Core Bus Corridors Design Recommendations

17th April 2020

1.0 Introduction

Dublin Cycling Campaign is a membership-based charity that advocates for better cycling conditions in Dublin. We have a vision for Dublin that is a vibrant city where people of all ages and abilities choose to cycle as part of their everyday life.

Broadly we welcome the improvements in the Core Bus Corridors from the last round of public consultation. There have been marked improvements in a number of locations. However, some areas have disimproved.

We understand that the designs are a work in progress. This submission examines the design approaches taken across all corridors and makes recommendations for which types of designs we want to see used across all of the Core Bus Corridors.

2.0 Cycling for All

The goal of the cycle routes must be to enable people of all ages and abilities to cycle. Cycling can be an option for almost everyone if we design for it correctly.

If the cycle routes do not measure up to international best practices we will not see kids cycling to school with their parents, teenagers cycling to the cinema, commuters cycle to work or older people cycle to the shops.

Only by enabling most people all people to cycle, by making it a realistic choice, can we deliver the potential modal shift changes. Everytime a new person starts cycling society reaps the benefits of improved public health, reduced congestion, and better

liveability of our urban places. The maximum benefits of cycling are only achieved by designing high-quality cycle routes that enable the largest cross-section of society to cycle.

3.0 High-level Recommendations

In the previous round of public consultation Dublin Cycling Campaign had nine concerns that we thought would prevent these changes living up to their potential:

1. Discontinuity of cycle routes
2. Level of segregation
3. Shared spaces
4. Bus stop bypasses
5. Quality of design of quiet cycle streets
6. The effect of on urban places, particularly urban villages
7. How these cycle routes fit into the GDA Cycle Network Plan
8. The need for more traffic reduction to free up space for people walking, cycling and using public transport
9. Design consistency

There have been changes that have addressed our concerns in some locations that we hope will be more widely rolled out as the design of each route develops. In this round we have 7 overarching concerns.

3.1 Discontinuity of cycle routes

Our biggest concern was that the cycle routes were non-continuous. To enable more than just the brave and confident to cycle the cycle routes need to be continuous. A cycle route is only as good as its weakest section. Bus lanes are not cycle infrastructure.

We welcome improvements like continuous cycle routes at Donnybrook (CBC13, map 9) using bus priority lights, at Dolphins Barn (CBC9, map 32) or Clogher Road (CBC9, map 45-47). However, there are still routes without continuous cycle routes especially James Street, Thomas Street and High Street (CBC7, map 25-28).

There are also new gaps in cycle routes like Terenure Road East (CBC12, map 6-7) on a major desire line to Rathmines and the city centre.

3.2 Level of segregation

The majority of the concerns in our 16 route submissions were about the level of segregation provided to cyclists. Full segregation from heavy traffic is key to providing a safe environment for people of all ages and abilities. The level of segregation needs to provide an environment that is safe and appears safe before people will swap to cycling.

3.2.1 Parking Protected Cycle Tracks

We are delighted to see more use of parking protected cycle routes for example at Drumcondra (CBC2, map 32) or Glasnevin Cemetery (CBC4, map 14). However, there are still large sections like Cork Street (CBC9, map 34) without parking protected cycle routes. We recommend wider deployment of parking protected cycle routes.

3.2.1 Major Junctions

We are encouraged by the use of protected junctions on many of the new designs.

However, getting the details right at these junctions is important. The best examples are Whites Cross on the N11 (CBC 13, map 27), Airside junction on the Swords Road (CBC2, map 3) and Cloghran Roundabout on the Swords Road (CBC2, map 6). An example of a more compact junction is Griffith Avenue / Swords Road (CBC2, map 29).

All of these are Dutch-style protected junctions that have many subtle design elements that are key to their safe operation. The above examples all have:

- clear buffer spaces
- pedestrian islands
- pedestrian zebra crossings across the cycle track
- short feeder cycle lanes on the intersecting roads

These design elements all contribute to predictability and segregation, which are two key principles of Dutch sustainable safety, which is enshrined in the Irish National Cycle Manual.

Unfortunately, many of the new protected junction designs are poor, for example, the Blunden Drive / Malahide Road junction (CBC1, map 8). It is missing buffer spaces, feeder cycle lanes and includes pedestrian/cycle or cycle/motor traffic conflicts depending on the traffic light configuration.

Dutch-style protected junctions do not allow motor traffic turning left (their right) when straight ahead cycles have a green light. This is segregation through time. Cycles must have their own light phase separate from left-turning traffic. Dutch design allows for parallel pedestrian and cycle crossings by taking the left-turning cycle and straight ahead pedestrian movements out of the traffic light phasing using a zebra over the cycle track to a pedestrian island. Without this design element the traffic light phasing on their junctions would be significantly worse leading to delays for all road users.

We strongly recommend that the NTA adopt the Dutch-style protected junctions as seen on CBC2 and CBC13 as the default approach for all major junctions in the BusConnects project.

We also strongly recommend that the NTA publish details on how the traffic light configuration will work at these junctions in order to confirm whether segregation through time is included.

3.2.3 Minor Junctions

Getting the details right on minor junctions or side roads is important. Otherwise it isn't clear that people walking or cycling on the main road should have priority over vehicles entering or exiting a side road.

There are good examples at St Helen's Road and Belview Avenue on the Rock Road (CBC15, map 4). The footpath and cycle track are raised across the side road. The stop line for vehicles exiting is set back. The cycle track bends out slightly from the main road. This moves the cycle track away from the ramp and adds forgiveness to the design. The one detail we cannot tell is the materials proposed for the paving. The materials should make it appear like a continuous footpath and cycle track, with the minor road stopping to cross the footpath/cycle track.

We recommend that this design approach be more widely adopted across the Core Bus Corridors.

3.2.4 Horizontal Buffer

One of the most underused elements across the Core Bus Corridors is a horizontal buffer between the cycle track and the main road. This buffer space provides more segregation to the cycle track and makes it more comfortable to cycle by providing space between the cycle track and the adjacent bus lane. It should be added whenever

possible but particularly on the 60km/h distributor roads. There are good short examples on the Swords Road (CBC2, map 10-11) and Naas Road (CBC8, map 7-8).

We recommend that this grass, paved or planted buffer be included on the outer sections of more Core Bus Corridors.

3.3 Shared Spaces

We reject all of the shared space designs that mix pedestrians and cyclists. Shared spaces provide a low quality-of-service and produce unnecessary conflict between pedestrians and cyclists. Shared spaces are particularly distressing to people with disabilities who do not want to be sharing space with people cycling, which is totally understandable. These areas must be redesigned.

There are fewer shared spaces in this round than the previous, which is welcome. However, there are still many places where there are shared spaces and shared toucan crossings. One notable example is at Blanchardstown's new bus hub (CBC5, map 3). This area will have high volumes of people walking and cycling. We strongly recommend that this area, and areas like it, be re-designed to remove the shared spaces and shared toucan crossings. A separate parallel crossing for people cycling removes these share spaces and shared crossings.

There's an example of a non-shared parallel pedestrian and cycle crossing at Coachman's Inn on the Swords Road (CBC2, map 7).

3.4 Bus Stop Bypasses

Bus stop bypasses (island bus stops) are a key element of segregation that needs to be added across many of the routes in order to encourage more people to cycle. Mixing cyclists with buses at bus stops leads to serious and potentially fatal conflicts. These are the kinds of unmanaged conflicts that will prevent parents from letting their kids cycle to school. Furthermore, these conflicts lead to delays in buses pulling in and out of bus stops especially along routes with a high volume of cyclists.

We note the inclusion in the new designs of "coach stops" on CBC 13. These should receive the same bypass treatment as bus stops for the same reasons as above.

More work is needed on both bus stop placement and bus stop design on all corridors.

3.5 Quiet Cycle Streets

Where cyclists are diverted away from the main routes, the design of quiet streets is essential. The Dutch are the masters of creating high-quality quiet cycle streets. There are two keys to their designs:

- The ratio of people cycling to the volume of motor traffic, which helps to regulate traffic speeds
- The subtle design elements that reinforce this is a cycle route with local access traffic as guest

We strongly recommend that the NTA consider using some of the Dutch techniques like optical narrowing, raised central bumps to reduce over taking, and coloured paving in order to create high-quality quiet cycle streets. As far as we can see there are no high-quality quiet cycle streets proposed on any of the corridors.

3.6 Two-way Cycle Tracks

The designs for two-way cycle tracks vary across the Core Bus Corridors. Some two-way cycle tracks have people cycle on the left, for example Constitution Hill (CBC3, map 15), Rock Road (CBC15, map 2-5), and Lucan Road (CBC6, map 1). Others indicate that people will cycle on the right (CBC2, map 7). Cycling on the right is confusing.

We strongly recommend that all two-way cycle tracks include people cycling on the left. If necessary a horizontal buffer should be included between the two-way cycle track and the road to add more segregation between anyone cycling contra-flow with traffic.

3.7 Urban Places

We welcome the use of traffic management approaches to reduce the impact of general motor traffic on urban villages on many of the Core Bus Corridors. Examples such Rathmines (CBC12, map 13), Kimmage Road Lower (CBC11, map 1) and Baggot Street (CBC14, map 2) are great examples of using bus gates to prevent through motor traffic, which allows for wider footpaths, cycle lanes, tree planting and retaining existing trees.

This approach should be taken in more urban villages across Dublin where there is a strong sense of place. Most notably Stoneybatter, where the currently proposed three

lane system leads to narrow footpaths and no placemaking in one of Dublin's best urban villages. It should not be a through route for motor traffic.

There is an over-reliance on bus lanes in the city centre within the canals. This leads to wide roads, narrow footpaths, poor cycling provision and a loss of street parking or trees. Examples include FitzWilliam Street & Baggot Street Lower (CBC2, map 1/1A), Richmond Street South/Camden Street (CBC12, map 14-16) and James Street and Thomas Street (CBC7, map 24-28).

We recommend the NTA look further at one-way systems or bus gates to reduce road widening, particularly in the city centre where there is too much unnecessary through-traffic.

4.0 Conclusion

There are marked improvements in the design quality between this round and the last round. Across all corridors there are examples of high-quality cycle designs. We strongly recommend that you take these high-quality elements and re-apply them across all sixteen corridors.

Kevin Baker
Chairperson

Arran Bolger
BusConnects Coordinator

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

Registered Charity Number (RCN): 20102029