



12 August 2019

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CC: National Transport Authority, Department of Housing

Regarding: MARTIN ROUNDABOUT UPGRADE

<https://www.galwaycity.ie/news/1325/59/MARTIN-ROUNDABOUT-UPGRADE/>

Development Description: The proposed measures at the upgraded signalised junction include: provision of public transport priority measures, provision of cycling facilities and associated pedestrian enhancements and traffic calming measures.

On behalf of the committee please find below our observations on the above application. *We would welcome an opportunity to meet with planners and engineers of Galway City Council and the National Transport Authority to explore our concerns and alternative proposals in greater detail.*

Introduction:

We note that the funding of this project is through the Urban Regeneration and Development Fund scheme (<https://www.gov.ie/en/campaigns/urban-regeneration-and-development-fund/>), and that a significant component of this scheme involves collaboration between state agencies, local authorities and other local and community groups. It was then surprising and disappointing to us that in January 2019 and May 2019, Galway City Council executive formally refused requests to meet with either Galway Cycling Campaign or a delegation from the Galway City Community Network prior to the development or publication of this design. We restate the request for a meeting regarding this scheme.

We welcome the stated rationale behind this junction redesign: to redesign the Martin Roundabout from a roundabout to a signal controlled junction to provide public transport priority measures, as well as provision of cycling facilities and associated pedestrian enhancements and traffic calming measures. However, we are unhappy with the proposed detailed design elements, particularly in relation to cyclists and pedestrians, which merit review. In our submission below we have a number of comments to make on some general and specific design elements, which we suggest will improve the overall design and the safety elements of the proposed scheme, and encourage an increased rate of cycling and walking.

Our concerns regarding the suitability of this location (Ardaun) to act as a site for a new residential suburb remain (previous submission attached). While the proposed removal of the roundabout might theoretically support the aims of a new residential suburb the published proposals do not tie into any generally viable walking or cycling routes.. The main means for cyclists or people on foot to reach this junction will continue to be the Old Dublin Road and the N67 dual carriageways associated with the Coolagh Roundabout and Oranmore Road. None of these are viable as walking or cycling routes for the general public. The character of these roads remains as interurban dual carriageways or motorways or feeders and collectors for the same. As such we would view the location as being inherently unsuitable for at grade crossings for vulnerable roads users either on foot or using bicycles. This suggests the proposed approach should be fundamentally reviewed from first principles.

Existing site and location of proposed development

The plan of the proposed junction redesign, is indicated below overlaid on a current satellite image of the location of the Martin Roundabout.



Figure 1. Aerial view of site of Martin Roundabout with proposed junction redesign layout overlaid.

Summary of Observations:

1. The drawings provided on the website are incomplete and do not provide key information such as cross sections, kerb radii, dishing, the nature of the cycle tracks - raised vs on-road etc.
2. Overall inadequacy of design for cyclists and pedestrians:
3. The overall design continues to be hostile to the needs of cyclists and pedestrians implying significant delay in either crossing the dual carriageway or turning onto it.
4. The treatment of transitions between the cycle tracks and the main road create avoidable conflicts.
5. The obvious and established desire line for cyclists coming from or going to Oranmore along the Dual Carriageway appears to have been ignored by the designers.
6. The junction layout combines cyclists and pedestrians in a manner that suggests significant delays for both. In the event that this design is followed it should be assumed that many cyclists will simply ignore the proposed cycle facilities and stay on the main road. The design should incorporate this assumption.

Detailed observations and discussion

Dimensions

In the absence of detailed information on the design we recommend that any one-way cycle tracks or hard shoulders be a minimum of 2m wide. Any transitions where the cycle tracks leave or rejoin the main roadway should be smooth and should not require manoeuvres. The practice of mixing pedestrians and cyclists should be avoided at locations with a strong link function.

Left turning movements by cyclists

Left bypasses should be provided for cyclists on all arms of the junction - particularly on the arm coming from Oranmore.

The wider context and implied interventions

The wider context of this junction suggests a number of interventions.

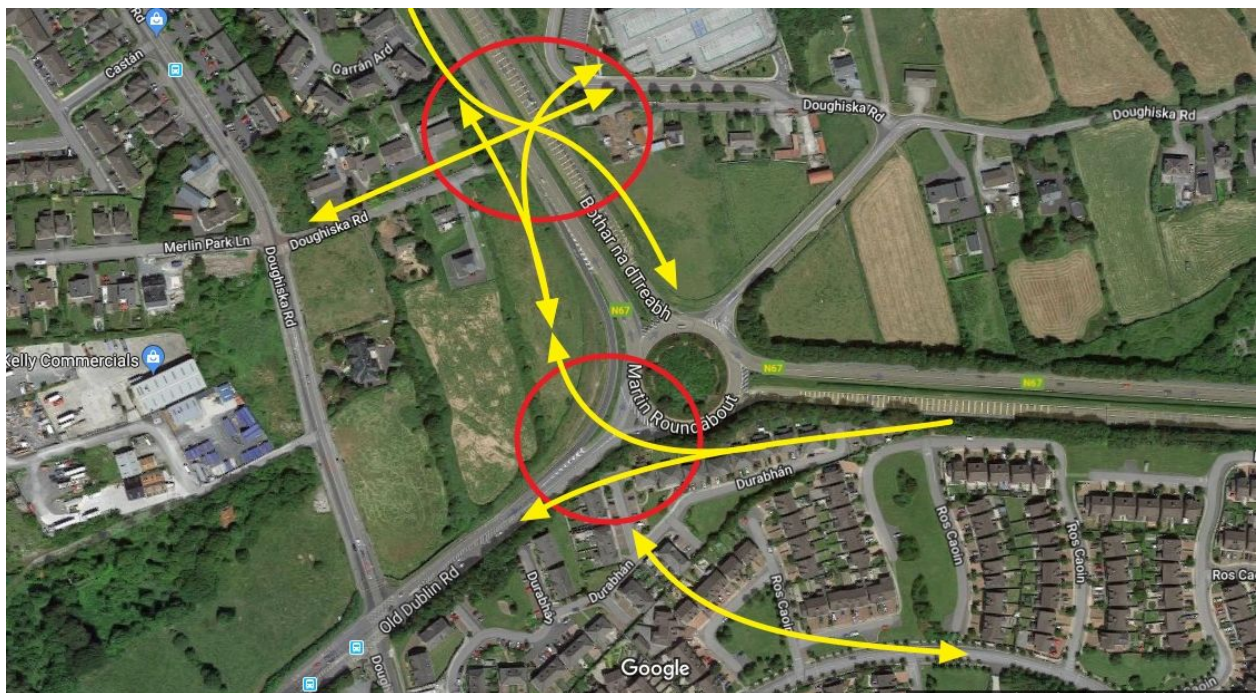


Figure 2. Google satellite view screen grab showing obvious desire lines not safely or conveniently catered for in the current design and which might be met by a combination of cycle by-passes and overbridges at the locations circled in red.

Desire line East-West: walking and cycling bridge over N67

There is an obvious desire line from Merlin/Doughiska along the minor road that was severed when the dual carriageway was built. A cycling compatible overbridge should be provided over the dual carriageway linking through to the Doughiska road. This will allow cyclists and pedestrians to avoid the main roads altogether. It would also link through to an obvious route to the city via Merlin Lane and so avoiding the Old Dublin Road which is not an inviting cycling or walking environment.

An overbridge at the Galway Clinic could tie in to such a track and also provide a means for cyclists using it to travel to Oranmore to get back onto the correct side of the Dual carriageway.



Figure 3. Google satellite view screen grab showing obvious location for an overbridge linking the clinic through to Doughiska..



Figure 4. Examples of walking and cycling bridges which would be suitable to cross the N67 dual carriageway at the location indicated in Figure 3. Note the ramp required for a shallow incline for cyclists to safely access and descend from the bridge can be accommodated through various designs with a small footprint as indicated by panel C.

Desire line North-South: Parallel to the N67

There is another requirement for a two-way cycle track on the east side of the dual carriageway linking Briar Hill and the Martin Roundabout location. This is an obvious desire line for cyclists going to or coming from Parkmore. There is a need to allow these users to avoid the Coolagh roundabout and slip roads associated with the N6/M6 motorway. The need to cater for the desire line along N67 north of the Martin Roundabout is made more acute by the inadequacy of cycling provision at nearby routes, in particular along Doughiska Road.

The Doughiska Road is internationally infamous for the hostility of its design towards cyclists and is frequently used as an example of bad road design. The Galway Transport Strategy Appendix F: "Cycle Network and Infrastructure and Development" prepared by Arup consultants on behalf of Galway City Council and the National Transport Authority, rated the cycling facilities on the parallel Doughiska Road as a "D" standard (with "A" standard considered the best). It states (page F4): "D-rated facilities include cycle lanes on Doughiska Road which are nominally segregated from motorised traffic, but cyclists give way to motorised vehicles at all of the frequent interaction points."



Figure 5. Desire line for safe cycle route along Doughiska Road.



Figure 6. Cycle lane facility on Doughiska Road, parallel to the N67 between Coolagh Roundabout and Martin Roundabout. This was rated as grade “D” by Arup consultants in the Galway Transport Strategy’s Appendix F and is clearly unsuitable as a safe and convenient cycling route.

Desire line from Oranmore

The obvious and established desire line for cyclists coming from or going to Oranmore along the dual carriageway appears to have been ignored by the designers. It is likely that at the moment the greatest number of cycle movements at the junction involves either cyclists turning left from the Oranmore side onto the Old Dublin Road or conversely turning right from the Old Dublin Road to head towards Oranmore.

Linkages to adjoining residential developments

We note that many residential developments adjoining the junction are closed-off from each other and do not facilitate walking and cycling on quiet residential roads. We propose introducing filtered permeable routes between these estates to enable this.

Overall alternative proposal

We propose a comprehensive revision of the proposal to make the Martin Junction safer and more attractive to people cycling and walking, and that must be done so looking at the surrounding area and the proposed development at nearby Ardaun.

Facilitating safe transit through the Martin junction itself could be achieved with bridges as detailed above or through provision of underpasses (of sufficient quality). Along with appropriately placed crossing points, these would also facilitate right-turns from all arms of the junction.

Also crucial is to provide linkages to any new cycling and walking infrastructure to nearby residential developments.

Note also the provision of a left, slip-turn for walking and cycling coming from the Old Dublin Road turning north (alongside the N67).

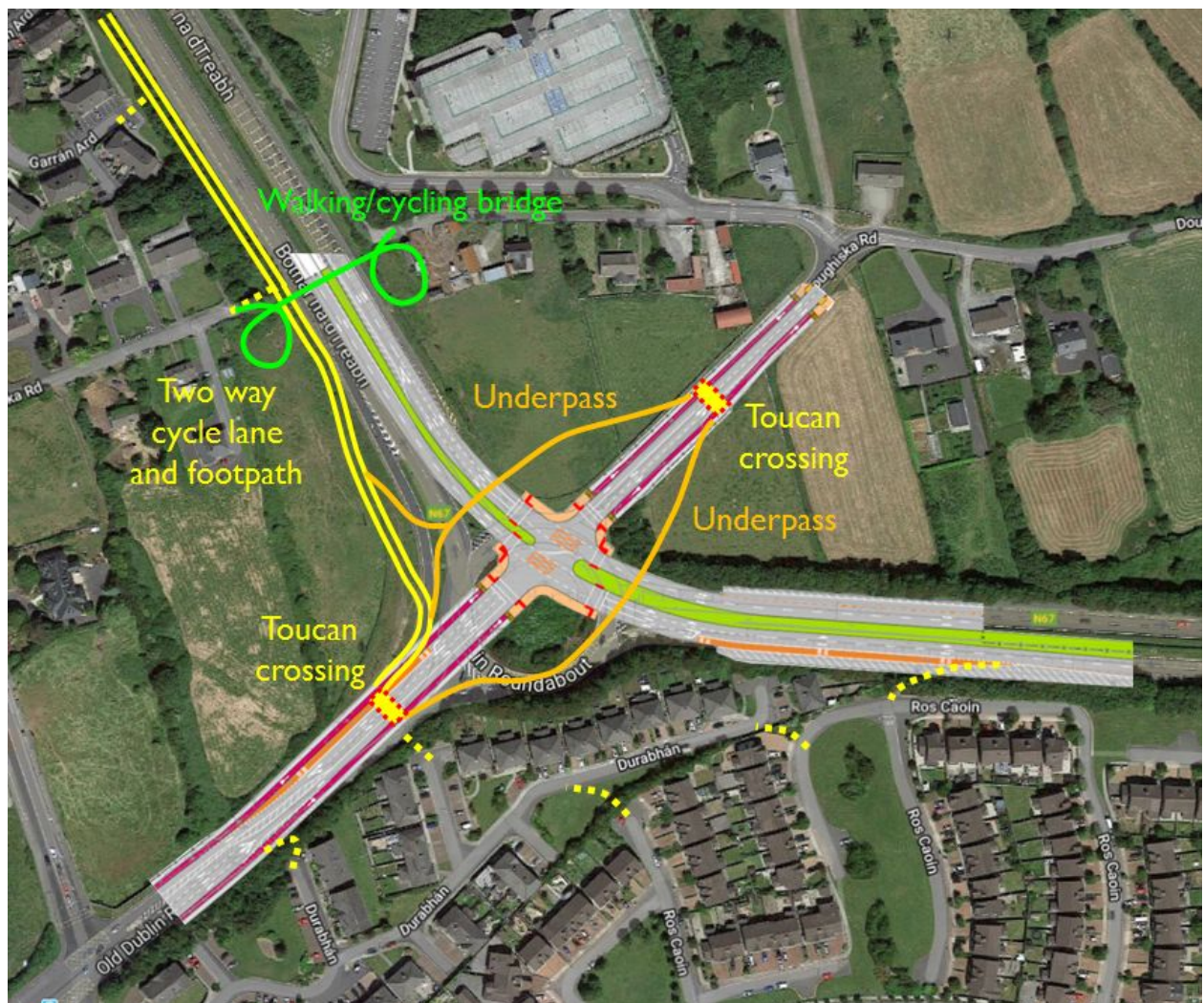


Figure 7: Proposed design features to cater to journeys and desire lines of cyclists and pedestrians. Proposed new links between housing estates and onto new cycling and walking infrastructure developments are indicated by yellow, dashed lines.

Many of these features could easily be accommodated within the footprint of the existing roundabout and would minimise the need for further land acquisition.



Figure 8. Example of cycling and walking underpasses with sufficient sight-lines, lighting, separation of cycling and walking and shallow gradients.

Treatment of the arms feeding the dual carriageway

Cyclists arriving at the junction and intending to travel to Oranmore along the dual carriageway have not been catered for. If they face significant delays then some will ignore the proposed cycle facilities and stay on the main roadway. Regardless of how they make the turn, if standard lane widths (2m to 3.65m) are used turning cyclists will be put in conflict with heavy traffic as they pass through the junction. There is a need for a hard shoulder or spacious nearside lane widths (>5.0m)¹ particularly on the Oranmore arm outbound. It is questionable if cycle tracks should be used on a segment that delivers cyclists to or from dual carriageway hard shoulders. If a raised cycle track is used then the issue of how turning cyclists access it or leave it needs careful treatment.

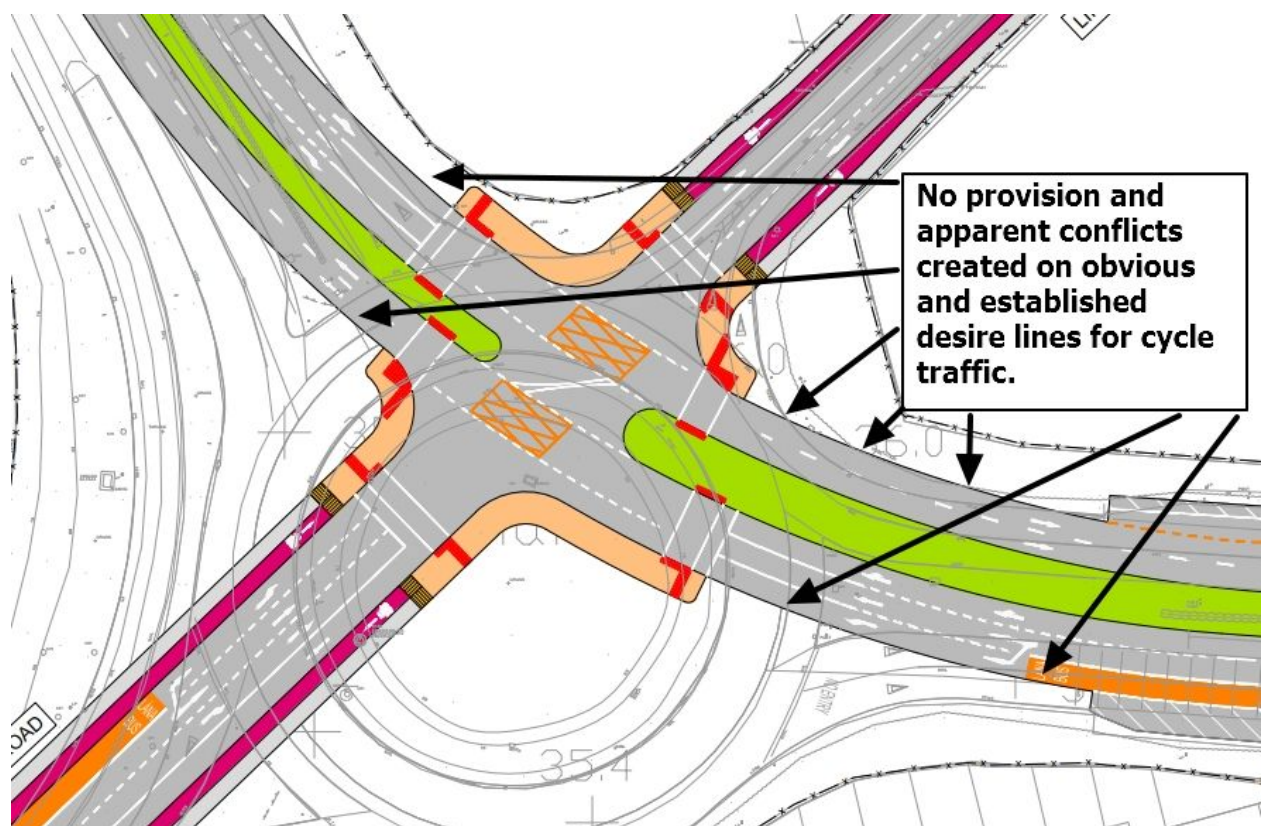


Figure 9. Annotated junction design.

The current design ignores the needs of cyclists coming from the Oranmore direction along the dual carriageway. Those heading for the city can be catered for using a left-bypass around the junction or through the estate at Durabhan/Ros Caoin. Those heading for Parkmore can be catered for by providing a second overbridge over the Old Dublin Road on the south side of the junction. This should link through into the Durabhan/Ros Caoin estates.

¹ Parkin, Designing for Cycle Traffic International Principles and Practices, Institution of Civil engineers Publishing 2018

Section 4: Routes Within the Highway

Figure 4.1.2 Cross-section descriptions

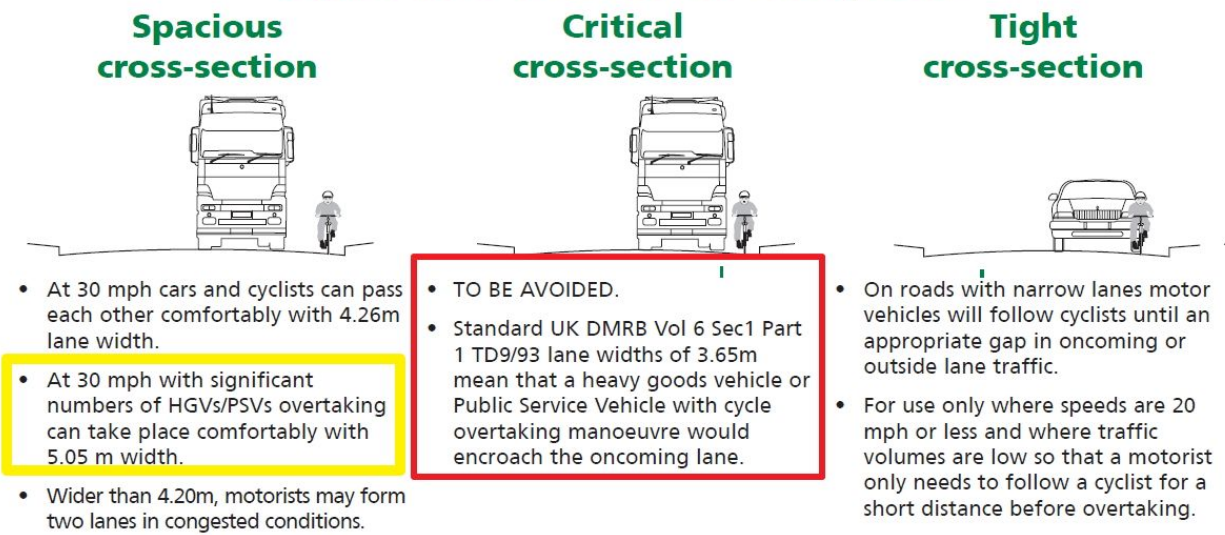


Table 4.1.1 Cross-section comments and mitigation

	Spacious	Critical	Tight
Definition	Sufficient room to safely overtake cycle traffic	Dangerous close overtaking	No room within the lane for overtaking of cycle traffic
Dimensions	At 30 mph: 4.20m (cars only) or 5.05m (HGVs) At 20mph: 3.75m (cars only) or 4.60m (HGVs)	3.10 to 3.75 metres	3.10 metres or less (cars) or 3.60 metres or less (with HGV traffic)

Figure 10. Extract from *Lancashire the Cyclists’ County* 2005, Parkin’s *Designing for Cycle Traffic* 2018 repeats the same advice. Coloured boxes added for emphasis.

Cycle Track Transitions

On the Galway Clinic arm for the junction the transition between the cycle track and the main roadway appears to be managed by placing cyclists in a conflict with both pedestrians waiting to cross and requiring an abrupt 90 degree turn into, or out of, the main traffic lane. This also occurs on a bend. If the cycle track is to merge with, or diverge from, the main traffic lane then this should occur well away from the bend, the junction, the crossing point and in a manner that does not require abrupt 90 degree turns into or out of the main lane.

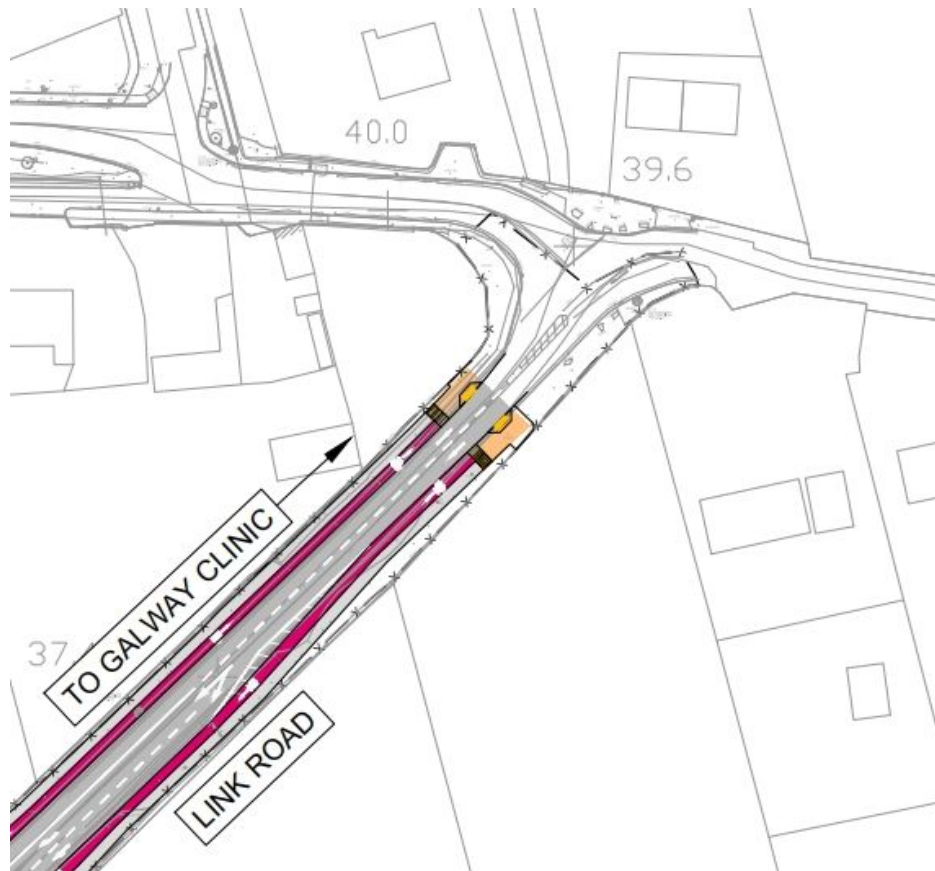


Figure 11. Extract from planning drawing showing cycle track transition creating conflict with people on foot and requiring 90 degree turns into, or out of, the main traffic lane at a junction on a bend.

Recommendation

The proposal should be amended to reflect these considerations.

- The drawings and material exhibited are not sufficient to enable a proper assessment of the proposed scheme. There is no Designer/Engineer's Report and no cross sections or visualisations of the proposals.
- The proposed scheme does not appear to comply with the guidelines of the National Cycle Manual in a number of respects and needs to be completely reviewed in that context.
- The desire lines and movement of cyclists and pedestrians should be considered in relation to the adjoining residential areas, the proposed Ardaun development, the nearby centres of employment, schools and amenities. This includes walking and cycling links through existing adjoining housing estates to negate the need to travel along or across heavily trafficked roads at this location.
- The reduced footprint of the proposed signalised-junction compared to the existing roundabout leaves much undeveloped land on the periphery of the site and potential to provide segregated crossing routes for walking and cycling, through the combined use of slip-turns, bridges, and underpasses.

On behalf of the committee

Galway Cycling Campaign