

Walking and Cycling Strategy for Newcastle West



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Rev D



Comhairle Chontae Luimnigh
Limerick County Council



Roughan &
O'Donovan

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1.0 INTRODUCTION

1.1 Background

Limerick County Council, funded by the Department of Transport, has commissioned Roughan and O'Donovan Consulting Engineers to prepare a Walking and Cycling Strategy for Newcastle West, Co. Limerick.

Newcastle West is the County Town and the largest settlement in County Limerick with a population of 6,327, according to 2011 census data. It is located approximately 45km southwest of Limerick City on the N21 National Limerick - Killarney Road, which is the main tourist and traffic route serving the southwest. The high levels of accessibility to Limerick and County Kerry provided by the N21 has led to increasing concerns in relation to traffic congestion through Newcastle West.

1.2 Purpose of the Strategy

The objective of the project is to develop a strategy that will recommend both engineered interventions together with measures aimed at increasing public awareness of the benefits of walking and cycling.

The strategy will recommend the provision of preferably traffic free safer routes for people to travel by bike or on foot and improved walking and cycling access to public transport routes and hubs. It will be complementary to school/college/workplace travel plans and will demonstrate how a reduction in short-distance car journeys through the availability of good quality travel information and alternative infrastructure can be achieved.

The strategy will be fully reflective of the policies and initiatives for County Limerick and will be the basis for future smarter travel projects.

1.3 Benefits of Walking and Cycling

Road traffic growth is having a damaging effect on the environment, the economy and public health. A key contributor to this is the number of people commuting to work in a 'driver only car'. It is critical that attractive alternatives to driving, like walking and cycling, are promoted and developed as more attractive and feasible travel options.

Development and delivery of the Walking and Cycling Strategy will present the following benefits for Newcastle West:

- **Environment:** The growth in greenhouse gas emissions is a major challenge nationally and internationally. Improving alternative travel modes to the car can reduce reliance on the car, one of the main sources of greenhouse gas emissions. Cycling and walking are both non-polluting and therefore beneficial for the environment. Locally, the standard of air quality in Newcastle West will improve with reduction in car use;

- **Economy:** Growing congestion in Newcastle West will continue to affect the economic competitiveness of the local economy. Reducing traffic volumes is therefore an important objective, and to do this, the alternatives must become more attractive. Walking and cycling are cost effective, both in terms of the infrastructure required as well as from the pedestrian and cyclist perspective. Investment in infrastructure for pedestrians and cyclists is often considerably cheaper than road construction elements and can deliver significantly more benefits in the longer term. The provision of designated cycle routes, walking trails/ pathways and improved road surfaces also supports tourism by facilitating cycling and walking holidays, and enhances the local tourism product; and
- **Better quality of life:** By improving opportunities for more active commuting and leisure trips, the overall quality of life of Newcastle West's residents could improve immensely. Health benefits of more active travel will deliver significant health benefits to the community. The provision of accessible walking and cycling routes for commuting and leisure activities ensures the availability of cheap and practical ways to keep fit and healthy.

2.0 POLICY CONTEXT

2.1 Background

This Walking and Cycling Strategy for Newcastle West has been developed with reference to the following documents:

- Smarter Travel: A Sustainable Transport Future 2009 – 2020;
- National Cycle Policy Framework, 2009;
- Limerick County Development Plan 2010-2016;
- Newcastle West Local Area Plan 2008 – 2014; and
- N21 Traffic Management Proposals Report.

2.2 Smarter Travel: A Sustainable Transport Future 2009 - 2020

This policy document sets its key targets as:

- Nationally, 500,000 more people will take alternative means to commute to work to the extent that the total share of car commuting will drop from 65% to 45%;
- Alternatives such as walking, cycling and public transport will be supported and provided to the extent that these will rise to 55% of total commuter journeys to work;
- The total kilometres travelled by the car fleet in 2020 will not increase significantly from current levels; and
- A reduction will be achieved on the 2005 figure for greenhouse gas emissions from the transport sector.

2.3 National Cycle Policy Framework 2009

The Government is committed to developing cycling as one of the most desirable modes of travel, it being good for your health, the economy and the environment. This National Cycle Policy Framework (NCPF) sets out objectives to the year 2020 to achieve its vision. The vision is that all cities, towns, villages and rural areas will be bicycle friendly. Cycling will be a normal way to get about, especially for short trips. Next to walking, cycling will be the most popular means of getting to school, university, college and work. The bicycle will be the transport mode of choice for all ages. We will have a healthier and happier population with consequent benefits on the health service. We will all gain economically as cycling helps in easing congestion and providing us with a fitter and more alert work force. A culture of cycling will have developed in Ireland to the extent that by 2020, 10% of all trips will be by bike.

In terms of cycle network development, a “hierarchy of measures” for delivery of infrastructure measures is proposed, as follows:

- **Traffic Reduction:** High volumes of traffic on our roads can be very intimidating for vulnerable road users. Traffic reduction in city and town centres therefore needs to be a first priority;
- **Traffic Calming:** While reducing traffic is a first priority, calming traffic to lower speeds which are less intimidating for vulnerable road users is a second priority;
- **Junction Treatment and Traffic Management:** Junctions often present a major barrier for pedestrians and cyclists, especially roundabouts;
- **Redistribution of Carriageway:** Existing road layouts may present opportunities for rebalancing, such as the introduction of wider pavements and cycle lanes;
- **Cycle Lanes and Cycle Tracks:** Where each of the above measures have been considered or implemented, on-road cycle lanes may still need to be provided to make a route cycling-friendly; and
- **Cycleways:** Where none of the above measures provide a cycling friendly route, the option of segregated infrastructure should be considered. However, where there are opportunities for segregated amenity routes that offer significant benefit, these should also be considered.

It is also acknowledged that a combination of both infrastructure and soft measures (such as marketing and travel planning) together is most likely to achieve modal shift with education and communication being critical components of the overall approach.

2.4 Limerick County Development Plan 2010-2016

The County Development Plan classifies Newcastle West as a 'Key Town' within the County acting as the key service centre in West Limerick. As a 'Key town' Newcastle West should act as a driver of development and a significant provider of services in West Limerick, as well as complimenting the development of the Limerick / Ennis / Shannon Gateway and acting as a base for high quality transport links to the core area of the region.

Limerick County Council recognises the importance of cycling and walking as a mode of transport and recreational activity which is potentially accessible to the wider community. Means of travel alternative to the car such as cycling and walking shall be facilitated and encouraged. The provision of a relevant quality infrastructure is crucial if people are to be persuaded to walk or use the bicycle for a variety of day-today journeys, and for purely recreational purposes.

OBJECTIVE COM O28: ENCOURAGE ACTIVE AND HEALTHY LIFESTYLE

a) It is the objective of the Council to promote the development of safe and convenient pedestrian and cycling facilities in the towns and villages to minimise the dependence on private motor vehicles and to encourage an active and healthy lifestyle.

Cycling will be encouraged through the provision of on and off-road cycle routes and traffic management measures that give cyclists priority. Cycle routes will also need to be well provided for in terms of parking infrastructure at the destination.

OBJECTIVE COM O26: NATIONAL CYCLE POLICY FRAMEWORK

It is the objective of the Council to support the policies of the 'National Cycle Policy Framework 2009-2020 – Smarter Travel', Department of Transport, April 2009.

2.5 Newcastle West Local Area Plan 2008 – 2014

This Local Area Plan (LAP) for Newcastle West sets out planning policies and objectives that articulate the vision for the future of the town. These objectives have regard to national, regional and county policy and guidance, as well as the aspirations and views of the community of Newcastle West as articulated through public consultation exercises held in relation to the plan.

The LAP sets out the main weaknesses as identified through public consultation and the site appraisals undertaken as part of the LAP preparation process. One weakness identified, that is relevant to this strategy, was **'inadequate footpaths in some locations and limited provision for cyclists'**. To ensure the sustainable development of Newcastle West, these weaknesses need to be addressed as an integral part of the policies and objectives of this LAP.

The County Council has ambitious visions for the future of Newcastle West, based on this community consultation exercise. One of these visions is to promote **'a walkable and pedestrian-friendly environment.'**

In order to achieve this vision, the following Strategic Objective has been established.

OBJECTIVE 6: AN ACCESSIBLE AND LEGIBLE TOWN

- iv. To provide for a more pedestrian and cyclist friendly environment in the town which reduces conflict between the needs of pedestrian and motorist; and*
- v. To promote the provision of amenity walks within and through the town and linking the various natural and heritage features.*

A key theme of the County Council's Transport and Infrastructure policy is the promotion of an integrated transport system throughout the County that is safe, efficient, competitive, accessible and socially and environmentally friendly, with an increased emphasis on the use of alternative modes of transport including public transport, cycling and walking. This LAP adopts a similar policy.

POLICY T1: STRATEGIC ACCESSIBILITY AND ROAD IMPROVEMENTS

It is the policy of the County Council to encourage the development of a safe and efficient movement and accessibility network throughout Newcastle West. Improvements to the network shall cater for the needs of all users and to encourage priority for town centre access, walking and cycling, public transport provision and accident reduction.

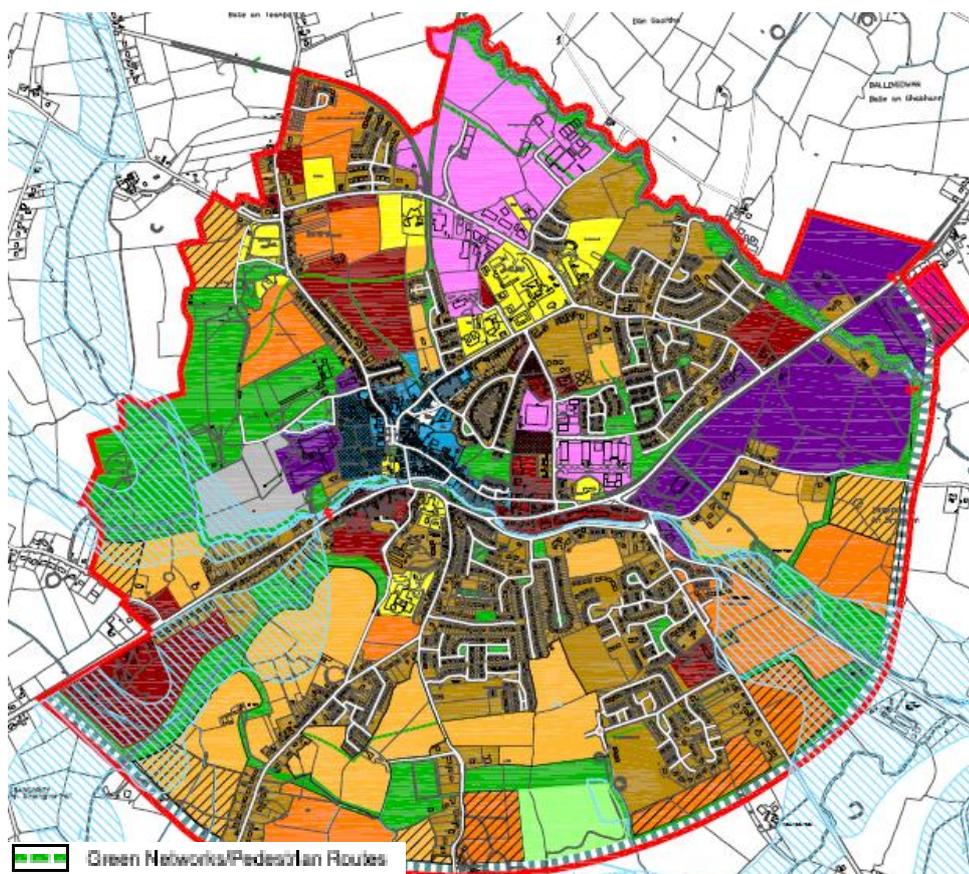
The Council recognises that integrated land use and transportation policies need to be pursued so that the continuing increase in car dependence and the projected population growth do not have adverse effects on the environment of Newcastle West. Alternative forms of transport (walking, cycling and public transport) will therefore be supported and encouraged by the Council in order to help reduce car usage and support the principles of sustainability.

POLICY T4: SUSTAINABLE TRANSPORT 1

*It is the Policy of the County Council to ensure that new developments provide for:
i. Successful incorporation of safe and efficient pedestrian routes and cycleways (connecting with existing networks wherever suitable)*

This policy seeks to promote the development of walking and cycling as viable alternatives to the private car, by creating more permeability through the construction of additional footpaths and cycle lanes.

In the long term, cycle-ways and walkways within Newcastle West should be interconnected to form a network. The Land Use Zoning map identifies a Green Network through Newcastle West to facilitate pedestrian accessibility and enhancement of natural amenities.



Newcastle West LAP Land Use Zoning Map

2.6 N21 Traffic Studies

In 2009, CST Group was engaged by Limerick County Council to carry out traffic studies in Newcastlewest.

3.0 EXISTING NETWORK AUDIT

3.1 Introduction

This section of the study assesses the extent and quality of the existing walking and cycling route network in Newcastlewest. There are few formal cycling facilities in the town, with the Great Southern Trail being the only designated cycle route. The Castle Demesne and Arra River route are other amenities for walking and they are informally used for cycling. The suitability of the general roads and streets for walking and cycling is described in this chapter. In addition there is reasonable permeability in some parts of the town that enables pedestrians and cyclists to find routes through quiet areas and avoid the busier streets. **Drawing No. 001** in **Appendix A** illustrates the findings of the overall network audit.

3.2 Great Southern Trail (Drawing No. 002)

The Great Southern Trail (known in abbreviation as the "GST") is a greenway route suitable for walking and cycling off road along a 37km route. It is part of a national designated cycling and walking route formed by the disused Newcastle West / Limerick / Tralee Railway Line. The disused railway extends west towards Abbeyfeale (23km), Listowel (36km) and Tralee (65km). To the east the GST extends to Ardagh (4km), Rathkeale (13km) and Ballingrane (16km). So far the route has been completed from Rathkeale westwards to Ardagh, then southward to Newcastlewest and then further westward to Abbeyfeale. The long term ambition is to complete the route from Limerick City to Listowel and Tralee. In the national context the GST has been suggested to form part of the National Cycle Network linking the Midwest to the Southwest parts of the country. The completed section of the greenway is a well-used recreational route for walking and cycling that links the town of Newcastlewest to open countryside.

At Newcastlewest the GST greenway commences at the northern edge of the town centre at Bishop Street near the Market Yard. Initially it passes through the residential area of Bishop Court, and then heads northward to an at-grade crossing of the R521 Station Road. There is a signal-controlled pedestrian crossing 70m west of the crossing point, which provides access to the Gael Scoil primary school immediately adjoining the greenway on the southern side of Station Road.

This crossing point is poorly located for the users of the GST. Station Road is part of the R521 regional route that forms a traffic relief route around the north-eastern side of Newcastlewest and links the N21 national primary route to the Port of Foynes on the Shannon Estuary to the north. Most of the industrial development in the town is located along Station Road and this is a busy road with a considerable volume of heavy commercial vehicle traffic. For users of the Great Southern Trail it is difficult to cross Station Road. Preferably a new pedestrian signal crossing should be located to align with the GST and should be linked to the pedestrian crossing still serving the access needs of the school.



Start of the Great Southern Trail at the entrance to Bishop Court on Bishop Street



Great Southern Trail (GST) south of R521 Station Road



Pedestrian Signal Crossing on R21 Station Road west of the GST crossing

Immediately north of Station Road the GST branches with the westward route heading left towards Abbeyfeale and the other route heading initially northward to Ardagh before turning east towards Rathkeale and Limerick City.

After curving westward the Abbeyfeale branch of the GST crosses underneath Churchtown Road on the R521 route using an old railway bridge. There is no connection to the GST at this point, which deprives the local residents from accessing the greenway for recreational use or for a traffic-free route into the town centre.



Two branches of the Great Southern Trail north of Station Road



Towards Abbeyfeale on the left and towards Ardagh & Rathkeale on the right



Great Southern Trail passing beneath the R521 Churchtown Road

3.3 The Castle Demesne (Drawing No. 003)

The Castle Demesne Park is a high quality and well utilised public amenity on the western side of the town that provides recreational playing fields, green spaces and walking routes.

Use of the Castle Demesne by cyclists is not formally provided for and access is restricted to a degree by kissing gates. There is a 3m wide spine road that crosses the park in an east-west direction from The Square to Cullinagh Road with a northward spur to Churchtown Road at St. David's cemetery. This route is suitable for cycling. All other paths in the park are less than 2m wide and are not suitable for cycling.

However, the urban area does not extend westward beyond the park and therefore there is limited scope for routing of greenways through the park that would be of benefit for functional trips by the towns people. The Castle Demesne is therefore primarily of amenity interest to this study.



Spine road through Castle Demesne



One of several kissing gates at Castle Demesne. There is direct access into the Castle Demesne from the Square in the Town Centre.



Access to the Castle Demesne at the Square in the Town Centre

3.4 Arra River Walkway (Drawing No. 004)

Probably the only way to cater properly for cyclists along the N21 route at the edge of the town centre is to provide an alternative route along the bank of the Arra River parallel to the N21.

Currently, there is a small riverside park that follows the Arra River in the town centre between South Quay and Courtenay Bridge. Part of the route is currently closed off immediately west of Bridge Street because of an unstable wall upstream of Bridge Street. This is a walking route and there is no formal provision for cyclists. The paths are fairly narrow and would need widening and improvement to cyclists in a shared space.



Footbridge on the Arra River Walkway at the Castle

A boardwalk type structure is probably required at tight places such as west of Bridge Street along the back of the castle. A new zebra crossing across Bridge Street will also be provided.



Boardwalk type structure at Anna Livia Bridge in Chapelizod

East of Bridge Street along the North Quay, the road should be narrowed to provide space for a 3m wide shared footpath and cycle track until the riverside walkway diverges from the street at the eastern end. This would cater for contra-flow cycling in the eastbound direction and will have no impact on existing parking.

The riverside walk between North Quay and Courtenay Bridge is very narrow and there is no edge protection beside the fast-flowing river. The existing path is also very low relative to

the water level and is prone to flooding numerous times during the year. An elevated boardwalk would be required to provide enough width for cyclists and be above flood level.



Riverside walk between North Quay and Courtenay Bridge

The N21 crosses the Arra River on Courtenay Bridge on St. Mary's Road east of the town centre where the riverside walkway currently ends at the northern side of the bridge. At this location the N21 is still narrower than desirable for shared use of the road by cyclists and only advisory cycle lanes can be accommodated. There is however a suitable alternative route on a quiet road along the southern bank of the river at Rathina, which links to the Cork Road. A zebra crossing should be provided at the N21 Courtenay Bridge along with a clip-on pedestrian and cycle bridge on the southern facade so as to connect to the continuation route along Rathina. This bridge improvement would also address the lack of a footpath on the southern side.

It should be noted that the proposed Arra River Walkway may be difficult to achieve due to possible issues arising from potentially traversing private property and lands along the route.

3.5 Slí na Sláinte Walking Circuit (Drawing No. 005)

This walking route is 3.7km long and extends from the Town Square along Churchtown Road northward, and then loops westward through the Castle Demesne before returning via the Arra River.



Walking Circuit sign in the Square

3.6 Town Centre Street Conditions (Drawing No. 006)

The town centre street system consists of The Square and the 4 streets leading into it, along with the Market Yard a short distance to the northeast of The Square. These streets and the adjoining areas to the north and east are located inside a main traffic ring route formed by the N21 to the south and the R521 to the east and north, with the Castle Demesne forming the western edge.

3.6.1 Bridge Street

Bridge Street is one-way northbound from St. Mary's Road (N21) at the Arra River Bridge on the southern edge of the town centre to The Square. This street has parking along the eastern side and a 5m wide one-way traffic lane, which is sufficient for traffic to pass a cyclist if necessary. As part of a Traffic Studies for Newcastle West carried out in 2008, a traffic count survey was carried out on Bridge Street. The results showed that traffic volumes are modest (370 vehicles per hour). Traffic speeds are also low; therefore it is a comfortable street for shared use. A cycle lane is not required on this street.



Bridge Street

3.6.2 Maiden Street

Maiden Street is one-way eastbound from the junction with Bridge Street, (just east of The Square) to Sheehan's Road. It also links with The North Quay as part of a one-way traffic loop leading back to Bridge Street. There is some parking on the street and there are traffic calming ramps provided at intervals. The traffic lane is quite narrow and insufficient for traffic to pass cyclists. As the street is fairly long, traffic could build up considerable speed, but for the traffic calming ramps. Traffic volumes are quite low with up to 160 vehicles per hour recorded in a survey carried out by Limerick County Council in late October 2012. This street is suitable for shared use by cyclists with traffic.



Maiden Street

3.6.3 The Square

There is a two-way traffic route along the eastern and northern sides of The Square, and a one-way route from northwest to southeast around the western and southern sides. On

street parking is permitted on the outer edges of The Square on the eastern and western sides.



Eastern side of The Square, looking south

There is a pedestrian zebra crossing near the north-eastern corner of The Square close to the junction with Bishop Street. However, at the south-western corner of The Square there is difficulty for pedestrians to cross the road comfortably and safely as they cannot see if traffic is approaching around the blind corners on the approach routes. The photograph on the following page shows a number of people crossing the road near the Castle with some anxiety. A pedestrian crossing should be provided in this vicinity. One possibility is a set of 3 raised platform zebra crossings at the traffic island in the middle of the junction of Bridge Street and Maiden Street.



Eastern side of The Square, looking north

Due to sharp corners on all routes into The Square, traffic speeds are low and the streets are suitable for shared use by cyclists with general traffic. However, there is no cycle parking provided in this location at the cultural, civic and commercial heart of the town.



**Southwest corner of the Square at the junction of Bridge Street and Maiden Street.
Pedestrian crossing needed**

3.6.4 Church Street

This street enters The Square from the northwest and links to the R521 Ardagh Road. It is quite a narrow street with some parking on the western side. The restrictions formed by the parking provide a traffic calming effect and impedes traffic flow and speeds. A traffic count carried out by Limerick County Council in October 2012 found a two-way traffic flow of 500 vehicles per hour in the morning peak (8.30am to 9.30am) and 361 vehicles per hour in the afternoon (1pm to 2pm). The restricted street layout and moderate traffic flows create an environment that is suitable for mixed use of the street by cyclists and traffic.



Church Street

The footpath on the eastern side of Church Street is narrower than desirable (2m), but there seems to be little scope to widen it unless the existing parking on the west side of the road is removed.

3.6.5 Bishop Street

This street extends north-eastwards from The Square past Market Yard towards Gortboy and into the largest part of the inner urban area. It is a busy two-way street with parking on both sides. However, traffic speeds are low as most vehicles appear to be using this route for access to the town centre and car parks for business purposes.

A traffic count carried out by Limerick County Council at the eastern end of Bishop Street at the Courtenay Boys School in October 2012 found a two-way traffic flow of 557 vehicles per hour in the morning peak (8.30am to 9.30am) and 512 vehicles per hour in the afternoon (1pm to 2pm). These traffic flows are moderate and where the road layout is restricted by parking and traffic speeds are low, the street is suitable for mixed use by cyclists and traffic.



Bishop Street. Pedestrian Crossing required near red brick building and Fitzgerald's Bar

There is a need for a pedestrian crossing on Bishop Street in the vicinity of the Market Yard access shown in the previous photograph so as to accommodate access between the shops and car parks on both sides of the street. This should link to the laneway that provides access to the surface car park off Church Street. Another pedestrian crossing would also be desirable at Scanlon's Lane on the north-eastern side of Market Yard to connect to the Supervalu shop and car park on the northern side of Bishop Street. It should be noted that these pedestrian crossings will have no impact on parking on Bishop Street.

On Bishop Street, at the junction with Bishop's Court, there should be a traffic calming platform to mark the start of the Great Southern Trail greenway route as it heads northward to the edge of the town.

3.6.6 Market Yard

This is a busy square in the commercial heart of the town with access routes for traffic on the eastern and western side and a link route between them that crosses the middle of the area, most of which is laid out as a surface car park. There are two other laneway access routes from Bishop Street that are shared by pedestrians and traffic and a pedestrian only route along Brewery Lane from Maiden Street near the Bridge Street junction. Pedestrian routes are poorly defined through the car parking areas and across the central traffic route. There is no cycle parking provided.



Market Yard



Market Yard viewed from Bishop Street

3.6.7 Conclusion

Because the main traffic routes of the N21 and the R521 skirt the edge of the town centre, the traffic conditions in the streets are generally good for pedestrians and cyclists. There are 3 locations identified from our inspections where there is a need for new pedestrian crossings at southern end of The Square and at two places on Bishop Street. There is no necessity for cycle lanes to be provided in the narrow town centre streets, where traffic speeds are low and volumes are moderate.

3.7 Inner Area of Town (Drawing No. 007)

The inner area of the town is defined as being situated between the town centre streets and the main traffic ring routes along the N21 and the R521. This area contains a mix of activities with residential, educational, employment, industrial and commercial uses.

The roads in this area are less constrained by parking and intensity of use compared to the town centre. Traffic speeds are therefore a little higher, which makes conditions less suitable for cyclists, especially for children on their way to and from the local schools.

On-street parking is provided for the residents along some of the roads in this area which mostly have no driveways. Such roads are often quite narrow and do not have a centre-line road marking. Other roads are quite wide and have less need for on-street parking.

Along most roads there are footpaths provided on both sides, but in some cases where there has been no development in the adjoining lands, there is no footpath along the frontage.

3.7.1 Gortboy West (St. Ita's to Bishop Street)

This road forms a central axis through the inner town area and extends from the edge of the town centre at Bishop Street eastwards to the R521 Route at Station Road. It is mainly a residential street, but also contains other uses such as the offices of The Revenue Commissioners, Courtenay Boys School and the health centre, as shown in the following photographs.

Although traffic flows on this road are moderate the speeds are higher due to fewer constraints and the straight geometry of the alignment. This road also provides access to several schools which generates more pedestrian and cycle activity than on many other roads. The traffic counts carried out by Limerick County Council at the Courtenay Boys Primary School on 23rd of October 2012 recorded 106 pedestrians and 4 cyclists in the morning peak hour (8.30am to 9.30am) and 232 pedestrians and 6 cyclists at lunch hour (1pm to 2pm). This road also serves as a main delivery route for heavy commercial vehicles to the town centre shops, with up to 8 trucks per hour recorded in the surveys. These conditions are somewhat unsuitable for safe and comfortable cycling and it would be desirable to provide cycling facilities. To do so will be difficult due to the fairly narrow road and the presence of a small amount of on-street parking. The existing road is 7.3m wide typically with footpaths in the range of 1.1m to 1.8m wide. The road is too narrow to accommodate cycle tracks or cycle lanes.



Gortboy West (at Revenue Commissioners offices, just east of Bishop's Court)



Gortboy West at Courtenay School

Traffic calming is probably the most practical modification that can be undertaken to improve conditions for cyclists by effectively lowering traffic speeds to below 30 km/h similar to the environment in the town centre. Physical measures, such as speed ramps and cushions, would slow traffic and improve safety for all road users, while having no noise impact on the residential areas in the vicinity.

3.7.2 Sheehan's Road

This road runs north-south through the middle of the inner area and links the N21 at St. Mary's Road near the junction with Maiden Street to Gortboy to the east of the Courtenay School. This is a mixed use road for access to residential estates, to the Lidl supermarket and to the Newcastle West Industrial Estate.

Traffic conditions are busy at the southern end at the junction with the N21 and there is often a queue of southbound traffic waiting for a gap to join the N21 at the priority controlled junction. It is difficult for pedestrians to cross the road at the southern end due to the volume of traffic and the numerous turning movements at the closely spaced double junction.



Sheehan's Road, Southern end

This is a difficult road for cyclists due to the volume and mix of traffic with heavy commercial vehicles accessing the industrial premises in the vicinity. Cycle tracks are desirable to provide safe and comfortable segregation for cyclists. All houses along this road have driveways and there is no requirement to accommodate on-street parking for residents. At the Social Welfare offices mid-way along the road there are five designated parking spaces. Across the road there are double yellow lines on the carriageway in front of the funeral parlour. This is a very busy location as the funeral parlour serves both Newcastlewest and a wide hinterland and, regularly, there are cars parked on the carriageway for evening removals.



Designated Parking outside the Social Welfare Office on Sheehan's Road

The road width varies considerably from a wide carriageway of 10.0m at the northern end to a minimum of 7.6m at the Sharwood housing estate. Along many places there is enough space for the provision of cycle lanes within the existing carriageway. Where the road is narrower there are grass verges that could be converted to cycle lanes, albeit with the loss of some trees and visual amenity. The footpaths are typically only 1.2m wide, which is less than desirable. A revised road layout could accommodate 1.25m wide cycle lanes with 3.0m wide traffic lanes in an overall width of 8.5m minimum between footpaths. Such cycle lanes are a little narrower than the minimum of 1.5m required in the *National Cycle Manual*. However, the provision of such narrow cycle lanes would be a big improvement for cyclist safety and comfort.

At this stage for a broad-ranging strategy plan it is not possible to be definitive about the details of all of the proposed cycling facilities and their integration with the other road features. A detailed topographical survey will be required to enable a design to be developed that can identify and resolve the numerous issues that will be involved.

It should not be necessary to remove the existing parking spaces at the Social Welfare Office as there is greater width available within the road cross-section at that location. It should prove feasible to provide cycle tracks in the grass verge behind the parking spaces. On the opposite side of the road the cycle track can be accommodated by narrowing of the traffic lanes. Elsewhere along the road the cycle lanes could have time limits so as to permit parking on evenings when removals are taking place at the funeral parlour as their main function would be in the morning and afternoon peak for school children. Where there is a risk of illegal parking on the cycle lane during the rest of the day, a 40mm high kerb separator along the outer edge would discourage traffic from encroaching onto the cycling facility. An example is shown below from Brewery Road in Stillorgan, County Dublin.



Example of Upstand Kerb on Brewery Road, Stillorgan, Co. Dublin

3.7.3 Churchtown Road

At the southern end this road is an extension of Church Street coming from The Square. It starts at the junction with Demesne Road, which gives access by car to the parking area at the Castle Demesne. This is a wide junction with a poor pavement surface condition probably due to the turning of trucks to and from the Ballygowan plant situated close by. It would be desirable to improve the layout at this junction for pedestrians walking along Churchtown Road, possibly with a staging island in the middle of the junction to shorten the length of exposure.

Almost directly across the road from the Demesne Road junction there is an entry to Church Street public car park from where there is a pedestrian laneway link to Bishop Street and the main shopping area in the town centre. This route provides a shortcut from the eastern part of the town to the Castle Demesne parkland. A pedestrian crossing would be useful to the north of this junction. This would not have any impact on existing parking facilities.



Churchtown Road junction with Demesne Road

Churchtown Road is generally quite wide with a carriageway width of 7.8m to 8.5m. There is informal on-street parking at a few houses without driveways, especially at Ballintemple, the northern end, near the junctions with Old Mill Road and Station Road.

Heading north from the town centre Churchtown Road climbs a moderately steep hill to a high point by the water-tower and St. David's Graveyard. There is an access for pedestrians and cyclists into the Castle Demesne at this point, which is the route taken by the Slí-na-Sláinte walking circuit. There is a gap in the footpath on the eastern side at a field where there is no frontage development, and at a number of houses immediately to the south as shown in one of the following photographs.



Churchtown Road, Southern end



Section without footpath on eastern side of Churchtown Road

At Ballintemple, the northern end of Churchtown Road joins the R521 at the junction with Station Road. Old Mill Road also joins at this point to form a cross-roads junction with a petrol station on the north-western corner.

Traffic conditions on Churchtown Road are moderate with flows similar to those noted earlier for Church Street or a little higher with additions from the car park at the southern end and from Demesne Road. A lot of the traffic from the Ardagh direction appears to turn eastward onto Station Road to follow the R521 route so as to bypass the town centre. However, traffic speeds can be high and this poses risks for cyclists. The incomplete footpath between Ballintemple and the Demesne, on the eastern side is also a problem. The road width is insufficient to provide cycle tracks, which would displace on-street parking by residents. This road does not serve any particular centre of potential cycling demand such as a school, and therefore there is little justification for the disruption that would arise from the provision of cycle tracks. Alternatively and similar to Gortboy, traffic calming could be provided to lower speeds to 30 km/h as necessary for shared use of the road. Physical measures, such as speed ramps and cushions, would slow traffic and improve safety for all road users. In addition, the junction at the R521 Station Road relief route should be modified to alter priorities to reflect the major traffic route between the east and the north. A mini-roundabout would be a suitable arrangement to provide a traffic calming gateway. (See Section 3.9.2). It is worth noting that this proposed mini roundabout will have no impact of existing parking at Ballintemple.



Churchtown Road, Northern end. Note the on-street parking

3.8 N21 Route / St. Mary's Road / South Quay (Drawing No. 008)

This is the busiest route through Newcastlewest and carries a large volume of traffic between Limerick and Kerry as it passes through the urban area over a distance of 2.7km and skirts the southern edge of the town centre. Traffic surveys were undertaken in 2008 and these indicate volumes of 1,100 vehicles per hour at the western side of the town and of 1,400 vehicles per hour on the eastern side. There is a significant proportion of heavy commercial vehicles. According to NRA Traffic Counter Data, 7.7% of traffic on the N21 at Templeglatine, 15km southeast of Newcastle West, was HGV traffic.

Cycling facilities should be provided along the N21 route through Newcastlewest so as to provide a high-quality, safe and comfortable route to encourage more cycling. This is justified on the basis of the high traffic volumes. It would also provide a clear statement of intent that Newcastlewest is a *Smarter Travel Town* to set an example to others. By providing highly visible cycling facilities on the main traffic route through the town, the Smarter Travel objective will be prominently promoted.

It might be argued that there is little cyclist demand along this route, and that the *Great Southern Trail* provides a more suitable route for cycling between towns in west Limerick. However, there is likely to be a latent local demand within the rural catchment area to the east and west of the town within a 5km to 10km range for which the N21 will be the shortest and most convenient route. If cycling conditions are improved within the town and active encouragement is given to the local population to cycle more, this will inevitably attract some increase in cycling from rural areas that are located along local roads that feed onto the N21. Although the number of cyclists is likely to be small, the high volumes of traffic on the N21 will require segregated cycling facilities for safety and comfort, which would continue from the hard shoulders on the rural sections of the road.

The road is generally very wide through the urban area with hard shoulders on the outer sections which extend for a considerable distance in towards the town centre. There are

traffic calming gateways at the edges of the urban area where the 60 km/h speed limit commences.



Traffic-Calming gateway at N21 West

The gateway shown in the preceding photograph forms an obstacle for cyclists. Dished kerbs are provided at the concrete traffic islands that block off the hard shoulder, but these are too severe for a cyclist to safely traverse at speed. The traffic islands should be cut back to provide a cycle passage through at road level as is the case shown in the next photograph. A portion of the island can be retained between the cycle track and the traffic lane. Similar modifications are required at other recently constructed build-outs.



A good example of a traffic island, on the N21 West, that does not obstruct cyclists

Approaching the inner town area from Cullinagh, the west, the road is initially quite wide as far as the bridge over the River Mash, but it then narrows considerably and space for cyclists is greatly reduced as shown in the following photographs.

In the inner part of the town the N21 passes along the South Quay of the Arra River and St. Mary's Road, where the road width varies considerably with parking along the southern side. There are bus stops on both sides of the road at South Quay with an indented bus lay-by on the northern side. The road width varies from 6.5m to 8.5m outside the parking bays, which is too narrow for cycle tracks and yet the volume of traffic is unsuitable for shared use of the road. Advisory cycle lanes could be provided along with a 30km/h speed limit within a traffic calming scheme. Physical measures, such as speed ramps and cushions, would slow traffic and improve safety for all road users. It is assumed that on-street parking should be retained for local businesses, although this could be reviewed if alternative parking can be identified to suit the local needs.



N21, about 800m west of Bridge Street Junction. Note the space available for Cycle Tracks



N21 West approaching the inner town area. Note the narrower road with limited space for mixing of cyclists with traffic including trucks. Mash River Bridge is visible just beyond the petrol station



N21 at the edge of town centre at South Quay. Note the truck straddling the road due to lack of width, which is as little as 6.5m at the narrowest

Probably the only way to cater properly for cyclists along the N21 route at the edge of the town centre is to provide an alternative route along the bank of the Arra River parallel to the N21. Currently, there is a small riverside park that follows the Arra River in the town centre between South Quay and Courtenay Bridge. Part of the route is currently closed off immediately west of Bridge Street because of an unstable wall. This is a walking route and there is no formal provision for cyclists. The paths are fairly narrow and would need widening and improvement to cyclists in a shared space. A boardwalk type structure is probably required at tight places such as west of Bridge Street along the back of the castle. A new zebra crossing across Bridge Street will also be provided.



N21 at St. Mary's Road at the junction with Bridge Street



Arra River west of Bridge Street. Note the path on the right is currently closed to pedestrians due to an unstable wall

East of Bridge Street along the North Quay, the road should be narrowed to provide space for a 3m wide shared footpath and cycle track until the riverside walkway diverges from the street at the eastern end. This would cater for contra-flow cycling in the eastbound direction and will have no impact on existing parking.



North Quay. There is room to widen the southern footpath (on the left) for a shared cycle track

The riverside walk between North Quay and Courtenay Bridge is very narrow and there is no edge protection beside the fast-flowing river. The existing path is also very low relative to the water level and is prone to flooding numerous times during the year. An elevated boardwalk would be required to provide enough width for cyclists and be above flood level.

The N21 crosses the Arra River on Courtenay Bridge on St. Mary's Road east of the town centre where the riverside walkway currently ends at the northern side of the bridge. At this location the N21 is still narrower than desirable for shared use of the road by cyclists and only advisory cycle lanes can be accommodated. There is however a suitable alternative route on a quiet road along the southern bank of the river at Rathina, which links to the Cork Road. A zebra crossing should be provided at the N21 Courtenay Bridge along with a clip-on pedestrian and cycle bridge on the southern facade so as to connect to the continuation route along Rathina. This bridge improvement would also address the lack of a footpath on the southern side.



N21 Courtenay Bridge. Note the lack of a footpath on the southern side on the right



Southern facade of the N21 Courtenay Bridge at Rathina. We propose to provide a parallel pedestrian and cycle bridge at this location

It should be noted that the proposed Arra River Walkway may be difficult to achieve due to possible issues arising from potentially traversing private property and lands along the route.

There is no footpath on the southern side of the N21 over a distance of 150m between Rathina and Garvey's supermarket just west of the junction with Sheehan's Road. The traffic lanes can be narrowed to accommodate a minimum 1.2m wide footpath, or preferably 1.5m wide where there is enough space.



N21 East of the Courtenay Bridge. Note no footpath on the southern side

At Garvey's supermarket and petrol station the N21 widens out again sufficiently for the provision of cycle tracks, which should continue eastward to the speed limit gateway at the edge of the town.

There is a newly constructed roundabout, Old Pike Roundabout, at the junction of the N21 with the Cork Road. This is a fairly small roundabout and is marked out with two traffic lanes, even though in practice it operates mainly as a single track junction due to the way it handles the turning proportions. The two-lane layout is not good for cyclists as it creates the potential for side-swipe accidents. This roundabout should be modified slightly to provide single lane entries with cycle tracks into and around the outer edge of the circulatory carriageway as outlined in the *National Cycle Manual* and as illustrated in the later photograph. According to the traffic count carried out as part of Traffic Studies in 2008, the existing evening peak traffic flows through the roundabout are of the order of 1,800 vehicles. A single-lane roundabout would be expected to handle these flows.



Existing Roundabout at junction of N21 with Cork Road



Example of a cycle-friendly roundabout (Glenageary, Dublin)

East of the roundabout the N21 widens out past the relatively new Tesco supermarket and there are hard shoulders that can be converted to cycle tracks. Some of the road space is currently allocated to right-turn lanes at Tesco and the Castleview housing estate. The lane widths can be adjusted so as to accommodate 1.5m wide cycle tracks on each side of the road, while still retaining the right-turn lanes.



N21 on east side of Newcastlewest. Note the space for cycle tracks

3.9 R521 Eastern Ring Route / Gortboy / Station Road / Ardagh Road (Drawing No. 009)

This is a moderately busy route with typical traffic flows of 600 vehicles per hour. More importantly for the safety and comfort of cyclists, there is much more truck traffic on this route, with up to 50 HCV's per hour recorded in the traffic survey carried out by Limerick County Council on 23rd October 2012, compared to fewer than 10 per hour on other roads in the town (bar the N21). The route functions well as a relief road for the town centre, with through traffic direction signs as shown in the following photograph.



Direction Signs for R521 Eastern Relief Route along Station Road

The R521 route provides access to many of the employment sites in the town in several industrial estates along both sides of the road. It also links to the major Pallas Foods plant located just over 1km north of the town on the Ardagh Road. These factories account for much of the truck traffic on the route. There are several large housing estates on both sides of the Gortboy section of the route. In addition there are 2 schools on the route, with Desmond College a large secondary school for boys at the eastern of Station Road beside the junction with Gortboy, and a primary Gael Scoil on the southern side of Station Road just beside the *Great Southern Trail*. The traffic conditions along this route are not good for shared use of the road by cyclists, especially for school children heading to the two schools, as well as to the nearby Courtenay Boys School on Gortboy. In addition, there is severance

experienced by the residents in the housing estates along the route who need to travel along this route or to into the town centre due to the lack of continuous footpath facilities and safe or signalised crossing points. Severance is the separation of residents from facilities and services they use within their community as a result of changes in road layout and lack of links between adjoining areas which are cut-off from each other.

3.9.1 R521 Gortboy

At the eastern end of this route between the N21 Lacey's Cross junction along Gortboy westward to St. Ita's junction with Station Road, the road width is only 7.0 to 7.5m wide, with fairly narrow footpaths of between 1.2m and 1.5m. The road is too narrow for cycle tracks and will need to be widened, which is generally feasible along the southern side where the frontage development is set back a sufficiently from the road. A 3m to 4m width will be required to be acquired from some properties.



Traffic on the R521 Gortboy Route



Room for Cycle Tracks along the R521 Gortboy Route

There is potential for alternative walking and cycling routes availing of permeability through adjoining residential areas which would enable people to avoid the busy main road for some trips. For instance there is a laneway beside the Hazel Grove housing estate that links to the Castlevue housing estate to the south, from where there is a further link westwards through the Newcastle West Industrial Estate towards the town centre. These routes provide connectivity towards the N21 bus stops on St. Mary's Road as well as to the schools on Bother Buí and Knockane on the southern side of the town.



Pedestrian link southward from Gortboy at Hazel Grove

3.9.2 R521 Station Road

This road connects to Gortboy at the eastern end at a priority controlled junction beside Desmond College and St. Ita's Community Hospital. The St. Ita's junction is not aligned for the main traffic route and should be modified by provision of a mini-roundabout, which would better suit the strategic traffic function along the eastern relief route around the town. It would also suit the transition along Gortboy into the suggested traffic calmed section west of the junction towards Bishop Street.

There is no footpath along most of the southern side of Station Road which needs to be rectified to complete the pedestrian network in the town.

The road carriageway is generally 9m wide, which is wider than most other roads in the town. The footpath along the northern side is 2m or more in width. On the southern side there is a hard shoulder in places that is up to 1.5m wide. Overall the width between boundaries is between 11m and 13m. The required road cross-section to properly cater for cyclists and pedestrians is as follows: 6.0m carriageway + 1.5m cycle lanes x 2 + 2.0m footpaths x 2 = 13.0m total width.

It is worth noting that St. Ita's Hospital and its curtilage, including its boundary full height wall, are protected structures. However, the proposed footpath along Station Road will be provided in the existing road space and there will be no negative impacts on the boundary wall.



R521 Station Road Junction at St. Ita's. Note traffic queue and pedestrian crossing signal for Desmond College



R521 Station Road at Desmond College. Note the end of the footpath on the left at St. Ita's Wall

Along most of Station Road, there is enough space available to accommodate the provision of a footpath on the southern side and raised-adjacent cycle tracks as appropriate to encourage walking and cycling to the employment sites and schools along the route. In a few locations, such as along the edge of the car park at St. Ita's Community Hospital, it will be necessary to acquire a strip of land up to 2m wide to provide room for the footpath. At this location, the low wall at St. Ita's is no longer a protected structure.



R521 Station Road at industrial estates



R521 Station Road at St. Ita's Community Hospital car park

3.9.3 R521 Ardagh Road

At the Ballintemple junction where Station Road joins Churchtown Road, the R521 heads north along the Ardagh Road. This is a very wide junction that is difficult for pedestrians and cyclists to cross due to the long exposure to traffic. The priority is also inappropriate with traffic heading to and from the town centre dominating. A mini-roundabout would be appropriate at this location, similar to the suggestion for the other end of Station Road at Gortboy. Again, this would have no impact on existing parking in the area. Traffic islands on each arm of the junction would make it easier for pedestrians to cross the road. The traffic calming effect would benefit cyclists by reducing traffic speeds. Such a change would also provide a gateway at the northern end of Churchtown Road which should have traffic calming from here to the town centre as described earlier.



Ballintemple Junction - Ardagh Road, Station Road and Churchtown Road on the R521 route

North of this junction the Ardagh Road is quite narrow and the footpath is not continuous on the eastern side. The missing section of footpath should be provided over a length of 120m past the Flynn's Tyres premises as far as the Cois Teampaill housing estate, which is otherwise not safely accessible on foot from the town.



R521 Churchtown Road and Ardagh Road, north of the Station Road junction

There is no space available for the provision of cycle tracks on the narrow carriageway of the Ardagh Road. An appropriate strategy would be to traffic calm the road so as to lower traffic speeds for the small number of residents on this short section of road. Physical measures, such as speed ramps and cushions, would slow traffic and improve safety for all road users. Most traffic approaching the town from the Ardagh direction drives too fast for the very narrow road and the restricted visibility over the humpback bridge. There should be a traffic calming gateway north of the bridge where the 50 km/h speed limit is located. As can be seen in the following photograph, the R521 is very narrow at the railway bridge and unsuitable for either safe walking or cycling.



R521 Ardagh Road. Note no footpath on the eastern side



Gap in footpath on R521 Ardagh Road linking to Cois Teampaill Housing estate



R521 Ardagh Road at the old railway bridge over the *Great Southern Trail*

There is an alternative cycle route that can be provided via the *Great Southern Trail* which passes under the R521 road at the old railway bridge.



***Great Southern Trail* at the R521 Ardagh Road Bridge, looking east**

It would be a simple matter to provide a link to the GST on the eastern side of the bridge from both north and south. This would enable people to access the safe walking and cycling route of the GST from the adjoining housing. It would also bypass the narrow humpback bridge.



Location for link to *Great Southern Trail* beside old railway bridge at Cois Teampail housing estate

3.10 Radial Routes on Southern Side of the Town Centre (Drawing No. 010)

3.10.1 R520 Bruff Line

The R520 commences at the N21 and links to the R522 and the Rathina Road, at the Arra Roundabout, to the south of the town centre. The road serves a small number of residents and currently there is no demand for cycling. However, once adjoining lands are zoned and the demand for cycling increases, the proposals described in the following paragraphs for the road can be implemented.

There are no pedestrian or cycle facilities on either side of the road which deprives the small number of residents living on this road, a traffic-free route into the town centre. The R520 is quite narrow and relatively straight in alignment. Therefore, traffic speeds are generally higher than the posted speed limit of 50kph and this poses risks for existing and potential cyclists.

However, there is no space available for the provision of cycle tracks on the narrow carriageway of the R520 Bruff Line. Traffic calming is probably the most practical modification that can be undertaken to improve conditions for cyclists by lowering traffic speeds to below 30 km/h, similar to the environment in the town centre. Physical measures, such as speed ramps and cushions, would slow traffic and improve safety for all road users. The Arra roundabout at the junction with the R522 would then also provide a traffic calming gateway to the town centre.

There is no footpath along a large section of the L52002 Dromindeel Road which needs to be rectified to complete the pedestrian network into the town.



R520 Bruff Line

3.10.2 Cork Road

The Cork Road commences at the N21 on the southern edge of the town. It serves a large number of residential estates including Palm Grove, Wingfield Orchard, The Paddocks, Killeline Heights, Ferndale and Woodfield Park. There are footpaths provided on both sides as far as Ferndale on the east side of the road. Beyond Ferndale there is a footpath on the west side of the road, along the frontage of Woodfield Park. Past Woodfield Park, the speed limit changes from 50kph to 60kph and there is some ribbon development, (approximately ten properties) on one side of the road. There are no footpaths on either side of the road at this location, which deprives the small number of residents, a traffic-free route into the town centre. This needs to be rectified to complete the pedestrian network in the town. Associated public lighting would also be required.

Cycle tracks are desirable along the Cork Road to provide safe and comfortable segregation for cyclists. South of the N21, the Cork Road widens out past Ferndale and there is a hard shoulder on one side of the road that could be converted to a cycle track. Beyond Ferndale, there are grass verges on both sides of the road that could be converted to cycle tracks, albeit with the loss of some visual amenity. There is potential for linking the walking and cycling route along the Cork Road to future development by availing of permeability through adjoining residential areas like Woodfield Park. Traffic speeds are low and volumes are modest through Woodfield Park therefore, it is comfortable for shared use. South of Woodfield Park there is a hard shoulder abutting the ribbon residential development that could be converted to a shared cycle track and footpath.



Cork Road

There is also potential for availing of permeability through Rathina which would enable people wanting to access the town centre to avoid a section of the busy N21. There is no necessity for cycle lanes to be provided on this road, as traffic speeds are low and volumes are moderate. For example, a traffic count carried out in 2008 on Rathina, found a two-way traffic flow of 396 vehicles per hour in the morning peak and 366 vehicles per hour in the evening peak period. This creates an environment that is suitable for mixed use of the street by cyclists and traffic.

3.10.3 Bóthar Bui

Bóthar Bui commences at the N21 and links to Knockane Road to the south of the town centre. It serves a large number of residential properties, a school and a nursing home. There are footpaths provided on both sides as far as Chapel Close. On-street parking is provided for the residents along alternate sides of the road, as properties have no driveways, therefore the road width is insufficient to provide cycle tracks.

However, the restrictions formed by the parking provide a traffic calming effect and impedes traffic flow and speeds. A traffic count carried out by Limerick County Council in October 2012 found a two-way traffic flow of 564 vehicles per hour in the morning peak (8.30am to 9.30am) and 350 vehicles per hour in the afternoon (1pm to 2pm). The restricted street layout and moderate traffic flows create an environment that is suitable for mixed use of the street by cyclists and traffic.



Bóthar Bui

Beyond Chapel Close, the road layout of Bóthar Bui changes as it veers to the south west. Footpaths are generally provided where there is frontage development but there are gaps in the footpath at a number of houses immediately opposite Chapel Close and along Knockane Road. These missing sections of footpath should be provided to enable people to access the town centre safely.

At the junction of Chapel Close, Killeline Road connects to Bóthar Bui and continues south serving a number of residential estates and properties and the Newcastle West R.F.C grounds. There is no necessity for cycle lanes to be provided on this narrow road, as traffic speeds are low and volumes are moderate. The street is suitable for mixed use by cyclists and traffic. However, there is severance experienced by residents in the housing estates and residential properties along the road, due the incomplete pedestrian network into town, which needs to be rectified. Severance is the separation of residents from facilities and services they use within their community as a result of changes in road layout and lack of links between adjoining areas which are cut-off from each other.

3.10.4 Lower Knockane Road

Heading south from the N21, the Lower Knockane Road climbs a moderately steep hill to a high point by Scoil Naisiunta Iosaf. The footpaths are narrower than desirable, but there seems to be little scope to widen it within the generally narrow street. On-street parking is also permitted for the residents who have no driveways.

At Scoil Naisiunta Iosaf the Lower Knockane Road widens out again and a footpath is provided on the school side of the road. The additional road width opposite the school is utilised as informal parking by parents dropping off and collecting their children from school.

Beyond Scoil Naisiunta losaf the road becomes quite narrow and does not have a centre-line road marking. Where there has been no development in the adjoining lands, there is no footpath along the frontage. There is a gap in the footpath on the left side of Lower Knockane Road at a single residential property. This needs to be rectified to complete the pedestrian network in the town.

Traffic speeds along Lower Knockane Road are low as most vehicles appear to be using this route for access to the school. A traffic count carried in 2008 found a two-way traffic flow of 168 vehicles per hour in the morning peak and 45 vehicles per hour in the evening peak period. The restricted street layout and low traffic flows create an environment that is suitable for mixed use of the street by cyclists and traffic.



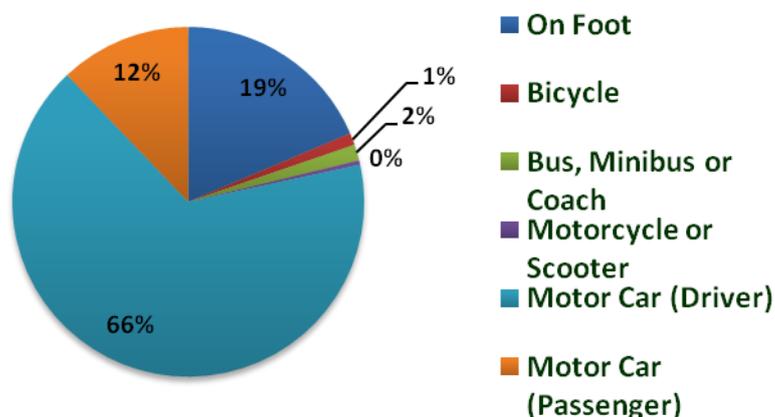
Lower Knockane Road

4.0 CURRENT TRAVEL TRENDS

4.1 2006 Census Data

Existing modal choice information is provided by 2006 Census Data. It should be noted that 2011 Census data is not currently available. The figure below describes the mode of transport used by persons in Newcastle West to travel to work.

2006 Census Results - Travel to Work

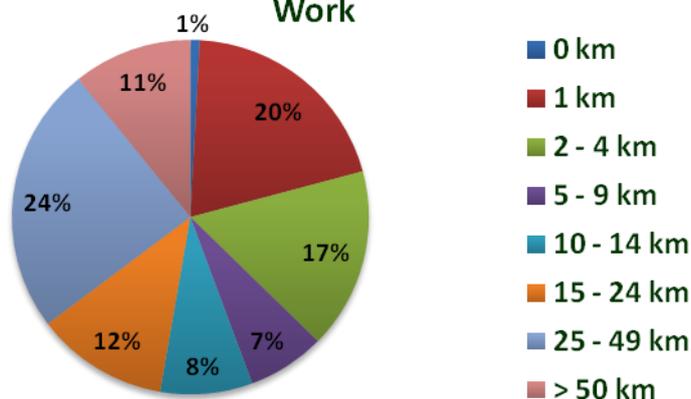


66% of persons use a car and 12% of persons are car passengers. 19% walk and 2% use public transport in the form of the bus. Just 1% of people cycle to work.

It is considered reasonable that a cyclist will be prepared to travel up to 5km to work along normal roads and streets but will be prepared to travel up to 10km along a cycle network. People will also typically be prepared to walk for up to 30 minutes to work, which means that walking could be an option from all home locations within 3km of the workplace.

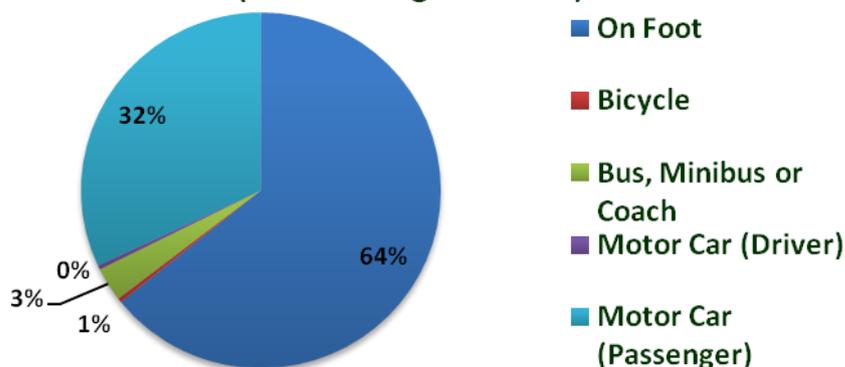
The figure below describes the distance persons in Newcastle West to travel to work. 38% of persons live within 5km of their workplace and hence could potentially walk or cycle to work. As only 20% of people currently walk or cycle to work, there is potential for a further 18% to use these modes of transport.

2006 Census Results - Distance Travelled to Work



A distance of up to 1km for walking and 3km for cycling is generally considered reasonable for pupils to travel to school by these modes of transport. The figure below describes the mode of transport used by students (aged between 13 and 18) in Newcastle West to travel to school.

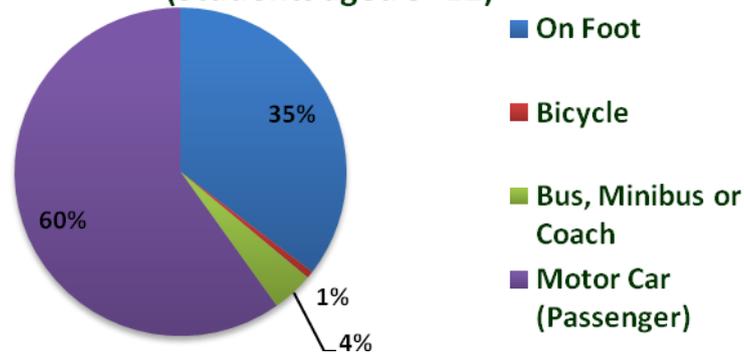
2006 Census Results - Travel to School (Students aged 13 -18)



64% of students walk to school and 32% are car passengers. 3% use public transport in the form of the bus and just 1% of student's cycle to school.

The figure below describes the mode of transport used by children (aged between 5 and 12) in Newcastle West to travel to school. 60% of children are car passengers and 35% walk to school. 4% use public transport in the form of the bus and just 1% of children cycle to school.

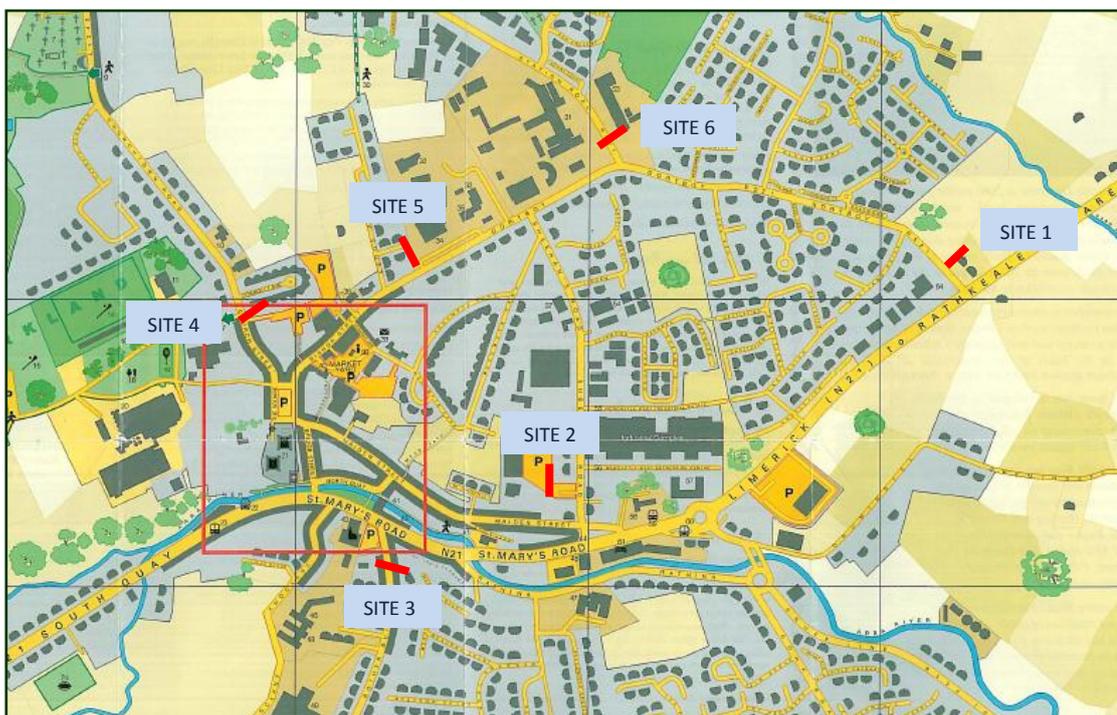
2006 Census Results - Travel to School (Students aged 5 -12)



4.2 2012 Traffic Count Data

In order to assess the suitability of the roads for use by cyclists, Limerick County Council undertook a number of traffic surveys on the main roads around the edge of the town. These counts were undertaken on Tuesday 23rd October between the hours of 08:30 - 09:30 and 13:00 -14:00 at the following sites:

- **Site 1:** R521 near Lacey's Cross on the N21;
- **Site 2:** Maiden Street;
- **Site 3:** Bóthar Bui (south of the Church);
- **Site 4:** Church Street (south of the Demesne junction);
- **Site 5:** Gortboy at Courtenay's Boys School; and
- **Site 6:** R521 Station Road at Desmond College.



The results of the traffic flow surveys are shown below:

Site	AM Peak (08:30 – 09:30)				Afternoon Peak (13:00 – 14:00)			
	<i>Pedestrians</i>	<i>Cyclists</i>	<i>LGV's</i>	<i>HGV's</i>	<i>Pedestrians</i>	<i>Cyclists</i>	<i>LGV's</i>	<i>HGV's</i>
1	5	1	606	48	8	5	329	31
2	20	-	122	-	42	-	159	2
3	135	1	558	6	240	3	345	5
4	57	-	500	7	145	1	361	4
5	106	4	557	8	232	6	512	5
6	345	4	875	68	374	3	785	35

The table below describes the existing modal split along these routes in Newcastle West.

Site	AM Peak (08:30 – 09:30)				Afternoon Peak (13:00 – 14:00)			
	<i>Pedestrians</i>	<i>Cyclists</i>	<i>LGV's</i>	<i>HGV's</i>	<i>Pedestrians</i>	<i>Cyclists</i>	<i>LGV's</i>	<i>HGV's</i>
1	1%	-	92%	7%	2%	1%	88%	8%
2	14%	-	86%	-	21%	-	78%	1%
3	19%	-	80%	1%	40%	1%	58%	1%
4	10%	-	89%	1%	28%	-	71%	1%
5	16%	1%	83%	1%	31%	1%	68%	1%
6	27%	-	68%	5%	31%	-	66%	3%

5.0 STRATEGY VISION

5.1 Objective of the Strategy

The objective of the strategy is to present a concept design for a walking and cycling network in Newcastle West that will encourage greater use of walking and cycling as alternative sustainable modes of transport for trips to work, public transport routes and hubs, education, shopping and tourist/recreation facilities. The strategy will identify viable routes between residential areas and other areas of potential cycle desire.

5.2 Areas of Potential Cycle Desire

In order to establish the desire lines for potential cycle routes, ROD have examined and mapped the location of all major residential areas, recreational areas, retail, educational and work centres. **Drawing No. 011** in **Appendix A** illustrates the existing land uses in Newcastle West.

- **Residential:** Long established housing areas occur near the town centre at Assumpta Park, Castleview and Sharwood Estates. More recently, there has been further substantial growth in housing development throughout Newcastle West, but especially in the south/ southeast at Killeline and Rathnaneane, and in the north/ northeast at Gortboy and Churchtown.
- **Education:** Within the town there are 5 primary schools (Monagea NS, Scoil Iosaf (St Joseph's Convent), Scoil O Curain B, SN Cill Lachtain, and Gaelscoil O Doghair), and 2 secondary schools (Scoil Mhuire & Ide and Desmond College).
- **Employment:** Manufacturing has played a major role in the local employment sector in Newcastle West. The three largest manufacturing industries are Pallas Foods, Rettig Myson and Ballygowan Water Ltd. Public Sector services such as the Revenue Office, St. Ita's Hospital, Schools and Council Area Offices provide other large employment bases.
- **Commercial:** The core of commercial activity is centred on the Square, extending along Maiden Street, Bishop Street, Bridge Street and Church Street.
- **Recreational:** Newcastle West benefits from various recreational sports clubs and facilities including GAA, rugby soccer, tennis and athletics. The town has an excellent Community Park, children's playground and playing fields at the Castle Demesne in public ownership.
- **Tourist:** Newcastle West has many fine tourist attractions, most notably the Desmond Castle complex on the banks of the River Arra. The castle and its grounds are open to the public and is well utilised by the local community. Other visitor attractions include a famine cemetery and the Civil War monument. The River Arra also offers renowned trout and salmon fishing. Other buildings of note include the Courthouse (1842) and the Church of the Immaculate Conception (1828), the old Railway Station (1867), St. Ita's Hospital, the Parish Hall, the Carnegie Library and the Courtenay Boy's School.

5.3 Target Modal Splits

The following table indicates target modal splits for Walking and Cycling in Newcastle West for 2015, two years after implementation of the Strategy. The target modal splits have regard to the following objectives of recent Smarter Travel documents:

- By 2020, work-related commuting by car will be reduced from a current modal share of 65% to 45%; and
- A culture of cycling will have developed in Ireland to the extent that by 2020, 10% of all trips will be by bike.

% Trips by Cycling	% Trips by Walking	% Trips by Car	% Trips by Car Passenger	% Trips by Public Transport
5%	20%	55%	15%	5%

The proposed modal split targets are considered realistic and achievable. Based on existing travel patterns in the area it has been assumed that the share for cycling will initially be modest but will increase substantially as the cycle infrastructure in Newcastle West undergoes major expansion and improvement.

6.0 STRATEGY - ENGINEERING INTERVENTIONS

6.1 Introduction

This section of the strategy recommends the engineering interventions that should be undertaken in Newcastle West as part of the Walking and Cycling Strategy including the provision of preferably traffic free safer routes for people to travel by bike or on foot and improved walking and cycling access to public transport routes and hubs.

This chapter should be read in conjunction with **Drawing No. 001** in **Appendix A**, which illustrates the overall proposed walking and cycling facilities in Newcastle West. **Drawing No's 002 – 010** illustrate the proposed walking and cycling facilities for each section.

6.2 Greenways

A greenway is a dedicated cycle & walking paths linking places to one another. Greenway routes are proposed at the following locations:

- Along the River Arra;
- Between the GST and the local road north of Sycamore Crescent; and
- Between Cork Road and N21 at 2 separate locations.

6.2.1 Arra River Greenway

Currently, there is a small riverside park that follows the Arra River in the town centre between South Quay and Courtenay Bridge. This strategy proposes developing this greenway to cater properly for cyclists. Refer to **Drawing No. 002** in **Appendix A**.

A boardwalk type structure is probably required at tight places such as west of Bridge Street along the back of the castle. A new zebra crossing across Bridge Street will also be provided. East of Bridge Street along the North Quay, the road should be narrowed to provide space for a 3m wide shared footpath and cycle track until the riverside walkway diverges from the street at the eastern end. An elevated boardwalk would be required on riverside walk between North Quay and Courtenay Bridge to provide enough width for cyclists and be above flood level. At Courtenay Bridge the N21 is still narrower than desirable for shared use of the road by cyclists and only advisory cycle lanes can be accommodated. A zebra crossing should be provided at the N21 Courtenay Bridge along with a clip-on pedestrian and cycle bridge on the southern facade so as to connect to the continuation route along Rathina.

This greenway would provide links to the Castle Demesne Parkland and the N21 at various locations. At South Quay, it is envisaged that the greenway continues south along the banks of the River Mash and veer south east towards Knockane Road. From here, it will link to Killeline Road and Woodfield Grove Estate to the east.

6.3 Cycle Tracks

Cycle tracks are desirable for situations where the traffic regime is unsuitable for cycling and cannot be otherwise mitigated. They provide safe and comfortable segregation for cyclists. The *National Cycle Manual* requires a minimum of 1.5m width for a cycle track.

Along many roads in Newcastle West there is enough space for the provision of cycle tracks within the existing carriageway. In some locations, grass verges and hard shoulders can be converted to cycle tracks, albeit with the loss of some trees, visual amenity and private property. Cycle tracks are proposed along the following roads:

- N21;
- Cork Road;
- R521 Ardagh Road;
- Station Road;
- Gortboy Road; and
- Sheehan's Road.

6.4 Cycle Lane and Traffic Calming

Advisory cycle lanes have been proposed along with a 30km/h speed limit within a traffic calming scheme where the road is too narrow for cycle tracks but the volume of traffic is unsuitable for shared use of the road. Advisory Cycle Lanes are marked by a broken white line which allows motorised traffic to enter or cross the lane. The N21 at South Quay, between the Mash Bridge and Rathina is too narrow and a cycle lane and traffic calming has therefore been proposed at this location.

6.5 Mixed Street

There is no necessity for cycle lanes to be provided on roads and streets with the following characteristics:

- Narrow streets or streets that are restricted by parking;
- Streets with low traffic speeds; and
- Streets with low traffic volumes.

Together, these create an environment that is suitable for mixed use of the street by cyclists and traffic. The following roads are suitable for mixed use:

- Lower Knockane Road;
- Knockane Road;
- Bóthar Bui;
- Killeline Road;
- Rathina Road;
- L52002 Dromindeel Road;
- Lower Maiden Street;
- Maiden Street;

- North Quay;
- Bridge Street;
- The Square;
- Bishop Street;
- Market Yard;
- Old Mill Road;
- Church Street;
- Demesne;
- L7076 Cullenagh Road; and
- Residential Estates.

6.6 Traffic Calming

Traffic calming has been proposed where there is no space available for the provision of cycle tracks. This will improve conditions for cyclists by lowering traffic speeds to below 30 km/h similar to the environment in the town centre. The R520 is quite narrow and relatively straight in alignment. Therefore, traffic speeds are generally higher than the posted speed limit of 50kph and this poses risks for existing and potential cyclists. Traffic calming has therefore been proposed on the R520 Bruff Line. The extent of the traffic calming will be determined at the detailed design stage.

6.7 Cycle Parking

High quality sheltered and secure bicycle parking areas are to be primarily provided at the following locations:

- In close proximity to the Town Centre; at The Square and Market Yard;
- At the proposed Transportation Hub along the N21 (Refer to **Section 6.14**);
- At all primary and secondary schools in Newcastle West; and
- At all places of employment in Newcastle West.

Cycle parking facilities could also be provided at sports clubs and facilities and the Castle Demesne subject to demand.

6.8 New Footpaths

Pedestrian routes in Newcastle West should be:

- Comfortable – provide a good surface without puddles and trips;
- Convenient – provide continuous footpaths;
- Convivial – be safe to use, and free from litter;
- Conspicuous – routes should be open to view, clearly signed and lit, assisting to improve perceptions of personal security; and
- Connected – direct routes reflecting desire lines where possible. They should link the main starting points with the destinations.

Along most roads in Newcastle West there are footpaths provided on both sides, but in some cases where there has been no development in the adjoining lands, there is no footpath along the frontage. The missing sections of footpath have been identified as part of this Strategy and should be provided in order to complete the pedestrian network in the town. Associated public lighting should also be provided. New sections of footpath should be provided along the following roads:

- South side of Station Road;
- East side of Churchtown Road;
- South side of the L52002 Dromindeel Road;
- North side of R520 Bruff Line;
- Both sides of the Cork Road;
- Both sides of Bóthar Bui;
- East side of Lower Knockane Road; and
- West side of Killeline Road.

Pedestrian routes are also poorly defined through Market Yard; hence this strategy identifies a spine pedestrian route through the Yard.

6.9 Toucan or Zebra Crossings

Toucan crossings allow pedestrians and cyclists to cross together without the need for the cyclist to dismount. New crossing points should be provided at the following locations:

- N21 at Rathina;
- Sheehan's Road at the entrance to the Industrial Estate;
- Bishop Street at Scanlon's Lane, Market Yard and Bishops Court;
- Gortboy at Sheehan's Road and Oakpark;
- Station Road at GST and Desmond College;
- Churchtown Road at the Demesne;
- Bridge Street; and
- 3 Crossings at the traffic island at the Bridge Street/Maiden Street junction.

It is also proposed to improve the layout of the Churchtown Road / Demesne junction for pedestrians and cyclists travelling along Churchtown Road, with a staging island in the middle of the junction to shorten the length of exposure.

6.10 Permeability Links

There is potential for alternative walking routes in Newcastle West availing of new permeability links through adjoining residential areas which would enable people to avoid the busy main road for some trips. Proposed permeability links are at:

- Between Assumpta Park and Lidl on Sheehan's Road (through private property); and
- Between Chapel Close and Beechwood Avenue.

Potential permeability links that may be considered in the future are at:

- Between Portland Drive and Castle View; and
- Between Sharwood Estate and Castle View at 2 separate locations.

We have also identified alternative routes that utilise potential permeability links where the roads are very narrow and unsuitable for providing footpaths, as follows:

- A clip-on pedestrian bridge should be provided on the southern facade of Courtenay bridge across the Arra River so as to connect to the Rathina Road, which is quiet, along the southern bank of the river, which links to the Cork Road. This bridge improvement would address the lack of a footpath on the southern side.
- The R521 Ardagh Road is very narrow at the railway bridge and unsuitable for safe walking. An alternative route should be provided via a link to the *Great Southern Trail*, which passes under the R521 road at the old railway bridge, on the eastern side of the bridge from both north and south. This would enable people to access the safe walking route of the GST from the adjoining housing.

6.11 Junction Improvements

In order to benefit cyclists by reducing traffic speeds and make it easier for pedestrians to cross the road, it is proposed to upgrade a number of junctions in Newcastle West as follows:

- Mini Roundabout at Ballintemple, at the R521 Station Road / Churchtown Road junction;
- Single Lane Entries with cycle tracks into and around the outer edge of the circulatory carriageway at the N21 Old Pike Roundabout; and
- Mini Roundabout at St. Ita's, at the R521 Station Road / Gortboy junction.

6.12 Signage

Signage advising road users they are entering a Smarter Travel area and to be aware of pedestrians and cyclists should be located and all proposed and existing gateways into Newcastle West, including:

- Proposed mini roundabout at Churchtown Road / Station Road junction;
- Existing traffic calming gateways on the N21; and
- Existing roundabout at the Arra Roundabout.

Presently there is only informal directional signage illustrating the presence of the GST, Castle Demesne, Slí Na Slainte and their links. Improved interpretative and directional signage could be provided for these walkway/cycleways, including the proposed Arra River Walkway, as part of the Strategy. Better signing and information boards for taxis should also be incorporated as part of the Strategy.

6.13 30 km/h Speed Limit

Traffic conditions in the town centre are good for pedestrians and cyclists as traffic speeds are generally at 30 km/hr. This is essentially self enforcing, however, the strategy proposes to introduce a speed limit of 30 km/hr to the centre of Newcastle West. A speed limit of 30Km/h is appropriate where the needs of vulnerable road users take precedent over the needs of vehicular traffic.

6.14 Transportation Hub

This strategy proposes to create a transportation hub on the N21 to the west of the Old Pike Roundabout. A transportation hub, or transport interchange, is a place where passengers transfer between vehicles and public transport. Public transport hubs include train stations and bus stops. This site is conveniently located for commuter traffic and numerous walking and cycling routes availing of permeability through adjoining residential areas and converging at this location. There are also existing bus stops on both sides of the road at this location with an indented bus lay-by on the northern side.

An important element of a potential transportation hub is the identification of Park and Ride facilities. They have the benefit of reducing the number of car based trips into Limerick City Centre. Tesco is located to north east of the proposed hub and it is intended to consult with Tesco to determine whether they would be amenable to providing a small portion of their car parking for Park and Ride facilities. High quality sheltered and secure bicycle parking areas should also be provided at this location.

The transportation hub will also dispense information in relation to public transport, taxis, walking and cycling. Real Time Passenger Information (RTPI) displays should be installed at the bus stops and shelters and should display the expected arrival times for the next 3 buses. This will encourage more people to use public transport and give people greater certainty when they are planning their journeys.

The proposed hub should also provide the following:

- Taxi Rank;
- Sheltered waiting and seating area;
- CCTV; and
- Adequate public lighting.

7.0 STRATEGY – SOFT MEASURES

7.1 Introduction

Awareness of the Cycling and Walking Strategy, its scope, objectives and targets, will be key to its success. This section of the strategy recommends soft measures aimed at increasing the public awareness of the benefits of walking and cycling and encouraging greater use of cycling and walking through the availability of good quality travel information.

7.2 Smarter Travel Champion

It is recommended that Limerick County Council appoint one of their staff a Smarter Travel Champion for Newcastle West responsible for the following:

- Sustained promotion of the Walking and Cycling Strategy;
- Generating revenue for the Strategy through sponsorship and advertising;
- Gaining the commitment of the local people, businesses, politicians and councillors of Newcastle West; and
- Liaising with relevant Government Departments, the Local Authorities and public transport operators when required.

It will also be the responsibility of the Smarter Travel Champion for Newcastle West to post information and maps relating to the Walking and Cycling Strategy on a website that is hosted by Limerick Smarter Travel. The website would also promote and provide up to date information on public transport services, car sharing, the Tax Saver Scheme, the location of bicycle parking and the health and financial benefits of sustainable commuting. The website should be linked to the Limerick Smarter Travel websites and the Official Guide to Limerick website, www.limerick.ie. It should also have feedback or chat facilities so that people can post comments or ideas in relation to the strategy.

7.3 Promotional Material

7.3.1 Existing Cycle/Walking Routes

It will be the responsibility of the Smarter Travel Champion for Newcastle West to post information relating to existing Walking and Cycling Routes on the website that is hosted by Limerick Smarter Travel.

Maps of existing walking and cycling routes should be posted on the website. For example, the Great Southern Trail group recently published a Southern Trail walking trail guide which is included in **Appendix B**. Also a poster illustrating the Slí Na Slainte route in Newcastle West is also included in **Appendix B**.

It is considered reasonable that a cyclist will be prepared to travel up to 5km to work along normal roads and streets but will be prepared to travel up to 10km along a cycle network. Also, people will typically be prepared to walk for up to 30 minutes to work, which means

that walking could be an option from all home locations within 3km of the town centre. **Drawing No. 004 in Appendix A** illustrate the extent of Newcastle West included in 3km and 5km isochrones. It is intended that this will give people a better perception of walking and cycling as modes of travel.

The website should also provide links to relevant websites promoting walking and cycling routes around the country, county and Newcastle West. For example:

- **Irishtrails.ie** is a website from the National Trails Office in the Irish Sports Council. The website, www.irishtrails.ie, has a database of over 870 trails, categorised by county, including 43 National Waymarked Trails. The trails promoted in Newcastle West are the Great Southern Trail and the Newcastle West Slí Na Slainte route. The website enables the user to review and rate trails. It also provides free downloadable publications, guides and advice for trail users. For example, their 'Walk safely' information leaflet is attached at **Appendix B**.
- **Southern Trail.net** is a website set up by the Great Southern Trail Action Group, a non-profit group working to develop the Limerick to Tralee section of the trail so that everyone can explore this beautiful region in a safe, leisurely way by foot or bicycle. It provides information on the trail, trail maps and links and planning your trip. The website, www.southerntrail.net/index.html, should be promoted on the website.

7.3.2 Cycle/Walking Events

The website should promote and provide details on events that promote sustainable transport. The Smarter Travel Champion should develop an events calendar linking in to existing national and county wide events to capitalise on interest generated around these events. For example, the following campaigns run every year:

- **National Bike Week** aims to promote cycling as a healthy mode of transport and is the opportunity for people to get back on the saddle – for commuting or for recreation. There are various events in local schools and communities organised throughout the week. These are highlighted by county on the National bike Week website, www.bikeweek.ie. National Cycle to Work Day also forms part of National Bike Week.
- **National Trails Day** is an annual event encouraging people to get out and enjoy the huge range of trails available across Ireland. The Great Southern Trail Action Group organise numerous walking and cycling events on the GST around this time, which are all advertised on their website, www.nationaltrailsday.ie.
- **Pedometer Challenge** is a national event open only to employers who have signed up to implement workplace travel plans as part of the Smarter Travel Workplaces programme. Teams of 3–6 workmates can register for the Pedometer Challenge. You can record your steps, on behalf of the team, by wearing a pedometer on your hip over the course of the challenge. Researchers have recommended 10,000 steps (or approximately 5 miles) per day for overall good health and well-being.
- **10 Minute Cycle Challenge** is a free workplace event, for both experienced and new cyclists. The Challenge is open only to employers who have signed up to implement

workplace travel plans as part of the Smarter Travel Workplaces programme. This is a team event (3–6 cyclists) and every team must have a 'new cyclist' – that's someone who hasn't cycled in the past six months. **1 trip = 1 point.** Trips must be 10+ minutes to qualify. Every time you log a trip to or from work, the Journey Logger will give you a bonus point for your efforts. Also, all 'new cyclists' logging more than 30 trips will get a bonus 10 points for their team.

The Smarter Travel Champion could also look into organising a car free day in Newcastle West where all local employers and employees are encouraged to make an effort to travel to work by non-car based modes.

7.3.3 Bike to Work Scheme

The website should also promote the government's 'Bike to Work' Scheme in order to reduce the percentage of single car users to and from Newcastle West and to encourage people to cycle to work. This government scheme covers bicycles and accessories up to a maximum cost of €1,000. The bicycle must be purchased by the employer but the scheme can then operate either with the employer bearing the full cost of the bicycle, or by way of a salary sacrifice agreement. An Information Pack for registering with the bike to work scheme is included in **Appendix C**.

7.3.4 Cycle Training Information

Cycle training is another effective method to increase the number of cycle trips and the number of cyclists. It does not involve constructing new physical infrastructure and is relatively low cost. Cycle training is usually associated with improvements in cyclists' safety. The training itself is intended to build confidence and traffic awareness to help cyclists travel more safely. This in turn can increase the amount of cycling that those trained do and potentially, as cycling is perceived as being safer will encourage others to participate.

The **Cycling Safety Programme** has been operating very successfully in County Limerick since 2004. The programme includes cycling safety theory, bicycle care and practical bicycle safety and skills training. This course is conducted on school grounds and planned to work in with the school timetable. Bicycle helmets and all ancillary equipment are provided by trainers. This course is offered to children from third class upwards. Over 2000 children have participated in cycling safety training in County Limerick to date. Twenty primary schools in County Limerick participated in cycle safety training during 2011. There are currently two companies in County Limerick delivering cycling safety training in the County, the contact details of which should be posted on the website:

- Mr. John Clancy, Cycle Safety School Mid-West; and
- Mr. Liam Collins, Safer Cycling Initiative, c/o Cycling Pursuits.

Cycle Training Ireland, based in Co. Tipperary, provides a broad range of cycle training services to all age groups including adult cycle training, schools cycle training, bike maintenance and instructor training. Their website, www.cycletrainingireland.com provides

useful links and resources on how to improve generally as a cyclist at basic and intermediate level. For example, 'Top Tips for Urban Cycling', produced by www.cycletraining.co.uk, is attached at **Appendix D**. A link to these websites should be provided on the Limerick Smarter Travel website.

7.3.5 Public Transport Information

Poor or insufficient access to information can be a major barrier to public transport use. It will be the responsibility of the Smarter Travel Champion for Newcastle West to post and update information and maps relating to public transport on the website. This includes timetable information, fares, bus stop location and route planning.

Newcastle West is served by Bus Éireann on the hour with buses departing from and arriving at The Courtenay Lodge and at South Quay, to Tralee, Killarney and Limerick with further connections from these areas. Currently the following Bus Eireann services serve Newcastle West:

- No. 13 and 14 Expressway Coach Services; and
- No. 321 Local Bus Service.

The relevant Bus Eireann timetables are attached at **Appendix E**. A link to the Bus Eireann website, www.buseireann.ie, should also be provided on the Limerick Smarter Travel website.

Subsidised bus travel should also be promoted on the website to increase awareness of the merits of bus travel. This is now possible through the Government's **Tax Saver** incentive scheme. Annual and monthly public transport tickets under this scheme have tax benefits for both the employers and employees. For more information, the website should provide a link to www.taxsaver.ie.

The contact details of all taxi firms operating in the vicinity of Newcastle West should also be provided on the website.

7.3.6 Car Sharing Information

Car sharing involves two or more people sharing a lift. One of the people travelling is usually the owner of the vehicle and the other(s) usually make a contribution towards fuel costs. It can take place either as a regular occurrence or just a one-off journey. The numerous benefits of car sharing are the following:

- The fuel cost and parking charges are divided equally between driver and passenger(s), making the trip cheaper for everyone;
- Employers can make significant reductions in parking provision, often resulting in cost savings for the company;
- Car sharing is one means of vastly reducing the number of single-occupancy vehicles commuting everyday; and

- Less private vehicles on the road means less car emissions, noise, fossil energy consumption and pressures on the environment resulting in a better quality of life.

The Smarter Travel Champion for Newcastle West should promote car sharing on the Limerick Smarter Travel website. A link to www.carsharing.ie should be also provided. **Carsharing.ie** is a scheme that enables people who have a similar commutes to share their journey instead of driving alone. It is an initiative of the National Transport Authority and Smarter Travel Workplaces. After entering identity and contact details you will be quickly allowed to describe your own trips and identify potential poolers. The website will identify potential car sharing partners in your area, and allow you to contact them to arrange a car share set-up that suits you and your needs. Carsharing leaflets and posters are available to download on the website to assist in the promotion of car sharing. A copy of these is included in **Appendix F**.

7.3.7 Travel Plan Information

A Travel Plan is a package of actions designed by a workplace, school or other organisation to encourage safe, healthy and sustainable travel options. The Smarter Travel Champion for Newcastle West should encourage workplaces and schools to implement Travel Plans in order to make all staff, visitors or students aware of the environmental consequences of their travel choices and the health benefits associated with choices such as walking and cycling. The travel plans should outline how these actions will be implemented and managed. The website should provide information on Travel Plans, for example the NTA's Step by Step Guide to Travel Plans is attached at **Appendix G**. The website should also direct employers to the NTA's Smarter Travel Workplaces programme website at www.smartertravelworkplaces.ie.

7.3.8 Working Practices

This strategy also requires commitment by work places in the culture and policies of the organisations. The website should have a section dedicated to Workplaces and what they can do to help increase the awareness of the benefits of walking and cycling and encouraging greater use of cycling and walking in their workplace. For example, High quality sheltered, secure bicycle parking areas should be provided in close proximity to building access points. These parking facilities could consist of bicycle lockers. They allow people to cycle to their place of work and secure their bike in the locker which is reserved for them alone. The locker will also house their rain gear and helmet. This allows the cyclist to know that their bike is safe. The website should provide links to bike rack and shelter providers in Ireland. For example:

- Bikedock Solutions at www.bikedocksolutions.ie;
- SES Services at www.seservices.ie;
- Arba Shelters and Canopies at www.arba.ie; and
- Pittman Traffic Safety and Equipment at www.pittman.ie.

Workplaces should also be encouraged to adopt the following:

- An adequate number of showers, changing facilities and drying rooms should be provided for potential cyclists;
- Implementation of parking charges or permits would remove the possibility of staff driving to the workplace speculatively for parking spaces;
- Travel expenses should be based on public transport fares instead of mileage. User mileage would only be paid on business journeys where no alternative is realistic by other means of travel. Car mileage should also only be paid at a flat rate so as not to encourage staff to drive larger less fuel-efficient vehicles;
- The introduction of a pool car would allow staff that need a car in the course of their business, to walk, cycle or use public transport to get to work. Compulsory driver training in eco-driving awareness could be provided for potential users. Emissions standards must also be considered when procuring a pool car; and
- Introducing flexi time can help cyclists and walkers by allowing them to make trips in daylight or before bad weather sets in.

7.3.9 Green Schools

Green Schools, known internationally as Eco-Schools, is an international environmental education programme, environmental management system and award scheme that promotes and acknowledges long-term, whole school action for the environment.

Green-Schools in Ireland is operated and co-ordinated by the Environmental Education Unit of An Taisce, in partnership with Local Authorities throughout the country, and is supported by the Department of Environment, Community and Local Government, the Department of Transport. Over 88% of all Irish schools are currently participating part in the programme and 2573 schools have been awarded the Green Flag. The website should provide a link to www.greenschoolsireland.org which provides information for schools that are working towards achieving their first green Flag or schools who have already achieved one or more Green Flags. It also provides details on upcoming events and competitions, case studies and the application process.

8.0 COST OF PROPOSALS

8.1 Introduction

At this preliminary stage of the project only indicative cost proposals for project delivery are possible. Detailed delivery costs will be developed once each of the infrastructure projects are designed in more detail. As such, a basic priced schedule for implementation of the various recommendations proposed in the strategy covered under Section 6.0 Engineering Interventions is provided below.

8.2 Engineering Interventions

The construction cost if the proposed cycle infrastructure identified in this strategy can be seen in the table below.

Location	Proposal	Cost (€)
Arra River Walkway (it should be noted that this cost does not include for any repairs required to the existing wall)	Boardwalk	1,100,000
	Zebra Crossings	10,000
	Footpath Widening	10,000
	Clip on Pedestrian and Cycle Bridge	45,000
	Total	1,165,000
The Square	Zebra Crossings	15,000
	Total	15,000
Bishop Street	Pedestrian Crossings	45,000
	Traffic Calming Platform	20,000
	Total	65,000
Gortboy West	Traffic Calming Ramps	25,000
	Total	25,000
Sheehan's Road	Cycle Tracks	110,000
	Toucan Crossing	15,000
	Total	125,000
Churchtown Road	Traffic Calming Ramps	40,000
	Staging Island	2,000
	Pedestrian Crossing	15,000
	New Footpath	15,000
	Total	72,000
N21	Cycle Tracks	205,000
	Advisory Cycle Lanes	90,000
	Traffic Calming Ramps	50,000
	New Footpath	15,000
	Upgrade of Roundabout	10,000
	Toucan Crossings	15,000
Total	385,000	

Location	Proposal	Cost (€)
R521 Gortboy	Cycle Tracks	160,000
	Toucan Crossings	30,000
	Total	190,000
R521 Station Road	Mini Roundabout	10,000
	New Footpath	50,000
	Cycle Tracks	200,000
	Toucan Crossings	30,000
	Total	290,000
R521 Ardagh Road	Mini Roundabout	10,000
	New Footpath	15,000
	Traffic Calming Gateway	10,000
	Traffic Calming Ramps	25,000
	Total	60,000
R520 Bruff Line	New Footpath	60,000
	Total	60,000
Cork Road	New Footpath	35,000
	Cycle tracks	185,000
	Public Lighting	50,000
	Total	270,000
Bóthar Bui	New Footpath	35,000
	Total	35,000
Lower Knockane Road	New Footpath	10,000
	Total	10,000
Killeline Road	New Footpath	45,000
	Total	45,000
Permeability Links		30,000
	Total	30,000
Cycle Parking		15,000
	Total	15,000
Signage		15,000
	Total	15,000
Transportation Hub		100,000
	Total	100,000
TOTAL		3,055,000
Planning, Design, Surveys, Construction Supervision	10%	305,500
TOTAL		3,360,500

The total cost of the engineering interventions is estimated to be approximately €3.4m.

9.0 ACTION PLAN

9.1 Introduction

From the development of the Walking and Cycling strategy for Newcastlewest, a number of actions can be recommended. The recommended actions include soft measures and engineering interventions required to improve cycling infrastructure and cycling participation.

9.2 Engineering Interventions

- **Action 1:** Implement the proposed traffic calming schemes;
- **Action 2:** Complete the pedestrian network into town (including permeability links);
- **Action 3:** Implement advisory cycle lanes;
- **Action 4:** Upgrade 2 priority controlled junctions to mini roundabouts;
- **Action 5:** Progress the proposed cycle tracks to planning and detailed design stage;
- **Action 6:** Implement Newcastlewest walking and cycling signage;
- **Action 7:** Provide increased cycle parking;
- **Action 8:** Progress the proposed Transportation Hub to planning and detailed design stage; and
- **Action 9:** Progress the proposed Arra Walkway to planning and detailed design stage;

9.3 Soft Measures

- **Action 1:** Appoint a Smarter Travel Champion for Newcastle West to oversee the implementation of and promote the Walking and Cycling Strategy;
- **Action 2:** Post and update information and maps relating to the strategy on the Walking and Cycling Strategy website;
- **Action 3:** Promote all aspects of the Walking and Cycling Strategy and website through various media;
- **Action 4:** Generate revenue for the Strategy through sponsorship and advertising;
- **Action 5:** Distribute information packs to major workplaces and schools with details of Travel Plans, Bike to Work Schemes and Public Transport;
- **Action 6:** Set up a facility to enable Car Sharing in Newcastlewest, on the website;
- **Action 7:** Promote nationwide and local events such as National Bike Week;
- **Action 8:** Increase awareness of the benefits of cycling by providing local workshops; and
- **Action 9:** Organise a 'Car Free Day' in Newcastlewest.

10.0 MONITORING AND EVALUATION

10.1 Introduction

Monitoring and evaluation of the recommendations contained in this strategy will be essential for identifying how effectively the proposed measures are performing and giving an indication of the success of the Walking and Cycling Strategy.

This strategy constitutes a baseline study of walking and cycling in Newcastle West. Monitoring and evaluation should be undertaken immediately after implementation of the Strategy and every year thereafter in order to establish effective comparisons from earlier surveys. In 2015, the mode share for cycling and walking should be compared to the target modal splits for 2015, as set out in this strategy. Also, in 2020 the modal splits should be compared to the key targets set out in the *Smarter Travel: A Sustainable Transport Future 2009 – 2020* policy document.

10.2 Monitoring and Evaluation Plan

The monitoring that will be put in place should include items such as:

- Automatic Traffic counters, monitoring pedestrian and cyclists numbers, on the main routes into town;
- Manual counts of pedestrian and cycle trips on other minor roads in the town;
- Level of usage of cycle parking, in key locations, to determine demand;
- Speed surveys;
- School travel surveys;
- Workplace Surveys; and
- Household Surveys.

10.3 Results of Monitoring and Evaluation Plan

Information gathered as part of the continuous monitoring process should be made available on the website in order to highlight any changes in travel patterns from previous years.

APPENDIX A

Drawings

APPENDIX B

Promotional Material: Existing Cycle/Walking Routes

APPENDIX C

Promotional Material: Bike to Work Scheme

APPENDIX D

Promotional Material: Cycling

APPENDIX E

Promotional Material: Bus Eireann Timetables

APPENDIX F

Promotional Material: Car Sharing

APPENDIX G

Promotional Material: Travel Plans