Core Bus Corridor 8: Clondalkin to Drimnagh - 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.

There are some very welcome and significant improvements for cyclists along this route. The largest issue in this area will be the effect of HGVs and heavy traffic volumes on cyclists safety. Special attention needs to be given to ensure that cyclists are not placed in HGV blind spots at junctions or entrances to industrial lands.

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

There are some significant improvements for cyclists along this route. This is not an area where you'd frequently see cyclists because the area is dominated by large volumes of heavy traffic. These proposals will go a long way to reducing that traffic dominance by making cycling a real option for the first time. We particularly welcome the use of two-way cycle tracks along the Naas Road, which is particularly hard for cyclists to cross.

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.

Without a doubt the BusConnect's proposals, if implemented, will make cycling safer in Dublin. However, they will not enable people of all ages and all abilities to cycle because of the lack of segregation in many places. This will prevent cycling from realising it's full potential as a transport solution in Dublin.

Many of our observations refer to the lack of segregation provided by the current designs at various locations. Along the routes there are segregated cycle tracks, but at some locations segregated cycle tracks 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 will not enable people of all ages and all abilities to move to cycling. There are design solutions to these problems, like parking-protected cycle tracks, bus stop bypasses for cyclists, or using fully segregated junction designs like the Dutch-style protected junction.

2.3 Scheme Objectives - Pedestrian Inclusion

The scheme objectives, included in this CBC Route Selection Report, mention bus priority provision, and implementing the GDA Cycle Network Plan along this corridor to the specified quality of service. There is no mention of pedestrians in the scheme objectives. Pedestrians are, more often than not, bus users in the end.

We note that there are many pedestrian improvements already contained in the proposals. However, there are a number of pedestrian issues within these designs like staggered pedestrian crossings, which hinder efficient pedestrian movement. We recommend that pedestrians also be included in the scheme objectives in later rounds of this process. This is to ensure that pedestrians are not disadvantaged by the proposals. It should be noted that both the Dublin City Council Development Plan (section 8.4) and DMURS (section 2.2.2), include a transport mode hierarchy that places pedestrians first, cyclists second, public transport third, goods vehicles fourth and general traffic fifth. This also applies to all other Dublin Local Authorities.

2.4 HGV Influence

The biggest issue for cyclists in this area will be the large number of HGVs. For example, special attention will need to be given to the how HGVs will cross the cycle tracks to enter premises so that cyclists are not placed in the blind-spot of HGVs. Using

the buffer space side road entry design from section 2.7.2 below will help to mitigate this problem.

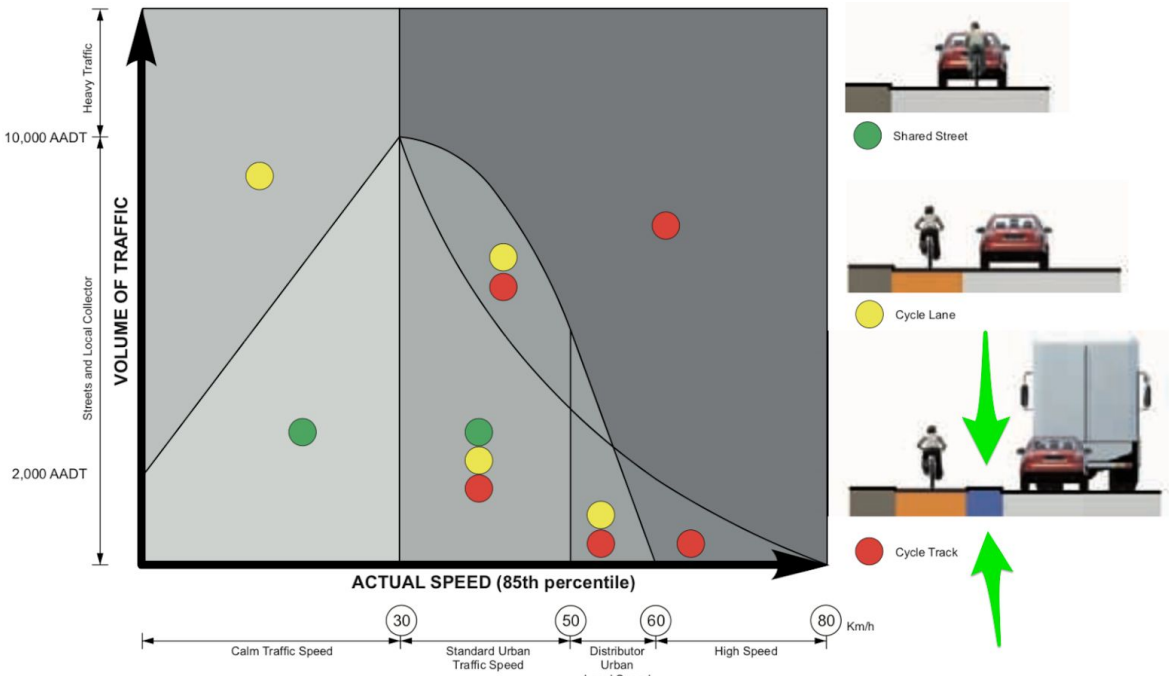
2.5 Buffer Space

The NTA's own National Cycle Manual (NCM), section 1.7.4, recommends that there should be 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 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.

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

Rationalising the number of right turn locations could allow for the central median to be narrowed so that a grass verge buffer space can be provided 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 maybe 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

2.6 Junction Design

Many of the proposed junctions on this Core Bus Corridor do not meet the criteria in the NTA's National Cycle Manual. There is use of streaming lanes (an orphaned cycle lane between two traffic lanes) at junctions along this route.
In section 4.4.4, on junction approaches the NCM states that:

- *Streaming cycle lanes can only be used in low traffic speed environments where there is minimal speed differential between cyclists and adjacent traffic*
- *Streaming is not suitable along HGV routes*
- *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*

In essence the use of streaming cycle lanes at junctions goes against the manual advice. These concept junction designs are also not suitable for all ages and abilities.

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

Greater segregation for cyclists is needed at major junctions along the route in order to enable and encourage more people to cycle. Segregated cycle tracks alongside roads provide segregation through space. 'At junction' segregation should be provided through specific allocated crossing time instead. Cyclists should be provided with their own set of traffic lights and their own phase, sometimes combined with the pedestrian phase on parallel crossings. This means that cyclists are never moving at the same time as traffic that would cross their path.

2.6.1 Protected Junction Design

This form of junction design has been achieved along the soon to be constructed 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.

5 Lamps Junction along North Strand - Junction Design Template

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 in the middle of the road that frequently are too small for bikes to easily manoeuvre around.

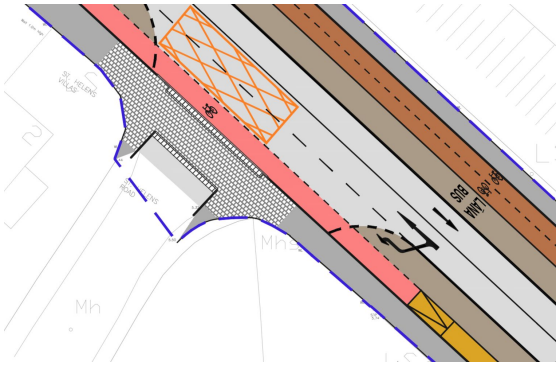
There is a good explanation of the principles of this design at www.protectedintersection.com.

2.7 Side Roads

At side roads it should be clear that cyclists and pedestrians have priority over traffic exiting or entering to or from the main road.

2.7.1 Continuous Footpaths/Entry Treatment

Infrastructure treatments, such as 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

2.7.2 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 turning 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 visible to the driver without the use of mirrors. The use of different surface treatment, in this case block paving, helps to highlight the conflict, indicates a change in driving conditions from main road to side road, and acts as a traffic calming measure.

This kind of design could be suitable on some of the outer sections of the Malahide Road where the cycle track will cross over entrances to industrial areas or garages. It's important at these locations to ensure the cycle track does not place cyclists in HGVs' blind zones.

2.8 Integration with GDA Cycle Network Plan

A single cycle route is only useful to people if their origin and destination are on or near the cycle route. A cycle network, where many cycle routes are connected together is far more useful to people. Similar to how a bus network is more useful than a single bus route.

This cycle route intersects with a number of other cycle routes included in the GDA Cycle Network Plan. This route should plan for the connection with these current or future cycle routes. Where possible, the ends of cycle lanes/tracks on these routes linking into the CBC cycle route should be constructed as part of the Core Bus Corridor. That will ensure that these junctions don't need to be re-designed when future cycle network projects are progressed.

2.9 Bus Stop Bypasses

Bus stop bypasses for cyclists should be the norm, as part of these designs. There are many reasons we'd encourage the design team to include bus stop bypasses at all bus stop locations:

- Bus stop bypasses are recommended by the NTA's National Cycle Manual, given the 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 operate more efficiently at stops because bus drivers will not need to wait for a slow cyclist to pass the bus stop before pulling in

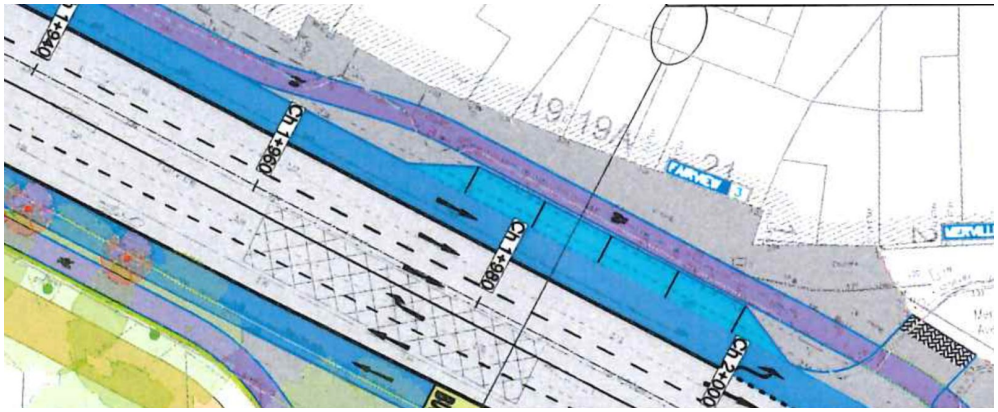
2.9.1 Bus Stop Locations

There is a strong case to be made for the rationalisation of bus stop locations. We strongly urge the review of bus stop locations and frequency. This will ensure greater efficiency of the bus service but also allow for greater consideration of the preferred bus stop bypass design for safety of all commuters.

2.10 Parking Inside Cycle Lanes

Car parking should ideally not be located inside the proposed cycle track. This implies that the cycle track will convert into a painted cycle lane and cyclists will lose segregation from traffic.

Best practice would be to route the cycle track on the inside of the car parking and to provide a buffer space between the car parking and the cycle track for the 'door zone'. A parking protected cycle was the design used for the recent Fitzwilliam Street cycle route by Dublin City Council, and the North Strand/Fairview cycle route at Marino Mart.



Am example parking protected cycle track in the North Strand/Fairview cycle route AECOM/ROD for Dublin City Council/NTA. Cycle track in purple. Parking in light blue.

2.11 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 network cycle routes intersect with this Core Bus Corridor. As the CBC will host a super high-frequency bus route it makes it more likely that people will cycle to the spine, and avail of an efficient bus service.

2.12 Development of Public Realm

We urge the Bus Connects team to clearly indicate where these benefits will arise along all the newly designed routes, as these positive developments will be critical in 'selling' the project, as was the case for the North Strand/Fairview cycle route.

3.0 Route Observations

3.1 Woodford Walk Junction

The Woodford Walk junction should include changes in order to make it more pedestrian and cyclist friendly. The slip turns should be removed (DMURS 4.4.3) in order to improve safety for pedestrians and cyclists. The cycle track should continue to the junction, instead of abruptly stopping short. This should allow cyclists to continue straight, turn left or turn right onto the Grand Canal Greenway.

3.2 M50 Underpass

We welcome the use of the Grand Canal Greenway at the M50 as part of the proposals. We request that special care be given to improving the passive surveillance of the Greenway at this location as a result. The Greenway doesn't feel safe at night. Removing some of the foliage and improving the lighting would go a long way to making the area feel safe. Perceived safety is one of the five needs of a cyclist in the National Cycle Manual.

3.3 Riverview Business Centre

We welcome the decision to replace the roundabout at the entrance to the Riverivew Business Centre (map 3) with a signalised junction. We'd however recommend fully segregating cyclists through this junction by not having a mixing zone for dedicated left-turn lanes. These are HGV entrances and the proposed cycle tracks place cyclists into a HGV blind zones. Instead keep the cyclists left of traffic at all times at this junction and provide buffer space turns.

3.4 Oak Road Junction

All arms of this junction (map 4) are designated routes of the GDA Cycle Network Plan either secondary 8C or 8C2. It should be safe for cyclists to travel in all directions at this junction. The 4 slip lane turns should be removed and replaced with dedicated left-turn lanes where appropriate. Given the level of HGV traffic a fully segregated protected junction should be considered.

3.5 Diageo Bailey's Entrance

The entrance to the Diageo Bailey's Entrance will see a large volume of traffic and HGV movements. Given the space available a buffer space priority junction for cyclists

should be provided. This will keep cyclists out of blind zones, allow turning traffic to wait for a passing cyclist without delaying buses and encourage priority for cyclists.

3.6 Kilkeen Junction

The slip lane turns here should be reconsidered. Segregating cyclists from left-turning traffic also needs to be strongly considered along here.

3.7 Naas Road Junction

The Naas Road junction is a beast of a junction that will be hard to provide a safe and direct route through for pedestrians and cyclists. We welcome to the use of a two-way cycle track along the Naas Road to help mitigate this fact as this reduces the number of time consuming crossings cyclists will need to make.

3.8 Two-way Cycle Track on Naas Road

We have a number of minor recommendations for the two-way cycle track. Install a buffer zone of 0.5-1m between the two-way cycle track and the road. This will allow the lanes on the cycle track to be swapped so that cyclists will cycle on the left, as they would expect.

At the toucan crossing on map 7 provide a small jug instead of creating a shared space. Shared spaces at toucan crossings place lampposts and pedestrians in the path of cyclists going straight creating unnecessary conflict.

At the HGV yard entrance on map 8 provide more buffer space so that cyclists are not in the blind zones of HGVs. Provide a slightly raised table in order to make the conflict area more legible (section 2.7.2 above).

3.9 Kylemore Luas Stop

At Kylemore Luas stop there is a good opportunity to encourage multi-modal transport between bike, Luas and bus. The proposed pedestrian and bike crossing locations seem far away from each other discouraging connection. Adding bike parking to this area will enable people to cycle from locations like Nangor Road and Park West to the Luas.

3.10 Long Mile Road

On the Long Mile Road there is a cycle track directly adjacent to the road and a 4m wide footpath. Consider reducing the footpaths to 3.5m so that we 0.5m buffer space can be provided between the cycle track and the road.

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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