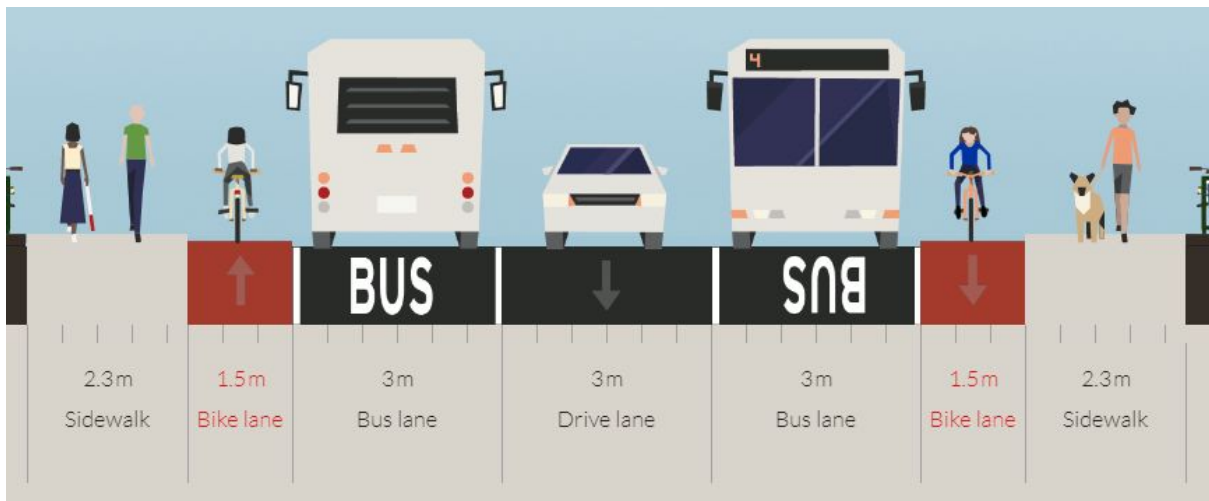
*Alternative layout for Baggot Street. The safety audit mentions that retaining the trees would be beneficial and help to keep speeds down. This option would make space for lots of trees either at the sides or down a central median.*



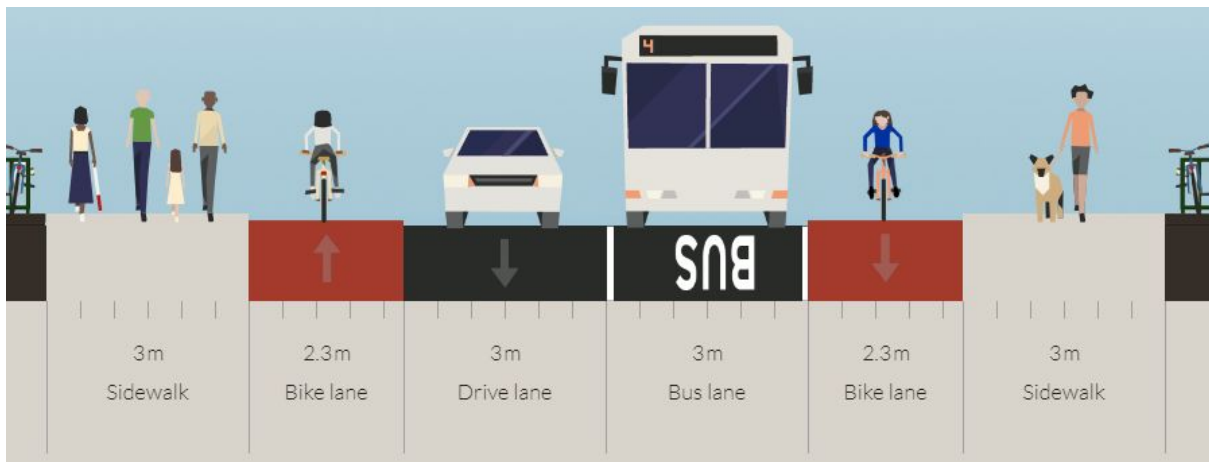
*This layout would easily accommodate island bus stops*

### 3.2 Baggot Street Bridge

If a one way private vehicular traffic system was introduced, cycle tracks could also be installed on Baggot Street Bridge without narrowing the footpaths. With bus priority lights, the bridge could be reduced to two lanes, facilitating wider footpaths and a more appropriate width for the cycle track



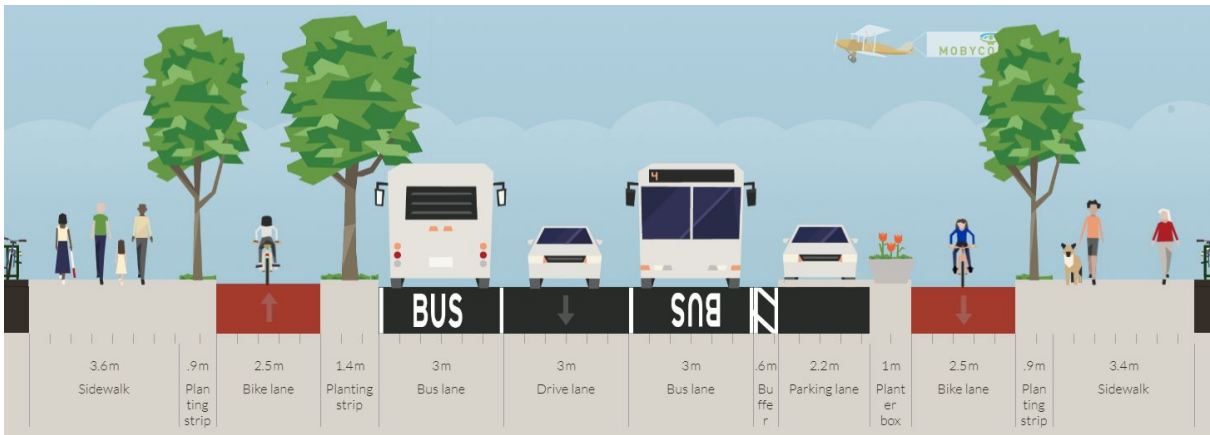
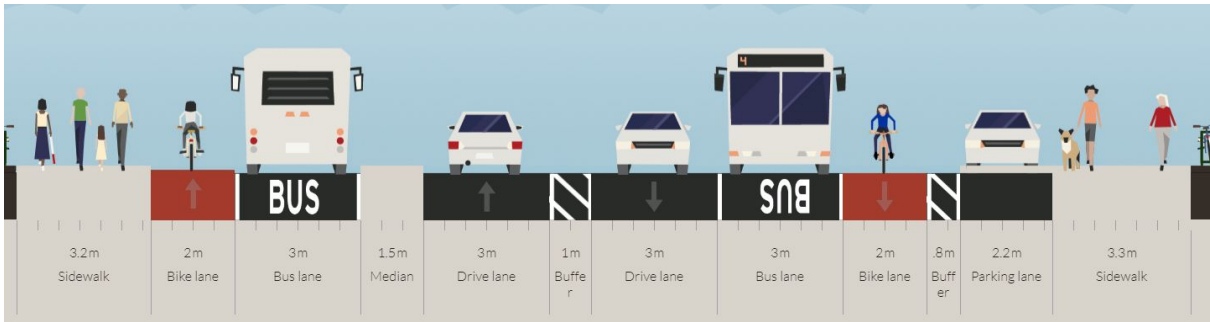
*Baggot Street Bridge, one way for private cars, no bus priority light*



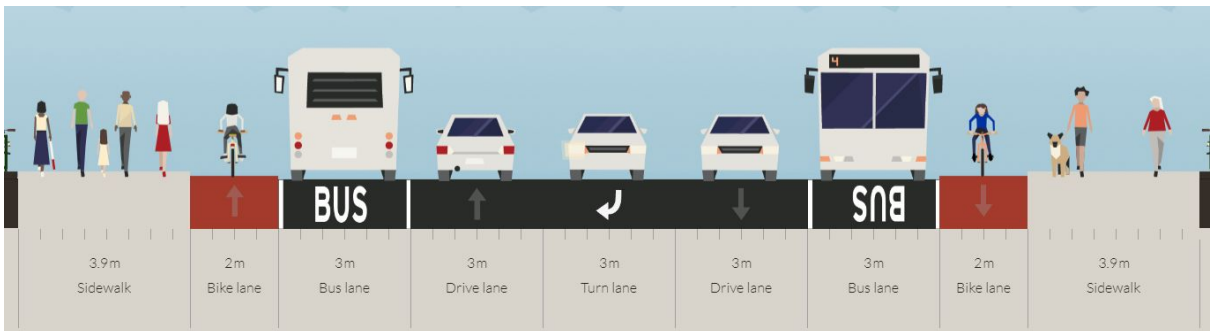
*Baggot Street Bridge, one way for private cars, with bus priority lights*

### 3.3 Baggot Street Upper

There are bus stops and a number of parking bays on this stretch of road. Reducing the number of traffic lanes would allow the cycle track to bypass these hazards.



*Near Mespil Road; NTA option vs alternative*



*Approaching Waterloo Road; NTA option vs alternative.*

### 3.4 Pembroke Road

The CBC proposal, as outlined, tries to meet the broad needs of all road users, including parking vehicles. This design would compromise the safety of vulnerable road users with narrow cycle tracks and footpaths, and extensive on-street parking. With only three motor traffic lanes and 2 m wide cycle tracks, little or no footpath narrowing would be necessary.

The proposed design of the junction with Northumberland Road is a major improvement for vulnerable road users, despite the retention of the slip road for buses. But, we would query the overall traffic lane design and the expected volumes. Are significant designated right turning general traffic lanes necessary? And the consideration of right turning cyclists does not appear to have been factored into the design.

The stretch of Pembroke Road outside the Ballsbridge Hotel is in excess of 25 m wide. There is no reason that island bus stops cannot be installed here, rather than provision for an extensive designated right turning traffic lane?

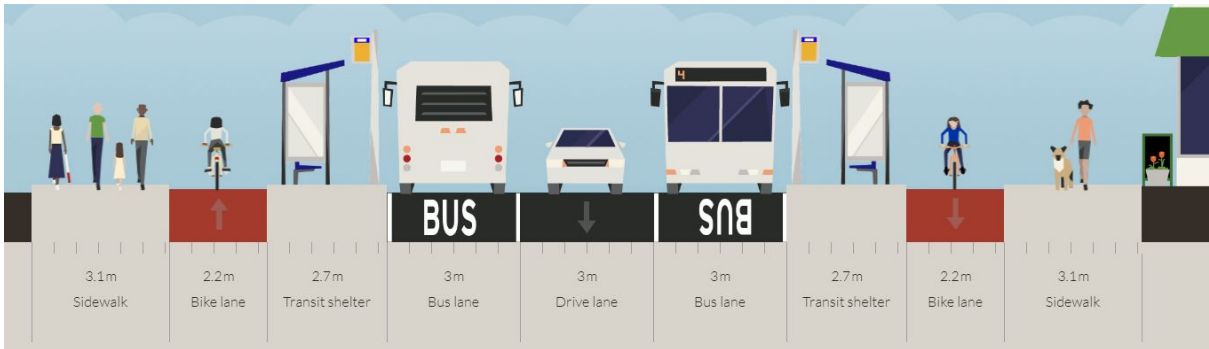
We welcome the closure of the Elgin Road outlet to the main route, and the potential for improved public realm and increased pedestrian safety. But the opportunity for cyclists' access to and from Elgin Road needs to be retained and made clear, as Elgin Road and other streets in this area are important quietways for cyclists. There is also an opportunity to include a specific bike slip lane on this proposed new landscaped area.

### 3.5 Merrion Road

The proposed design for the Herbert Park/Shelbourne Road is much improved, but consideration for the junction should be upgraded to a kerb protected junction, as outlined in section 2.5.2 above might be examined. We welcome the increased footway areas, the potential for extra landscaping, and the reduction in the turning angles.

The recently upgraded design for the Dodder Greenway, which includes a proposed new Toucan crossing at the actual Balls Bridge, and changes to Beattys Avenue and Anglesea Road, needs to be factored in to the CBC design.

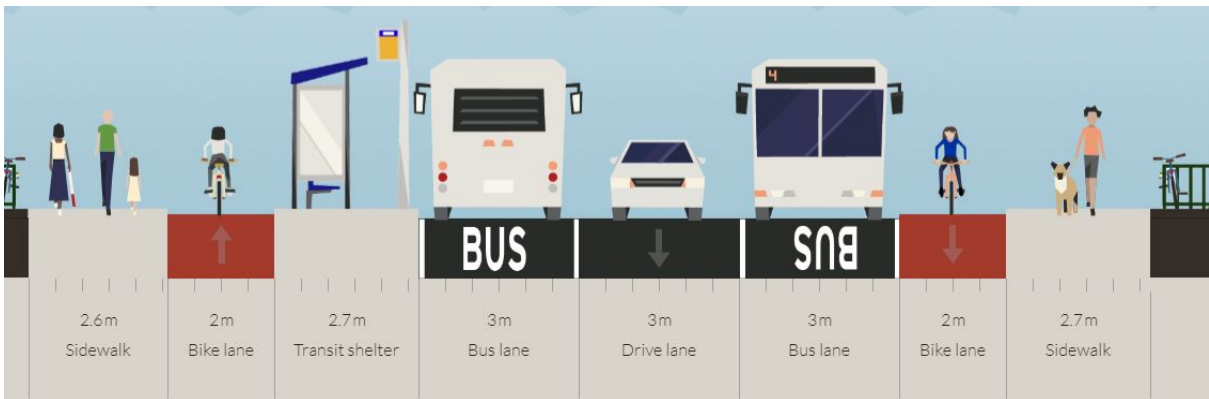
The lay-by at the RDS bus stop which, on the CBC design, is inline with the cycle track, could be removed and replaced with an island bus stop.



*Bus stops outside the RDS with a three lane layout. The RDS is to the left in this cross section.*

We question the proposal for an extra new bus stop between Serpentine Avenue and Sydenham Road?

At the Simmonscourt Road junction, which is 400 m from the RDS bus stops, Merrion Road is about 21 m wide. Therefore, without removing any trees, an island bus stop could be provided on each side of Simmonscourt Road.

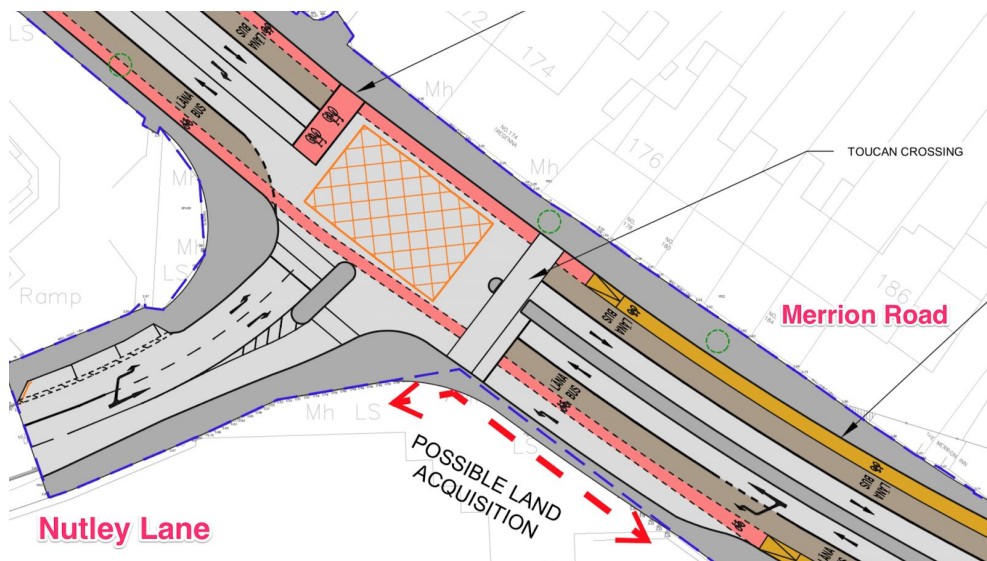


*Simmonscourt Road bus stops could look like this*

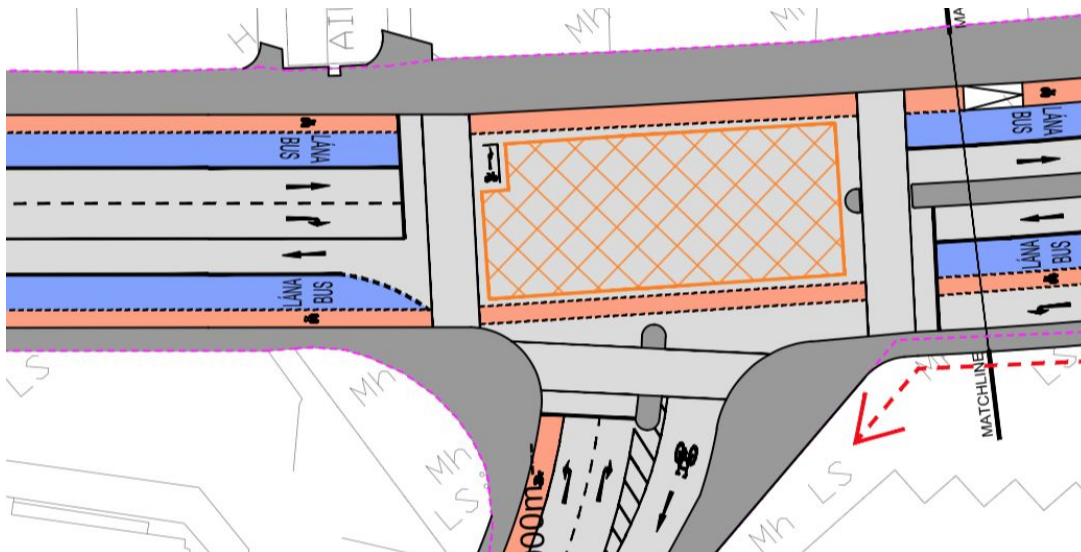
South of Simmonscourt Road, Merrion Road narrows, so the cycle track should also narrow to 2 m to minimise the necessary road widening. Ideally, it should not narrow to anything less than 2 m as is proposed in the current designs.

### 3.6 Nutley Lane

The Merrion Road/Nutley Lane junction does not allow right turns to be safely made by cyclists. Buses on Nutley Lane will all be turning left, making the right turn for cyclists dangerous. It is not clear where cyclists wishing to turn right from Merrion Road onto Nutley Lane are expected to wait. The previous public consultation and the feasibility designs from AECOM for this junction included continuous dedicated cycle lanes through the junction.

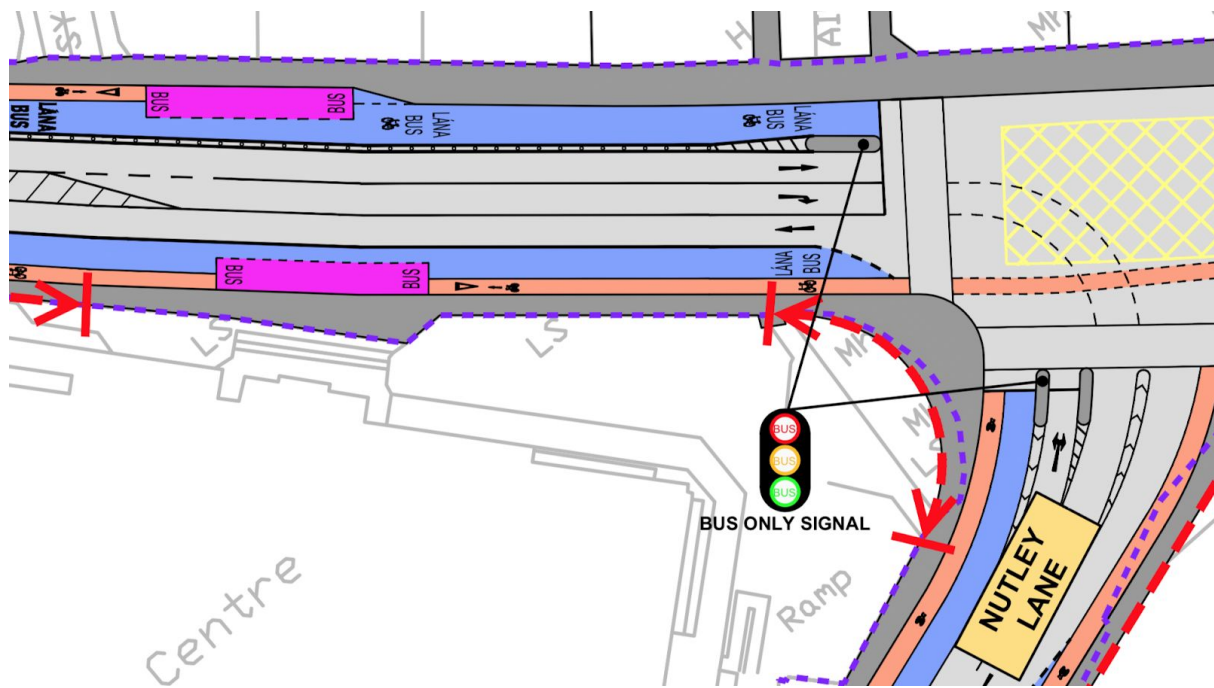


*Extract of the Sandymount to Blackrock Public Consultation, October 2016, with continuous dedicated cycle facilities*



*Extract of Dun Laoghaire to City Centre CBC Sheet 9 of 20 - background information, with continuous dedicated cycle facilities*

These dedicated cycle facilities have been compromised for a traffic island for bus priority lights. We understand the need for bus priority lights for right turning buses, however, it must not come at the cost of dedicated cycle facilities at this location.

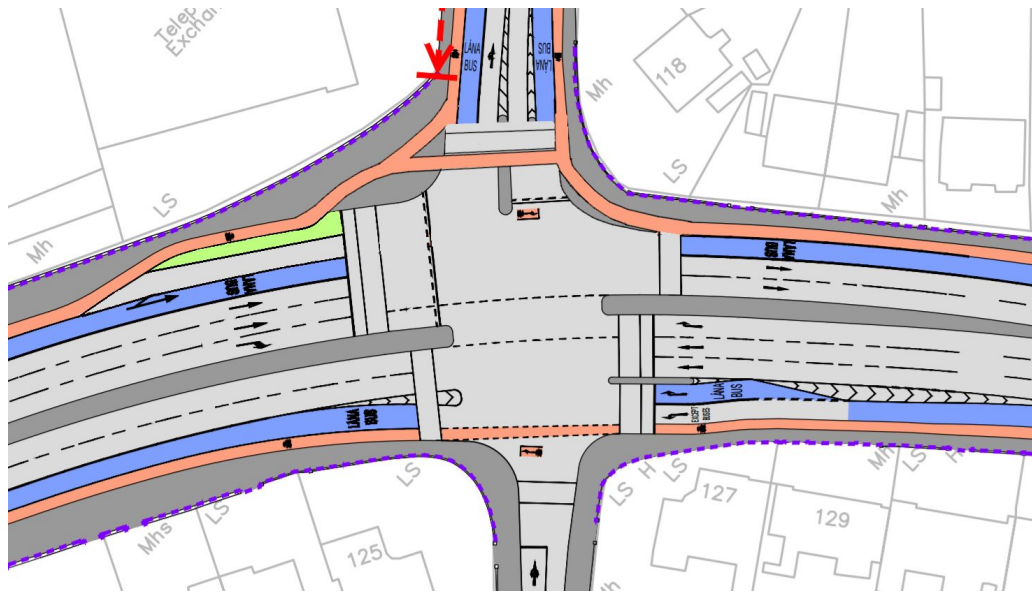


*Extract of CBC14: UCD public consultation document showing loss of the outbound dedicated cycle facility in order to make space for a bus priority light*

We welcome the overall proposals to CPO land along Nutley lane in order to provide the required level of service. We would also like to see obvious rat runs in this area restricted or closed off completely, to allow traffic along the main route to proceed.

The Stillorgan Road/Greenfield Park Junction (map 12) includes a dedicated left-turn traffic lane with a cycle track outside, on the inward Stillorgan Road.. This junction is the location of a recent cycling fatality caused by a left-turning truck. More should be done here to reduce the likelihood of left-hook collisions such as providing a kerb-protected lozenge island or an advanced stop line for cyclists.

The junction design overall needs to be upgraded to give clarity for cyclists making right turns in particular, but also to bring cycle tracks through the junction. Greenfield Park is also an access route to and from UCD.

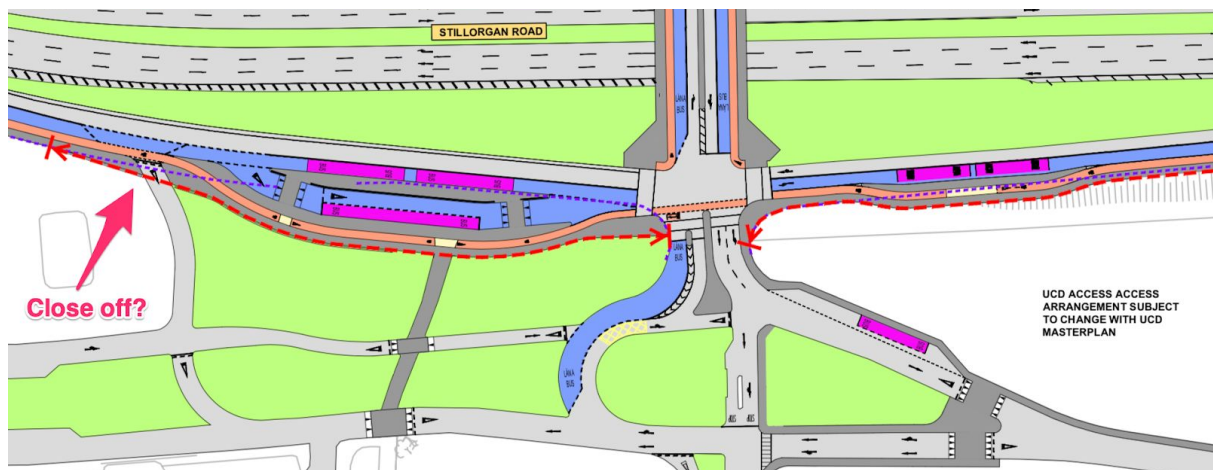


*Possible improvements for cyclists on the outbound side of the road*

### 3.7 UCD Flyover Area

We welcome the significant improvements to the bus stops at this junction, but the junction designs can be improved further.

1. The cycle tracks on the flyover should continue into the junction and be more direct, rather than merging into shared space. Shared space is dangerous for cyclists and pedestrians, and there is more than enough space to avoid using it here.
2. Ideally, the UCD exit lane to the north of the flyover should be closed off to motor traffic. This would remove a conflict point between cyclists and motor vehicles and provide an intuitive route for cyclists to exit UCD and join the inbound cycle track



*Extract of map 15*



## 4.0 Conclusion

We trust that our observations will be taken into account as the design for this scheme progresses from a concept design to a preliminary design. We look forward to engaging with the NTA as the design progresses.

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