

## Part VIII Planning Report

# R510 Quinn's Cross to Raheen Roundabout Improvement Scheme

**May 2022**

Document Control	
<b>Client</b>	Limerick City & County Council
<b>Project Title</b>	Quinn's Cross to Raheen Roundabout Improvement Scheme
<b>NTA Project Ref.</b>	LCC-18-0002
<b>Project Phase</b>	Phase 4 - Statutory Process
<b>Document Title</b>	Part VIII Planning Report
<b>Publication Date</b>	May 2022

Rev.	Status	Prepared By	Checked By	Date
0	Draft	L. Kennedy	S. Kennedy	23.03.2022
1	Final	L.Kennedy	S. Kennedy	28.04.2022

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# 1. INTRODUCTION

## 1.1 Background

The Active Travel Department of Limerick City & County Council propose improvement works on the R510 between Quinn's Cross & Raheen Roundabout. This Report sets out the need for the Scheme, the Scheme objectives and provides a general description of the proposed improvement works. Figure 1.1 shows the site location and Scheme extents.

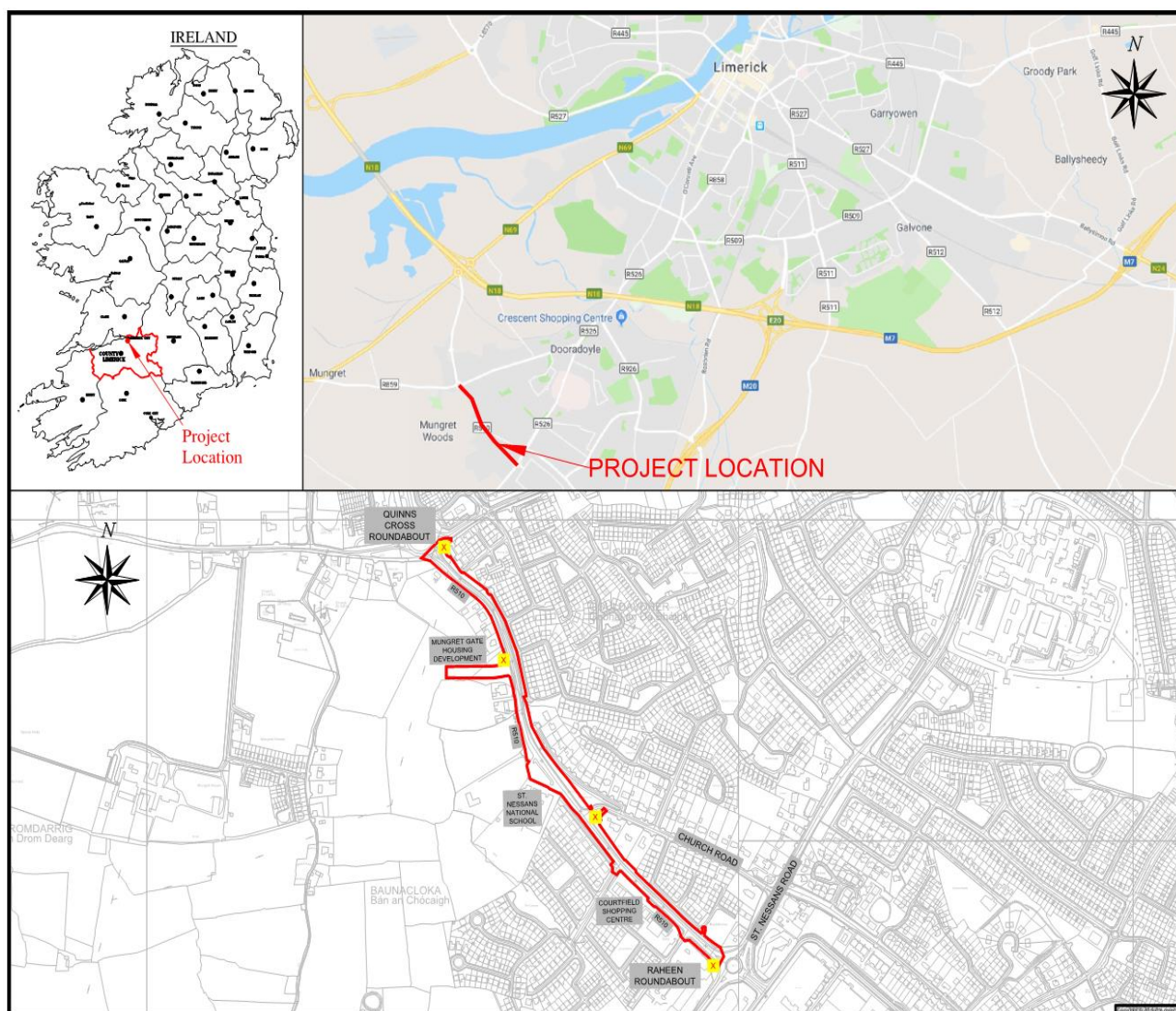


Figure 1.1 Site Location & Scheme Extents

Limerick City & County Council appointed MHL & Associates, Consulting Engineers, to prepare preliminary designs for the provision of Cycling Facilities on the R510 between Quinn's Cross and Raheen Roundabout. The Scheme is located in the greater Raheen/Mungret area which is a large residential area in the Southwest of Limerick City with a number of local schools and employers in the locality. Raheen Business Park, a large IDA site, is located adjacent to Raheen Roundabout where a significant number of Limerick's population are employed in a number of companies. Other significant

attractors in the area include the Courtfields Shopping Centre adjacent to the South Court Hotel on the R510 and St Nessian's Primary school which accommodates approx. 750 students & 55 staff.

This project has been progressed on the basis of the recommendations of the 2016 Limerick Metropolitan Cycle Network Study (LMCNS) which identified the R510 as the primary cycle network between Quinn's Cross Roundabout and Raheen Roundabout. The route is therefore part of the strategic urban and transport planning for Limerick and has been identified to provide safe, more coherent, direct, attractive and comfortable facilities to encourage cycling as a sustainable transport option. The Approving Authority is the National Transport Authority (NTA).

An objective of the LCCC Southern Environs Local Area Plan (2021-2027) notes the requirements of 'Smarter Travel' and that the Local Authority will continue to seek the development of cycle and pedestrian routes throughout the plan area. In addition, a Master Plan was prepared for the Mungret area following receipt of significant funding from the Local Infrastructure Housing Activation Fund (LIHAF). The first phase of residential development as set out in the Mungret Masterplan is accessed via a new signalized junction constructed in 2018 on the R510. This has prompted the need for the provision of cycling infrastructure to both support the LIHAF residential project and to bridge the gap in infrastructure between Quinn's Cross and Raheen Roundabout to facilitate cycling to schools and local areas of employment.

Details of the proposed works are shown as per layout plans listed below which are to be read in conjunction with this report:

- RCT-SLM-P01 Site Location Map & Location of Site Notices
- RCT-LA-P01 Proposed Layout Key Plan Sheet 1 of 8
- RCT-LA-P02 Proposed Layout Plan Sheet 2 of 8
- RCT-LA-P03 Proposed Layout Plan Sheet 3 of 8
- RCT-LA-P04 Proposed Layout Plan Sheet 4 of 8
- RCT-LA-P05 Proposed Layout Plan Sheet 5 of 8
- RCT-LA-P06 Proposed Layout Plan Sheet 6 of 8
- RCT-LA-P07 Proposed Layout Plan Sheet 7 of 8
- RCT-LA-P08 Proposed Layout Plan Sheet 8 of 8

## 1.2 Scheme Objectives

This Scheme aims to deliver improved safety, comfort and security for cyclists, pedestrians and the mobility impaired on the R510. The Scheme is being proposed to encourage an uptake in cycling as a viable and safe commuter travel mode. This objective is to be achieved through the delivery of facilities which are designed to comply with the National Cycle Manual (NCM), the Design Manual for Urban Roads and Streets (DMURS), Safe Routes to School Design Guide, Transport Infrastructure Ireland (TII) Publications and the Traffic Management Guidelines (TMG's) and through a National Transport Authority (NTA) review process.

The current situation on the roadway is considered to be unsafe for cyclists due to the absence of dedicated cycle facilities, high traffic volumes at peak hours and multiple vehicular side roads and accesses that have been designed with the prioritisation of motorised vehicles in mind. Existing side road junction arrangements are difficult for vulnerable road users due to wide carriageway approach widths, large junction radii, wide circulating carriageway and resultant high vehicular speeds.

The design has been developed to achieve the following objectives:

- To improve safety, comfort and security for cyclists, pedestrians and motorists;
- To provide segregated cycle facilities;
- To improve the crossing facilities for pedestrians and cyclists across the roadway and at side road junctions;
- To comply with the emerging Limerick Shannon Metropolitan Area Transport Strategy (LSMATs);
- To provide junction solutions in line with the Principles of Sustainable Safety, that meets with the five needs of cyclists and the target Quality of Services outlined in the National Cycle Manual (NCM);
- To design a facility that complies with the National Cycle Manual published by the National Transport Authority and the Design Manual for Urban Roads and Streets, the Safe Routes to School Design Guide and any other relevant guidelines

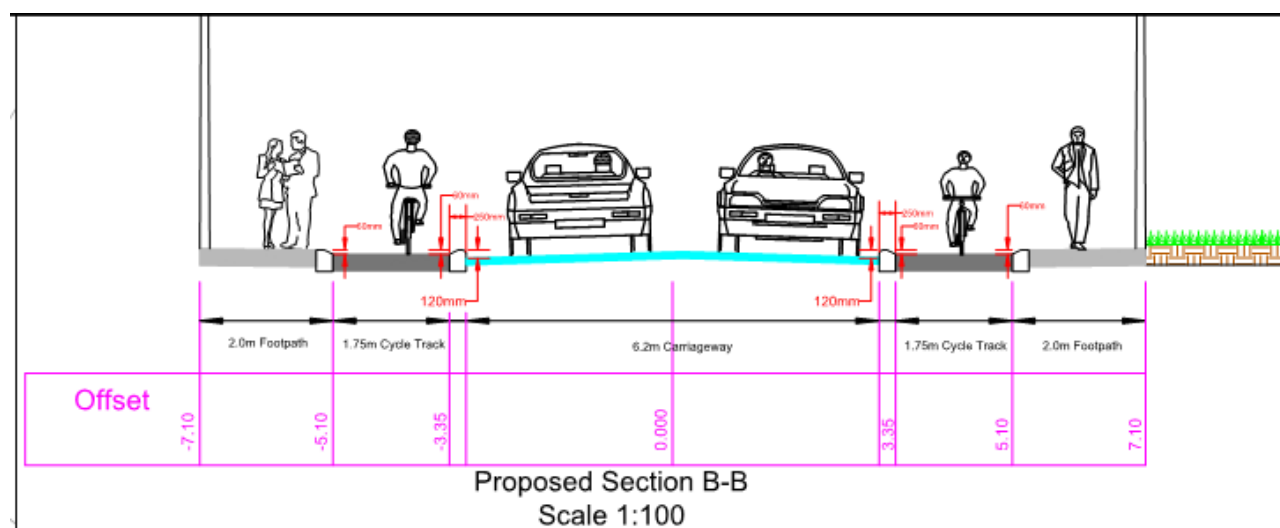


Figure 1.2 Typical Cross Section showing proposed footpath, cycle and road carriageway arrangement.

The proposed development will consist of the provision of segregated cyclelanes and footpath upgrades along the extent of the R510 between Quinn's Cross Roundabout & Raheen Roundabout with the addition of dedicated pedestrian and cycle crossing facilities. The works will also provide an upgrade of the traffic signals at Mungret Gate junction to provide both a protected junction arrangement for cyclists & bus priority measures for public transport. The proposed works also aim to improve safety at St. Nessan's National School with 'front of school' treatment, with additional upgrade works to bus stops, side road junctions, new road surfacing, installation of LED public lighting & surface water drainage works.

### **1.3 Planning Policy Context**

The proposal has been developed with consideration of the Southern Environs Local Area Plan (2021-2027), the Limerick County Development Plan (2010-2016 as extended), the Draft Limerick Development Plan (2022-2028), and relevant national and regional planning documents and guidelines.

The proposal has had regard to Objective IN 08: Cycle and pedestrian facilities within the Limerick County Development Plan (2010-2016 as extended). Although the Draft Limerick Development Plan (2022-2028) is yet to be adopted, given the advanced stage of the plan, significant weight can be given to the policies and objectives contained within. Taking this into account the proposal has had regard to Objective TR 013 Delivering Modal Split, Objective TR 014 Walking and Cycling Infrastructure, Objective TR 015 Limerick Cycle Network, and Objective TR 030 Behavioural Change Measures. The proposal is considered consistent with these key objectives in relation to Sustainable Mobility and Transport.

With regard to the Southern Environs Local Area Plan (LAP) (2021-2027), Objectives TM 04, TM 05, TM 06, and TM 022, regarding modal shift, improved pedestrian linkages and cycle networks, and the implementation of the Cycle Network as per the final LSMATS are of particular relevance to the proposal. The proposal is considered to be consistent with these objectives.

In addition to the objectives listed above, the proposal has had regard to the additional and relevant information set out in the Limerick County Development Plan (2010-2016 as extended), the Draft Limerick Development Plan (2022-2028) Plan and Southern Environs LAP in relation to the environment, heritage, flooding, and amenity.

### **1.4 Pre-Planning Internal Review Process**

The project documents were circulated to all relevant internal departments within LCCC for comment on 19<sup>th</sup> November 2021 with comments requested to be returned within a 2 week period.

Comments were received from the Planning, Environment & Place-making and the Roads Traffic & Cleansing Departments during the internal review period which have been addressed and the project documents have been updated accordingly.

The proposed layout plans were presented to the Limerick City West Metropolitan District Councillors via an on-line briefing held on 8<sup>th</sup> December 2021. A number of queries were raised during the briefing which have subsequently been responded to by the Active Travel Department and circulated to all City West Metropolitan District Councillors.



## **2. IMPACT OF THE SCHEME**

### **2.1 Ecological Impacts**

Based on the current proposed arrangement of the cycle facilities and associated development works no significant ecological constraints have been identified at this stage. A Bat Roost survey has been undertaken by Ecofact Environmental Consultants and should be read in conjunction with this report. The survey has identified the potential of one mature tree to have bat roosts. An additional bat activity survey will be undertaken during the activity season of May – September and submitted to LCCC Environmental & Planning Department for review with appropriate mitigation to be addressed, as determined.

### **2.2 AA Screening**

An Appropriate Assessment (AA) Stage I Screening Report has been completed in respect of the development works and has determined that a full Stage II Appropriate Assessment is not required.

Further detail is set out in the Screening for Appropriate Assessment Report by Ecofact Environmental Consultants and the AA Screening Determination by LCCC which should be read in conjunction with this report.

### **2.3 EIA Screening**

An Environmental Impact Assessment (EIA) Screening Report has been completed in respect of the development works and the evaluation undertaken has identified that the development works do not meet the thresholds for which preparation of an EIAR is a mandatory requirement. The EIA Screening Report recommends that the Local Authority takes account of the information provided in the Report and can conclude that the development works do not have the potential to have likely significant effects on the environment.

Further detail is set out in the Screening for Environmental Impact Assessment Report by Ecofact Environmental Consultants and the AA Screening Determination by LCCC which should be read in conjunction with this report.

### **2.4 Arboricultural Impact Assessment**

An Arboricultural Impact Assessment was carried out by Arbor-Care Ltd. on 5th of June 2021 in accordance with BS 5837:2012 (Trees in relation to design, demolition and construction recommendations). Based on the impact assessment a series of Tree Protection Drawings were developed to identify trees suitable for retention and the protection of the same. Both impact assessment report and drawings should be read in conjunction with this report.

A total of 96no. trees were surveyed and of those 22 no. trees were identified for removal to facilitate the development. 1no. tree was identified for removal due to poor condition.

Tree removal works will take place outside bird nesting season and as per Ecologist assessment, retained trees will be protected throughout construction works in accordance with the Arborist's recommendations.

## 2.5 Landscaping

The overriding design intention is to improve the sense of space, create a variety of quality public spaces along existing residential developments to increase potential uses / improve the sense of ownership and to enhance the biodiversity in the area.

76 no. specimen trees will be planted at selected locations to improve the character of the site, provide additional screening and to compensate for loss of existing trees (refer to section 2.4 above), whilst bands of native hedgerows and swaths of wildflowers along existing tree lines will create a linear green buffer strip.

Site biodiversity will be improved through the use of native and non-invasive adaptive planting, including landscape planting measures to protect and enhance pollinators as set out in the All-Ireland National Pollinator Plan 2015, through the provision of pollinator friendly planting, wildflower meadow and shade tolerant planting under trees and native hedges.

Bird and bat boxes will be installed on existing trees as part of this development to encourage nesting in the area and attract wildlife.

Planting on the site will commence with the completion of each stage of the works and as a result the programme is closely tied to construction operations. Ground preparation will precede planting and will include weed clearance and amelioration where necessary. Planting of specimen trees and hedging will be carried out in the dormant period from November – March, with grass seeding carried out from April – September, this will ensure ample opportunity for planting to establish properly and reduce casualties during the maintenance period.

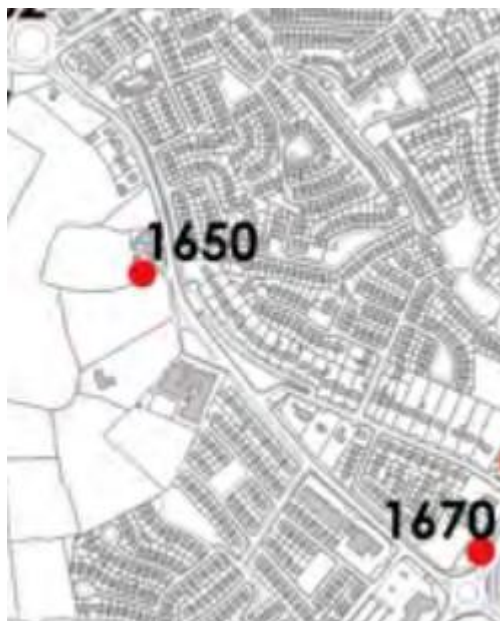
Intensive landscape aftercare for each area will run for 12 months from the practical completion date using approved herbicides and hand weeding. There will be a period of 12 months defects liability on all planting with plant failures being replaced in the following planting season.

## 2.6 Archaeological & Heritage Assessment

There are no recorded monuments impacted by the development works identified on Map No. 6 Recorded Monuments Map from the LCCC Southern Environs Local Area Plan 2021 -2027. RMP Ref. No. LI013-132 is an enclosure at Gouldavoher located on lands adjacent to scheme extents.

There are no protected structures impacted by the proposed development works identified on Map No. 5 Protected Structures Map from the LCCC Southern Environs Local Area Plan. There are 2 protected structures located in close proximity to the scheme extents as marked in Figure 2.1 below. The proposed works do not impact on either structure or any known archaeological or built heritage constraints.





**Figure 2.1 Map showing Record of Protected Structures with O'Gradys Baunacloka Thatched House & Barry's Gouldavoher Thatched House Highlighted**

## 2.7 Flood Risk Analysis

The scheme extent is not located within Flood Zones A or B as outlined in Map 2 Flood Map of the LCCC Southern Environs Local Area Plan (2021 –2027) and the mapping associated with the Draft Limerick Development Plan (2022-2028)

## 2.8 Storm/Surface Water Drainage / SuDS

Storm water flows can have a significant detrimental impact on the available capacity of combined sewer networks and at treatment plants. Inadequate treatment of surface waters can result in pollution of the receiving watercourses. There are many approaches to management of surface water that take account of water quantity (flooding), water quality (pollution), biodiversity (wildlife and plants) and amenity and these are collectively referred to as Sustainable Urban Drainage Systems (SuDS). The use of SuDS to address surface water and its diversion from combined sewers is encouraged, in particular in infill/brownfield sites and higher density areas as appropriate.

The existing R510 surface water within the scheme extents is discharged to a separate storm water network system which discharges to Bunlicky Lake where it is naturally attenuated prior to discharge to the Shannon. LCCC will explore the introduction of SuDS measures during the detailed design stage of the project through the introduction, where feasible, of nature-based SuDS solutions and there will be minimal increase in discharge volumes associated with the scheme.

## 2.9 Public Lighting

The existing public lighting network will be upgraded as part of the scheme extents. Subject to approval of the scheme, a lighting design shall be designed by a competent Lighting Design Engineer with sufficient survey detail / background detail so as to clearly show the lux levels generated by the proposed lighting installation. The lighting design shall include a legible plot of the lux levels superimposed on the Site Layout Plan for Limerick City & County Council's Public Lighting Section approval.

## 2.10 Public Utilities

The design of the scheme will take particular account of the depths to the existing services, with undergrounding of any existing overhead ESB/public lighting services to be examined with utility providers. It is envisaged that the impact on any existing public utilities will be minor.

## 2.11 Construction Management Plan

The Construction Management Plan shall be submitted to and agreed with the Limerick City and County Council Environment & Planning Department prior to commencement of the works. This plan shall provide details of intended construction practice for the duration of the works, including hours of working, acceptable noise/vibration limits, traffic management measures and off-site disposal/recovery of construction/demolition waste.

## 2.12 Land Acquisition

To facilitate the scheme, land is to be acquired on the southern side of Mungret Gate junction to enable construction of the public footpath and segregated cycle tracks. The area to be acquired by Limerick City and County Council has been provisionally agreed with the landowner and agreements will be finalised following confirmation of the scheme as currently proposed. A letter of consent to go to planning has been received from the landowner.

Limerick City and County Council also have a number of existing land dedication agreements in place with landowners along the extents of the scheme and the proposed scheme will not encroach beyond the area subject to existing dedications.

# 3. TRAFFIC & TRANSPORT

## 3.1 Local Road Network

The R510 regional road connects the M20 from Loughmore junction 3 (Raheen exit) to Limerick City Centre passing via both entrances to Raheen Business Park, Quinn's Cross and Irish Cement plant to the city centre via the N69 Dock Road. The R510 is a strategic road corridor that links the M20, Raheen Business Park and the south western commuter residential areas of Patrickswell and Mungret to Limerick City Centre. This route was the original N20 that linked Cork and Limerick prior to the opening of the M20 Adare to Limerick bypass and the N18. Figure 3.1 below, which shows the route of the R510 from the M20 towards Limerick City Centre in blue.

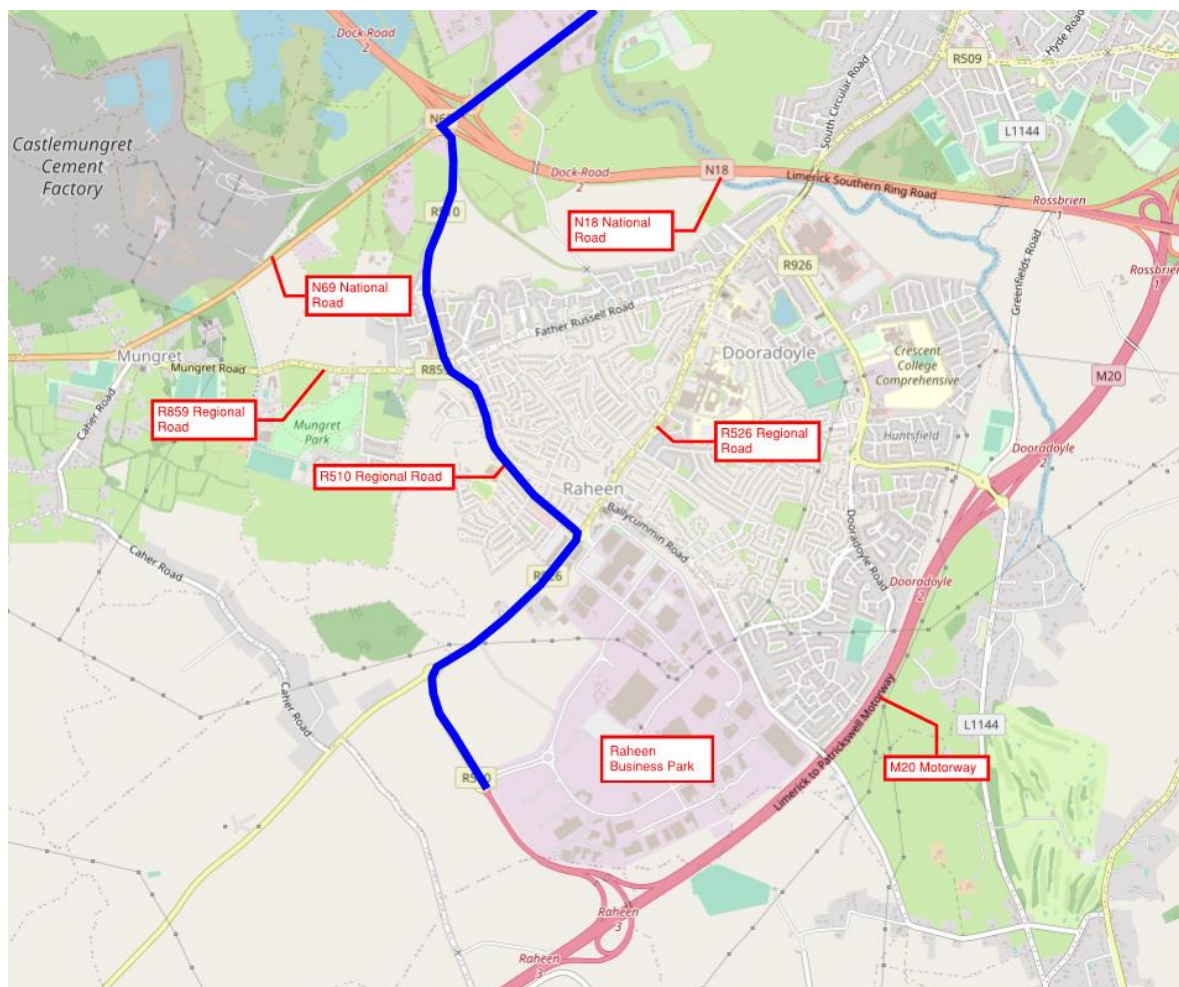


Figure 3.1 Regional Road R510

### 3.2 Cycle Facilities

Cycle facilities in the Raheen/Mungret area currently are a mixture of on-road and off- road cycle facilities on the main R526 St. Nessan’s Road corridor towards the city centre. There are raised off road cycle tracks connecting Mungret Village with Quinn’s Cross Roundabout which were constructed in 2018. The R510 does not have any facilities for cyclists at present apart from the approaches to Quinn's Cross roundabout. Phase 1 of the Mungret Gate Development was also completed in 2018 from the R510 near Quinn’s Cross which also consists of 300m of segregated cycle tracks. The remaining phases of the Mungret Gate streets network will be constructed with cycle facilities to link the R859 near Loughmore Roundabout through to the R510 near Quinn’s Cross Roundabout.

The R526 St. Nessan’s Road has on road facilities between Raheen Roundabout and St. Paul’s Roundabout in the form of an inbound bus lane and an outbound (southbound) cycle lane. These facilities are not continuous through the junctions. The R526 continues to the south towards Patrickswell with an off-road shared pedestrian/cycle facility outbound and an on-road cycle lane citybound.

The National Transport Authority (NTA) published a draft Limerick/Shannon Metropolitan Areas Transport Strategy (LSMATS) report in September 2020. The R510 was identified as a primary route as illustrated below in figure 3.2. which is extracted from LSMATS Proposed Cycle Network Map (draft). Defined Primary Routes correspond to those experiencing the highest level of demand. Primary Routes are typically direct and provide medium- long radial connections to key destinations. These routes are supplemented by secondary and feeder routes which provide access to residential catchments and local facilities/services.

It is not expected that the requirements of LSMATS will alter the requirements at this location but future versions of draft and the final LSMATS report will be considered when published.



Figure 3.2 Proposed Cycle Network extracted from revised draft LSMATS Report

### 3.3 Walking Facilities

Walking facilities are in the form of footpaths along both sides of the R510 and on all adjacent side roads. The current footpaths along the R510 will be upgraded as part of the scheme with improvements to a number of existing controlled crossing points and the introduction of an additional crossing point. The crossings are located at key locations such as Quinn's Cross Roundabout, Mungret Gate Junction, St Nessans Primary School, Church Road Junction and a new additional crossing at Courtfields Junction.

### 3.4 Safe Routes to Schools Programme

The current car drop-off and pick-up arrangement at the school entrance is a significant safety concern as there can be reduced visibility due to the uncontrolled parking and drop-off arrangements.

A parent survey was undertaken at St. Nessan's NS in October 2021 (Safe Routes to Schools) and the survey which was completed by over 60% of parents demonstrates a willingness to move from cars to biking/walking to school where appropriate and safe options were available. Of those surveyed 95% indicated support of proposals to improve walking and cycling routes to the school. As the majority of students attending St Nessan's NS are living within 20 minutes walking distance / 10 minute cycle distance of the school (information as captured by the survey), it is anticipated that the number of car trips associated with school drop-off will significantly reduce if the local cycling, walking and public transport infrastructure is improved.

For those parents that will continue to drive children to school, there will be limited provision for parent drop-off /parking at the school entrance. This will improve the safety of children arriving at the school on their bikes and on-foot and congregating at the school entrance. As noted in the NTA's Safe Routes to Schools Design Guide, this will promote more considered parking practices for those who must drive, away from the school gate, to where there is less user intensity and subsequent risk to children's safety.

The results of the parent survey are encouraging and it is anticipated, based on the survey responses, that the scheme will result in a significant increase in walking and cycling to school and consequent reduction in car usage. It is also expected that this modal shift will lead to further uptake with children wanting to join their friends on the walk, cycle or bus trips to and from school. Any remaining car usage will be distributed throughout the nearby streets and neighbourhood resulting in a safer situation at the school entrance and approaches. In addition, Active Travel Department have agreement to introduce a Park and Stride facility, on a trial basis, at a location near to the school which will commence in advance of the scheme and will be continued on introduction of the upgrade scheme.

The parent survey also indicated that there was good uptake on private school bus usage at distances >1km and some uptake on public transport for those located at >1km radius of the school. Public transport infrastructure improvements are included in the scheme with inline bus stops and new NTA bus shelters to be provided.

### **3.5 Public Transport Network**

Limerick City Bus Service running along Father Russell Road - the 301 City Bus Route - Father Russell Road/Raheen to Westbury, Athlunkard which has its terminus on Fr. Russell Road and travels south west along Fr. Russell Road to Quinn's Road, then southeast along the R510 to Raheen Roundabout from where it follows the R526 St. Nessans Road towards the City Centre. See Figure 3.2 below which shows the Limerick City Bus Route Plan with the 301 service shown with a pink line.

The 301 bus is a regular city service operated by Bus Éireann, running from 7.00am to midnight every 30 minutes, 7 days a week, with an additional morning peak hour bus. The 301 runs from Fr. Russell Road in Raheen, through the city centre to Westbury in County Clare. It stops at five locations on St. Nessans Road before crossing the R526 Ballinacurra Road motorway overbridge on the inbound journey to the city centre.

The existing 2 no. bus stops on the R510 adjacent to St Nessans Primary School are to be retained as part of the development works as inline bus stops with new NTA bus shelters to be provided.



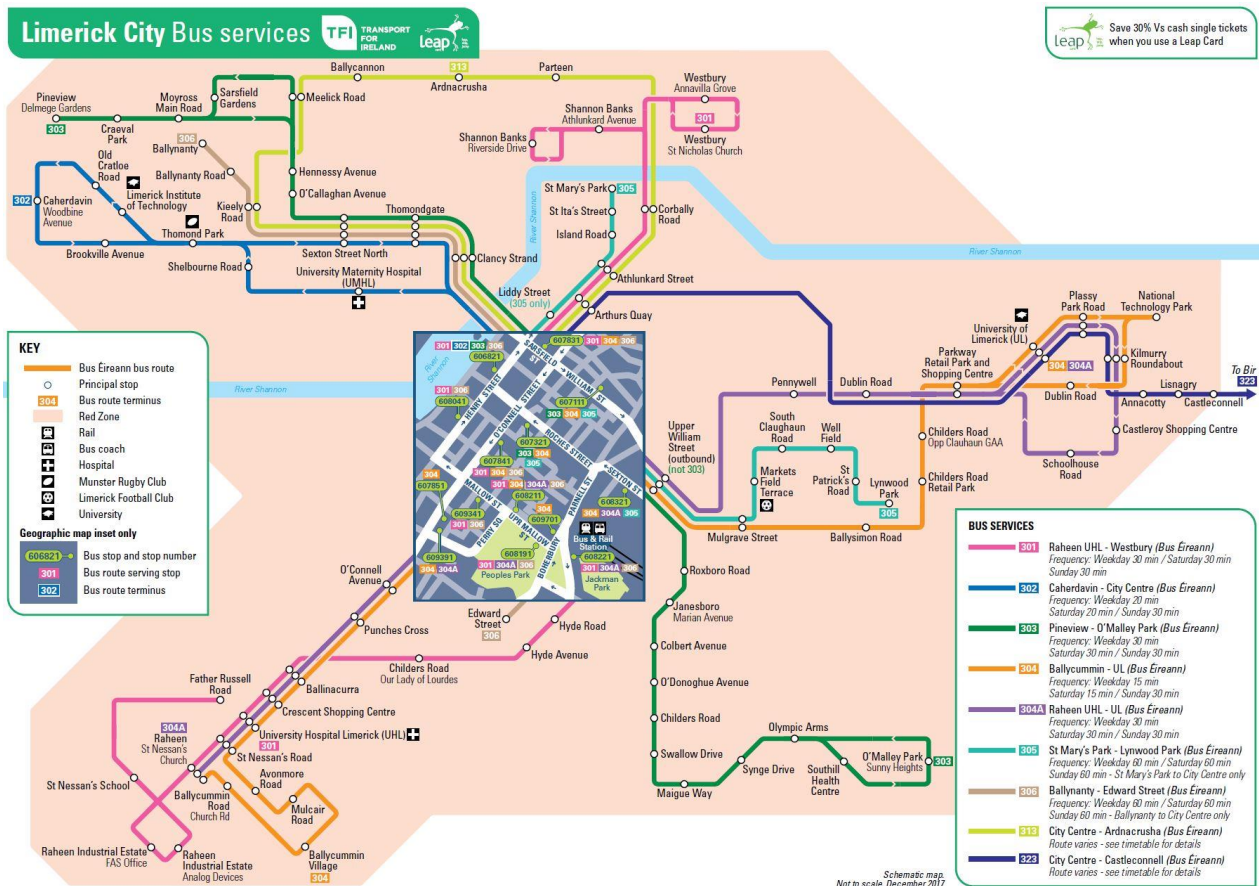


Figure 3.3 Limerick City Bus Services Map

### 3.6 Existing Traffic Conditions

The R510 is a 50km/h speed limit road. Traffic counts were carried out by Limerick City & County Council in 2014 & 2018 as part of the Mungret Masterplan Strategy. Using this data a 2-way AADT on the R510 is 16,740 vehicles per day.

In view of the on-going COVID-19 pandemic updated traffic counts have not been undertaken but recent Central Statistics Office evidence suggests that current traffic volumes are at 90% of 2019 levels.

### 3.7 Road Safety Issues

As part of the proposed preliminary design process, a Stage I Road Safety Audit has been completed by Roadplan Consulting Ltd and the recommendations of the Audit have been implemented in the current scheme design and will be further developed through the detailed design of the scheme.

An analysis of the Road Safety Authority Collision Map 2005-2016 indicates that there were a number of collisions along the R510 Road over the years – see Fig 3.4 below



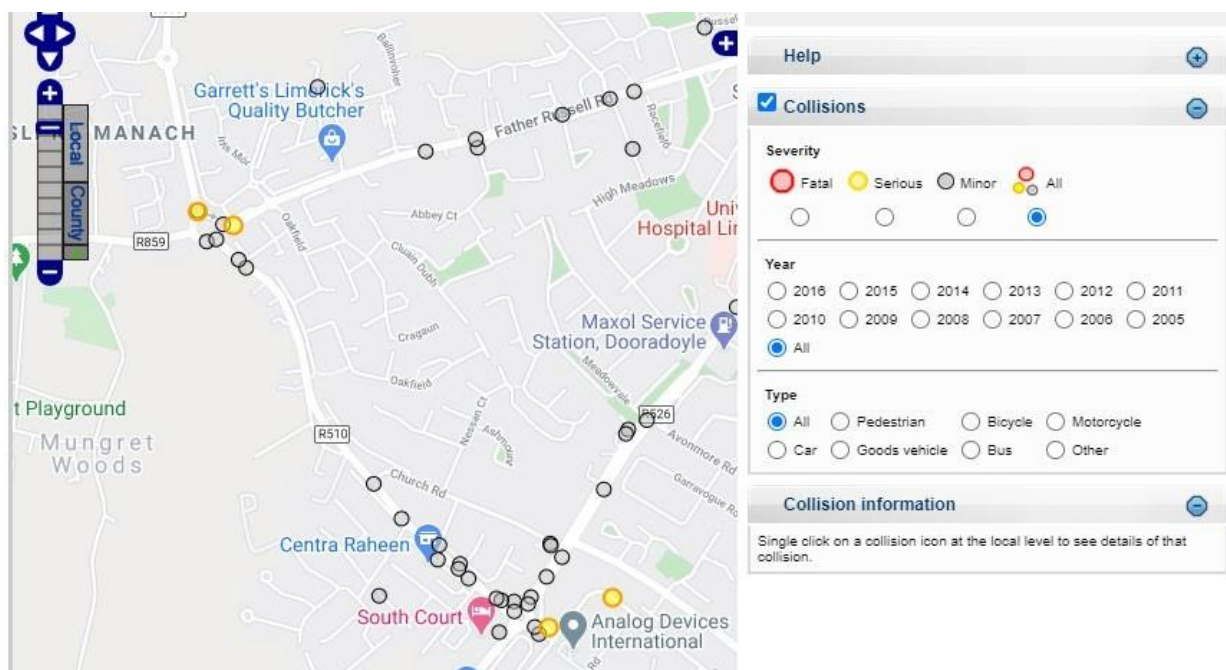


Figure 3.4 Road Safety Authority Collision Map 2005-2016

The collisions consisted of 15 minor injury collisions of which 3 involved pedestrians, 2 cyclists, 1 motor cycle and 9 cars. No serious or fatal injury collisions were recorded in that time period.

## 4. CONCLUSIONS

This Part 8 Planning Report has been prepared in accordance with Part 8 of the Planning and Development Regulations 2001 as amended. The Report and associated drawings outline the Preliminary Design (as agreed with NTA) of the R510 Quinn's Cross to Raheen Roundabout Improvement Scheme.

The Scheme has been designed to improve road safety for vulnerable cyclists and pedestrians through the provision of dedicated cycle facilities and upgraded footpaths, improved junction arrangements and upgraded and additional crossing points.

The scheme, as proposed, provides for a safer active travel journey to work, school or to access local businesses and improved accessibility to available public transport.

The scheme, as proposed, conforms with National Policy and the policies of Limerick City & County Council to promote sustainable travel.