

CASE STUDY - Cross Avenue and Environs

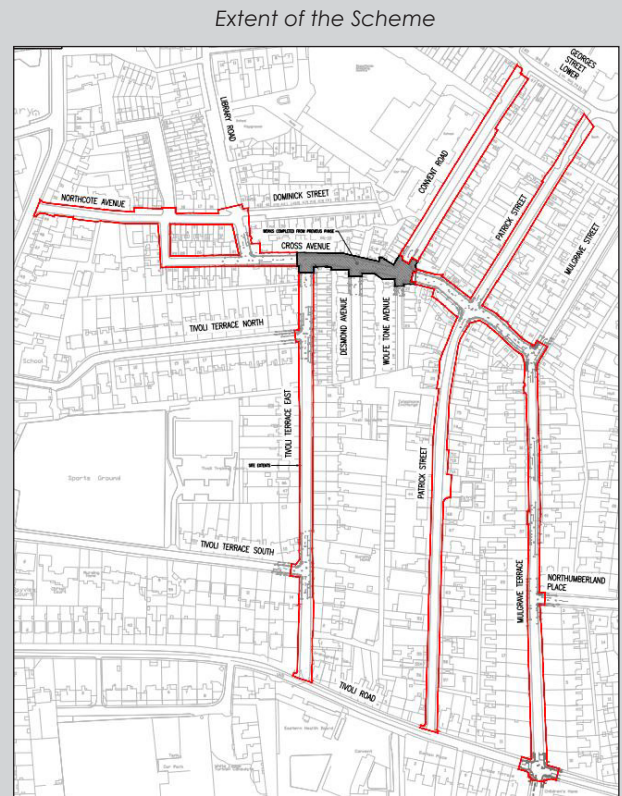
Name: Cross Avenue and Environs Road Safety Improvement Scheme

Location: Dun Laoghaire, Co. Dublin

Project Type: Creation of a self-regulating street environment

Completion: April-June 2017

Cost: 350k



Context and Movement:

Cross Avenue and its environs are located in close proximity to Dun Laoghaire Town Centre, Co. Dublin. As defined by DMURS its place context is a *Neighbourhood*, predominantly consisting of medium density housing. However as a result it close to the town centre of Dun Laoghaire, it also shares some traits of a *Centre*, with several small scale commercial and retail uses scattered throughout. Pedestrian activity levels are also relatively high. Cross Avenue forms part of a permeable *Local Street* network, with direct links between the town centre and adjoining neighbourhoods.

Preceding Environment

The existing street network is relatively constrained, consisting of narrow streets fronted by development, frequent junctions and on-street parking. Resident concerns and surveys indicated that 'rat running' was occurring through the area leading to higher traffic volumes and higher traffic speeds that would be expected.

Objectives of the Scheme

The objectives of the scheme are to improve safety and enhance the public realm along Cross Avenue and its environs and maintain/protect the amenity of residents in the area. The scheme also incorporates a number of specific objectives of the Dun Laoghaire Urban Framework Plan, including:

7. Provide a network of attractive urban spaces and public realm.
8. Improve and enhance existing visual amenity and streetscape within the Framework Plan area.
21. To undertake a Road User Audit and support the application of DMURS, together with environmental improvements, on Cross Avenue - (Old Victorian Street) and interconnecting streets.
22. To promote the expansion of 30 km/hr limit zones in Dún Laoghaire and Environs in accordance with best practise and speed guidance documents.

Scope of Works

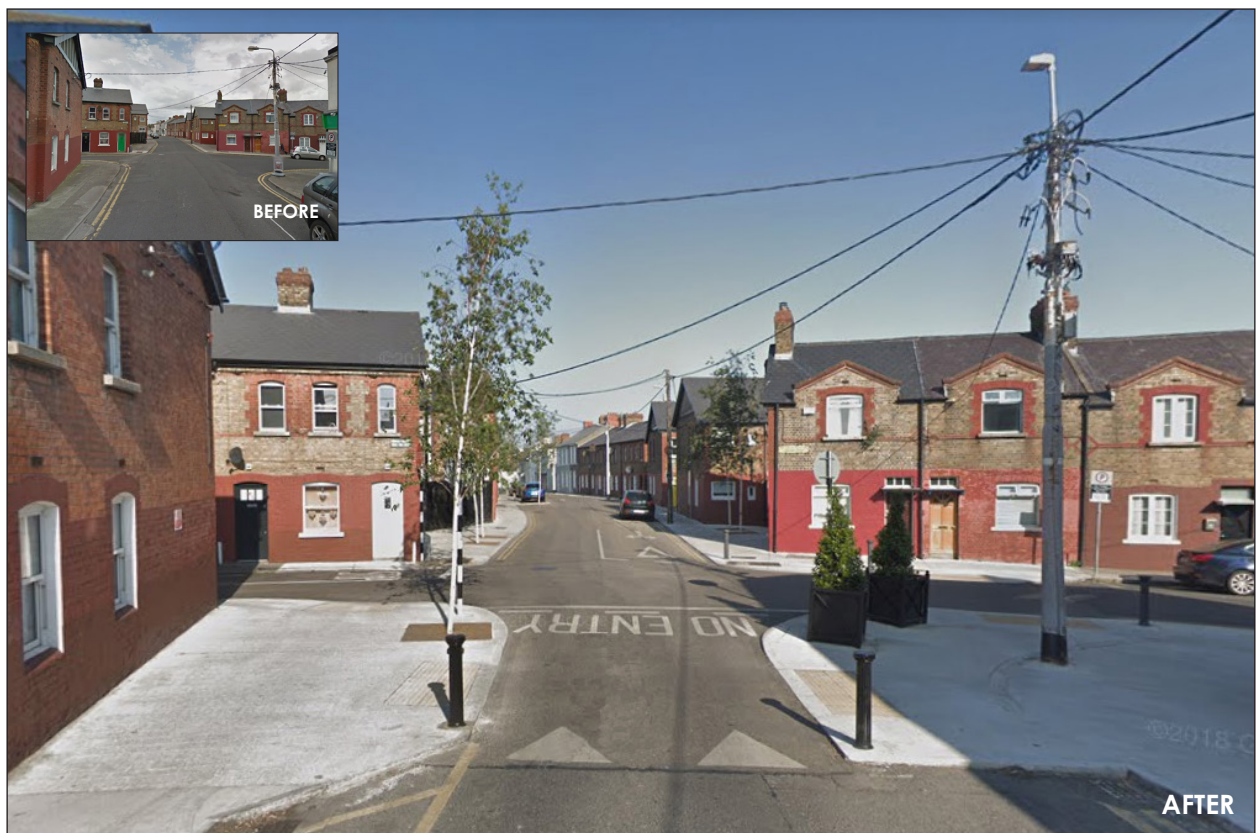
The scheme consisted of:

- A new one way system for part of Cross Avenue.
- Increased footpath widths and changes to the carriageway surfaces.
- New street tree planting and other landscaping works.
- New horizontal (raised tables) and vertical (pinch points, staggered on-street parking) deflections.
- Kerb builds and reductions in corner radii.
- Improved pedestrian crossing facilities.
- Implementation of a 30km/hour speed limit.

Consultation

A non-statutory public consultation process was undertaken, including a workshop with elected members, an information evening for the public and the public display of the proposed plans. Further details on public consultation can be found here:

<https://dlrcoco.citizenspace.com/transportation/cross-avenue-and-environs-road-safety-improvement/>



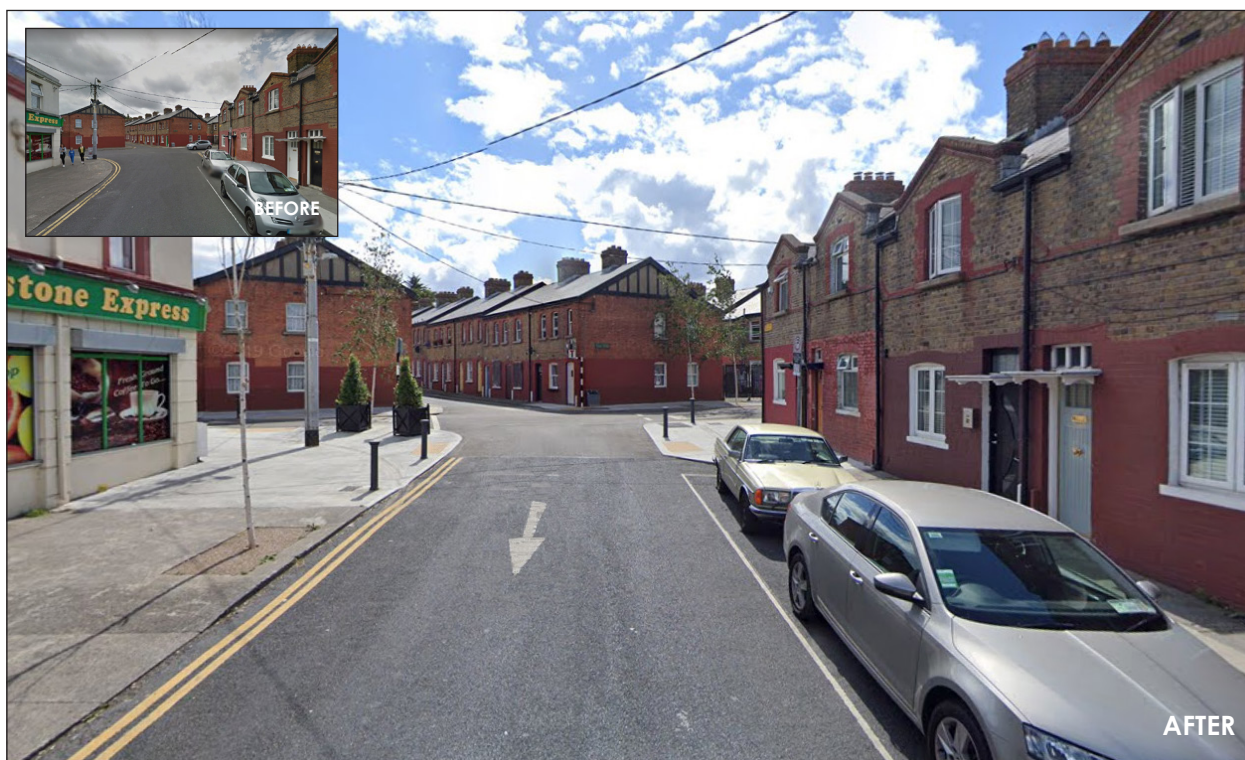
View from Cross Avenue to junction with Convent Road/Wolf Tone Avenue. Works include tightening of corner radii (new kerb line/footpath widening and build out), raised platform/new surface, tactile paving, street tree planting and part conversion of Cross Ave to one way (image source Google Street View)



View towards junction of Cross Avenue and Wolf Tone Avenue. Works include tightening of corner radii (new kerb line/footpath widening and build out), entry treatment and use of on-street parking to create a horizontal deflection (image source Google Street View).



View from Cross Avenue to Desmontf Avenue. Works include tightening of corner radii (new kerb line/footpath widening and build out), entry treatment, street tree planting (including plated tree pits)(image source Google Street View).



View from Convent Avenue to junction with Cross Avenue/Wolf Tone Avenue. Works include tightening of corner radii (new kerb line/footpath widening and build out), raised platform/new surface, tactile paving, street tree plating (image source Google Street View).



View of new staggered parking arrangement along Patrick Street (image source Google Street View).

Monitoring

Following the implementation of the scheme a review and assessment was undertaken. This included the placement of automatic traffic counters at various locations and survey of vehicle speeds.

Following the completion of the scheme it was found that:

- Post construction the 85th percentile speeds have reduced significantly from approx. 45 km/h to 35 km/h on Tivoli Street East and Mulgrave Street with a smaller reduction to around 40 km/h on Patrick Street. There was a slight reduction on Cross Avenue (25 km/h).
- Traffic volumes have reduced by approximately 20% on all streets with the exception of Mulgrave Street, where a small increase of < 4% was observed. The increase on this street is expected as a result of the conversion of Cross Avenue to one way.

A Stage 3 Road Safety Audit was also carried out and found no significant issues associated with the scheme's over-arching design philosophy. No major collisions have been reported within the scheme extents following completion of construction.

Key Lessons

The scheme is an exemplar of the creation of a self-regulating network that enhances both safety and place value. Although the 85th percentile speeds remain higher than desirable (i.e. 30km/h), there were significant reductions in the average speed of vehicles. This demonstrates that effective traffic calming measures can be implemented using a range of complimentary measures as outlined in Chapter 4 of DMURS. The scheme also demonstrates that self-regulating networks, with some minor changes in vehicular permeability, can also be effective in reducing the volume of traffic, as outlined in Section 3.4.1 of DMURS.