cyclist.ie the Irish Cycling Advocacy Network

Core Bus Corridor 9: Greenhills - 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 wants to make Dublin a safe and friendly place for everyone of all ages to cycle.

There are many welcome segments to the Greenhills to City Centre route that have the potential to deliver a high-quality route. However, these good sections are let down by poorly managed detours for cyclists, gaps in the cycling provision and poor details. The proposals for Kildare Road in particular are both unsafe and a poor alternative to the Crumlin Road.

There are some high-level issues with the current proposals. We understand that the NTA is currently at a preliminary concept design stage. This is reassuring as many of the details of the proposed cycling facilities need to be improved in order to enable safe cycling for people of all ages and abilities.

We look forward to future engagement with the NTA to resolve the major issues and refine the details in later stages so that we can produce a high-quality result similar to the Fairview/North Strand cycle route.

2.0 General Observations

2.1 There are some clear improvements

Though we are critical of parts of the concept design in many areas, there are already positive improvements proposed for pedestrians and cyclists within this concept design. These include:

- Extensive use of cycle track segregation throughout the corridor.

- The redesign of the Walkinstown Roundabout to reduce the number of traffic lanes and to install safe crossing features, although we disagree with the proposal for 'shared space', as it will de-prioritise cyclists.
- The replacement of roundabouts in Tallaght, Belgard Square area by signalised junctions
- The realignment of Greenhills Road south of the M50 and the construction of new roads linking Greenhills road with Ballymount avenue, Calmount Avenue, and Calmount Road.
- The proposed 2 way cycle route through ITT

2.2 Cycling for All

Dublin Cycling Campaign advocates for high quality and safe cycling facilities that will enable people of all ages and abilities to cycle. Currently, the people who at present 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 design of present cycling facilities and no coherent network. Without a doubt the Bus Connects' proposals can help to make cycling safer in Dublin. However, they need to be designed to enable people of all ages and all abilities to cycle.

Many of our observations are about the lack of segregation provided by the current design. Along the route there are segregated cycle tracks, though at many locations it appears that segregated cycle tracks will become painted cycle lanes in order to allow for on-street parking or inline bus stops. At junctions cyclists are mixed back in with traffic. This loss of segregation reduces the chances of people of all ages and all abilities taking up the invitation to cycle. There are well recognised design solutions available for each of these problems, such as parking-protected cycle tracks, bus stop bypasses for cyclists, or using fully segregated junction designs like the Dutch style protected junction.

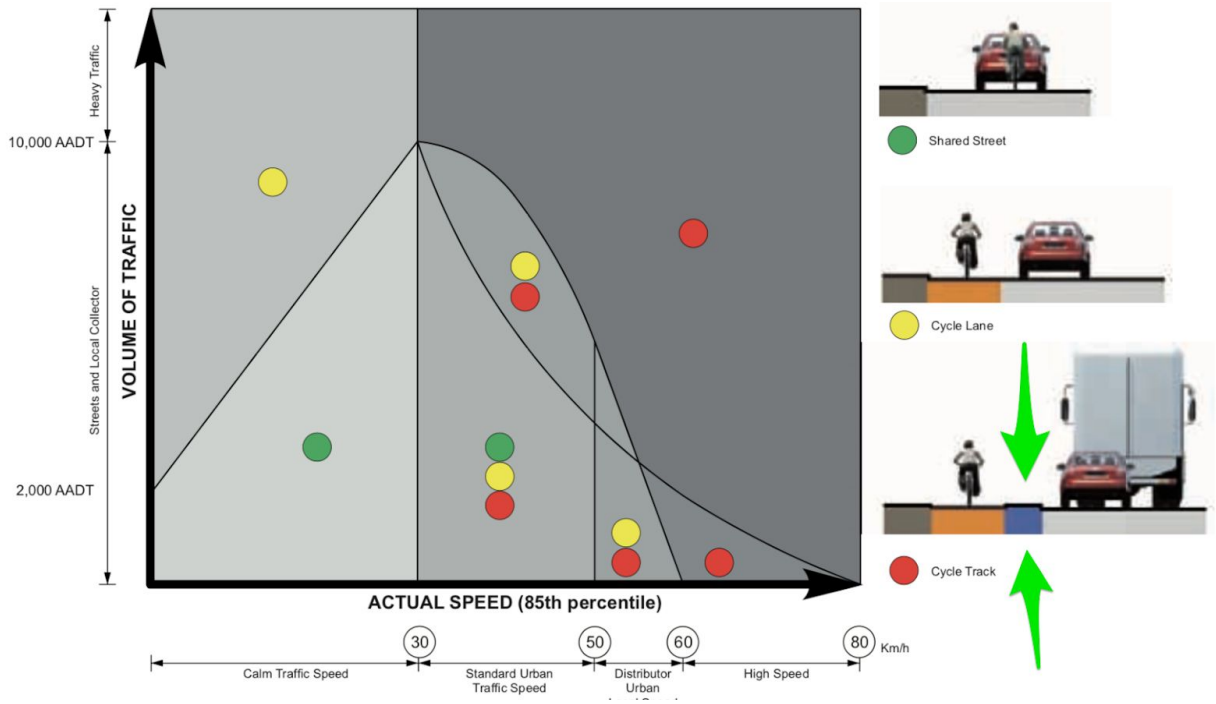
2.3 Buffer Space

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

This buffer space helps to improve 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 traffic lane. It is important to point out that the buffer space is not an area that should be cycled on and it should not be included in the width of the cycle track.

Buffer space can also help to keep cyclists out of HGV blind zones. This is particularly important on this Core Bus Corridor, which passes through the extremely busy Ballymount industrial estates between Tallaght and Walkinstown Roundabout.

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

2.4 Protected Junctions

While there are segregated cycle tracks along most of the route, this segregation disappears at every major junction. Junctions are statistically the most dangerous parts of the road for all road users.

There are two types of segregation which can be used at junctions. All major junctions should include at least one, if not both, of these forms of segregation. This is especially important around the industrial estates, where HGVs with large blind zones will be turning.

2.4.1 Segregation through time

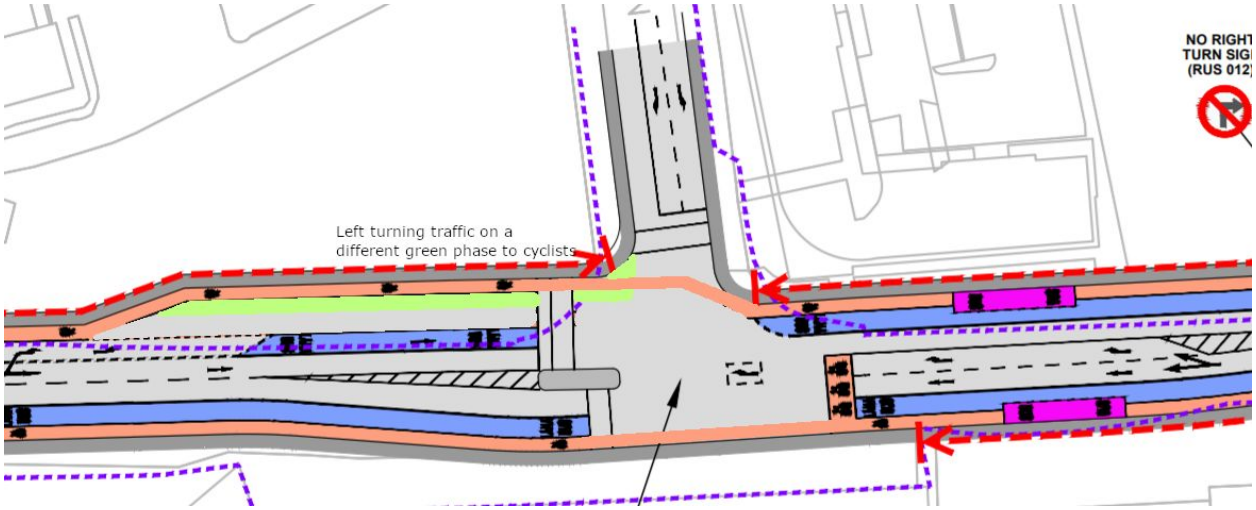
The most effective way to improve safety at junctions is to ensure that cyclists are never moving at the same time as traffic that can cross their path. This completely eliminates the conflict, so it should be used wherever possible. There are turning lanes proposed at all the major junctions, so it should be feasible to give turning traffic a green light only when traffic continuing straight has a red light. When designing a traffic light sequence of this nature, it is important that average wait times for cyclists are comparable to wait times for motor traffic travelling in the same direction.

2.4.2 Segregation through space

Segregation can also be achieved by installing a buffer between the cycle track and the road. This is not as good as time segregation because the conflict does still exist. However, the risks are still significantly reduced for the following reasons:

1. The buffer means that cyclists are more visible to turning vehicles.
2. Traffic is almost perpendicular to the cycle track when it crosses. This allows both cyclists and driver to see each other without having to look backwards.
3. The buffer gives more time for both cyclist and driver to better anticipate the movement of the other, and react accordingly. This means that a mistake from the driver or cyclist is less likely to cause a collision.
4. This design better protects cyclists from vehicles who might accidentally mount the kerb when turning left. Additionally, this design makes the right turn safer by giving cyclists space to wait before the second stage of the turn.

At most of the major junctions, there is certainly space for this buffer. For example, the removal of streaming lanes for cyclists (discussed later in this submission) would immediately free up 2 m of space which could be converted into a buffer. The image below shows how this could be implemented for the junction with Airton Road. At this junction, it is possible to use both time and space segregation.



One possible redesign of the Airton Road junction to remove the streaming lane

This is being achieved along the North Strand/Fairview cycle route project from Dublin City Council and the NTA. It uses a modified version of the protected junction design. The protected junction design also allows for right hand turns for cyclists.

The junction design also segregates pedestrians and cyclists by providing parallel crossings and designated spaces. This would eliminate shared spaces for pedestrians and cyclists. Shared spaces are disliked by pedestrians, cyclists and by people with disabilities. Parallel crossings also mean that cyclists don't have to use islands on the median that are frequently too small for bikes to easily maneuver around.

There is a good explanation of the principles of this design at www.protectedintersection.com.

2.5 Bus Stop Bypasses

There are no proposed bus stop bypasses on this CBC corridor. There are many reasons we'd encourage the design team to include bus stop bypasses:

- Bus stop bypasses are recommended by the NTA's National Cycle Manual, given the likely frequency of buses along this route
- Bus stop bypasses remove conflict between buses and cyclists. There is nothing more terrifying, particularly for a beginner or tentative cyclist than a 30 ton bus pulling into a bus stop on top of you
- Buses will be able to pull into stops faster because bus drivers will not need to wait for a slow cyclist to pass the bus stop before pulling in

The lack of bus stop bypasses was identified as a safety issue (problem 2.1.4) in the Road Safety Audit (Appendix D, ARUP). There is available space at many of the proposed bus stop locations - but see 2.12 below. This is a critical issue for encouraging a more diverse group of people to cycle.

2.6 Streaming Lanes

Streaming lanes (an orphaned cycle lane between two general traffic lanes) are used five times on this corridor:

- Greenhills Road at the junction with Airton Road
- Greenhills Road at the junction with Mayberry Road
- Drimnagh Road at the junction with Walkinstown Road
- Dean Street at the junction with Patrick Street
- Nicholas Street at the Christchurch junction

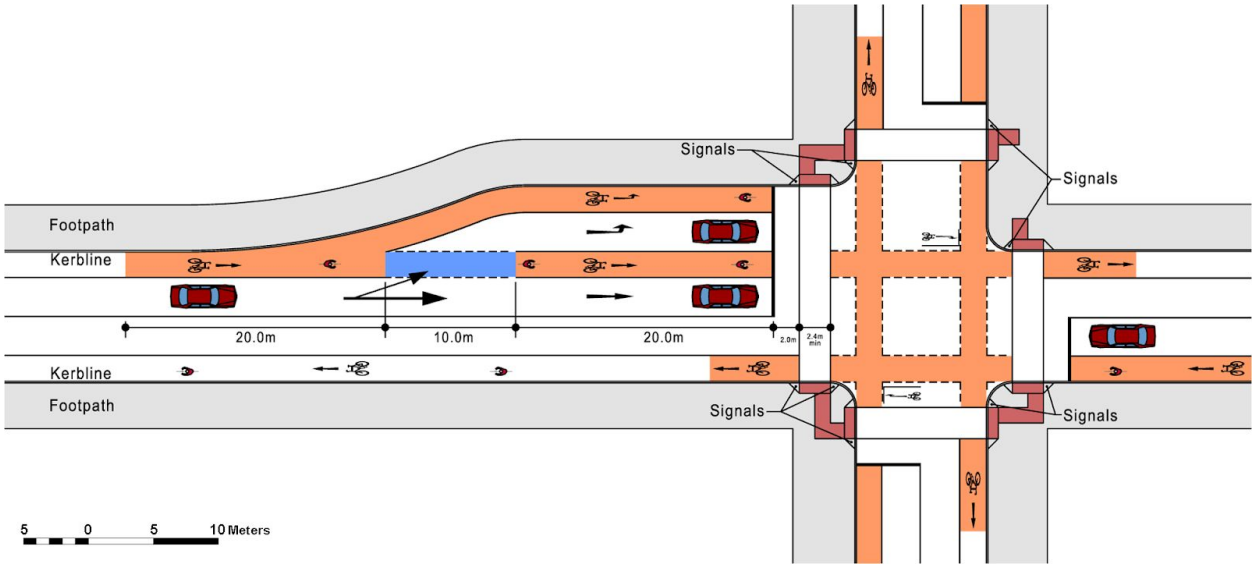
Streaming lanes in general create a number of problems:

1. The shallow angle of crossing means that cyclists have to look backwards to check that it is safe to proceed. This can be difficult and dangerous at busy junctions, especially for more vulnerable cyclists.
2. The lack of protection means that cyclists are at risk of being hit by a driver moving into the left turn lane. This risk is particularly pronounced with HGVs which often have large blind zones.
3. Drivers often merge gradually over the entire length of the streaming lane, instead of moving into the left turn lane as quickly as possible. This exacerbates the problems highlighted in the previous two points.
4. The perception of danger that this junction design creates means that it will not encourage cycling for all. The image below shows why inexperienced cyclists do not feel comfortable using junctions like these.

A demonstration of how the proposed junction design does not enable cycling for people of all ages and all abilities

As well as being dangerous for cyclists, the proposed streaming lanes do not comply with the National Cycle Manual (NCM). Section 4.4.4 of the NCM states that:

1. *Streaming cycle lanes can only be used in low traffic speed environments where there is minimal speed differential between cyclists and adjacent traffic*
2. *Streaming is not suitable along HGV routes*
3. *The permitted weaving area for traffic to cross the cycle lane must be clearly indicated and limited to no more than 10.0m long so as to reduce vehicular speed, and profiled line markings should be considered for the solid white line beyond the weaving area.*
4. *Streaming cycle lanes should only be used beside right or left hand pockets (i.e. distinct lanes dedicated to turning movements) and should not exceed 30.0m in length*
5. *Cycle lanes should be clearly visible in all conditions, including night time and poor weather.*



NCM guidelines for streaming lanes

With a speed limit of 50 kph for much of the corridor, this is not a low speed route, so the streaming lanes are not compliant with point 1, especially on the suburban sections of the corridor.

This corridor passes beside two industrial estates (Broomhill and Hibernian Industrial Estates), and goes straight through the middle of Ballymount Industrial Estate, which is one of the largest in Dublin. Therefore, this is clearly a HGV route, so streaming lanes are also not compliant with point 2 above. This is especially important at the Airton Road junction, which is an entrance to Broomhill Industrial Estate.

The lengths of the proposed streaming lanes are as follows:

- Airton Road: 61 m streaming lane, including a 21.5 m weaving area.
- Mayberry Road: 62 m streaming lane, including a 27 m weaving area.
- Drimnagh Road: 29 m streaming lane, all of which is a weaving area.
- Dean Street: 29 m streaming lane, all of which is a weaving area.
- Nicholas Street: 33 m streaming lane, with mo marked weaving lane. The weaving lane would be 19-25 m long if marked, bringing the total streaming length to 52-58 m.

The streaming lane on Nicholas Street is also dangerous because it and the cycle lanes around it appear too narrow.

- The Nicholas Street streaming lane in the proposals appears to be just 1.5-1.6 m wide, while the NCM recommends 2 m.
- The left turn lane appears to be just 2 m wide, meaning that left turning traffic will have no option but to encroach on the streaming lane.
- The left turn lane appears gradually, which will encourage left turning drivers to straddle the straight and left lanes, making the streaming lane useless.
- The slip road allows left turning drivers to approach the junction at speed, which will exacerbate the other safety issues with this streaming lane.

For these reasons, we recommend that all the proposed streaming lanes be removed. Replacing these junctions with either NCM compliant junction designs or by using the protected junction designs from above.

2.7 Integration with GDA Cycle Network Plan

There are a number of junctions which intersect with other routes mentioned in the GDA Cycle Network Plan. These junctions should be designed in such a way that the Cycle Network Plan can be completed without redesigning or reconstructing these junctions.

- The junction linking Belgard Square and ITT crosses Belgard Road, which forms part of Primary Route SO5
- The six branches of the Walkinstown Roundabout are Secondary Routes 7E, 8A, SO3, and SO4.
- Parnell Road forms part of Primary Route S01/N10
- The South Circular Road forms part of Secondary Route C7
- Donore Avenue forms part of Secondary Route 8C

2.8 Opportunity for Multimodal Travel

Multi-modal travel between bike and bus could be encouraged as these designs progress. A first step would be to provide covered sheffield stands with CCTV coverage near bus stops along this route, giving a particular focus to where orbital cycle routes intersect with this Core Bus Corridor. As the CBC will host a super high-frequency bus route it makes it more desirable for people to cycle to the spine.

2.9 Lane Widths

Throughout this corridor, traffic lanes of 3.25m are proposed. While the DMURS does consider this to be the standard lane width of an urban arterial road, it also points out that narrow lanes are one of the most effective traffic calming measures.

> *"Lane widths may be reduced to 3m on those Arterial and Link streets where lower design speeds are being applied, such as in Centres and where access for larger vehicles is only occasionally required."*

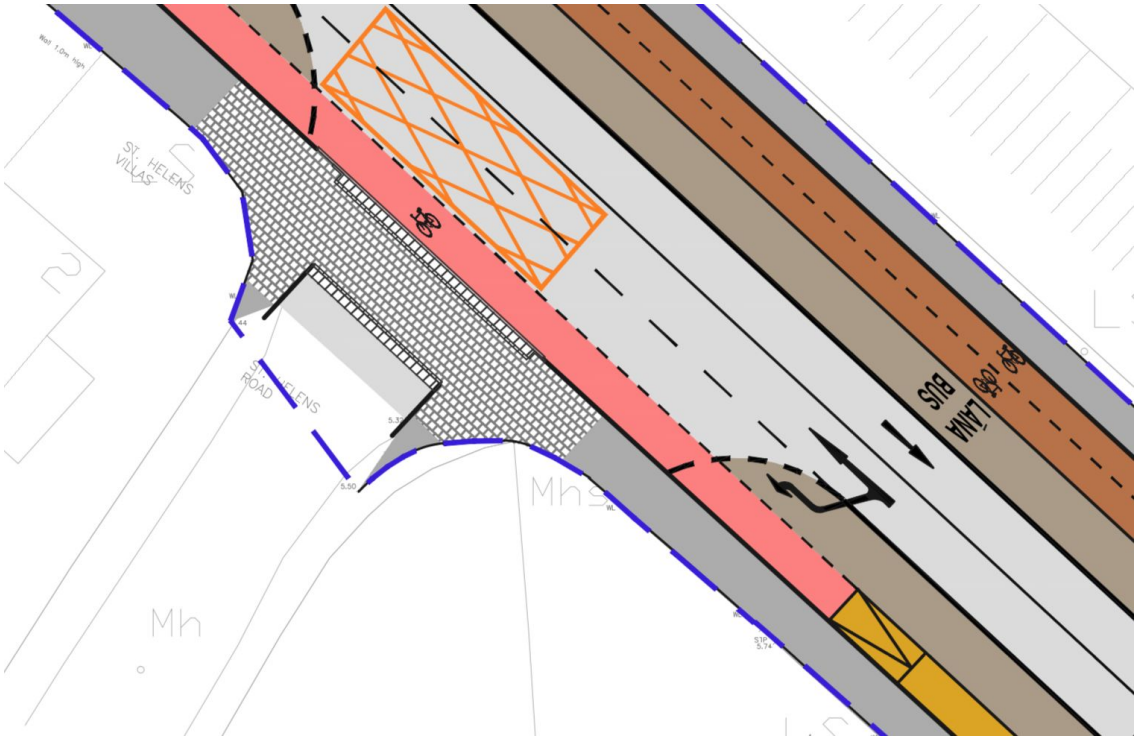
On the other BusConnects CBCs, 3m wide lanes have been used throughout, including on the N11 which has a higher speed limit, so it is unclear why 3m wide lanes would be too narrow for this CBC. The excess 50cm should be used to widen the cycle tracks, install a buffer between the road and cycle tracks, or improve the public realm with wider footpaths.

2.10 Side Roads

On side roads, pedestrians and cyclists should have priority over turning motorists, and this should be made clear in the design of the junction.

2.10.1 Continuous Footpaths/Entry Treatment

Infrastructure like entry treatment or continuous footpaths/cycle tracks encourage and promote priority for pedestrians and cyclists. They also encourage lower speeds. In general this would be exemplified by a raised table exit/entry from all side roads.



A raised continuous footpath over a side road as part of the proposed Merrion Gates to Blackrock Scheme - AECOM/ROD for NTA

2.10.2 Buffer Space Design

An alternate method for providing for safer minor road junctions is to bend the cycle track away from the road at the junction. This provides better visibility for cyclists by moving them out of the blind zones of vehicles. It can also provide space for turning vehicles to wait for cyclists to pass by. Priority for cyclists over minor roads needs to be reinforced with this design. The cycle track should also be clear to motorists, the use of red surface treatment to mark the conflict area is a must.

With this design the area between the road and the cycle track places the cyclist well outside the blind zone of the truck and clearly in front of the driver. The use of difference surface treatment, in this case block paving, helps to highlight the conflict, indicate a change in driving conditions from main road to side road and acts as a traffic calming measure.

2.11 Bus Stop Locations

We note only minor rationalisation of the location of bus stops along this route. This major redesign of bus facilities needs to include a logical examination of the need for bus stops at the various locations.

2.12 Bus Lane Hours of Operation

All bus lanes should be 24-hours. This is particularly important where there is no dedicated cycle infrastructure proposed. In these places the operational bus lanes will provide low-levels of protection to cyclists.

3.0 Route Observations

3.1 Belgard Square (Maps 1-4)

We welcome the proposal to limit the roads around Belgard Square to bus traffic only, although some policy and specific design elements will be required to cater for business deliveries. We recommend clarity on the access by bicycles. This is a dense residential and commercial area where cycling must be a viable option. The options report does not outline clear reasons for the omission of cycling infrastructure here.

- On the bus only section of Belgard Square West
- The rest of Belgard Square West is local access only, so the need for bus lanes and general traffic lanes should be examined. Reducing the road to two lanes and removing the central hatching would make space for segregated cycle tracks
- This area is very well served by various public and private car parks, so the need for on-street parking on Belgard Square West should be reconsidered.
- The design of Belgard Square North should also be reviewed to include cycle tracks. This could be achieved by restricting the road to local access only, with Katharine Tynan Road and the Tallaght Bypass carrying through traffic. Alternatively, the road could become one way for general traffic.
- Primary Route SO5 of the GDA Cycle Network Plan runs along Belgard Road, so a protected junction should be installed here.

We recommend that options for linking cycling into the existing Tallaght Village Route, via the Old Blessington Road be examined. This would enable active travel connections into ITT, and link up with the proposed bus/cycle route through ITT.

3.2 Tallaght Square and Village 30kph

The overall central area of Tallaght Square and Village needs to recognise the need for reduced speeds, to enable better and safer walking and cycling. The development of

the Bus Connects proposal is an opportune time, together with some traffic calming measures to introduce this initiative, similar to what has been done in Dublin City Centre.

3.3 IT Tallaght (Maps 5- 6)

We welcome the proposal for a 2 way cycle route through the ITT campus, as this will encourage greater usage within and around th campus. But, we recommend that this 2 way route be extended to connect with the ITT entrance on the Blessington Road/Main Street. This will provide a clear link with the existing Tallaght cycle route through the Village, as well as the potential route across the Belgard Road to connect directly with the LUAS terminus area.

The proposed layout of the junction at the Greenhills Road entrance to ITT does not cater for cyclists exiting right, or entering from the north, and will create pedestrian/cyclist and bus/cyclist conflicts. The detailed design needs to take these factors into account.

- The existing cycle tracks on Greenhills Road south of the ITT entrance should be retained and improved further. Further, the northbound track should be redesigned to maintain priority across the ITT Access Road.
- The southbound cycle track should continue through the T junction. This is especially important at this junction because the large number of lane merges and the lack of space would cause drivers to encroach on a painted cycle lane.
- An additional pedestrian/cycle crossing should be installed so that all arms have a pedestrian crossing.

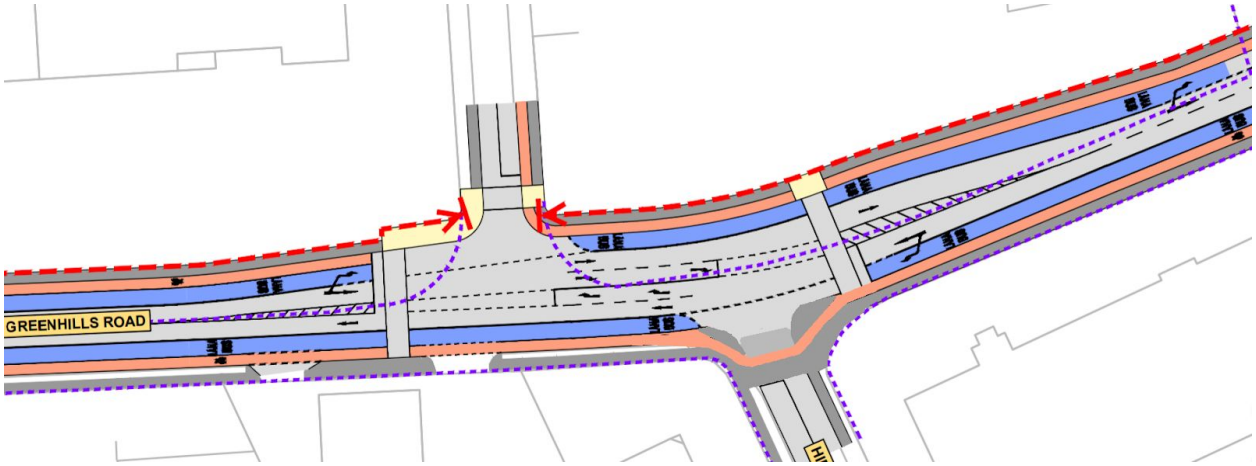
3.4 Hibernian and Airton Industrial Estates (Maps 7-8)

There are two entrances to Hibernian/Airton Industrial Estate within 250m of each other. We are delighted that a significant amount of land take is proposed along a good part of this section on Greenhills Road, but there are also further possibilities at this location to CPO some extra land here in order to enable proper bus stop bypasses for cyclists.

Both of these proposed junction designs need to be reviewed and redesigned to better protect cyclists against turning vehicles, and improve the experience for pedestrians. This is especially important given that industrial estates generally have a disproportionate number of HGVs with large blind zones.

It is not clear from the maps will these junctions be signalised or not. It is also not clear if cyclists will be moving at the same time as left-turning vehicles. If cyclists can be heading straight when trucks are turning left then the cycle track design needs to protect cyclists.

These junctions/entrances should be raised and provide a buffer space between the road and the cycle track. This moves cyclists out of the blind spot of left-turning HGVs.



Map 8: Northern entrance to Hibernian Industrial Estate, with raised entry treatment and buffer design. This is only necessary if the cyclists and trucks are on the same traffic light phase.

3.5 Broomhill Road - Hibernian Industrial Estate (Map 8)

We are happy to see controlled crossings proposed for cyclists and pedestrians at these busy intersections, but we suggest that they need to be relocated closer to the intersections. This will help to facilitate right turning cyclists in this area. We assume they are proposed as Toucan crossings.

The use of a shared footpath for cyclists and pedestrians at the Broomhill Road junction is not acceptable. Shared footpaths are bad for cyclists and pedestrians alike, particularly along primary cycle routes.

The closing of one of the Hibernian Estate's entrance/exit roads should be seriously considered, along this section to improve overall safety and reduce potential conflicts. Two separate exits are unnecessary for this small industrial estate.

3.6 Mayberry Road Junction (Map 8)

The recurring issue of left turning traffic across proposed cycle tracks needs to be improved at this junction, similar to other junctions referred to above. The toucan crossing should be a single movement crossing giving proper priority to pedestrians. Right turning cyclists both into and out of Mayberry need to be factored into the design.

3.7 New Road Diversion and M50 Bridge (Maps 9,10,11)

We support the new proposed realignment of the Greenhills Road, and the opportunity for Parkview residents to be directly linked to their natural community close to Tymon Park, while continuing improved facilities for buses and cyclists.

We recommend the clear delineation of a cycle/pedestrian link from the old Greenhills Road to the proposed Toucan crossing on Map 9. This will make it safer and easier for cyclists to access the Greenhills route heading northwards, as well as facilitating cross access by pedestrians.

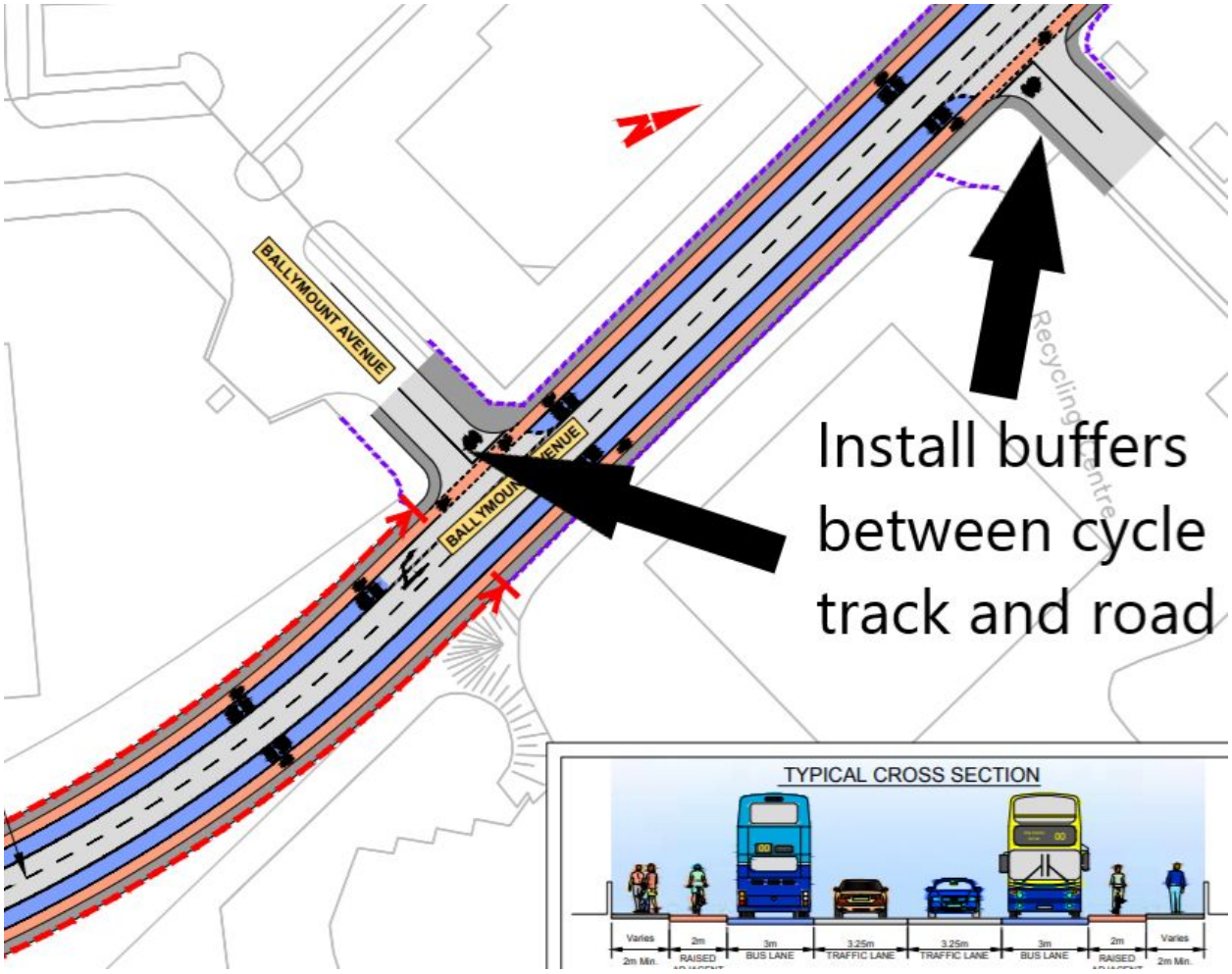
We recognise the constraints at the M50 bridge, and we support the NTA proposal to strongly consider widening the bridge, as this will ensure the design continuity along the proposed Greenhills Route.

3.8 Ballymount Industrial Estate and Greenhills Road (Maps 11 to 16)

We strongly recommend the closing of vehicle access to and from Greenhills Road and Ballymount Road Upper. This junction is narrow and dangerous with a steep climb out onto the Greenhills Road. The proposed re-routing of the bus and main route on to Ballymount Avenue facilitates the easy access to and from this area via Ballymount Avenue.

Given the volume of large vehicles going to and from Ballymount Industrial Estate, it is extremely important that buffers, raised tables, and other measures are used at junctions to reduce the speed of turning vehicles and to keep cyclists out of their blind zones.

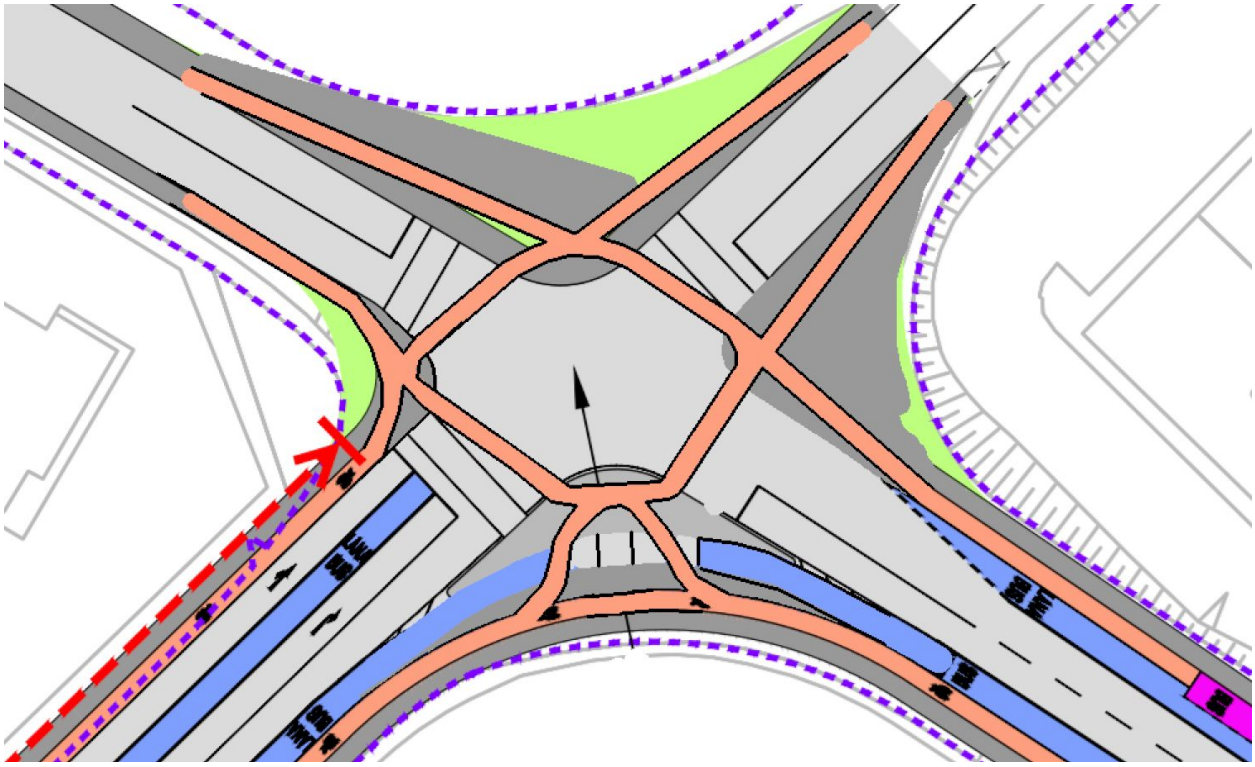
Also, Secondary Routes 7E and 8A of the GDA Cycle Network Plan go through the industrial estate, so the entrances and exits must be designed to fully accommodate cyclists.



3.8.1 Ballymount Avenue/Calmount Road junction

We welcome the removal of the roundabout at this junction. However, it is disappointing that the proposed replacement, as outlined in the drawing (Map 13) is little better for cyclists. All four arms of this junction are Secondary Routes in the GDA Cycle Network Plan, so it needs to be possible for cyclists to make all possible turning movements. We await details of the final detailed design in this area.

There's more than enough space for full Dutch style junction. While we would like to see the busy slip road removed, as it poses a danger for cyclists. The image below would be a possible workable compromise, with space between the cycle track and the bus slip lane



Alternate design for junction (map 13)

3.8.2 Lidl Roundabout and Calmount Avenue Link

While we understand the need for the proposed Calmount Avenue link to enable vehicle access to and from the closed section of Greenhills Road, and the Tymon/keadeen Avenue estate. We are not happy with the recommendation to build a roundabout at the new Lidl junction, unless it is designed to safely cater for cyclists and pedestrians. Cyclists travelling between Walkinstown and Tallaght area are likely to avail of the Old Greenhills Road under this proposed scheme, as it will be quieter and generally safer.

3.9 Walkinstown Roundabout (Map 18)

The proposed roundabout layout is certainly a significant improvement over the existing design. The removal of the third traffic lane and the inclusion of crossing points at every arm are welcome. However, we still have some concerns, and we feel that this proposed new design is still hostile and difficult for cyclists and pedestrians. It will still cause problems with fast moving traffic entering the roundabout. We recommend that some form of traffic calming be considered at all of the arms of this major roundabout.

While the consultation document describes the area around the roundabout as a shared space, we have been informed at a community forum that cyclists will be

expected to dismount. This is completely unacceptable. Requiring cyclists to dismount is an admission that the design does not accommodate cyclists.

Neither the options report nor the consultation document outline the reasons for not separating cyclists and pedestrians at this junction. This would remove the conflict and allow for parallel cycle and pedestrian crossings. If cycle tracks can safely be installed within the confines of the proposed shared footpaths, then that should be done. If not, alternatives should be considered to make that space available. A Dutch style designed roundabout should be seriously considered for this major roundabout, with prior PR work locally and nationally on the use of it.

All six corners of this roundabout are being used for car parking. Land take from some or all of these car parks could be used to facilitate a Dutch style cycle track around the roundabout.

Even if a cycle track around the entire roundabout is not feasible, there should at least be a bidirectional cycle track connecting Greenhills Road to Bunting Road. This is the recommended route for cyclists using this corridor, and the most direct route into the city centre, so it is reasonable that there will be a significant volume of cyclists using this route.

Five of the six arms of this roundabout have two approach lanes, and the traffic survey reveals that all six arms are heavily trafficked. Therefore, uncontrolled crossings over two entry lanes would be unsafe and inconvenient. Signalised crossings would be better, even if they would result in intolerably large amounts of time spent waiting to cross.

3.10 Bunting Road (Maps 18, 38-40)

We support the decision to use Bunting Road as part of the main corridor for cyclists as it is a direct and generally quiet road. However, we do have some concerns.

1. Through traffic. Bunting Road has had a history of fast through traffic, which is why severe ramps were installed. There is a case to be made for further restricting through traffic by introducing filtered permeability, and removing the existing ramps along this road.
2. Currently, footpath parking is extremely common on Bunting Road. This creates a hazard for cyclists, both from drivers crossing the cycle track to park, and from parked cars blocking the cycle track. As we have seen elsewhere in Dublin on roads like Brewery Road, segregated cycle tracks do nothing to stop people parking on the footpath. Therefore, Bunting Road should be designed in such a way as to discourage this behaviour.

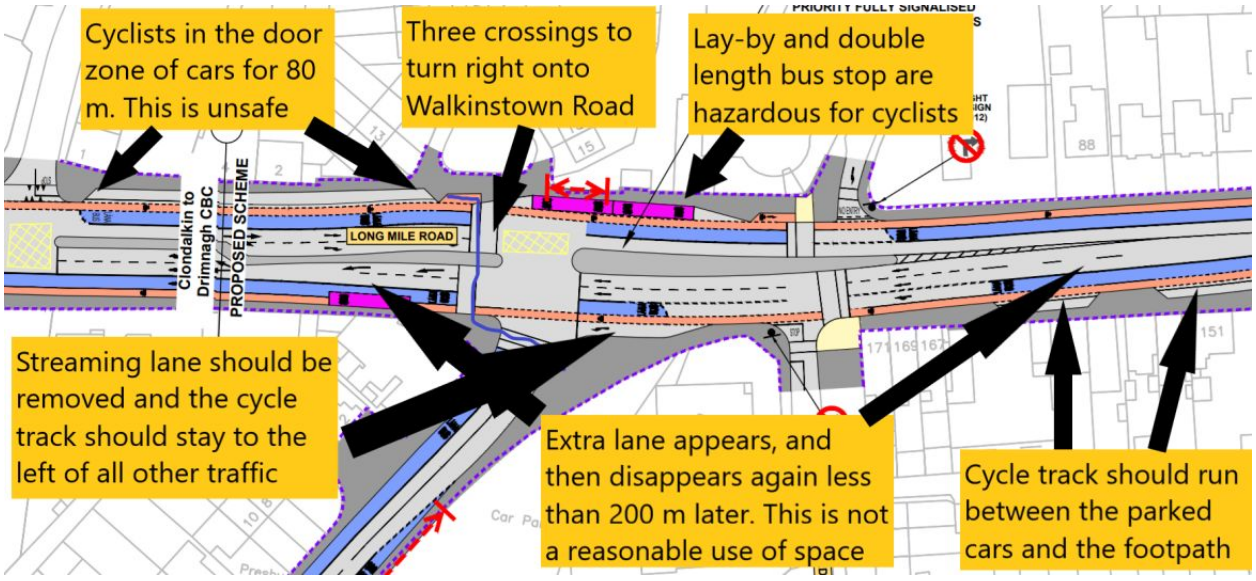
The junction between Bunting Road and Cromwellsfort Road is not at all safe for cyclists. For outbound cyclists, the cycle track suddenly disappears just before the

junction. Inbound cyclists also inexplicably lose their cycle track at the bend. It is not clear how an outbound cyclist on Bunting Road can rejoin the cycle tracks on Greenhills Road. How does a cyclist make a right turn?

3.11 Drimnagh Road (Map 21, 22)

We welcome the proposal remove the right hand turning options from Balfe and Slievebloom Roads, as this will reduce overall conflict and improve the operation of the traffic lights. But, the proposed design of the junction between Drimnagh Road and Walkinstown Road has a number of serious flaws, and should be reviewed.

1. The placement of bike lanes in the door zone of parked cars is dangerous. Instead, the bike lanes should run behind the parking bays and there should be space between the parking bay and the cycle track.
2. It is unclear why a bus stop layby is proposed at this junction, or why it needs to be double length. Removing the layby would enable a bus stop bypass to be designed.
3. Cyclists wishing to turn right onto Walkinstown Road have to cross three separate pedestrian crossings.
4. For westbound traffic continuing straight, a second general traffic lane appears before merging again less than 200 m later. It is highly unlikely that this improves the capacity or traffic flow of this road, and that space should be reallocated to make the junction safer for cyclists.



3.12 Kildare Road Detour (Maps 23, 26-30)

This proposed cycle route detour fails to meet the five needs of a cyclist. The route is both unsafe and indirect. It is a generally busy through vehicle route. The connection from St Mary's Road travelling northwards on to Kildare Road is not obvious.

Kildare Road is the proposed replacement for Primary Route 8 on Crumlin Road, which is being used for bus priority. The options report picked option CG1b, which included dedicated cycle tracks on Kildare Road.

There are no dedicated cycle facilities on Kildare Road. From discussions at the community forum we understand this is to prevent the need to remove on-street car parking for houses along Kildare Road without off-street car parking. However, it does not have to be one or the other. Kildare Road is wide enough to cater for proper cycle track design. This Google Image of the road shows the more than adequate width from fence to fence to enable a good design.
https://www.google.ie/maps/@53.3251238,-6.3132813,3a,75y,77.04h,90t/data=!3m6!1e1!3m4!1snAlk3KXE9L0MPDVfWL0xew!2e0!7i16384!8i8192

The current proposed plan for Kildare Road will not produce a high-quality cycle route capable of replacing Primary Route 8 on Crumlin Road. We suggest two alternatives are examined:

- Adding dedicated cycle facilities and maintaining on-street car parking
- Redesign the road to be compliant with the National Cycle Manual for an integrated cycle route.

3.12.1 A Safe Integrated Cycle Environment

The present proposals are not compliant with the National Cycle Manual for an integrated cycle route. Kildare Road could be designed in such a way as to provide a high-quality of service, where actual vehicle speeds are low, less than 30km/hour. However, the current proposals do not provide either a safe or high-quality integrated cycle environment as required by the NTA's National Cycle Manual.

There is a 50km/h speed limit and the road is not designed for low-speed either. The carriageway width varies from 7.1-8.5m wide. This is far too wide for a residential street. It is outside the 5.5m to 7m maximum suggested in the National Cycle Manual (pg 55). The proposals also include new and retained slip turns and large corner radii.

The proposed traffic reduction measures on map 27 are closer to bus priority than making the street safe for cyclists. This will filter out some through-traffic.

For a safe integrated cycling environment:

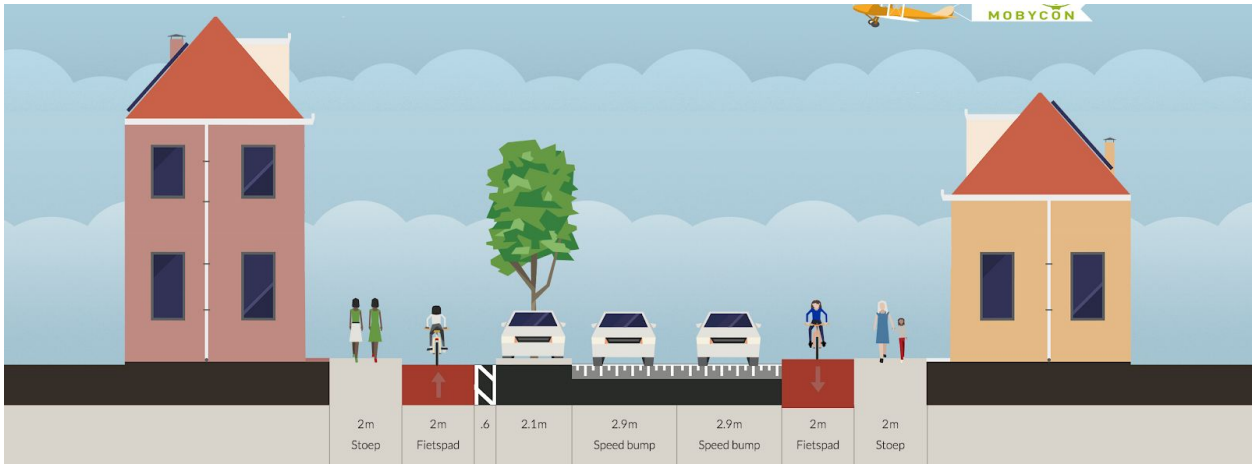
- More through-traffic must be filtered out
- The speed limit must be reduced to 30km/h
- The carriageway must be reduced to 5.5-7m wide (6m would be acceptable as this is a bus route)
- The larger corner radii reduced
- All slip lanes removed
- Junctions made tighter

3.12.2 Dedicated Cycle Facilities

The other option is to include dedicated cycle facilities on Kildare Road (or at least sections of it). It is possible to maintain on-street car parking and install dedicated cycle facilities. The cross-section of Kildare Road is quite wide for a residential street (15m-17.6m). We have attached Appendix A, which shows the cross-sectional width of Kildare Road.

The need for off-street car parking varys along the length of Kildare Road. Some houses have off-street car parking, others have the potential to add off-street parking and some houses have no access to off-street car parking.

Here's a potential cross-section for most of Kildare Road. At a limited number of pinch points there isn't space for on-street car parking and cycle tracks. Short sections without on-street parking could be acceptable.



A potential cross-section for 16.5m

It may not be necessary to provide cycle tracks on all sections of Kildare Road. However, there is space for dedicated cycle facilities while maintaining on-street car parking.

3.12.3 Sundrive Road Connection (Maps 28,29)

The proposed cycling route diversion along Slane Road is relatively nonsensical, and can be availed of by cyclists who wish to do so, even at present with no specific

markings. It makes more sense to run this route right through to the Sundrive Road/Clogher road signalised junction, and provide cycle tracks all the way from Crumlin Road, along Sundrive Road to this junction.

Alternatively provide a cycle route on Clogher Road to the Canal.

3.13 Crumlin Road (Maps 30, 31)

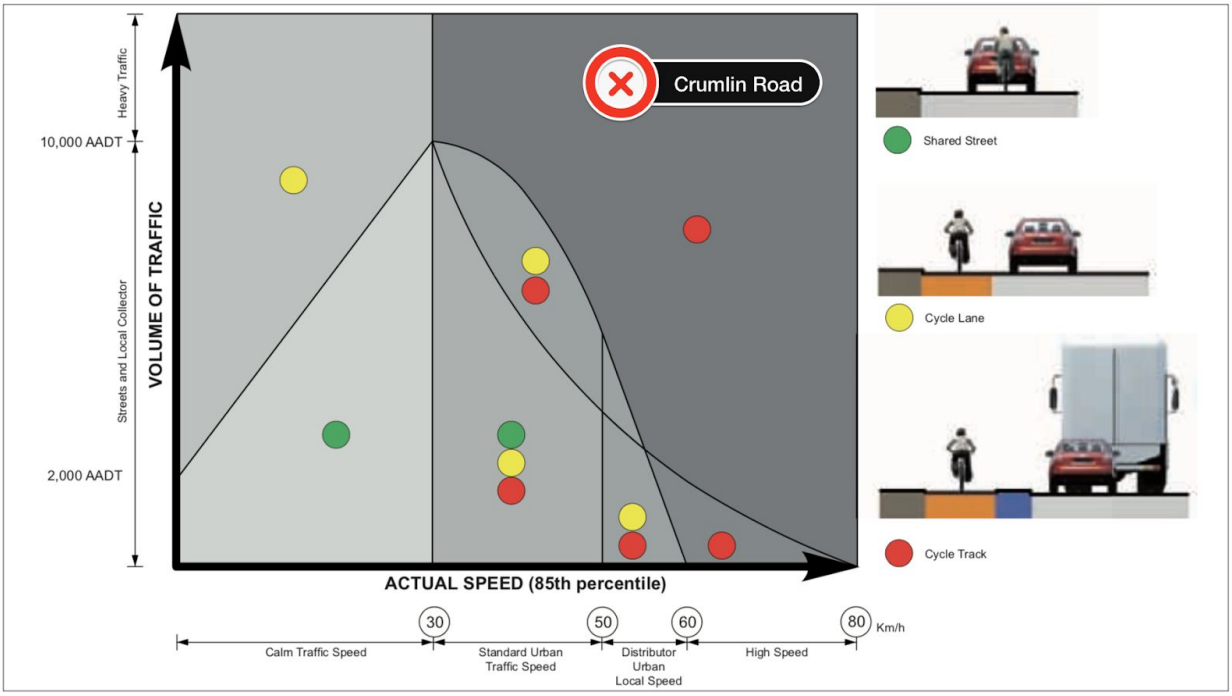
Crumlin Road from Sundrive Road to the Grand Canal (map 30-31) has no dedicated cycle facilities. The options report recognises that this stretch forms part of Primary Route 8 in the GDA Cycle Network Plan, yet no efforts were made to find space for cycle tracks here.

The options report begins with the unbending assumption that a bus lane and a general traffic lane must be maintained in both directions, even though DMURS states that these two modes should be considered last, not first.

The proposals to reduce the speed limit to 30km/h between Herberton Road and Dolphin Road, are a misreading of the National Cycle Manual (NCM). Are the schools the reasoning behind the lower speed limits on this section? The NCM uses actual traffic speeds and traffic flow to determine whether dedicated cycle facilities are required. No part of the suggested proposals will reduce the speed of traffic. Signage has limited effectiveness, as demonstrated by RSA regular free speed surveys.

There are traffic counts in Appendix C of the options report. These include morning peak hour PCU traffic counts. They show 1,642 two-way traffic movements on this section of Crumlin Road. The NCM says that peak hour two-way PCU flows can be used to estimate AADT. It estimates AADT at 16,420.

Even if the speed limit and actual speed of traffic were reduced then this Bus Connects proposal for Crumlin Road is still unsafe. It fails to recognise the guidance of the National Cycle Manual.



According to the options report, 3-4 m of land take would be necessary for the installation of cycle tracks. The report looked at three different sources of this land:

1. Front gardens on the northern side of the road. This was rejected because it would completely remove those front gardens
2. Front gardens on the southern side of the road. This was rejected because residents would no longer have sufficient space to park a car in their driveways.
3. Land take from both sides. This would preserve off street parking for residents on the southern side of the road, and it would retain some front garden for those on the northern side of the road. The report does not specify how much front garden houses on the northern side of the road would have left. It was rejected because "*any widening into properties on the northern side of the road would significantly reduce the amenity value of these gardens*".

No multi-criteria analysis appears to have been carried out to justify the rejection of these three options, and no other options were considered at all.

These options need to be properly analysed:

1. Provide cycle tracks for the first 200m of that section of road at either end where the space already exists
2. Commit to a full CPO. Roughly 3m of space needs to be found to provide minimum width facilities. This would reduce the general traffic lanes from 3.25m to 3m and provide 1.75m cycle lanes.

3. Remove a traffic lane and re-route inbound traffic via Herberton Road and the Canal back to Dolphins Barn bridge. This will require the junction at Crumlin Road/Sundrive to be redesigned to include a dedicated left-turn lane.

3.14 Dolphins Barn Bridge (Map 31)

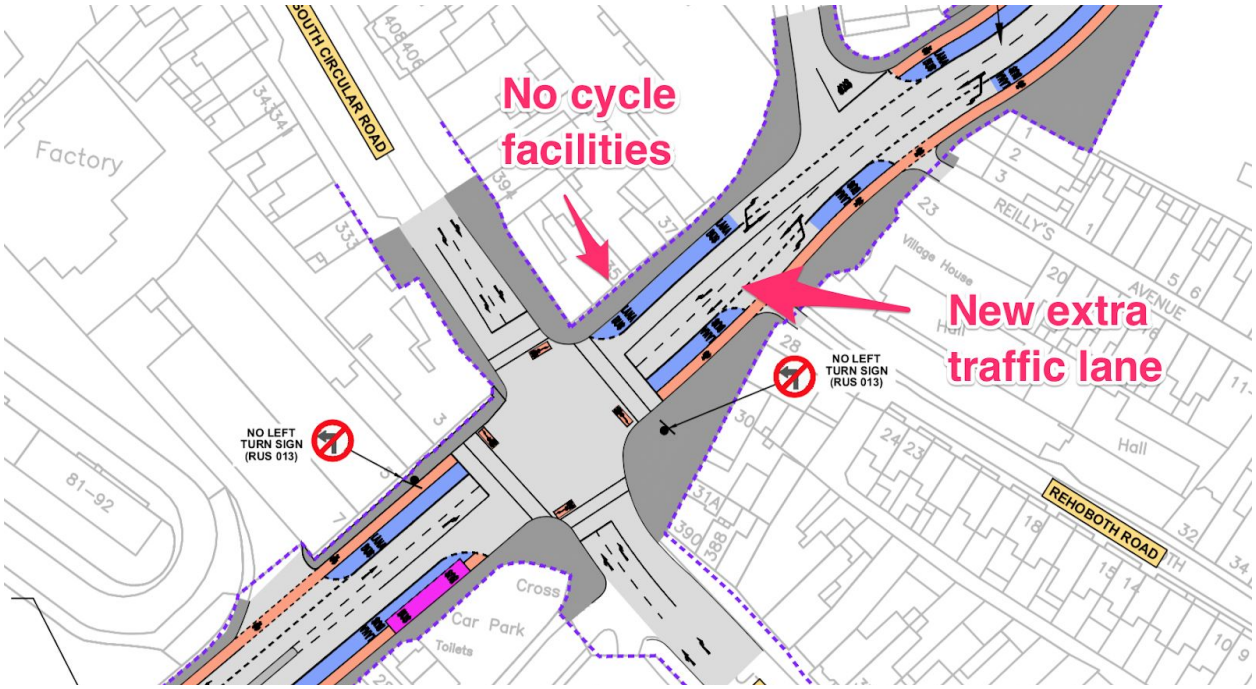
The cycle tracks on Dolphins Barn Bridge over the canal look less than 2m. The hatching down the middle of the bridge should be removed to provide any necessary width for the cycle facilities.

3.15 Dolphins Barn Crossroads (Map 32)

At Dolphin's Barn crossroads, we are delighted to see the improvements proposed, including the removal of the central islands and the single movement pedestrian crossings.

However, the safety of cyclists is compromised in order to provide better priority for buses, and turning motor traffic. The inbound cycle track is sacrificed east of the junction so that a new dedicated right turn lane can be added. This probably improves bus priority by bringing the bus lane to the junction. However, it is done at the expense of cyclists. It is one of the examples within BusConnects that shows bus priority is more important than the safety of cyclists.

The junction should be designed to provide segregated protected cycle tracks when turning onto South Circular Road where feasible. For example, at the eastern corner of the junction there is adequate space to provide a cycling slip turn.



Extract map 32.

3.16 Cork Street (Maps 32-35)

There are good improvements along Cork Street. However there are a few recurring issues:

- Lack of bus stop bypasses
- Too many bus stops (maps 34/35)
- No continuous footways and cycle tracks over side roads
- On-street parking meaning the cycle track will turn into a painted cycle lane

3.18 Dean Street (Map 36)

The layout could be designed to give better protection to cyclists at the intersection with St. Luke's Ave. The main route inbound for cyclists will be turning right onto Dean St., there will be a pinch point where turning busses/vehicles swing toward the cycle track (there is also currently a continuous metal railing along the edge of the footpath along Dean St.). Protection should also be provided on the left turn from Dean St. onto St. Luke's Avenue outbound.

Ideally the pocket left turn/slip lane onto Patrick St. should be designed out as it will require vehicles to cut across the cycle track and will place eastward travelling cyclists between two traffic lanes, in the so-called 'orphan' situation. A protected left turn segregated cycle track should also be provided from Dean St. onto Patrick Street to accommodate the flow of cyclists in the direction of this CBC.

Outbound - The provision for right turning cyclists from Patrick St onto Dean St. is extremely poor and does not appear to have been considered in the plans. This junction needs to be designed with protected turning provision for cyclists provided.

The Dean St./Patricks St. junction should be designed as a protected junction, ensuring a coherent junction for cyclists at the interface with the Kimmage CBC.

3.19 Patrick Street (Maps 36-37)

The on-street car parking should be reduced to the absolute minimum or ideally removed altogether on Patrick Street. It reduces footpath width, leaves the cycle track unprotected, and requires the median to be removed. The footpath and cycle track should be made continuous and raised across the numerous side streets.

3.20 Christchurch Junction (Map 37)

The Christchurch junction has been voted many times by our members as close to the most frightening junction in Dublin for pedestrians and cyclists. It's disappointing that little is being done to upgrade the safety and readability of the junction for pedestrians and cyclists. Pedestrians are still being asked to make multiple crossings. Cyclists are still expected to weave across multiple lanes of traffic. This is along a strategic pedestrian route (Dubline) in the Dublin City Development Plan.

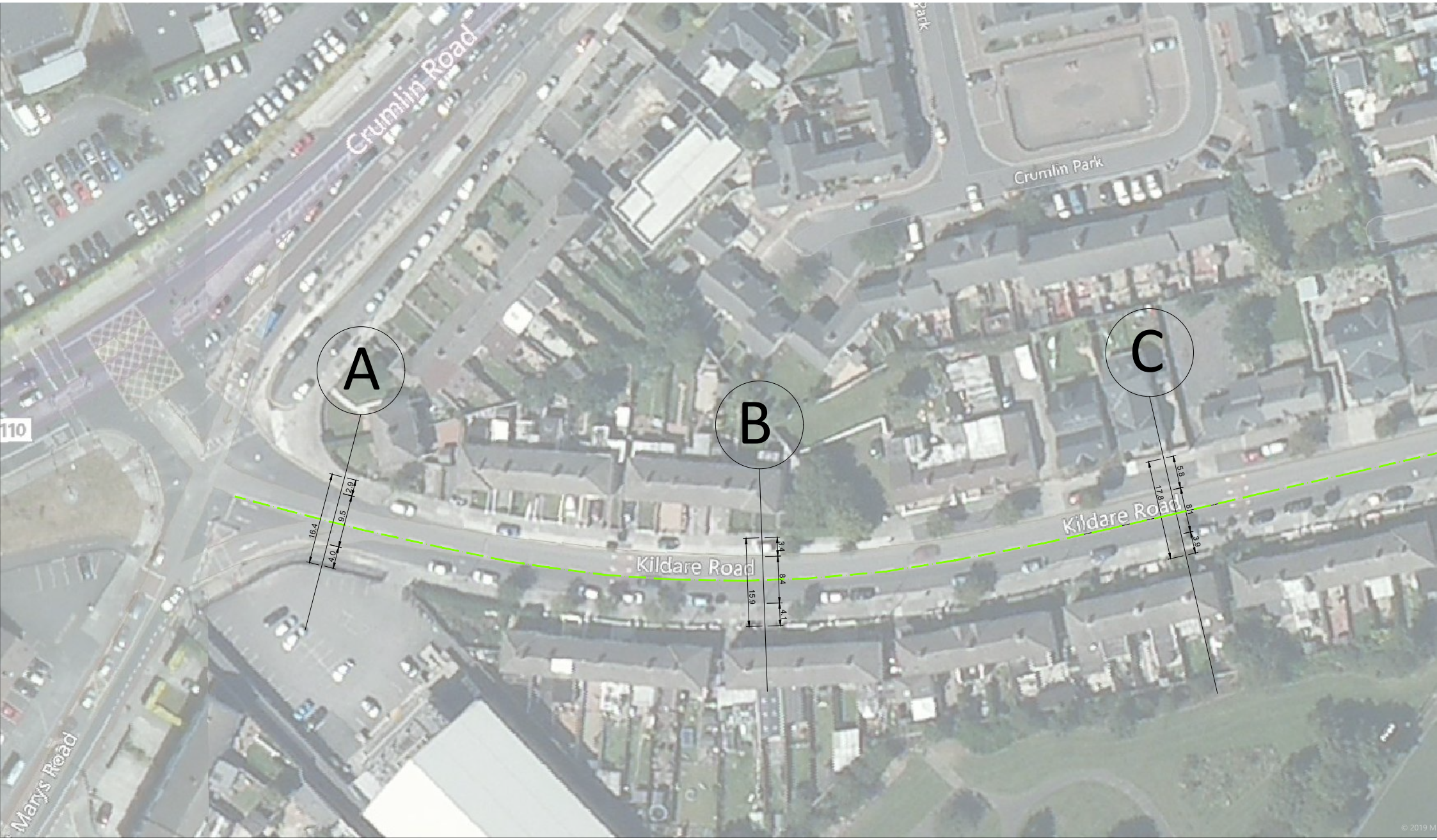
Cycling infrastructure should be extended from this junction to connect with the proposed Liffey Cycle Route and to provide a key cross-city link to the north side of the city.

4.0 Conclusion

There are huge opportunities along this route to provide high-quality cycle infrastructure. Unfortunately this Core Bus Corridor fails to live up to those opportunities in many places. There is lots of work to be done on this corridor before it is safe for people of all ages and abilities to cycle. We trust that our comments and observations will be taken into account as the design advances.

Kevin Baker
Dublin Cycling Campaign
% Tailor's Hall,
Back Lane,
Dublin 8

Dublin Cycling Campaign,
Registered Charity Number (RCN): 20102029


Crumlin Road
Crumlin Park
Kildare Road
Kildare Road
Mary's Road
110
A
B
C
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12.9
9.5
4.0
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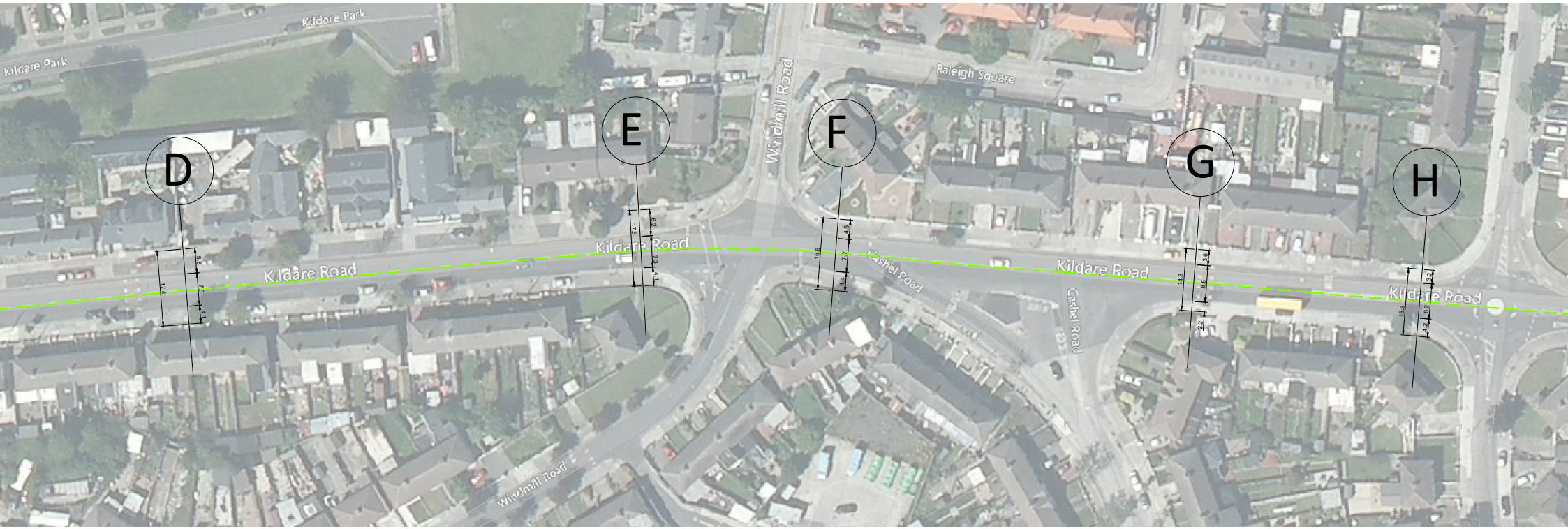
D
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