

Arup Consulting Engineers

Limerick City Council

Limerick Green Routes

Corridor Selection Report



LIMERICK CITY COUNCIL  
CONHAIRLE CATHRACH LUIMNIGH

consulting civil & structural



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Report

ARUP

## **EXECUTIVE SUMMARY**

Arup Consulting Engineers (Arup), in association with DBFL Consulting Engineers (DBFL), have been commissioned by Limerick City Council to undertake a corridor selection study for the provisions of the Limerick City Green Routes project.

### ***Green Routes***

Green Routes are regulated traffic management measures designed to provide priority for the efficient movement of commuters, shoppers and tourists by bus. Green Routes will greatly improve the frequency and reliability of bus services, provide for improved bus service expansion, introduce new and improved pedestrian crossings facilities and provide better facilities for cyclists.

Currently the primary mode of transport in Limerick City and environs is the motor car while other modes such as using the bus are declining because of unreliable journey times due to traffic congestion. The reliance on the motor car results in environmental and road safety problems for the city. As a result national and local policy is now aimed at producing a Modal Shift from the motor car to greener and more efficient modes of transport, such as public transport and cycling. Limerick City Council wishes to reduce congestion and introduce Green Routes throughout the City in order to promote a modal shift from the motor car to public transport and cycling over the coming years.

### **Green Routes Benefactors**

- Those who have no access to a private car (i.e. the elderly, Tourists & schoolchildren and those who live in socially disadvantaged areas). Public transport accessibility ensures the all members of society can integrate and avail of all services provided within the Limerick City catchment.
- City centre workers and residents will benefit from the improved public transport service entering Limerick City.
- Green Routes will encourage greater numbers of people to travel by bus and assist in reducing general traffic flows within the city centre and enable more convenient pedestrian improvement to be carried out without effecting city centre accessibility.
- The Green Routes will provide major improvements to the pedestrian environment along the selected corridors, and local residents will benefit from

these improved facilities (i.e. upgraded public lighting footpaths, dedicated pedestrian crossings improved bus stop facilities and bus time information).

- The Green Routes will also facilitate the introduction of a programme of Park and Ride facilities which will help to reduce traffic congestion by reducing the number of car journeys into and out of the city centre.
- Coupled with the City Council's ongoing programme of city centre remodelling, city centre business will benefit from improved accessibility by public transport. This enhanced public transport network will improve the attractiveness of the city centre as a shopping/business recreation and event destination.

### **Existing Bus Service**

Bus Éireann currently operates approximately 19 City Bus routes as well as numerous intercity and rural services from its bus depot at Colbert Station. Additional private bus operators are also licensed to operate in the city centre and environs. Most of the city's bus services start and end in the city centre and are centred in and around O'Connell Street, Henry Street and William Street.

The current bus services are significantly affected by traffic congestion and Bus Éireann has recently noted that the average speed of buses in Limerick city and environs is just 10kph, which is significantly below international standards (approximately 20kph including dwell times at stops). As a result buses are often late and on some occasions may not turn up at all.

To ensure that bus fleets can compete with the effect of growing traffic congestion on the existing road network it is necessary now to comply with Government policy and City Council's policy to provide for comprehensive expansion of bus services in the city and environs through the implementation of Green Routes. Further investment in the existing bus fleet will happen when journey times improve following the implementation of the Green Routes.

### **General Design Principles**

- Deliver bus journey speeds on the route of at least 20kph average over the whole route;
- Operate on regulated lanes over the complete length of the route, except where the existing road widths are too narrow to permit the provision of regulated lanes;
- Delivered without the need to purchase private residential property where possible.

- Operate at times when traffic congestion occurs along the route.

The various routes in each corridor (South, East, West, North) available for the Green Routes entering the city centre were examined and the following criteria was used in the sustainability assessment:

**Current City Bus Service** – is there a Bus Éireann (or other company) City Service operating along the road?

**Length of Route** – the shorter the route the lower the implementation costs and the potentially shorter journey time.

**Length of route within the administrative area of another County** – This is required as the provision of a new route in another County may not be possible and is beyond the control of Limerick City Council.

**Catchment Area Served** – The type of land uses served has a large bearing on the usage of buses, for example if the route does not link a residential catchment to a destination catchment (school, employment etc) the bus loading will be very low.

**Congestion** – Levels of traffic congestion along the routes.

**Typical Cross-section** – is there space to provide bus priority measures?

**Existing Bus Priority** – are there existing bus lanes on this part of the route?

**Potential for bus priority** – is there scope to provide bus priority?

**Off-street Parking** – Is there off-street parking available for residents? And what type of on street parking is taking place?

**Traffic Calming** – is there traffic calming along a road? Traffic calming causes difficulty for buses.

**Split Routing** – Whether a bus will have to use a different access and egress route from the City Centre. This causes difficulties in terms of operations and service for passengers in general bus operators prefer to have a single route.

### ***Corridor Selection Ranking***

A corridor selection process has been carried out using the above parameters and is addressed in detail in the main Corridor Selection Report. The findings of this route assessment are:

## **Identified Green Routes Short Term**

### **THE SOUTHERN CORRIDOR (Inbound only)**

#### **Ballinacurra Road R526**

- The provision of a bus lane approaching the junction (McDonald's Cross) in the inbound direction from South Circular Road to Childers Road. The introduction of the bus lane will impact on parking; however a detailed parking survey was carried out which identified that the current parking demand along the street can be accommodated on the opposite side of the road or on side streets. The introduction of regulated parking can accommodate resident needs.
- The co-ordination between the traffic signals at Punch's Cross with those at Childers Road/ Ballinacurra Road to allow a green wave for public transport vehicles.

#### **O'Connell Avenue (Inbound and Outbound) N20**

- The provision of a bus lane approaching the junction of St Gerard street O'Connell Avenue in the inbound direction. The bus lane will impact on parking during peak periods; however deliveries and short term parking can be accommodated during off-peak periods along the bus lane.
- Introduce bus detection at the junction of St Gerard street / O'Connell Avenue
- The provision of an inbound bus lane approaching the junction of Mallow Street/ O'Connell Avenue and the removal of disc parking at this location.
- The provision of an outbound bus lane on the O'Connell Avenue for 200 metres approaching Punch's Cross. This junction will be reconfigured to enable this bus lane and more convenient access for Lord Edward Street traffic onto O'Connell Avenue

## **Identified Green Route Short Term**

### **THE WESTERN CORRIDOR (Inbound)**

#### **Northern Ring Road - R445/ Cratloe Road**

- The provision of an inbound bus lane on the Northern Ring Road from Redgate Road to Cratloe Roundabout.
- The provision of an inbound bus lane on the Northern Ring Road, Cratloe Road approaching the signalised junction at Hassetts Cross. The provision of the inbound bus lane may reduce the capacity of the roadway for general vehicles; however, the capacity at the junction will be retained by ensuring the bus lane is set back from the junction.
- The provision of bus detection facilities at Hassetts Cross will enhance the bus priority measures along the corridor.

#### **Northern Ring Road - Sexton Street (North) R445**

- The provision of an inbound bus lane where road width permits along Sexton Street (North) into High Road Thomondgate.
- The provision of bus detection facilities at the proposed new junction of Sexton Street (North)/ Cross Road.

#### **Ennis Road (Inbound) R857**

- The provision of an inbound bus lane along Ennis Road between Pairc na nGael and Belfield Gardens. The introduction of the bus lane will require the introduction of regulated parking provisions which can accommodate the needs of residents.

## **Identified Green Route – Eastern Corridor (Short Term)**

### **Childers Road R509**

- The provision of an outbound bus lane approaching the Parkway Roundabout. This road widening is being carried out as part of the Groody Valley Shopping Centre.
- The introduction of bus detection at the traffic signals at Bloodmill Road/Childers Road.
- The provision of an inbound bus lane approaching the Tipperary Road Roundabout.
- The provision of an inbound bus lane approaching the Kilmallock Road Roundabout.

Any improvement works proposed for Childers Road will involve localised road widening to facilitate the bus priority measures, some of which will be carried out in conjunction with new developments proposed for the area.

### **Kilmallock Road**

- Provide a contra-flow bus lane along Kilmallock Road at Bengal Terrace to facilitate inbound buses. Access to the contra-flow bus lane will be controlled by automatic bollards.
- Revise the road layout at the Pike to allow buses to travel outbound on Kilmallock Road via a contra-flow bus lane.

### **Mulgrave Street R527**

- The provision of an inbound bus lane along Mulgrave Street to incorporate the proposed traffic signals for Cathedral Place/Mulgrave Street. The removal of disc parking at this location.

## Project Value

The estimated construction cost for the schemes are noted below and will be implemented over the coming 12 to 24 months following preliminary design, non-statutory public consultation and detailed design.

Southern Corridor	€ 4,000,000
Eastern Corridor	€ 4,000,000
Western Corridor	€ 7,000,000
Total Cost Estimate of Short Term Proposals	<b>€15,000,000</b> (ex.VAT)

The above capital costs represent a significant investment by central government in the development of the public transport network serving Limerick City Centre. In addition the above corridors will connect with park and ride proposals for the suburban areas of the city. It is expected that the delivery of the park and ride strategy for the City will be in the region of €20 million and will further reduce traffic congestion in Limerick City and environs.

## Summary

The provision of Limerick City Green Route Project will be one of biggest public transport projects delivered in the city for a number of years. The Project will enable the city centre to develop in an attractive and inviting fashion, will provide commuters and visitors to the city with a choice of transport modes, encourage greater bus use and tackle the traffic congestion problem in a sustainable manner. The environmental improvements (i.e. public lighting upgrades, footpath improvement works, traffic calming measures) possible from the delivery of the Green Routes Project will enhance not only the city centre but also the corridors the Green Routes will travel along.

The development of the Green Route network in Limerick will bring the city in line with the other major gateway cities in Ireland (i.e. Galway, Cork, Waterford and Dublin) in terms of providing its citizens with a reliable high quality public transport service.