

Dublin Cycling Campaign Tailor's Hall Back Lane Dublin 8 D08 X2A3 2nd June 2022

## RE: Clongriffin to City Center Core Bus Corridor (Case: 313182)

## 1.0 Introduction

Dublin Cycling Campaign is a registered 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.

We have been engaging with the applicant, National Transport Authority, through all stages of this project including the multiple rounds of public consultation, community forums, and through one to one meetings.

We support this project. However, without modifications it will not deliver a safe cycle route and will not deliver on the cycling modal shift necessary. All modifications are possible via condition if the board or applicant are agreeable. We request an Oral Hearing to discuss the issues around the junction designs.

## 2.0 Four Types of Cyclist

The goal should be to create a cycling environment that is suitable for people of all ages and abilities. That way the project can achieve the greatest modal shift to cycling, which will help Ireland achieve its climate, public health, and transport ambitions.

A useful typography is the 'Four Types of Cyclist' by Dr Jennifer Dill, Professor Urban Studies & Planning. It divides people into four cohorts:

• Strong and Fearless (4-7%): will cycle in any conditions no matter how hostile. They will mix in all traffic types with no cycling infrastructure.

- Enthused and Confident (5-9%): They will mix with some traffic. They require some infrastructure. Most of Dublin's existing cyclists are in this cohort or 'Strong and Fearless'
- Interested but Concerned (50-60%): will only cycle if provided with high-quality safe and comfortable cycle routes. Will only comfortably mix with low levels of traffic in intentional low speed environments.
- No Way, No How (25-33%): unlikely to ever cycle no matter the conditions

This project needs to resolve a number of issues or it will not attract people in the large 'Interested but Concerned' cohort to provide the modal shift necessary to fulfill the goals of the National Sustainable Mobility Policy.

## 3.0 Existing Cycling Conditions

The existing cycling conditions along the project corridor are extremely poor. On the outer dual carriageway sections traffic speeds and volumes are high. The junctions are massive and there is no cycle infrastructure. These sections are only suitable for the 'Strong and Fearless' cyclists. From Artane to Fairview, the conditions are marginally better with some shared bus lanes and painted cycle lanes. There are no kerb protected cycle lanes along the route. The route has none of the elements that would attract people in the large 'Interested but Concerned' cohort.

## 4.0 Proposed Cycling Infrastructure

The proposed cycling infrastructure in this project would significantly improve the existing situation. The cycle route proposed would provide a route that will attract a portion of the 'Interested but Concerned' cohort. There are a number of reasons this project will enable more people to cycle:

- Continuous kerb protected cycle tracks along the entire length of the project. A cycle route is only as good as its weakest link. There are no gaps in the cycle route proposed, which is a major difference to most existing cycle routes in Dublin.
- Bus stop designs that mean people cycling never share the same space as buses. People cycling and 30 ton buses can't mix safely. It is a major perceived safety risk that prevents many people in Dublin from taking up cycling. This is a crucial element that must be retained in the final design.

• Some protected cycle junction designs so people cycling aren't mixed with heavy traffic at large junctions. However, we have major concerns about some of the proposed junction designs.

## 5.0 Requested Modifications for Safety

Safety is one of the five needs of a cyclist in the National Cycle Manual.

#### 5.1 Junction Design

The NTA are proposing unproven junction designs for cycling that include traffic hazards that will put people cycling at unnecessary risk. In EIAR Appendix A6.3 Junction Design Report, the applicant states there are four junction types. From a cycling perspective, there are two junction types, Junction Type 1-3 and Junction Type 4.

Junction Type 4, known as the Cyclops Junction, follows the international standard pioneered in the UK. The key element for people cycling is that they cross the junction under green signals at the same time as pedestrians. Cyclists don't cross the junction at the same time as left-turning motor traffic. This eliminates one of the most frequent cycling / motor traffic collisions, the 'left-hook'. As pedestrians and cyclists cross at the same time it improves junction efficiency and reduces wait times for all modes.

Junction Type 1-3, known as the Dublin-style junction, does not follow any international standard. It has been created by the National Transport Authority (NTA). People cycling will be crossing the junction at the same time as left-turning motor traffic. This can lead to 'left-hook' collisions for people cycling.

The Pedestrian Infrastructure Assessment criteria in EIAR Chapter 6 (Appendix A6.4 page 2) does not include the pedestrian crossing distance when assessing junction quality. Shorter pedestrian crossing distances are important for slower moving pedestrians like children and those with mobility impairments. The NTA's chosen junction design Type 1-3 has longer pedestrian crossing distances than alternatives, like Junction Type 4, typically 3-5m longer.

There have only been two constructed examples of Junction Type 1-3 in Ireland. One at Balbutcher Lane in Ballymun, Dublin, which is a much smaller junction than any of the proposed junctions. The other is the Lombard Street / Townsend Street junction in Dublin city center. This small junction has gone through multiple iterations to attempt to resolve shortcomings from initial design. However, our members still report many frequent near misses and collisions. We encourage the Inspector to visit either location and observe the unsafe operation of these junctions.

In previous design iterations of BusConnects core bus corridors the NTA have also proposed Dutch-style junction designs. It has similar properties to the Cyclops junction design. However, Dutch-style junctions do not feature in this application. This Dutch-style junction design has been used successfully for decades in the Netherlands, and is in use in 14 other countries worldwide. There are examples in Ireland. There is a Dutch-style junctions in Wicklow town at the junction of R999 / Hawkstown Road, which was constructed two decades ago. Another example is the new junction at Drummartin Link Road / Lower Kilmacud Road in DLRCC.

You can find a visual representation of all three junction types as an appendix to this submission.

The National Transport Authority will not live up to their responsibilities as a Road Authority under the Roads Acts by building unproven Junction Type 1-3. The only two examples of the NTA junctions Type 1-3 have safety issues. There are proven international standards that the NTA could use for all junctions on this project instead.

The applicant should answer the following questions:

- 1. What evidence does the NTA have about the safety of their new junction design Type 1-3?
- 2. Why hasn't the NTA used an international standard junction design, which has been proven to be effective, such as the Cyclops (Type 4) or Dutch junction on all junctions in this project?
- 3. Why was pedestrian crossing distance not included in the Pedestrian Infrastructure Assessment in EIAR Chapter 6 (Appendix A6.4 page 2)?
- 4. How many proposed junction arms will have longer crossing distances for pedestrians?

#### 5.2 Green Buffer Space Between Cycle Track and Road

Sections of the 'Interested but Concerned' cohort – eg less experienced cyclists or parents cycling with children wobbling along on their bikes - are unlikely to feel safe or comfortable with 30 ton buses (with overhanging wing mirrors) whizzing past them at 50kph on the other side of a narrow kerb. Buffers offer separation and forgiveness should a person wobble or fall off their bike. In addition planted green buffers are attractive, soak up rainwater and provide a degree of protection from the noise and pollution of traffic.

Along most of this proposed route there is ample space to provide green buffers, in fact along sections of the route a grass buffer is already planned - it just needs to be moved to the outside, between the cycle track and bus lane.

## 6.0 Requested Modifications for Cycling Comfort and Inclusion

## 6.1 Shared Walking and Cycling Spaces and Crossings

Pedestrians, cyclists and disability groups all dislike shared spaces that mix walking, wheeling and cycling – this mixing leads to conflict and to people finding these shared spaces confusing and intimidating. Away from the main junctions, all the toucan crossings of the Malahide road (R107) are shared spaces - separate walking and cycling crossing should be provided.

## 6.2 Width of cycle track

Cycle tracks should be wide - the wider the better. At the very least, they should be wide enough for cyclists to pass each other comfortably. This is particularly important given that cycle tracks should be inclusive, and allow easy use by cargo bikes, handtrikes and mobility scooters, without impeding others. A Standard cycle track of 1.5m may be adequate for commuter cycling (individuals on standard bikes, cycling in single file) but a 2/ 2.25m track facilitates overtaking and allows for non-standard cycles, as well as allowing 2 people to cycle side-by-side eg parents cycling with smaller children or older children cycling to school with friends. Apart from a couple of short narrow sections this is a spacious route and a wide, comfortable cycle track should be easy to accommodate.

## 7.0 Conclusion

We reiterate our request for an Oral Hearing in order to discuss and resolve the junction issues raised in this submission.

Ellen Cullen Chairperson, Dublin Cycling Campaign

# ppendices

- 1. Representation of the types of cyclists
- 2. Simplified schematics of different junction designs

Strong and fearless 4-7%

## Enthused and confident 5-9%



Interested but concerned 50-60%

#### **DUBLIN JUNCTION WITH CORNER ISLAND**



Raised kerb segregation

Left turning and straight ahead motor traffic lane

Stop line for cyclists

2.5m approx.

4

Corner protection island

Stop line for right-turning cyclists (depends on junction signalling)

Left turning cyclist must stop when pedestrian crossing is green.

#### **DUTCH JUNCTION**



Horizontal segregation wide enough to provide safe space for pedestrian waiting area

Left turning and straight ahead motor traffic lane

Pedestrian crossing waiting area

Pedestrian crossing over cycle lane

Protective corner island

4

Stop line for straight-ahead and right-turning cyclists (depends on junction signalling)

Left turning cyclists never encounter signals

#### **CYCLOPS JUNCTION**



Raised kerb segregation

Left turning and straight ahead motor traffic lane

Pedestrian crossing point to pedestrian island

Pedestrian island

Controlled crossing across motor traffic lanes only

Protected corner island

Stop line for cyclists. Right-turns for cyclists can be made in a single phase

Left-turning cyclists never encounter signals

### **DUTCH JUNCTION MOVEMENT SEQUENCE**



All motor traffic proceeds.

Straight ahead cycle & all pedestrian traffic is held. Left turning cycle traffic proceeds.



All motor traffic is held. All cycle and pedestrian traffic proceeds.





### **DUBLIN JUNCTION MOVEMENT SEQUENCE (A)**



All motor traffic proceeds. All cycle & pedestrian traffic is held.



All pedestrian traffic proceeds. All motor & cycle traffic is held.



All cycle traffic proceeds. All pedestrian & motor traffic is held.







**NOTE:** Interupting the cycle lane with the controlled pedestrian crossing will add an extra 5m to the pedestrian crossing span.

## DUBLIN JUNCTION MOVEMENT SEQUENCE (B) (NOT SAFE FOR LARGE OR BUSY JUNCTIONS!)



All motor & cycle traffic proceeds. All pedestrian traffic is held. High risk of conflict between cycle and motor traffic.







### CYCLOPS JUNCTION MOVEMENT SEQUENCE



All motor traffic proceeds. Straight ahead cycle & all pedestrian traffic is held. Left turning cycle traffic proceeds.





All motor traffic is held. All cycle and pedestrian traffic proceeds.

