

Core Bus Corridor 10: Tallaght to Terenure - 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 welcome many of the upgrades for cyclists proposed along this route. There are some significant improvements. However, there are sections of the route that will be unsafe for cyclists, particularly around Templeogue Village and Old Bridge Road. Widening the road in Templeogue Village to four lanes is bad for pedestrians, cyclists and the public realm.

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

2.0 General Observations

2.1 There's Good In Here

There are some good and very welcome improvements along this route. Particularly along Templeogue Road between the M50 and Old Bridge Road. However there are some significant issues with this route that need improvement.

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 Primary Cycle Route Width

This CBC will deliver on part of primary route 9A 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 the 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	В	В

We recognise that achieving a 2.5m wide cycle track on all portions of this route may be challenging, however it is possible to achieve this width along large segments of the route by widening into the median or using grass verges beside the proposed cycle track. In constrained areas a cycle track width of 2m is acceptable, but should be implemented with caution.

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 <u>can only be used in low traffic speed environments</u> 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 <u>should not exceed 30.0m in length</u>

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 <u>www.protectedintersection.com</u>.

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 Templeogue Road Two-Way Cycle Track

In the cross-section of the footpath and two-way cycle track on map 1-2 it shows the cycle track and footpath directly adjacent with no vertical height difference, which implies there is a painted line between the two. We'd recommend that some form of segregation is provided between the cycle track and the footpath. This is particularly important for the visibly impaired so that they know they are walking on the footpaths and not on the cycle track.

There's two options: vertical or horizontal segregation. There is the space for horizontal segregation so that would be our preferred option. A small grass buffer strip between the footpath and the cycle track. The other option is vertical segregation, place the footpath higher than the cycle track with a chamfered curb between the two. The Royal Canal Phase 2 is a good example of this.

We also recommend swapping the footpath and the cycle track. This would place the footpath along the building line, which would allow for better segregation of cyclists and pedestrians at the Spawell Roundabout because there would be no need for a shared space mixing zone.

3.2 Templeogue Road Southside Cycle and Pedestrian Facilities

There are no footpaths or cycle facilities proposed along the southside of Templeogue Road on map 1-2 in order to link up to the M50 underpass on this side of the road or local facilities. This would also provide a more direct route for outbound cyclists in particular by allowing them to avoid the slow two-stage crossing of Templeogue Road at Spawell.

3.3 Spawell Roundabout

There is sufficient space to segregate pedestrians and cyclists at the Spawell Roundabout. This will be made easier by swapping the footpath and cycle track on Templeogue Road (see 3.1 above).

It should also be noted there are already cycle tracks along Wellington Lane that should be tied into this scheme in order to create a coherent network for cyclists.

3.4 Templeogue Road Buffer Space

On map 4 outbound there is no buffer (a grass verge) between the cycle track and traffic on Templeogue Road. All sections have high traffic volumes. A small buffer between the cycle track and the traffic is required. This space could be found by setting back the footpath and cycle track from the edge of the road or by widening into the median.

3.5 St Michael's House and Cheeverstown House Entrances

We welcome the use of a raised table at the entrance to St Michael's House/Templeogue House and Cheeverstown House (map 4). This should be used as part of a mechanism to provide cyclists priority over these private entrances as required by the National Cycle Manual.

The shared space either side of these entrances should be replaced. For the St Michael's House entrance (north side of Templeogue Road), this will be made easier if the footpath and cycle track are swapped to place cyclists closer to the road.

3.6 Outbound Bus Stop (Map 4)

The outbound bus stop on map 4 includes a huge number of conflicts between pedestrians and cycle tracks. Pedestrians not using the bus but continuing on down the footpath are forced to cross the cycle track twice. This is not an approved design for a bus stop bypass in the National Cycle Manual. Either widening into the median to find space for a footpath or relocating the bus stop to before the toucan crossing should be considered.

3.7 Toucan Crossing (Map 4)

The toucan crossing and the median waiting zone do not look large enough to comfortably mix pedestrians and cyclists.

We also note that there is an uncontrolled right turn into Corrybeg at this location. Will traffic be able to correctly judge four moving lanes (two general traffic, one bus lane and one cycle track)? We suggest this be considered at the next design phase.

3.8 Old Bridge Road Junction

Special attention needs to be given to cycling movements at this junction as the current situation is unsatisfactory for cyclists. The majority of cycling traffic in the morning peak comes from Old Bridge Road (from Knocklyon side) and travels towards

Templeogue Village. Even under the new plans this cycling movement is not well catered for.

Old Bridge Road is also secondary route 9A and the connection to the future Dodder Greenway (primary route 9A), which will run along Butterfield Avenue. It is important that this link is improved as part of this scheme in order to create a strong cycling network and to cater for the existing cycling demand. The slip turn should also be removed inline with DMURS section 4.4.3.

Given the high traffic flows, high speeds, large number of turning movements and high cycling demand at this junction we recommend cyclists are fully protected at this junction and provided with their own traffic lights, potentially at the same time as pedestrians if on parallel crossings.

3.9 Parallel Access Road (Map 5)

The angle of entrance to the parallel access road on map 5 across the cycle lane will encourage vehicles to cross the cycle lane at speed. Can one of the two entrances to this parallel access road be closed off to remove the conflict with cyclists and remove the angled entrance.

3.10 Templeogue Road (Map 5-6) and Templeogue Village

The current proposals are bad for cyclist safety and bad for the public realm of Templeogue. It is clear that Templeogue Road between Cyprus Grove and Templeville Road (map 5-6) is attempting to do too much with too little space.

Templeogue Road (map 5) has advisory cycle lanes in both directions. Under the proposals cyclists will be significantly worse off. In some areas cyclists will share with buses but in other areas share with general traffic. This link is a key link for cyclists heading towards primary and secondary schools, Rathmines and the city centre.

The proposals for Templeogue Village are seriously disappointing with the proposed widening the road to four traffic lanes destroying the public realm. The transport function of this road should not be overriding the place function within Templeogue Village. The plans also remove existing cycle tracks in order to create more space for motor traffic. It also seems to ignore the proposals from South Dublin County Council (SDCC) to significantly upgrade the public realm as part of the Templeogue Village Initiative.

3.10.1 Alternate 1: One-way Outbound

There are already traffic diversions in the area that could be extended. Templeogue Road from Fortfield Road (map 7-10) will be local access and bus only inbound. Inbound traffic will be diverted onto Cypress Grove Road and Springfield Avenue.

Our recommendation for Templeogue Road (map 5) is to make it one-way for general traffic outbound, which matches other sections of Templeogue Road (map 7-10). Local access could be allowed to Templeogue Village from both sides by allowing inbound traffic but by providing a bus gate near the junction of Templeville Road/Springfield Avenue. This would prevent through-traffic but allow good local access to retail in Templeogue Village.

This would reduce the need for a dedicated bus lane allowing 3 metres of space to be reallocated to either the public realm in Templeogue Village or segregated cycle tracks.

This option might require the upgrade of nearby existing roads in order to cater for increased traffic such as Fairways, which links the parallel Butterfield Avenue to Springfield Avenue.

3.10.2 Alternative 2: Use Bus Priority Lights at Templeogue Village

The current proposals to build two dedicated bus lanes through Templeogue Village will destroy the public realm. The road width could be reduced using a set of bus priority lights either side of Templeogue Village. That would reduce the road to 2 lanes within the village, drastically improving the public realm or providing space for dedicated cycle tracks. It would add another delay point to buses but it would drastically improve Templeogue Village for pedestrians and cyclists, who are higher on the transport hierarchy.

However, this alternative would do little to improve the conditions for cyclists on Templeogue Road (map 5), which our alternative 1 option would do.

3.11 Templeville Road

More traffic will be using Templeville Road because of the proposed traffic restrictions in the area. Can the advisory cycle lanes on Templeville Road be upgraded to mandatory cycle lanes or segregated cycle tracks. This is a link towards St Pius's National School on Fortfield Park and Templeogue College secondary school.

3.12 Dodder Greenway Connection

There is a proposed connection between the Dodder Greenway and Templeogue Village on Riverside Cottages. More needs to be done to easily allow cyclists turn in and out of Riverside Cottages.

3.13 Templeville Road/Springfield Avenue Junction

We welcome the removal of the two slip lanes and the addition of a cycle track on Springfield Avenue.

There are currently right-turn bans at this location and the proposed traffic restrictions mean that there will be more turning movements than straight ahead traffic. Redesigning this junction as a protected junction for cyclists would remove conflict between turning vehicles and cyclists, reduce the complexity of the junction and it would make pedestrian crossing distances smaller, allowing for the removal of the staggered crossings that are discouraged by DMURS.

3.14 Fortfield Road Junction

We welcome the reduction in corner radii of Fortfield Road (map 7), however our recommendation would be to install the tail end of cycle tracks on this road as it is a designated feeder route in the GDA Cycle Network Plan.

We suspect that most inbound commuter cyclists will not use the cycle track through Bushy Park as it is somewhat indirect and this section of road will be bus and local traffic only. However, the Bushy Park cycle track will be valuable to novice cyclists or those with kids. It is also not clear how a cyclist makes a right turn from Templeogue Road onto the two-way cycle track in Bushy Park. Should a jug turn or a turn box be provided?

The footpath layout near the entrance to Bushy Park is also convoluted and includes shared spaces. As a result we expect that many pedestrians will just walk along the cycle track as it is the most direct option. A more direct footpath should be provided and the shared space removed.

3.15 Two-way cycle track in Bushy Park

There is conflict here already between the pedestrian and the cyclists with the existing one-way cycle track. We recommend some level of segregation between pedestrians and cyclists similar to section 3.1 above.

The width of the cycle track is only 2.5m wide and the width of the footpath is only 1.5m wide. We'd encourage the design team to increase the width of both paths to 3m and 2m respectively as this will improve quality-of-service and comfort levels for all.

3.16 Templeogue Road (Map 9 & 10)

We welcome the installation of a full width cycle track beside the outbound general traffic on Templeogue Road (map 9-10). We would recommend extending the outbound cycle track to the junction, CPO'ing a small section of the car park of Eddie Rocket's if necessary. We recognise that there is not the width to provide a cycle track on the inbound side and that cyclists will be forced to share with buses and local traffic only.

We welcome the use of the 30km/h speed limit in this sharing zone but we ask what measures are being installed to encourage a 30km/h speed limit. The reduction of traffic lanes to 3m is a good start. Could the crossings on map 9 and map 10 be converted into a bus-friendly raised pedestrian crossings. This would help indicate that this is a low-speed zone.

3.17 Rathdown Drive

As a result of the traffic restrictions on Templeogue Road Rathdown Drive could become a new rat run. Measures should be put in place to prevent rat running down the quietway. We also note that Rathdown Drive has a 50km/h speed limit. This should be reduced to 30km/h.

A potential solution would be to restrict traffic from Rathdown Crescent onto Rathdown Drive. The roundabout on Rathdown Drive is unnecessary, it has 3 arms, one of which serves approximately 2 houses. The roundabout in its current form is restrictive to cyclists entering from Templeogue Rd.

We would also like to see the entrance from the cycle lane onto Templeogue Road reconfigured. The proposed (existing) 90 degree angle isn't comfortable and places pedestrians and cyclists into a blind conflict. A wider entrance for cyclists with a more gradual angle off Templeogue Road would resolve these issues.

Another potential option is an off-road cycleway through the green area alongside Rathdown Drive. There is already a worn path through the trees and it is a clear desire line.

3.18 Terenure Place

There are no cycle facilities proposed for Terenure Place. There are existing advisory cycle lanes. Without cycle facilities here this will become a missing link between the cycle routes of this Core Bus Corridor and CBC12: Rathfarnham.

We have attached an alternate concept design as Appendix A to the end of this submission. With some work protective corner island could be installed in this plan, which would better protect cyclists from vehicles invading the cycle lane.

4.0 Conclusion

We think there are many things along this route that could be improved for pedestrians and cyclists.

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.

Kevin Baker, John Shanahan, Mairead Forsythe Dublin Cycling Campaign % Tailor's Hall, Back Lane, Dublin 8

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

õ TERENURE ROAD NORTH RATHFARN CORRIDOR ROAD: TALLAGHT-TERENURE CORRIDOR TEMPLEOGUI TERENURE ROAD WEST

Appendix A: Terenure Place Alternate Design