



Comhairle Contae Mhaigh Eo
Mayo County Council



DRAFT

Ballina Local Transport Plan 2023



Executive Summary

The Ballina Local Transport Plan (LTP) will guide future transport investment in the area in conjunction with the Ballina and Environs Local Area Plan (LAP). The LTP is a short to medium-term plan that will be used to guide the towns transport strategy for the period to 2028, but also looks beyond to 2040. As such, it should be under consistent review and updated accordingly, with a proposed 2-year review period for short term proposals, 3-5 year review for medium term proposals and 10 year review for long term proposals.

To meet the required level of emissions reduction as set out in the Climate Action Plan 2023 by the Government of Ireland vehicle kilometres travelled are set to reduce by 20% by 2030. The Climate Action Plan 2023 builds on the Climate Action Plan 2021 which aims to reduce transport related emissions by 50% in the same period. This is to be done through active travel infrastructure, improved public transport, planning, innovation and financial supports for improved system, travel, vehicle and demand efficiencies.

The strategic aim of the Ballina LTP is to provide for the planning and delivery of transport infrastructure and services in Ballina that will allow for the generation of a sustainable transport network that can cater for demand.

The Ballina LTP examines all transport modes and how they interact both in the town centre and throughout its environs, specifically including linkages with active travel modes and public transport modes. The development of a sustainable transport network has the potential to contribute positively to both the local area and to its residents through a combination of direct and indirect benefits.

While the LTP has provided high-level Multi Criteria Analysis (MCA) of a range of options, individual projects developed from objectives within the Ballina LTP will require further design optioneering and analysis. It should also be noted that the individual projects will be subjected to public consultation, environmental assessments, heritage studies, relevant statutory procedures and consultation with the relevant statutory stakeholders. Projects with potential impact on National Roads will be developed in consultation with TII in accordance with TII publication DN-GEO-03030, including the development of the appropriate design reports for TII approval.

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1 Introduction

1.1 Overview

Clifton Scannell Emerson Associates (CSEA) have been engaged by Mayo County Council (MCC), on behalf of the National Transport Authority (NTA) to prepare a Local Transport Plan (LTP) for the Ballina Town area.

The LTP, which is in support of the Ballina and Environs Local Area Plan (LAP), sets out a series of objectives and actions over the plan period to ensure that essential transport infrastructure will be delivered at the right locations in the town to create opportunities for a modal shift towards more sustainable transport options.

This LTP aims to identify long-lasting transport improvements to ensure growing use of sustainable travel modes for work, education, retail, and visitor trips. The LTP presents a comprehensive analysis of the current transport network in Ballina Town, outlines the impact of future proposed development on transportation and presents potential solutions to improve conditions for active modes, public transport, and private vehicles.

The overall aspiration of the LTP is to provide recommendations to deliver a high quality, safe, coherent, direct, and attractive sustainable transport network. The provision of this infrastructure will provide opportunities to upgrade and enhance the identity of localities within the study area, assisting in providing inherent orientation, and enhancing the physical presentation and appeal of localities to encourage more walking and more cycling for trips to destinations.

The modal shift from private car to walking or cycling, which is particularly feasible for short distance trips, is linked to a reduction in greenhouse gas emissions. This is a key objective of the Climate Action Plan 2023 which seeks to reduce transport related emissions by 50% by 2030. Inciting this behavioural change within the local community will contribute hugely to meeting this target and will be complemented by improved public transport measures and electric vehicle provision.

The LTP proposals will incorporate a better-quality public realm with visual enhancement of the area. This investment will facilitate increased pedestrian and cycle movement across the town improving connectivity between businesses, schools, housing, recreation areas, etc creating more attractive and vibrant streets. It will also reduce dependence on the use of cars for short to medium distance trips. The network will be delivered to improve safety, reduce journey times, and contribute towards increased numbers of trips being made by bicycle and by foot in the local catchment.

1.2 The Study Area

Ballina is located in County Mayo and has a population of 10,171 as indicated by the 2016 Census. It is the second largest town in County Mayo and serves as the main administrative, public health, education and commercial centre for the north of the county as well as for west Sligo. The town provides 4,810 jobs, with a job/resident worker ratio of 1.361 (2016 Census). To cater for efficient movement between different areas of the town for different trip purposes, it is important to develop a sustainable and robust transport plan.

The River Moy passes through the Town Centre, which acts as a severance to active travel between the east and west of the town. Additionally, two national roads (N26 and N59) pass through the town which contribute to a car-centric environment that is not conducive to active travel.

Figure 1-1 shows the LTP boundary (as aligned with the LAP). The LTP will focus on the urban core of the town as this area contains the major residential, employment, commercial and leisure centres.

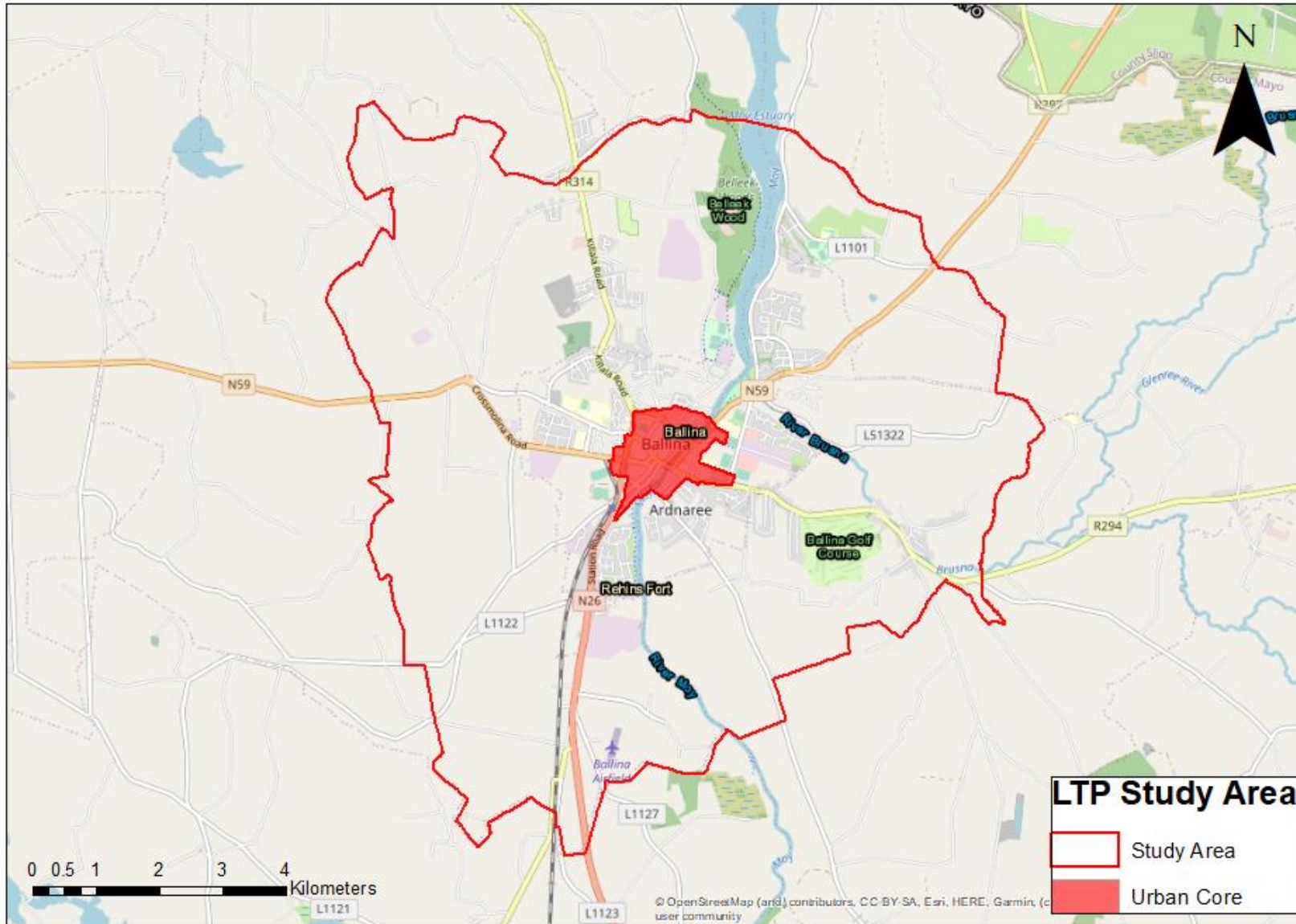


Figure 1-1 Ballina LTP Study Area

1.3 Local Context

Traditionally a market town and service centre for a large hinterland incorporating North County Mayo and the west of County Sligo, Ballina town is located at the tip of Killala Bay, where the River Moy enters the sea. The first bridging point at the head of Killala Bay, Ballina is a strategic gateway to the northwest region and a focus for communications for the North Mayo and West Sligo area.

The area typifies both the opportunity and the challenges of sustainable transport Mayo County. At present, there is latent demand for active travel facilities as it is largely a residential area within a short distance of trip attractors. However, the town is characterised by two national routes (N26 and N59) which bring substantial traffic volumes through the town streets.

The town centre can be described as bounded to the north by N59 (Humbert Street, Circular Road and Dillon Terrace), Emmet Street to the east, Tolan Street and Bury Street to the south and to the west by N59 (Teeling Street and Pound Street)

The town centre boundaries are inadvertently set by the respective active travel barriers at the periphery. The approaches to the centre along N59 (Clare Street and Sligo Road), Abbey Street, N26 (Kevin Barry Street), N59 (Lord Edward Street) and Kilala Road are all lacking adequate active travel facilities.

As a result, the transport network within Ballina has developed with a strong focus on motor-based vehicles. County Mayo has one of the highest usage rates of private cars (73.2%), compared to the national average (65.6%). The development of a sustainable transport network has the potential to contribute positively to both the local area and to its residents through a combination of direct and indirect benefits. The private car is the main mode of transport within Ballina. The LTP seeks to reduce the reliance on the private car and to focus land-use and development in line with sustainable transport alternatives. By locating people close to employment and complimentary services the need for car-based travel is reduced, which makes active travel a more viable alternative.

At present there is a lack of viable transport alternatives to the private car for commuters, which result in a high dependency on the private car. This trend is reflected in the high levels of car-based travel in Ballina, where the historically dispersed and disconnected nature of development has placed limitations on movement and circulation.

2 Policy Context and Design Guidance

2.1 Policy Context

To develop a comprehensive and holistic LTP for Ballina, different policies and guidelines will be followed. It is important that the LTP aligns with these policies and guidance so as to prevent contradictions, maintain standards, and efficiently improve the existing transport network in terms of safety, sustainability and traffic management. Following policies and guidelines were deemed relevant to the development of LTP for Ballina:

2.1.1 Draft Ballina Town and Environs Local Area Plan

Mayo County Council is preparing a Local Area Plan (LAP) for the Ballina Town & Environs area that will set out the framework to guide future development in the town and environs up to 2027 and beyond.

The Plan sets out an overall strategy for the proper planning and sustainable development of Ballina in the context of the Mayo County Development Plan; the National Planning Framework, the Regional Spatial and Economic Strategy for the Northern and Western Region, and the Mayo County Council Climate Change Adaptation Strategy. It is also informed by Ministerial Guidelines issued pursuant to Section 28 of the Act together with EU requirements regarding Strategic Environmental Assessment (SEA); an Appropriate Assessment/Natura Impact Report (AA/NIR), and Strategic Flood Risk Assessment (SFRA). A strategic aim of the plan is to promote and develop a sustainable, integrated transport system for Ballina that prioritises walking, cycling and public transport, and provides an appropriate level of road infrastructure, road capacity and traffic management to support future development and enhance connectivity to and from regional towns and cities.

2.1.2 Mayo County Development Plan 2022-2028

The Mayo County Development Plan 2022 – 2028 set out the strategic aim to “to support increased use of sustainable modes of transport; the integration of spatial planning with transport planning; enhanced county and regional accessibility; the transition to a low carbon energy efficient transport system; and the development of a safer, more efficient, effective and connected transport system within Mayo.”

This is set to be achieved through several Integrated Land Use and Transportation Policies. The most relevant to the LTP are:

- MTP 1: To support sustainable travel in the county by ensuring future population and employment growth predominantly takes place in urban areas which will warrant provision of public transport services;
- MTP 2: To support and facilitate the integration of land use with transportation infrastructure, through the development of sustainable compact settlements which are well served by public transport;
- MTP 7: To promote the transition to a low carbon integrated transport system by firstly reducing the need for travel through the use of design solutions and innovative approaches with regards to the Design Manual for Urban Roads and Streets, and subsequently to shift to environmentally sustainable modes of transport;
- MTO 5: To retrospectively provide public transport, walking and cycling infrastructure and facilities in existing development areas to achieve growth in sustainable mobility;
- MTO 7: To establish modal shift targets and a monitoring regime to increase the usage of sustainable modes of transport in the towns of Ballina, Castlebar and Westport, as informed by local transport plans;
- MTP11: To support safer cycling/walking routes to encourage people to be more physically active for transport and leisure purposes;
- MTO 8: To encourage and facilitate the maintenance and further development of the public footpath network, walking and cycling routes and associated infrastructure and where possible the retrofitting of cycle and pedestrian routes into the existing urban road network; and
- MTO 9: To support the establishment of a network of interlinked cycle ways and walk ways in the county and the adjoining counties and specifically to support the development of a link between the Great Northern Greenway and the Great Western Greenway, having regard to best practice standards including the Design Manual for Urban Roads, Streets and the NTA Cycle Manual and the TII Standard DN-GEO-03084 'The Treatment of Transition Zones to Towns and Villages on National Roads or any amending/superseding national guidance or manuals.

2.1.3 Climate Action Plan 2023

This document is the Government's plan for tackling climate breakdown. It outlines the current state of play across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and charts a course towards ambitious decarbonisation targets. The Climate Action Plan 2023 (CAP23) builds on the Climate Action Plan 2021 (CAP21) with the objective to achieve a net zero carbon energy system and create a resilient, vibrant and sustainable country.

To meet the required level of emissions reduction as set out in the CAP21 by the Government of Ireland, transport related emissions are set to reduce by 51% by 2030.

The CAP23 calls for a significant cut in transport emissions by 2030 in order to meet this sectoral emission ceiling. This includes a 20% reduction in total vehicle kilometres, a reduction in fuel usage, and significant increases to sustainable transport trips and modal share.

This is to be done through active travel infrastructure, improved public transport, planning, innovation and financial supports for improved system, travel, vehicle and demand efficiencies.

2.1.4 Draft Mayo Cycle Network

Published as part of Cycle Connects, the Draft Mayo Cycle Network contains a comprehensive review of the existing cycle network and associated data and proposes a cycle network for developed areas. The purpose of Cycle Connects is to improve the sustainable travel network by outlining the required infrastructural changes needed to maximise the potential for modal shift.

It is noted that the proposals included within the Cycle Connects programme are in the early stages of the design process and are subject to review and changes prior to finalisation/implementation.

Ballina is designated as an Urban Cycle Network with the draft proposals shown in Figure 2-1.

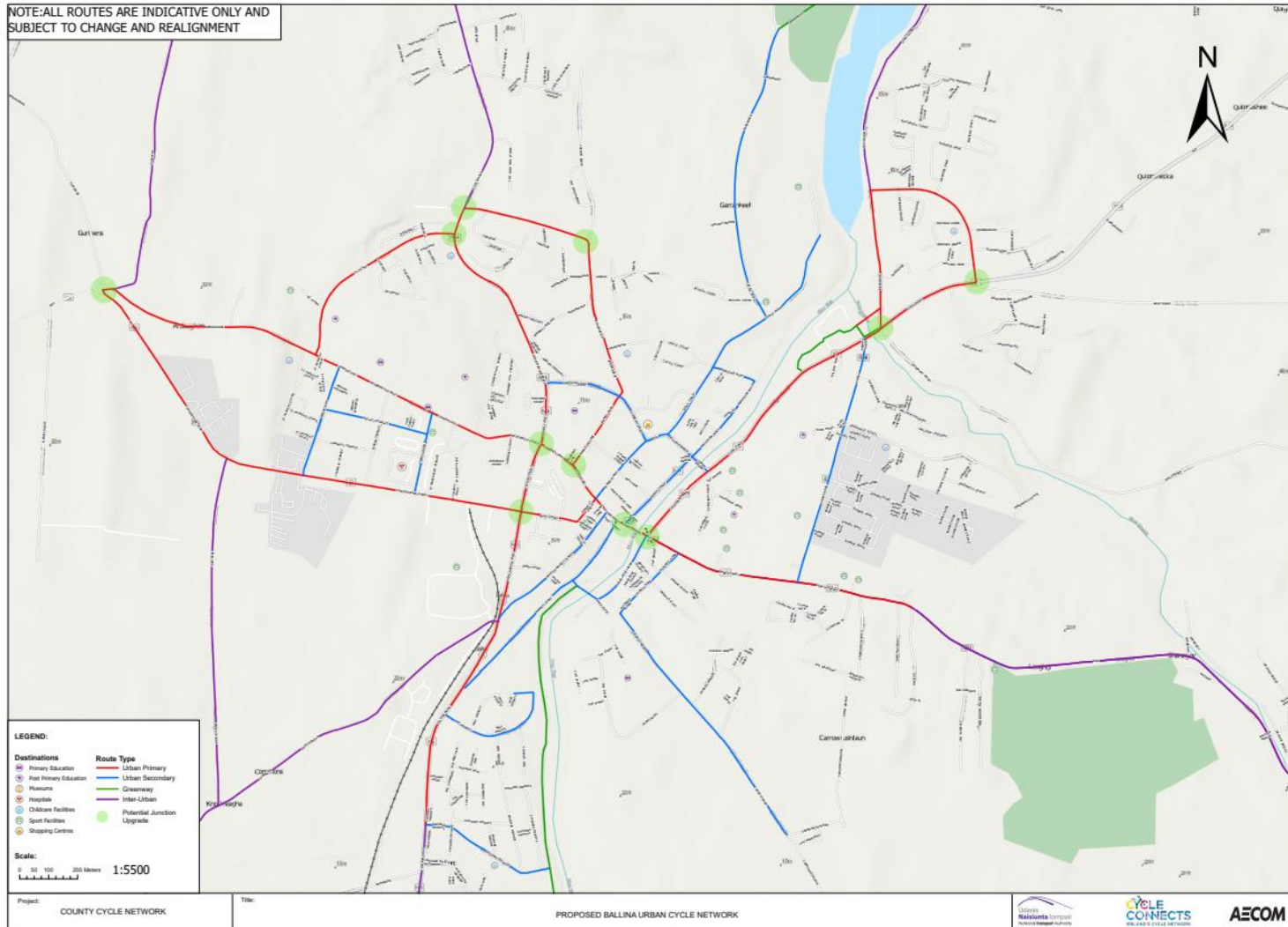


Figure 2-1 Cycle Connects - Draft Ballina Urban Cycle Network

2.1.5 Sustainable Drainage Systems (SuDS)

Streets support an important drainage function within built-up areas. The shift toward sustainable forms of development has seen the emergence of Sustainable Urban Drainage (SuDS). Following two documents have been referenced to prepare recommendations on SuDS: *Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas- Water Sensitive Urban Design Best Practice Interim Guidance Document* and *Design Manual for Urban Roads and Streets; Advice Note 5: Road and Street Drainage using Nature Based Solutions*. SuDS consist of a range of measures that emulate a natural drainage process to reduce the concentration of pollutants and reduce the rate and volume of urban run-off into natural water systems (and thus the pollutants it carries). The incorporation of SuDS elements into the fabric of the street itself can also serve to increase legibility and add value to place. Rainwater runoff can be directed towards landscaped areas which, in turn, are specifically designed and constructed to allow that runoff enter the area and percolate through the designed soils prior to entering underground porous pipes which direct the flow back into the existing drainage network. This will help address the negative impacts of urban runoff. Additionally, landscaped areas can provide biodiversity enhancement opportunities. The LTP recommends considering SuDS design while implementing the proposals.

2.1.6 Further Relevant Policy Documents

Further relevant policy documents and design guidance that have guided the development of the LTP include:

- Regional Spatial and Economic Strategy for the Northern and Western Region;
- National Investment Framework for Transport in Ireland (NIFTI);
- National Development Plan 2018-2027 (NDP);
- National Sustainable Mobility Policy;
- Smarter Travel – A Sustainable Transport Future;
- Sustainable Mobility Policy Review;
- Design Manual for Urban Streets and Roads (DMURS);
- National Cycle Manual (NCM);
- National Roads 2040, TII;
- TII Publications DNGEO-03030 ‘Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes’; and
- TII Publications DNGEO-03084 ‘The Treatment of Transition Zones to Towns and Villages on National Roads’.

Details of these policies are given in Appendix 1.

3 Methodology

3.1 Area Based Transport Assessment (ABTA)

As part of the requirement for an evidence-based approach to planning, as set out in the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES), an Area Based Transport Assessment (ABTA) is required to inform a Local Transport Plan (LTP) in order to guide the transport requirements for the future development of the area.

Published by the NTA in September 2021, the 'ABTA 'How To' Guide – Pilot Methodology' serves as the most relevant ABTA guidance document. The guidance is designed to inform the development of LTP's.

The key aims in the development of an ABTA are to:

- Maximise the opportunities for the integration of land use and transport planning by including the ABTA process as integral to the preparation of the Plan;
- Assess the existing traffic, transport and movement conditions within the Plan area and in its wider context;
- Plan for the efficient movement of people, goods and services within, to and from the Plan area;
- Identify the extent to which estimated transport demand associated with the emerging local development objectives can be supported and managed on the basis of existing transport assets;
- Identify the transport interventions required within the Plan area and in the wider context, to effectively accommodate the anticipated increase in demand; and
- Inform Site Specific Transport Assessments for development management applications.

The ABTA process is an iterative process consisting of several steps. The outline LTP proposals are developed through an iterative approach incorporating the following process:

- Part 1-Baseline Assessment
 - NMU Audit (Appendix 3)
 - GIS Analysis
 - ATOS Analysis
 - POWSCAR Analysis
 - Establishing Transport Context, LAM Modelling (Appendix 2)
 - SWOT Analysis
- Part 2a-Establish Context for the ABTA using tools such as Early Stakeholder Consultation, SMART Analysis (Appendix 8)

- Part 2b-Options Development (Appendix 4)
- Part 3-Options Assessment
 - Screening of Options Long List (Appendix 5)
- Part 4 – Refinement & Sense Check the Proposals
 - MCA (Appendix 6)
 - Refinement of EPO (Appendix 7)
- Part 5- Finalisation of the Plan; and
- Part 6 - Monitoring and Evaluation
 - Public Consultation
 - Statutory Approval

The process aims to develop a desired network that is practically implementable and takes into account the existing physical, ecological, historical and socio-economic constraints within the study area. Through a process of sense checking and refinement as well with stakeholder consultation, an overall LTP for the study area will be generated.

This LTP will be cognisant of the existing sensitives and propose a viable network to encourage mode shift to sustainable modes whilst maintaining a level of service for vehicular traffic that local residents are accustomed to.

3.2 National Sustainable Mobility Policy

3.2.1 Avoid, Shift, Improve

As outlined in the National Sustainable Mobility Policy and CAP23, the approach to achieve a more sustainable transport sector is based on the Avoid-Shift-Improve principle (Figure 3-1).

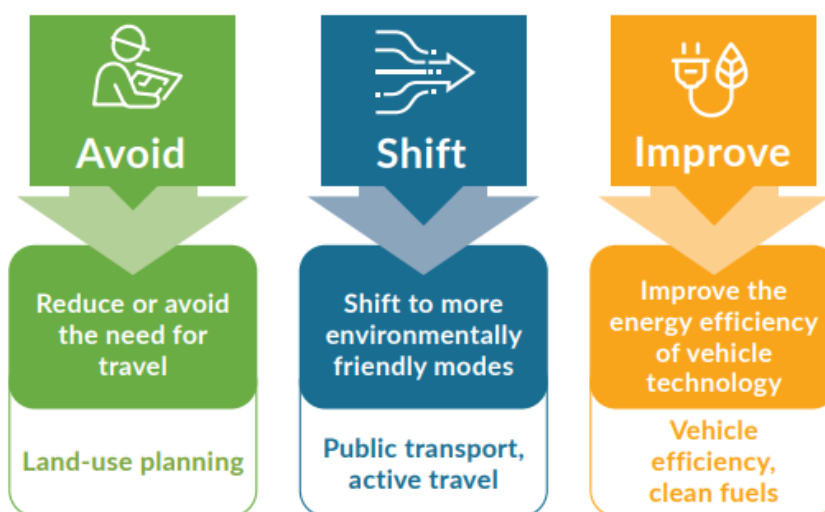


Figure 3-1 'Avoid-Shift-Improve' Principle from the National Sustainable Mobility Policy

The Ballina LAP relates to town centre regeneration and focuses on sustainable development within the existing footprint of the town (compact growth). Development of brownfield/infill sites in the town centre and densification and consolidation of established neighbourhoods within the town will ‘**Avoid**’ longer distance trips and tie in with active travel alternatives to private car use.

The LTP will focus on ‘**Shift**’ with the primary focus being the encouragement of modal shift from private car to active travel modes.

There will be ‘**Improve**’ measures included such as the provision of EV charging points as part of proposed mobility hubs and public transport improvements.

3.2.2 Road User Hierarchy

The road user hierarchy, as set out in the National Sustainable Mobility Policy, states that the order of consideration to encourage sustainable travel patterns and safer streets is shown in Figure 3-2.

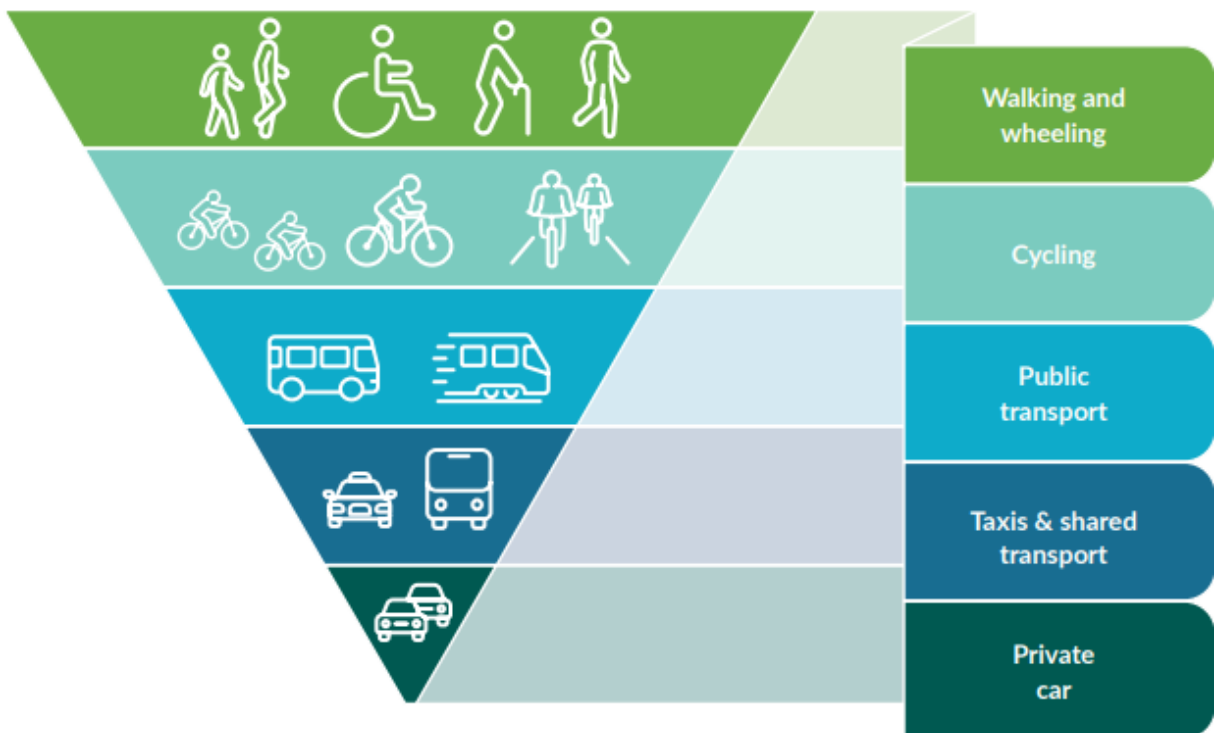


Figure 3-2 Road User Hierarchy from the National Sustainable Mobility Policy

The NCM also notes that pedestrians are the most vulnerable road users and recognises the need for integration between walking and cycling to create a sustainable transport network. This is to be achieved through pedestrian priority to be reinforced by signage and cycling alignment and speed reduction measures.

The Hierarchy of Provision within a network, as proposed by the NCM is as follows:

1. Traffic Reduction;
2. Traffic Calming;

3. Junction treatment and traffic management;
4. Redistribution of carriageway;
5. Cycle lanes and cycle tracks; and
6. Cycleway (public roads for the exclusive use of cyclists and pedestrians)

Walking is recognised as the most sustainable form of transport. Furthermore, all journeys begin and end on foot. By prioritising design for pedestrians first, the number of short journeys taken by car can be reduced and public transport made more accessible.

3.3 Consultation

Engagement with key stakeholders and the general public prior to finalising the Ballina LTP is considered essential in order to gain an appreciation of existing transport issues and opportunities and to ensure that the proposals which will be contained within the strategy will meet community needs.

3.3.1 Public Consultation

The Draft LTP will undergo a process of public consultation before finalisation in accordance with the statutory procedures. The public consultation will be managed by MCC.

3.3.2 Early Stakeholder Consultation

3.3.2.1 Workshop with Councillors

Consultation to inform the development of the Draft LTP was undertaken in March 2022.

A workshop was held, via Microsoft Teams, with the local councillors to inform them of the proposal to develop a sustainable transport network for Ballina. This was attended by 6 councillors in addition to representatives from MCC and CSEA. The councillors were presented with high-level initial proposals for review and were invited to give feedback.

The key issues raised were:

- The need for improved pedestrian crossing facilities throughout the town, particularly along the N59 and N26;
- The need to alleviate traffic congestion caused by the ‘school run’;
- Increased connectivity for sustainable modes to major employment centres, particularly to the north of the town;
- Concern about the safety of cycling for school children, particularly along the N59 connecting to McDermott Street;
- Concern that increased provision of active travel infrastructure will cause vehicular traffic delays;
- Concern about the impact of inclement weather on active travel;

- Concern that some commutes are too long to be feasibly undertaken by active travel;
- A suggestion that connectivity from the Train Station to the Town Centre needs considerable improvement, including the possible revision of the Train Station Car Park;
- The difficulty of delivering cycling infrastructure due to the width of streets in the town centre and the potential to implement one-way systems in the town in order to create space for footpaths and cycle facilities;
- The need to retain a quantum of on street-parking;
- The need for increased pedestrian permeability; and
- Concerns about local perception of the proposals.

3.3.2.2 Written Consultation with Stakeholders

Primary stakeholders within the Ballina Town Area were identified in conjunction with MCC. These included:

- Public Representatives;
- Schools;
- Staff Based in other departments of MCC;
- Bus Operators;
- Irish Rail;
- State Agencies and Government Departments;
- Utility Companies;
- Large Employers;
- Retail Groups;
- Sports Clubs;
- Local Community Organisations; and
- Service Providers.

All identified primary stakeholders were contacted by email April 2022 and invited to submit feedback by email to help inform the preparation of the LTP.

5 no. responses were received, and the feedback was considered throughout the options development process. The details of the public consultation submissions and collated response in shown in Appendix 9.

4 Baseline Assessment

4.1 Town Catchment

The Ballina town area has developed around the River Moy. The town has largely grown in an east-west span. GIS analysis shows that the town area is largely captured by the 15min walking catchment and almost entirely captured by a 10min cycling catchment (Figure 4-1 and Figure 4-2).

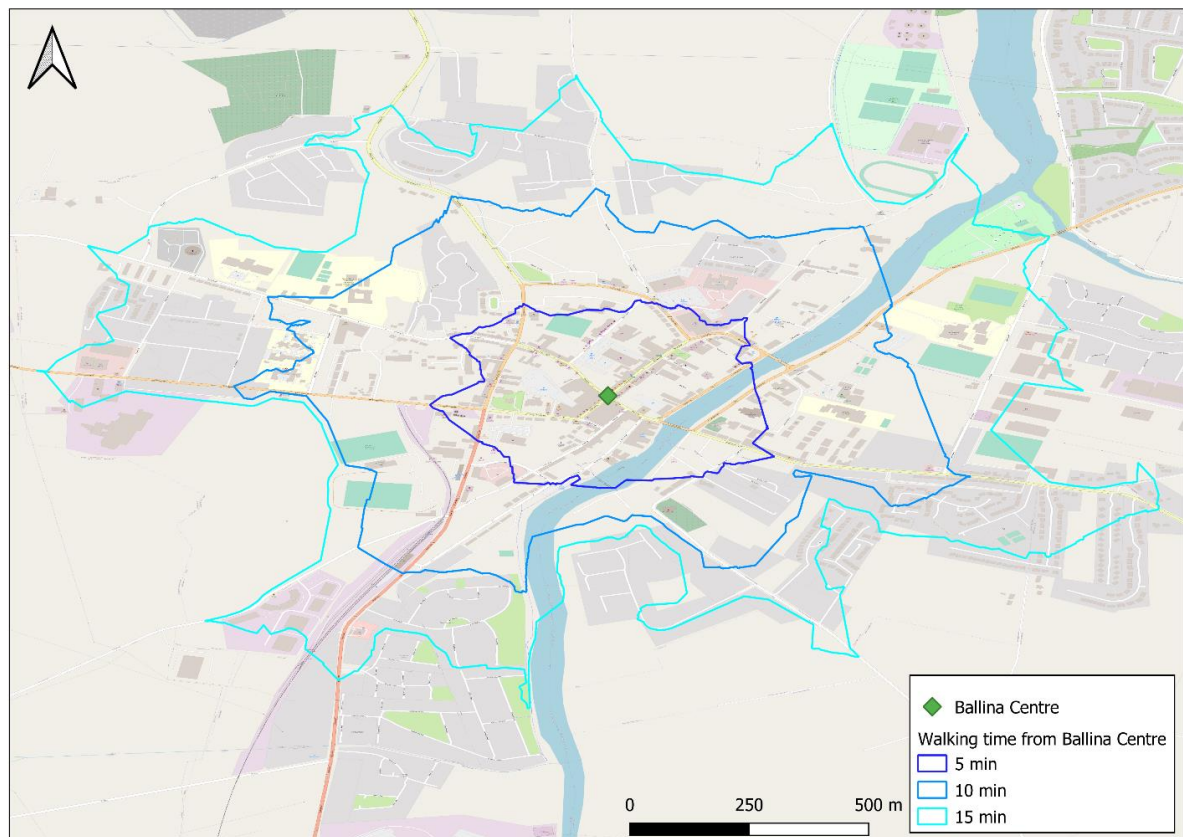


Figure 4-1 GIS Accessibility Map - Walking Catchment

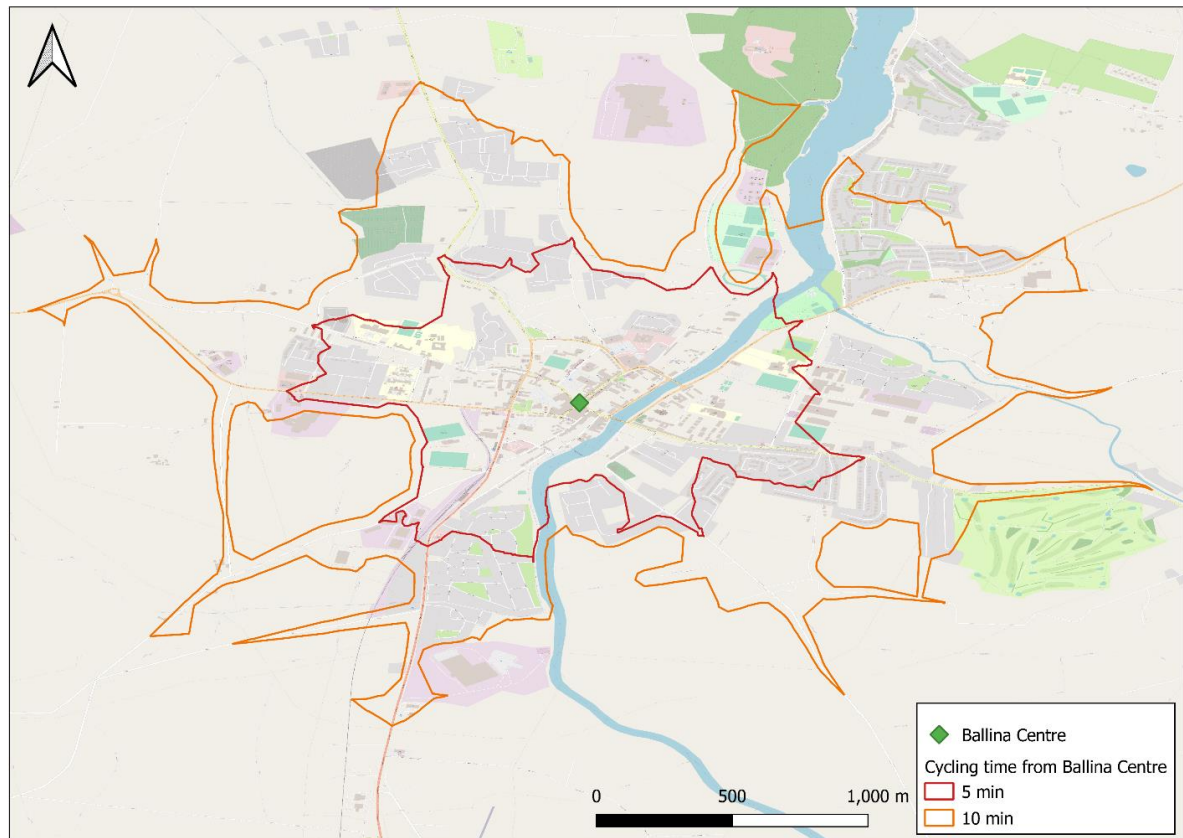


Figure 4-2 GIS Accessibility Map - Cycling Catchment

The town has a relatively flat topography making it well suited to active travel modes. In particular, the entire town area could be captured by the 10-15min cycling catchment with network improvements. This shows the potential for Ballina to be a leading town for sustainable transport.

Some of the proposed development lands, particularly to the southwest, are within the 10min cycling catchment. In addition, extended active travel facilities along the N26, the N59 Sligo Road to the northeast and north to Coca Cola will broaden the active travel boundary of the town providing connectivity to existing and proposed development zones (Enterprise and Employment).

4.2 Trip Generators and Attractors

The trip generators within the Study Area are primarily the residential zones. These areas are located primarily on the periphery of the town, with a higher density to the north.

Trip attractors were identified that would likely generate demand to/from each high-density population area. These include the commercial town centre, employment zones on the periphery and education.

The trip generators and trip attractors are shown in Figure 4-3.

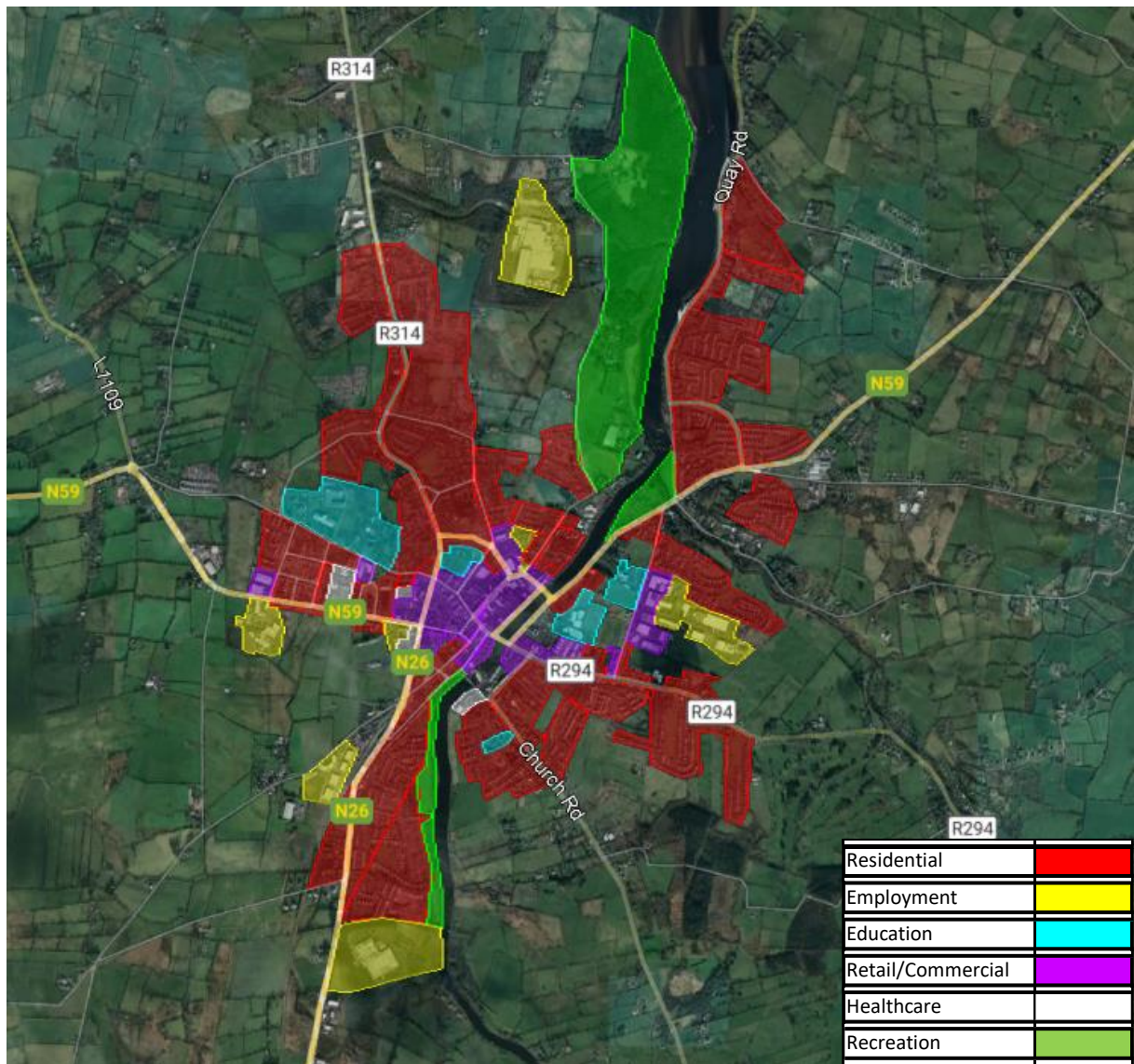


Figure 4-3 Trip Generators and Attractors

- **Residential:** The residential area comprises primarily of housing estates with several smaller residential streets.
- **Employment:** The industrial estate on the Bunree Road, Coca Cola Ballina Beverages, Hollister ULC and the Civic Offices.
- **Education:** The education centres within the study area include:
 - Moyne College;
 - St. Muredach's College;

- Gaelscoil na gCeithre Maol School;
 - Quay National School;
 - Rehins NS;
 - Culleens NS;
 - Cormaic Naofa NS;
 - Scoil Iosa;
 - St. Dymphna's School; and
 - St. Mary's Secondary School;
- **Retail/Commercial:** The Town Centre is identified as the main retail/commercial zone. Additionally, there are retail hubs along Abbey Street and Bunree Road.
 - **Healthcare:** The healthcare centres within the study are Ballina District Hospital (St. Joseph's), Ballina Medical Centre, Ballina Dental Practice and Sonas Nursing Home.
 - **Recreational Areas:** a number of recreational areas were identified, with attractions including the River Moy Greenway, Tom Ruane Park, Ballina Athletic Track and Beleek Woods.

Other land use zones that would also contribute to trip generation within the area include community services, sports clubs, civic amenities, places of worship and tourist attractions.

4.3 Transport Network

4.3.1 Active Travel Network

The 'Monasteries of the Moy' is a 14km stretch of the Great Western Greenway that runs from north of Ballina Town Centre to Kilalla Village.

There is also a small stretch (0.9km) of greenway to the south of the town centre from Salmon Weir Bridge to Rehins Fort housing estate. Salmon Weir Bridge is an active travel bridge that serves at the most southernly crossing of the River Moy.

Lack of cycle facilities within the town makes the two stretches of the greenway discontinuous.

The existing cycle network is shown in Figure 4-4.

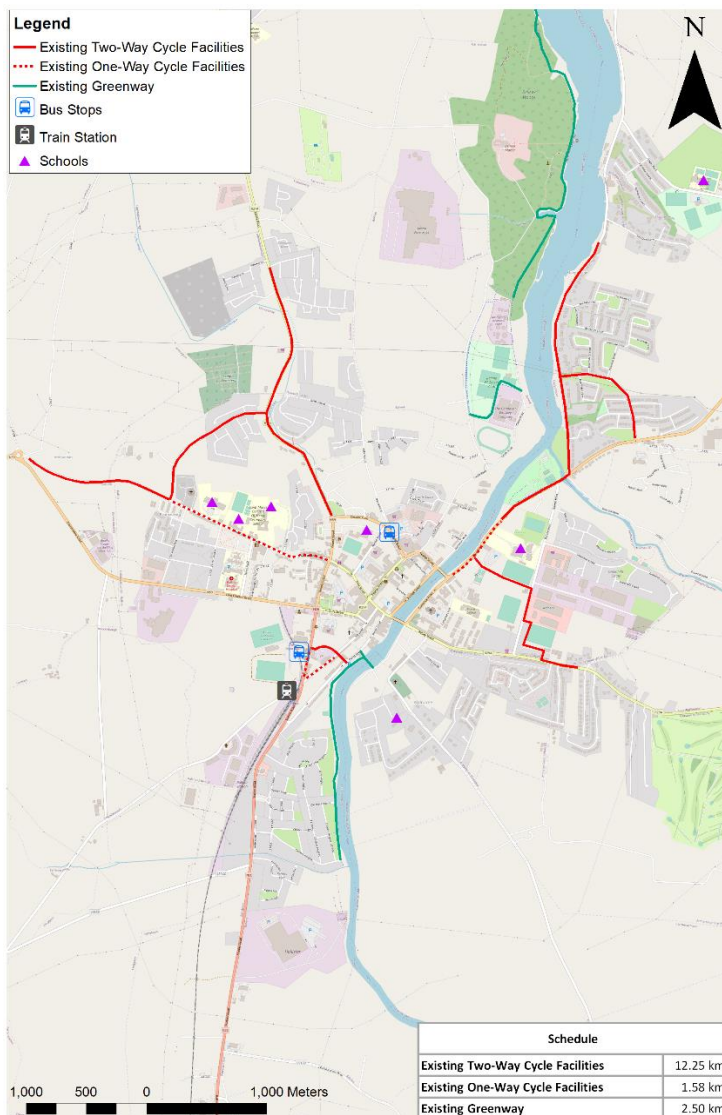


Figure 4-4 Existing Cycle Network

The majority of the existing facilities do not extend through/across the town centre, with many terminating at the periphery of the town centre with no dedicated facilities to cater for cyclists to/from many of the main trip attractors (i.e. schools, shops and recreational areas). In addition, all existing cycle facilities terminate at major junctions with no provisions to assist cyclists in traversing the junction.

The NMU audit found several issues within the active travel network that are impeding a high active travel mode share in the area. Key findings include:

- That typically the area in front of school areas is heavily dominated by cars at school start and finish times, particularly at Gaelscoil na gCeithre Maol.
- Within school areas, particularly McDermott Street, the road is relatively lightly trafficked outside of school drop-off and pick up times.
- Indiscriminate parking is prevalent throughout the town and parking enforcement is low.
- Town centre car parks, particularly Bachelors Walk and Barrett Street have low occupancy.
- Peripheral routes are inhospitable and challenging for pedestrians and cyclists.
 - For pedestrians, several major junctions are lacking pedestrian facilities, pedestrian crossings are not provided along desire lines throughout the town area, footpath width is narrow and footpaths start/end abruptly.
 - The cycle facilities are generally sub-standard for the adjacent AADT, the cycle facilities often stop in advance of a junction, pavement condition is poor, and obstructions are often caused by parked cars.
- There are multiple sections within the town centre where the footpath is discontinuous and there are no crossing facilities.
- In high pedestrian areas, such as Pearse Street and Market Square, the streetscape is car dominant.
- Cycle facilities are unprotected and have poor surfacing.
- Need for prioritisation of pedestrians & cyclists.
- There is scope to improve pedestrian infrastructure along routes via: junction tightening, resurfacing, improved crossings, permeability links & development of Park & Stride locations.
- There are multiple existing permeability links which could be improved through additional pedestrian crossings, lighting, & placemaking.

4.3.2 Public Transport Network

The Ballina Town Area is reasonably well connected to neighbouring towns and cities. It is served by several intercity buses that stop at Ballina Bus Station.

Bus Eireann Expressway Route 22 is the main route serving the town providing connections to along the N5 to Dublin via Foxford, Strokestown, Longford, Mullingar, Maynooth, Liffey Valley, Hueston Station and Busáras (Dublin City).

There is no local bus network within the town, however there is a ‘Local Link’ service available. The Local Link services are return, with varying length of stay at the destination. The existing Local Link network is shown in Figure 4-5 with the route frequency shown in Table 4-1.



Figure 4-5 Existing Local Link Network

Table 4-1 Local Link Frequency

Service	Connection	Frequency (Departs Ballina)	Length of Stay
788	Foxford	Friday (12:00)	4hr 00mins
871	Knockmore	Thursday (11:00)	2hr 00mins
821	Lacken	Thursday (12:10)	
787	Attymass	Tuesday (11:00)	2hr 00mins
4648	Lahardane	Monday - Friday (10:10)	3hr 00mins
4649	Ballycastle	Monday - Friday (09:30)	4hr 10mins
4993	Killala	Monday(19:55)	3hr 05mins

4.3.3 General Road Network

Traditionally a market town and service centre for a large hinterland incorporating North County Mayo and the west of County Sligo, Ballina town is located at the tip of Killala Bay, where the River Moy enters the sea. The first bridging point at the head of Killala Bay, Ballina is a strategic gateway to the northwest Region and a focus for the North Mayo and West Sligo area.

This focal point of the town's history has led to the built environment in Ballina being characterised as a crossing point of the River Moy and by the two National Roads that pass through the town centre.

The main roads comprising the local road network are described as:

- **N26 (Foxford Road):** is a two-way National Primary Road with a posted speed limit of 50kph within Ballina, which commences at its junction with the N59 to the north and extends southwards from Ballina, through Foxford, to where it meets the N5 near Swinford.

There are pedestrian footpaths along the N26 from its junction with the N59 to its junction with the L1122 Commons, however there are no cyclist facilities along it. The N26 serves a number of housing estates on its eastern side and multiple direct accesses along its western side.

- **N59 (Crossmolina Road):** is a two-way National Secondary Road with a posted speed limit of 50kph within Ballina town. There are pedestrian footpaths along the N59 from its junction with the N26 to the roundabout with L1109, however there are no cyclist facilities along it.

The N59 serves a number of housing estates on its northern side and multiple direct accesses along both its northern and southern sides, with on-street parking also provided along its southern side.

- **McDermott Street/Convent Hill:** is a one-way road with a posted speed limit of 50kph with footpaths along both sides from its junction with Fenian Row to its junction with the N59 and a one-way cycle lane along its length.

The road serves a number of schools on its northern side and access for multiple housing estates along its southern side.

- **Killala Road (R314):** is a two-way Regional Road with a posted speed limit of 50kph and a footpath along its western side. There are cyclist facilities along Killala Road, however these are discontinuous and are located on the eastern side of the road only. Killala Road serves a number of housing estates along with multiple direct access, with some sections including on-street parallel parking.

- **Bohernasup:** is a two-way road with a posted speed limit of 50kph and footpaths on both sides. There are no cycle facilities on the road, which serves a number of housing estates and multiple direct accesses with some on-street parking.
- **Castle Street/Nally Street:** is a narrow two-way road with footpaths on both sides of the road to its junction with Arbuckle Street, where the footpath on the eastern side of the road ends. There are no cycle facilities along the road, which serves a number of housing estates and multiple direct accesses.

Castle Street/Nally Street forms a link to/from the Ballina Athletic Track, the Ballina Town FC Soccer Club, Belleek Wood/Park and Belleek Castle.

- **N59 (Sligo Road):** is a two-way National Secondary Road with a posted speed limit of 50kph within Ballina, with footpaths on both sides from the town centre extending to the roundabout with Quignalecka/Behy Road. There are cycle facilities on some sections of the N59, however, these are discontinuous. The road is the main route between Ballina Town and the region north-east of the River Moy.
- **Riverslade/Quay Road** is a two-way local road with a posted speed limit of 50kph and footpaths on both sides of the road, however, these are discontinuous along some sections. There is a shared cyclist/pedestrian facility along the western side of the road, however, it is also discontinuous.

Riverslade/Quay Road serves a number of housing estates and multiple direct accesses, with some sections of the route including on-street parking.

- **Abbey Street (R294):** is a two-way Regional Road with a posted speed limit of 50kph and footpaths on both sides of the road, with some short sections shared with cyclists. The road serves a number of housing estates and has multiple direct accesses, with some sections of the route including on-street parallel parking.
- **Plunkett Road/Church Road:** is a two-way road with a posted speed limit of 50kph and a footpath on one side and no facilities for cyclists. The road serves a number of housing estates and has multiple direct accesses.

4.4 Travel Patterns

The travel patterns within the study area have been established and analysed using the POWSCAR data and ATOS.

4.4.1 Commuter Travel Patterns

Figure 4-6 shows the commuter car mode share using the POWSCAR Data from the 2016 Census.

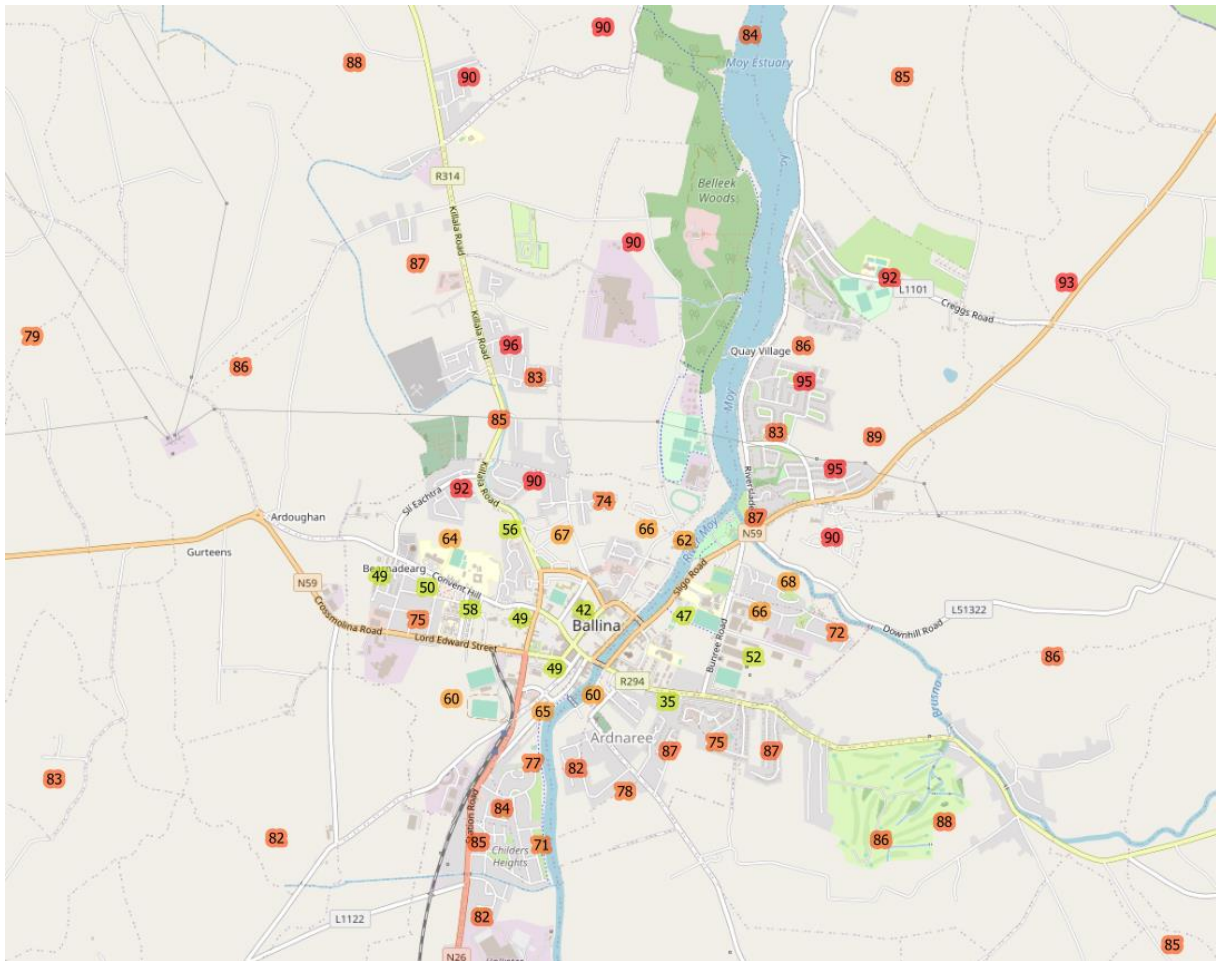


Figure 4-6 Commuter Car Mode Share

The POWSCAR data collected shows that there is a high percentage of car mode share within the town area. The POWSCAR analysis for the AM peak is shown in Figure 4-7. The first table shown in Figure 4-10 presents the car mode share between zonal trips. The second table presents the total number of trips between zones.

As shown in the map below, Zone 1 roughly covers the Ballina Town Centre; Zone 4,5 and 7 covers the major residential areas; Zone 2,3,4 and 5 include the major school destinations; and Zone 8,9 and 10 majorly covers the peripheral agricultural land. According to the POWSCAR analysis, the busiest origin zone for all the trips is Zone 5 (Education and Residential Zone) with 27% of the trips going to Zone 1 (Town Centre), 19% trips within the zone and 17% trips to Zone 4 (Employment and Education Zone), Zone 1 (Town Centre) is the busiest destination zone with maximum trips originating from Zone 5 (21%) followed by Zone 3 (14%), Zone 2 and 4 (11%). Zone 4 is the second busiest destination zone with maximum trips originating from Zone 5 (24%). Therefore Zone 1,4 and 5 have the highest trip generation, with Zone 1 (town centre)

being the busiest area. Zones 2,3 and 7 are the next busiest origin zones, and Zone 2 and 6 the next busiest destination zones.

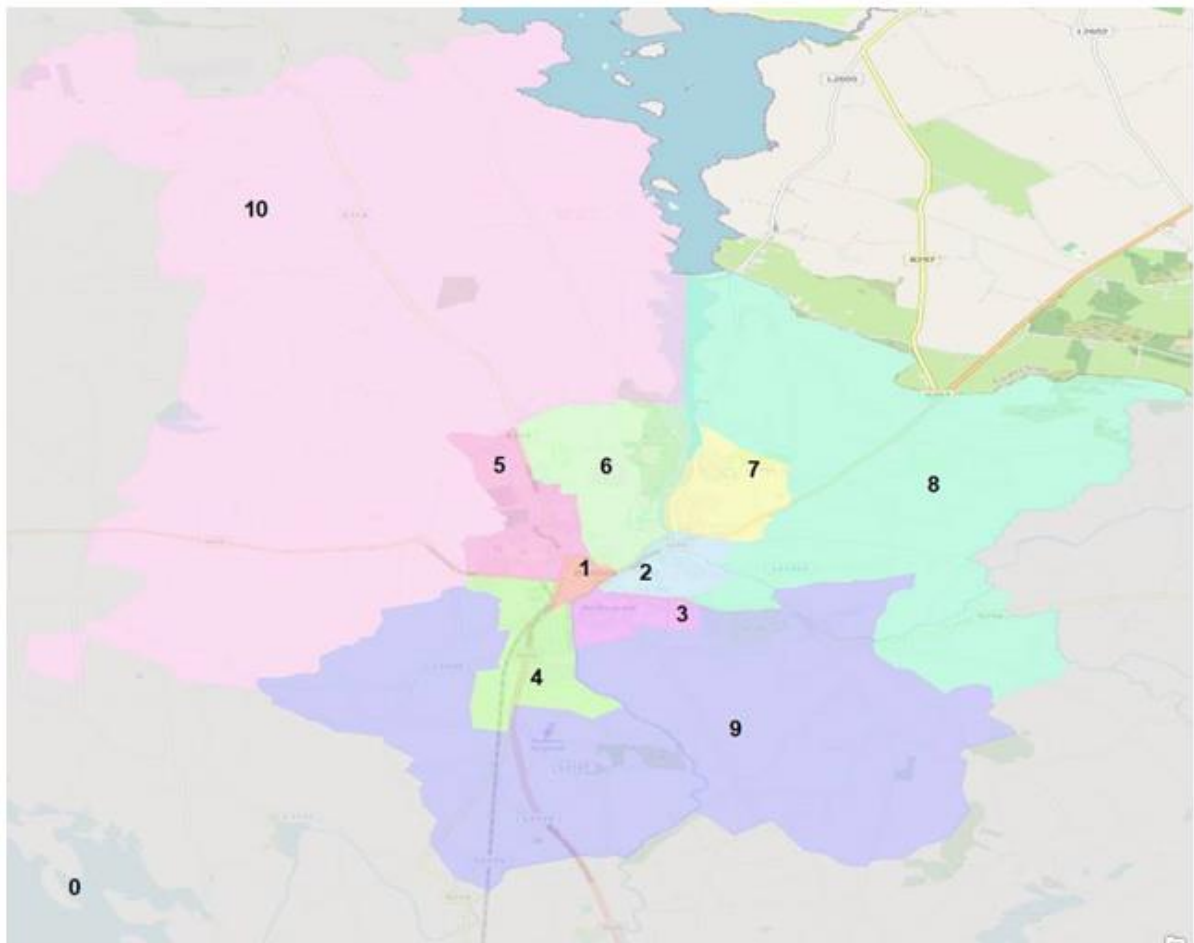
Most of these zones and inter zonal trips are within cycling and walking catchments, however, lack of standard active travel infrastructure creates an unsafe car dominant environment. The data shows that motorised modes are preferred throughout the study area, including short distance movements that could feasibility be made by active travel modes. This is demonstrated by the following zone-zone analysis:

- Zone 2 to 1 – 59% motorized (58 trips); and
- Zone 3 to 2 – 79% motorized (41 trips).

The POWSCAR data collected shows that there is a high percentage of car mode share within the town area. Local trips (with origin and destinations within Zones 1-7) make up approximately 59% of car trips on the streets within the town centre. The working population cohort are largely well suited to active travel modes and therefore there is huge potential for mode shift from private car for commuter trips.

A regular local bus service would utilise this demand to alleviate traffic congestion and promote a change to sustainable modes of travel for journeys that cannot be reasonably be undertaken by active travel modes due to distance or inclement weather.

This analysis gives an overview of potential desire lines for active travel. To provide a comprehensive local transport network it is important to provide standard active travel infrastructure in the town, especially along these desire lines. Providing such infrastructure in short term in higher demand areas could facilitate a change in travel behaviour which would cause modal shift, and increased demand for medium- and long-term active travel proposals.



%ROAD	1	2	3	4	5	6	7	8	9	10	TOT
1	3%	56%	50%	80%	33%	43%	67%	100%	100%	100%	35%
2	59%	56%	43%	90%	65%	69%	79%	100%	78%	100%	66%
3	57%	72%	63%	86%	62%	69%	75%	67%	100%	100%	69%
4	64%	61%	100%	66%	70%	82%	100%	67%	91%	90%	71%
5	58%	76%	78%	76%	61%	69%	83%	100%	94%	83%	69%
6	56%	78%	n/a	70%	80%	66%	67%	67%	89%	100%	69%
7	89%	84%	80%	93%	94%	83%	71%	100%	85%	86%	87%
8	100%	89%	100%	89%	90%	100%	75%	88%	100%	100%	94%
9	95%	89%	83%	88%	100%	87%	100%	100%	74%	100%	89%
10	93%	94%	100%	90%	85%	92%	100%	100%	100%	85%	91%
TOT	65%	74%	76%	82%	74%	76%	80%	88%	89%	90%	75%

TOTAL	1	2	3	4	5	6	7	8	9	10	TOT
1	61	18	4	10	12	14	6	2	6	4	137
2	99	72	14	40	46	32	28	6	18	6	361
3	133	57	16	44	52	45	8	6	26	14	401
4	98	36	2	65	40	22	10	6	22	20	321
5	190	66	18	124	137	83	24	10	34	24	710
6	61	36	0	33	20	35	6	6	18	4	219
7	87	49	10	61	68	48	34	6	26	14	403
8	33	18	6	18	20	21	8	16	12	6	158
9	73	36	12	66	36	30	2	6	46	10	317
10	86	34	16	60	66	50	16	4	30	52	414
TOT	921	422	98	521	497	380	142	68	238	154	3,441

Figure 4-7 POWSCAR Analysis

The ATOS mapping shows that the employment hubs within the town centre are largely accessible by both walking and cycling. The employment accessibility is shown in Figure 4-8 for walking and Figure 4-9 for cycling.

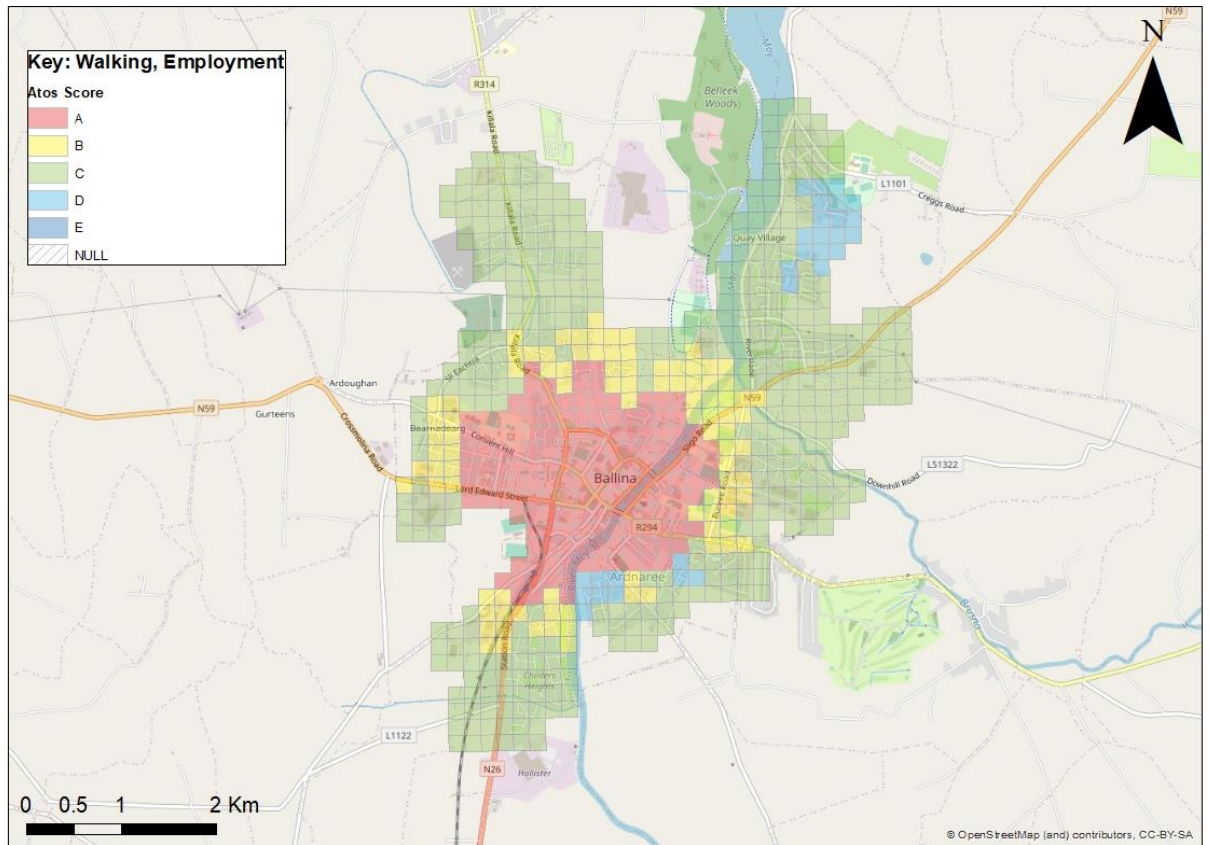


Figure 4-8 Employment Accessibility – Walking

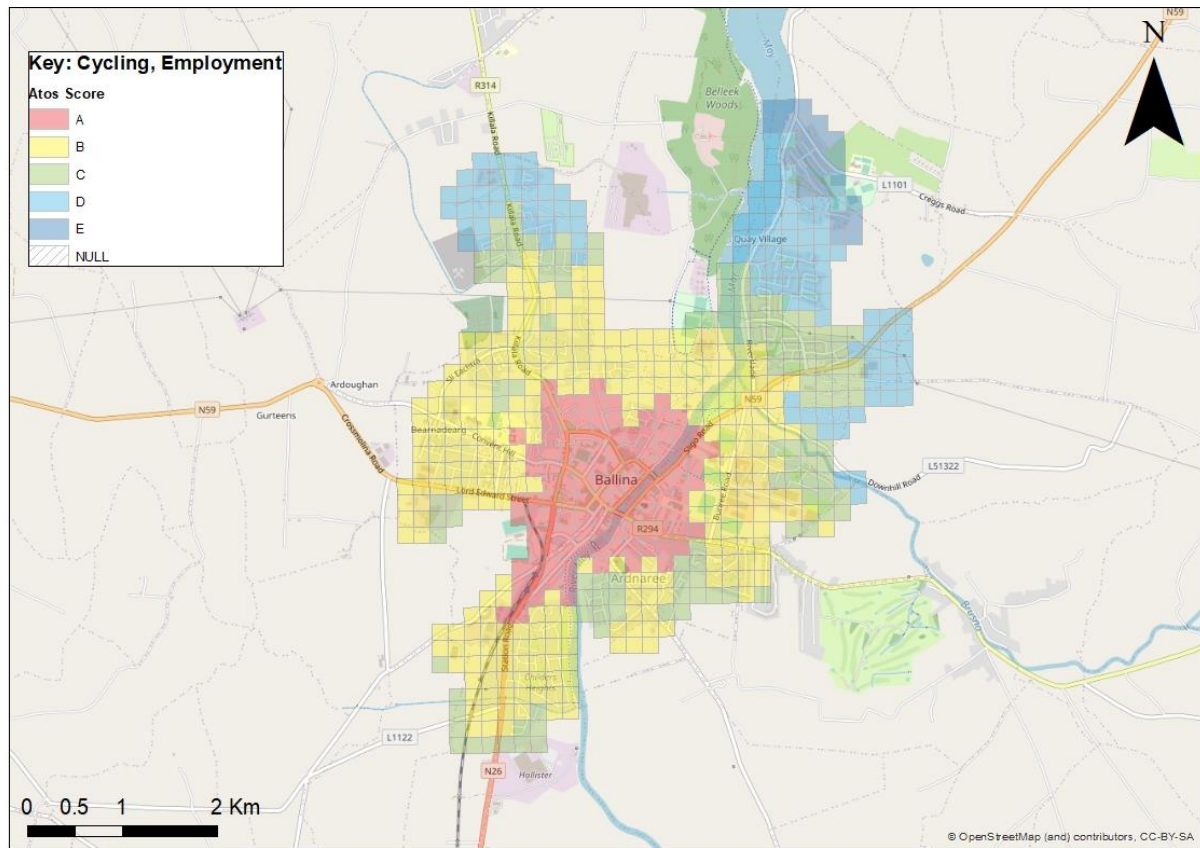


Figure 4-9 Employment Accessibility – Cycling

The industrial areas at Bunree Road and N26 (south) represent a significant area of employment but only achieves a Level B/C level of service for both walking and cycling. This in contrast to the town centre which achieves a Level A level of service. This is due to the fact that the River Moy, in particular the crossings at the Upper and Lower Bridges, is acting as a barrier to active travel to these employment zones. Therefore, the accessibility and connectivity of the area is diminished. The Coca-Cola factory to the north of the town is noted as being a large employer in the area and has a Level C/D level of service. This is also attributed to poor connections across the River Moy.

The lands to the southwest and northeast that are proposed as Enterprise and Employment zones will need active travel connections to enable their development with enhanced accessibility to town and adjacent residential catchments.

4.4.2 School Travel Patterns

Figure 4-10 shows the school mode share using data from the 2016 Census.

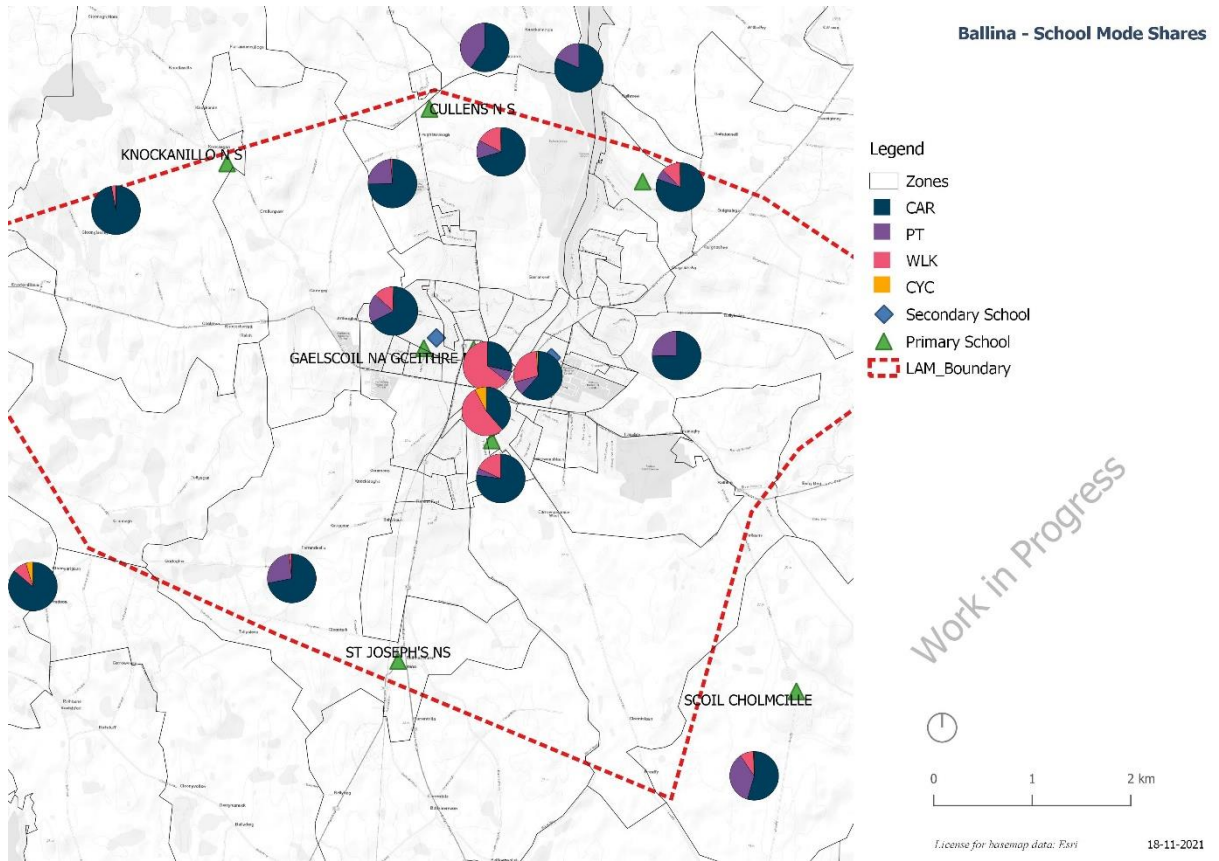


Figure 4-10 School Mode Shares

Private car is the dominant mode share across the Study Area with the exception of Gaelscoil na gCeithre Maol and Moyne College.

Figure 4-11 shows the trip length distribution for school related trips in the Study Area.

Trip Length Distribution

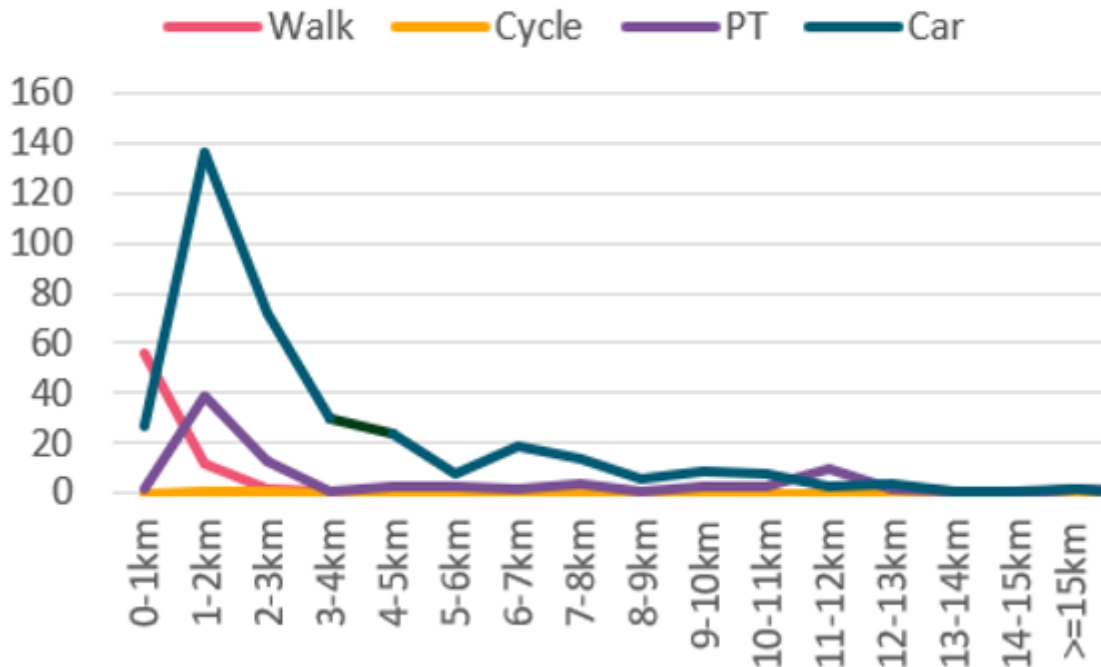


Figure 4-11 Trip Length Distribution

The mode share distribution shows that there are a substantial number of trips being undertaken by private car that are less than 2km (i.e., within walking catchment) and 5km (i.e., within cycling catchment).

It is noted that out of the school trips in the catchment, 49% are made by private car, 2% by bike and 20% by foot. Private car is the dominant mode choice for trips over 1km in length. This shows that there is significant scope for mode shift to sustainable modes, particularly for cycling which currently has a small mode share percentage.

The GIS analysis (Section 4.1) shows that the school districts, located in close proximity to the town centre (particularly to the east on McDermott Street), are within a walking and cycling catchment by distance with the major residential zones. This is in contrast to the ATOS mapping that shows both primary and secondary schools are both largely inaccessible by active travel with most residential areas having a level of service of C or below to the school zones (Figure 4-12 - Figure 4-15). There is therefore a huge potential for a mode shift for these trips. School aged children are well poised to undertake trips of this distance by active travel.

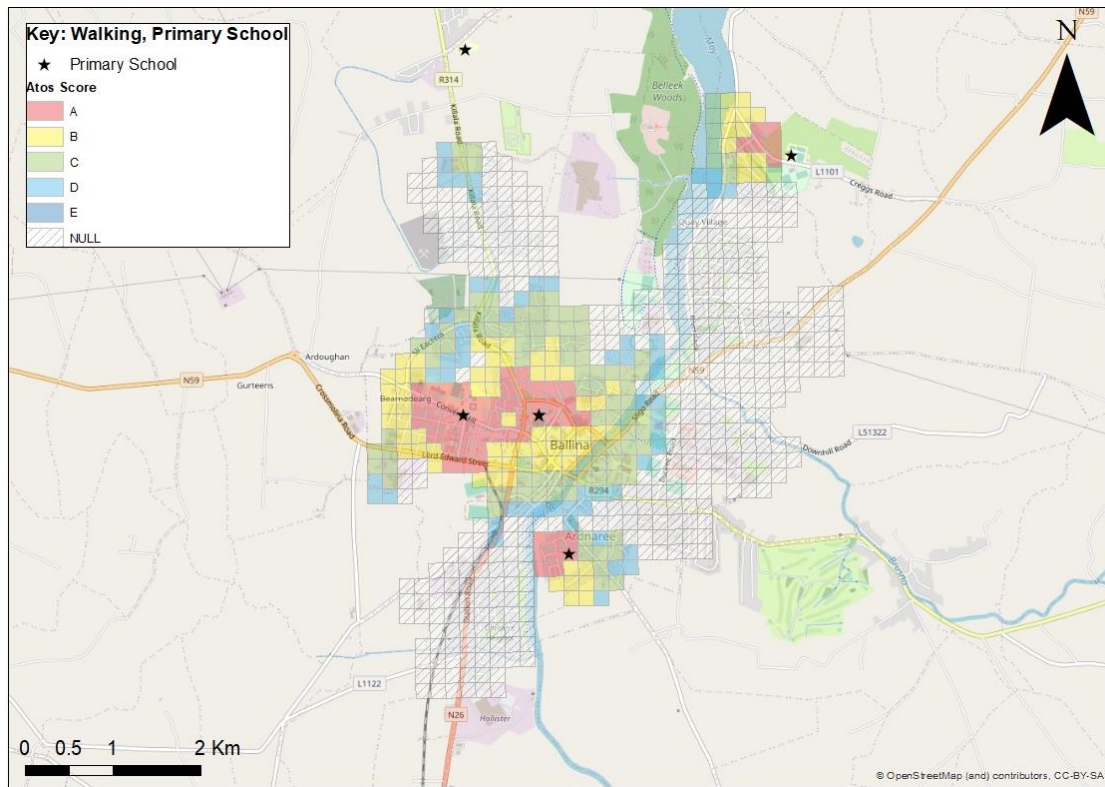


Figure 4-12 Walking Accessibility to Primary School Destinations

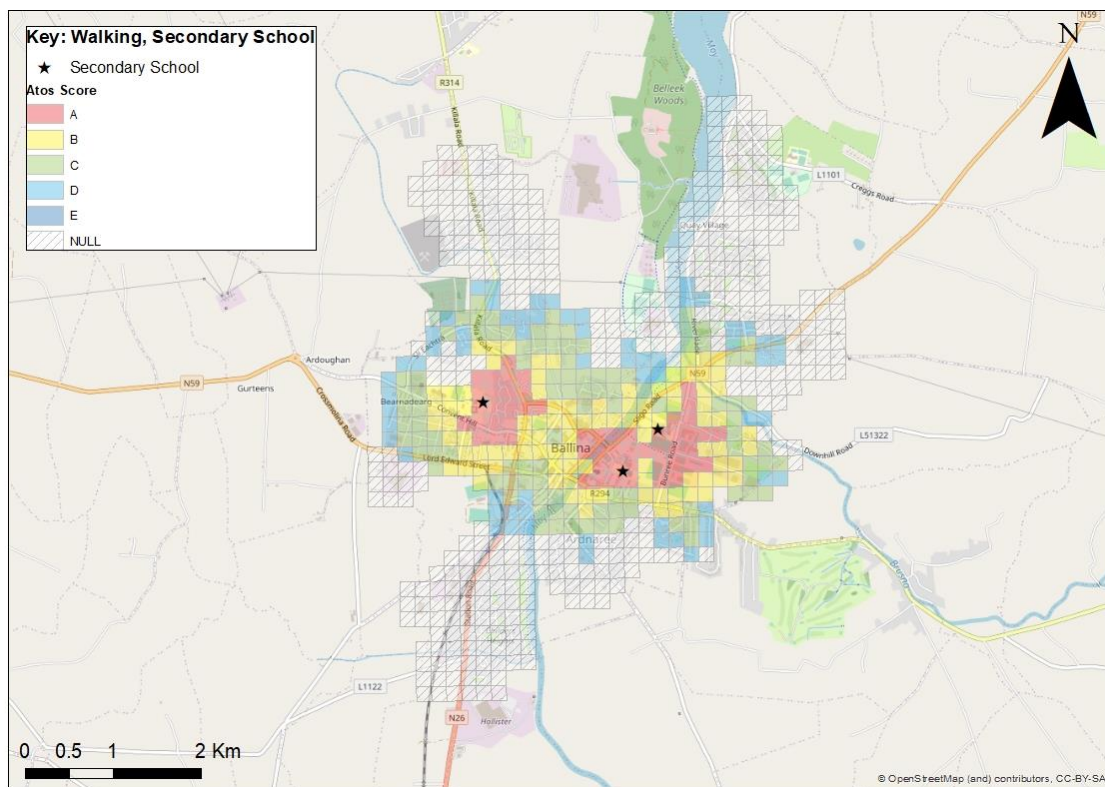


Figure 4-13 Walking Accessibility to Secondary School Destinations

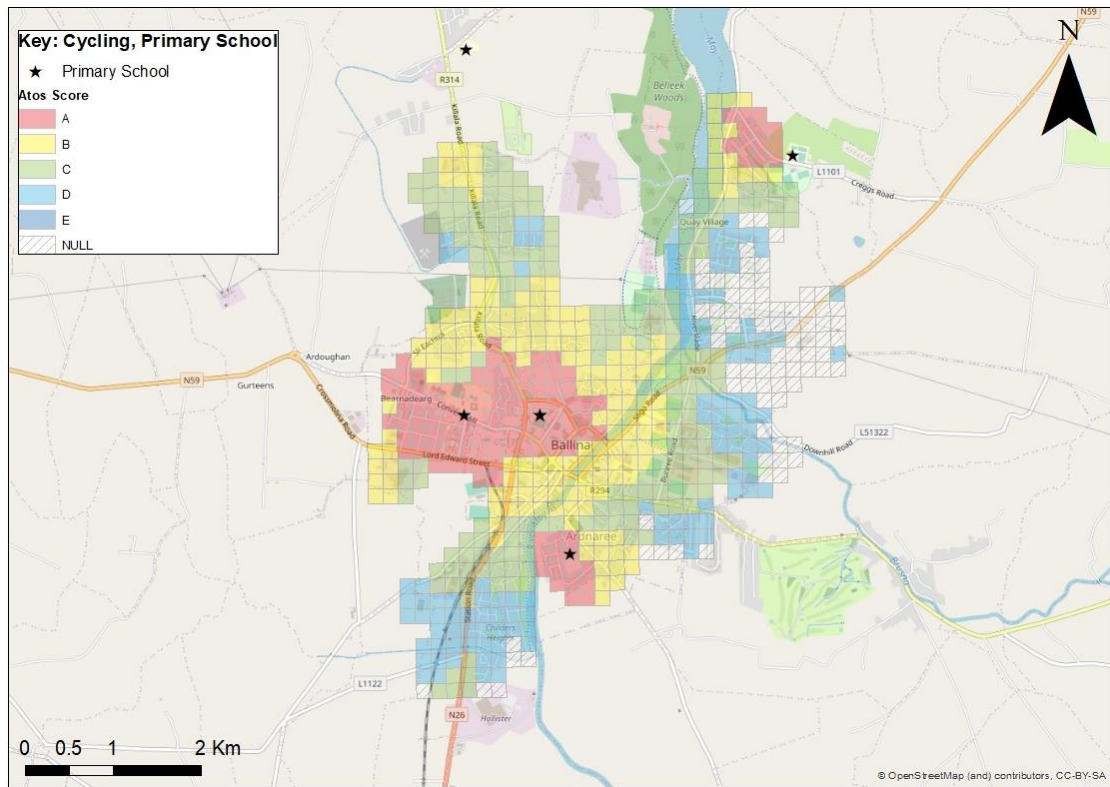


Figure 4-14 Cycling Accessibility to Primary School Destinations

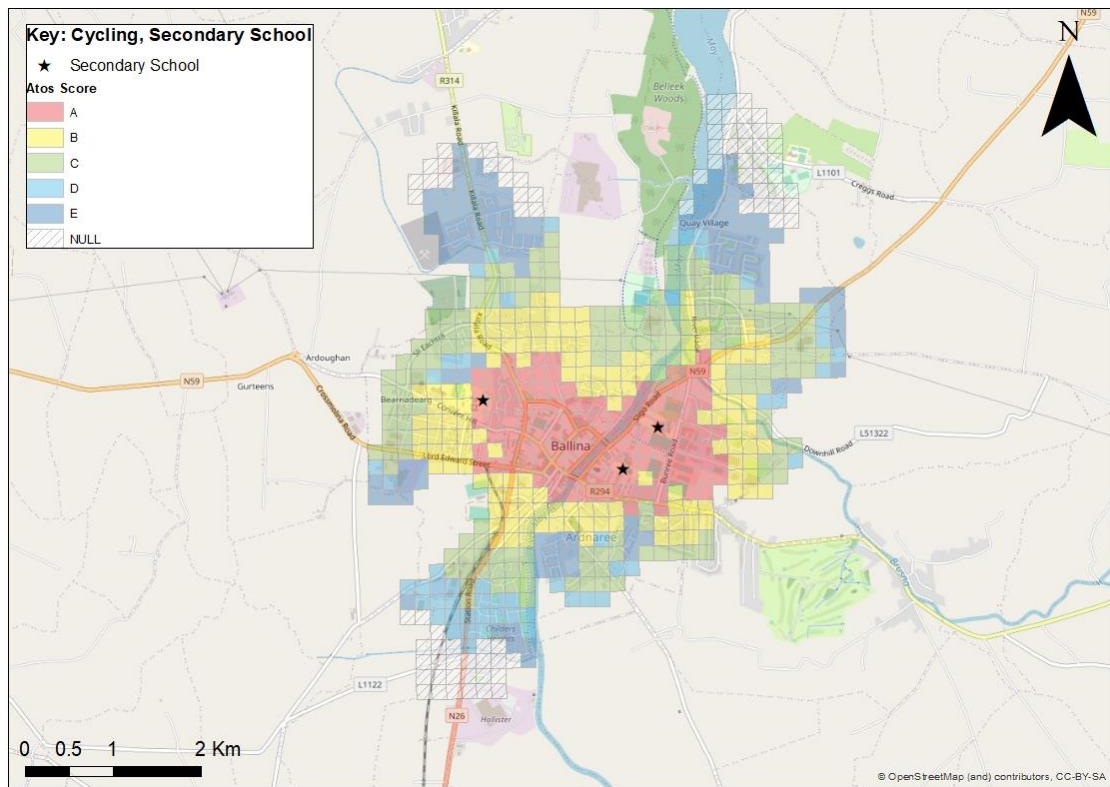


Figure 4-15 Cycling Accessibility to Secondary School Destinations

Overall, primary schools are relatively more accessible than secondary schools. Across the maps, the area north-east of the N59 and south-east of the N26 are the least accessible zones for education centres. These areas are primarily residential. It is clear that the N59 and N26 are causing huge severance for active travel to school zones. This is shown most notably by the walking accessibility to secondary schools where these residential areas largely receive a low level of service.

Additionally, the SRTS data for Scoil Íosa shows that 48.2% of students live within a 1km radius of the school travel by car and only 8.2% travel by bike (Figure 4-16).

How students within a 1km radius (110) are travelling to school

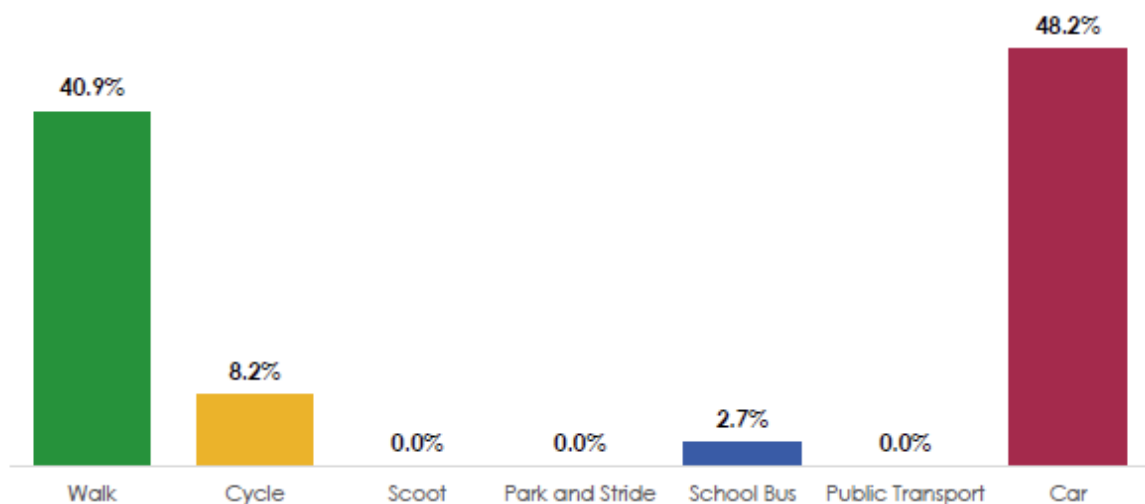


Figure 4-16 School Travel Pattern for Scoil Íosa (from SRTS Draft Delivery Plan)

As Scoil Íosa is located along McDermott Street, it is a gauge for the travel patterns of the wider school population for the area. This shows that the existing one-way unprotected cycle track is not attracting users and shows that the car dominant environment is deterring active travel modes.

There is a need to connect residential catchments to both the north and south of the town with improved active travel connections to the town centre, where the schools are located.

The traffic data collected shows that several major junctions are congested at the typical school drop off and pick up times showing that a reduction in school trips made by private car will alleviate traffic in the town centre.

If there was a significant mode shift to active travel modes (approximately 85%) from the trips that are within the walking/cycling catchment of primary/secondary schools, there would be a correspondingly significant reduction in private car trips on the road network.

4.4.2.1 School Drop Off/Pick Up

Traffic at the front of schools during drop-off and pick-up times presents a major transport challenge to be addressed.

Front of school congestion is safety hazard as it is where children congregate in the greatest numbers and where they are most vulnerable to indiscriminate parking practices. Parking outside of school gates is dangerous for school children as they are amongst the traffic and parked cars can reduce visibility of children crossing the road. In addition, parking on footpaths can block access as well as reduce the available footpath width which leads to overcrowding on footpaths or forcing children to walk on the road.

To alleviate front of school congestion, an integrated street design can reduce traffic volumes. Integrated streets provide higher quality street environments that are attractive to pedestrians and cyclists and promote the use of more sustainable forms of transport. The focus of the front of school works is to create a safer and more inviting space for students and gives priority to pedestrians & cyclists in this space.

The SRTS and 'Park & Stride' programmes are in the initial phases of roll-out in Ballina (Section 4.5) and will play a key part in delivering the infrastructure along access routes and at the school gates include footpath improvements, cycle facility improvements and front of school redesign.

4.4.3 Trips Within the Town Centre

It is noted that retail/commercial activity, employment, and tourism are the main economic drivers in Ballina. As such, several types of trips to the town are best suited to be made by private car. Additionally, plenty of people commute by private car from areas beyond the town catchment where there is often no alternative to private car as a mode of transport.

The large employers (Hollister/Coca-Cola/MCC Local Government offices) are also well served with large surface car parks. This coupled with poor accessibility for active travel modes from residential areas is contributing to a high car-mode share and high traffic volumes on the town centre streets.

Tourism trips are often made by private car, particularly as Ballina is a destination town along the Wild Atlantic Way. While this is noted as being intrinsic to these tourism trips, there is scope to utilise 'Park'n'Stride' facilities rather than have short tourism trips made around the town centre by private car.

As the POWSCAR data does not include for shopping/leisure trips ie: trips to the town centre to Lidl/Aldi/Tesco/Dunnes/SuperValu etc and the industrial estate on Bunree Road (hardware shops/furniture shops etc) it is difficult to quantify the number of trips of this nature being made. However, it is observed that there are trips being undertaken by car that could feasibly be made by active travel modes. This is particularly true for

people who are currently driving 'from shop to shop' within the town centre and trips that are being made to visit small retail shops, cafés, bars and restaurants.

It is important to retain the same level of service and accessibility to Ballina for visitors while enhancing the active travel facilities within the town centre.

Visitors making trips from the wider catchment area should be encouraged to park their cars in one of the towns car parks and travel by foot for the duration of their stay. Similarly local trips that are being made around the town centre by private car should be encouraged to be transitioned to active travel modes. Removing this internal traffic from the town centre will create an active travel friendly environment that will enhance the public realm of the area.

Parking charges within Ballina should be reviewed to encourage the use of Park and Stride locations above the use of on street parking. This can be achieved by having a number of different 'parking zones' with relative charges. The most expensive charges would apply to the central town centre streets. Underutilised car parks on the periphery could be utilised for long-stay parking at an attractive rate.

By providing 'Park and Stride' locations at the edge of the town centre to cater for the long-distance trips into Ballina, the provision of Mobility Hubs and bike sharing infrastructure will encourage active travel within the towns retailing and hospitality districts.

4.4.4 Overall Travel Patterns

The LAM modelling and POWSCAR data shows that of the commuter traffic trips within the study area, 59% are from internal zones to internal zones (ie; trips that have an origin and destination within the town area, shown as Zone 1 – Zone 7). This 59% represents a share of trips that could feasibly be made by active travel modes.

The trips that have an origin or destination in an external zone are likely to cover a distance too great to be practically made by active travel modes but have the potential to be undertaken by public transport.

The LAM modelling also shows that within the local road network (ie; excluding National Roads), the majority of the traffic is local traffic and characterised by short trips.

The travel patterns within the town reciprocate the POWSCAR data for commuter and school travel. It shows that there is a strong reliance on private cars, including for trips over short distances. There is scope to change the travel patterns of the local community to reduce the number of vehicles travelling on the local road network through the provision of active travel and public transport infrastructure.

4.5 Current Schemes

There are a number of supporting measures arising from local and government incentives that MCC are availing of to develop a sustainable transport network.

These measures have the advantage of being quick to implement with little required infrastructure. The principal of these policies is to incite behavioural change by providing the necessary groundwork to demonstrate the benefits of sustainable modes of travel.

The successful implementation of these measures will significantly contribute to a positive public opinion of the development of a sustainable transport network. This will be achieved through a visible and tangible impact such as reduced congestion in the town centre.

4.5.1 E-Parking

Status: *Operational*

The E-Parking App was launched in Ballina in August 2021. The app allows registered users to pay for parking online without the need for paper tickets and the use of 'Pay and Display' machines. It also allows users to extend the duration of stay by topping up on the app rather than having to return to the vehicle.

The app can be used all over the paid parking zones with Teeling St Carpark seeing the highest levels of usage and Bachelors Walk Carpark seeing the least.

Traffic wardens can scan the reg of parked cars to determine if parking has been paid for through the app.

4.5.2 EV Charing Points

Status: *Partial Completion/On-Going*

There are currently 2 EV charging points in Ballina Town Centre located in Market Square Car Park and Humbert Street Car Park.

In accordance with the Mayo County Development Plan 2022 – 2028, a minimum of 10% of the proposed car parking spaces required for new developments shall be provided with electrical connection points, to allow for functional EV charging. The remaining car parking spaces shall be fitted with ducting for electrical connection points to allow for the future fit out of charging points at up to 20% of car parking spaces.

4.5.3 Safe Routes to School

Status: *Draft Delivery Plans/Consultation*

As part of the first round of SRTS in County Mayo, Draft Delivery Plan have been prepared for Scoil Íosa Quay School. The draft plans have been published for consultation.

The programme which is funded by the NTA and co-ordinated by An Taisce's Green-Schools will play a key part in delivering the infrastructure along access routes and at the school gates include footpath improvements, cycle facility improvements and front of school redesign. As per the NTA guidance SRTS Design Guide, drop-off zones will be designated away from the school gate. To alleviate front of school congestion, an integrated street design can reduce traffic volumes. Integrated streets are higher quality street environments attract pedestrians and cyclists, promoting the use of more sustainable forms of transport.

The Draft Delivery Plans contain concept designs of interventions to improve infrastructure outside and on the routes to school with the aim of increasing the number of children who walk, cycle or scoot to school. These proposed interventions are based on survey findings, audits, consultation with the school and the Local Authority, and have been reviewed by the NTA.

The draft proposals will be in line with the LTP proposals for the area.

Following Round 1 of the programme, SRTS will expand across the school network.

4.5.4 Park and Stride

Status: Development

MCC have launched the Park and Stride initiative which could within Ballina reduce congestion caused by the school run by utilising the towns car parks as drop zones from which school children/guardians can walk to the school.

The initiative has commenced in Castlebar and is intended to expand to Ballina upon successful implementation.

Potential Park and Stride school and car park partnerships are:

- Moyne College – Cathedral Road Car Park;
- St. Muredach's College – Cathedral Road Car Park;
- Gaelscoil na gCeithre Maol - Market Square Street Park;
- Cormaic Naofa National School- Market Square Street Park;
- Belmont Montessori School - Humbert Street Car Park;
- Scoil Íosa – St Patricks Catholic Church;
- St. Dymphna's School - St Patricks Catholic Church; and
- St. Mary's Secondary School- St Patricks Catholic Church.

4.6 Strategic Road Network

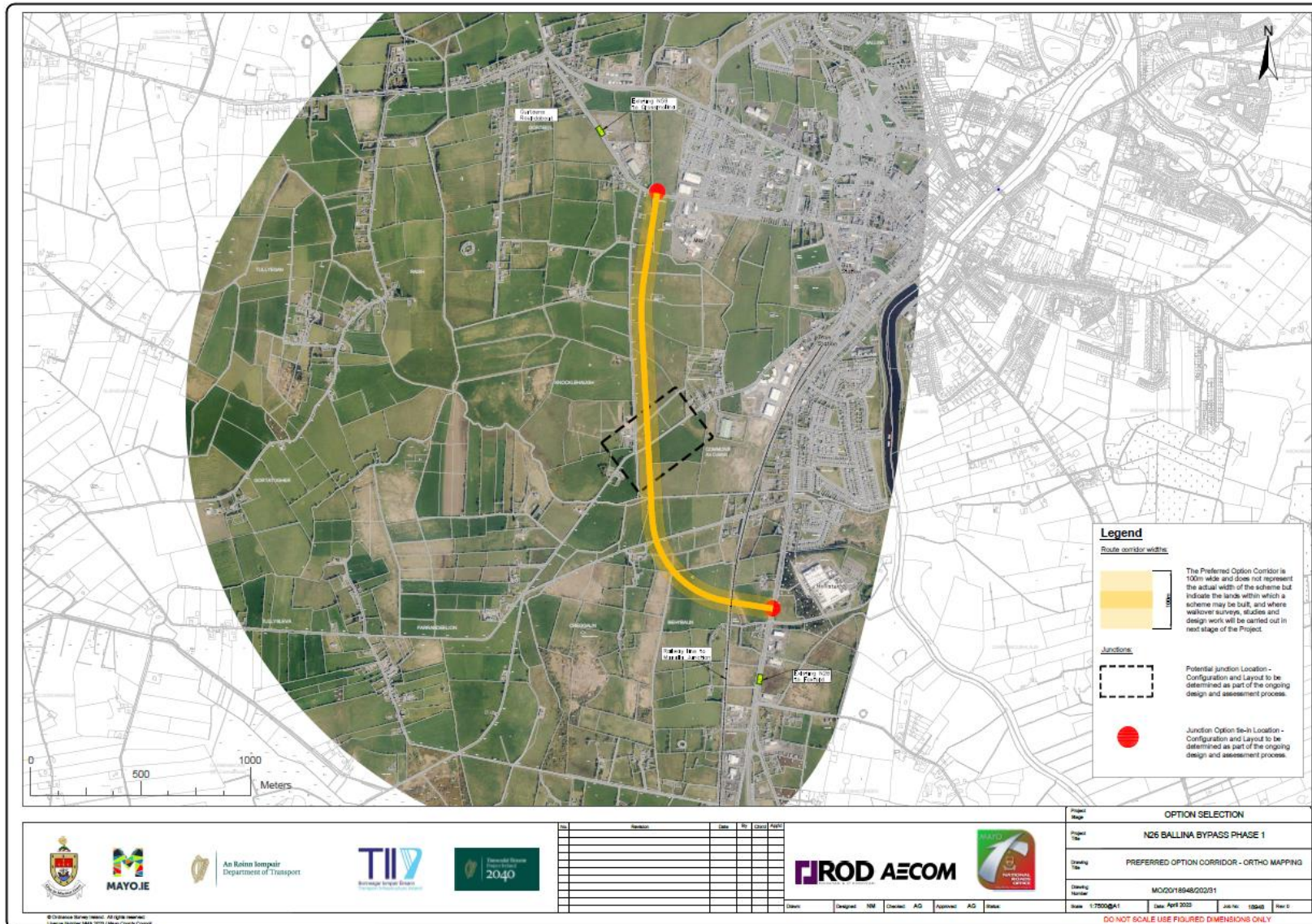
The current road network within Ballina is dominated by two National Routes passing through the town centre bringing significant by-passing traffic volumes through town centre streets. Ballina's main roads include the Foxford Road (N26) also serving as the main road to Ballina and the link to the main Dublin road (N5). The Crossmolina Road (N59, west bound) is the main road from the town to the west of the county. The

Sligo Road (N59, east bound), links Ballina to Sligo town and the west of County Sligo. Ballina is therefore serving as a key transit route with 3 strategic routes passing through the town. This creates significant problems of congestion in the town which detracts from the amenities of the town, particularly the town centre.

4.6.1 N26 Ballina Bypass Phase 1

The proposed N26 Ballina Bypass Phase 1 is being progressed by MCC in conjunction with TII and is at Phase 2: Option Selection; Stage 2: Option Appraisal. The infrastructure will link the N26 with the N59 at the southwest of the town. The project is in Phase 2 Option Selection with the scheme expected to undergo the Statutory Process procedure in 2025.

The Emerging Preferred Option Corridor is shown in Figure 4-17.



Date	Description	Date	By	Checked	Approved

PRODAECOM

INTERNATIONAL PROJECT CENTRE

OPTION SELECTION			
Project Name	N26 BALLINA BYPASS PHASE 1		
Drawing Title	PREFERRED OPTION CORRIDOR - ORTHO MAPPING		
Drawing Number	MO2018948/202/01		
Scale	1:7500@A1	Date	April 2023
Job No.	12843	Rev	0

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Figure 4-17 N26 Ballina Bypass Phase 1 Phase 1 Route Selection – Emerging Preferred Option

The impact of the full extent of the western bypass has been modelled using the LAM for future scenarios to ascertain the level of traffic reduction on town centre streets that can be achieved.

The expected change in traffic volumes with the opening of the bypass (Emerging Preferred Option) is shown in Figure 4-18.

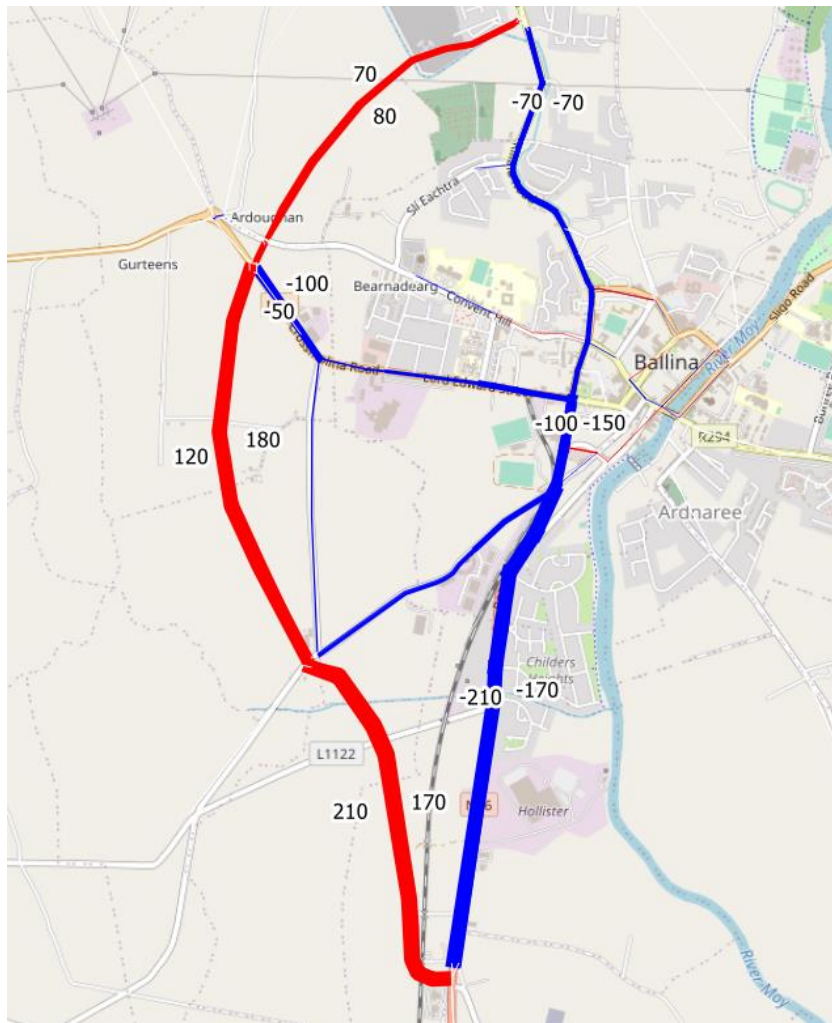


Figure 4-18 Traffic Flow Redistribution (AM Peak Hour) with Proposed N26 Ballina Bypass Phase 1 Emerging Preferred Option Corridor

The bypass will remove significant traffic from both the N26 Kevin Barry Street (250 vehicles per hour) and N59 Lord Edward Street (150 vehicles per hour) providing relief to The Font Junction (Kevin Barry Street, Bury Street, Teeling Street and Lord Edward Street). This would enable enhanced active travel provision along these key routes connecting the town centre to surrounding residential and employment catchments.

The proposed bypass will allow for future potential development, including the lands zoned as Enterprise and Employment, south of Lord Edward Street. The removal of

traffic, both existing and forecast, will allow for N59 Lord Edward Street to be redesignated from a National Road to allow for the provision of active travel facilities. This would enable access to the connecting road network for active travel modes and bring this area within the 10-minute active travel catchment of the town centre.

4.6.2 Eastern Bypass

Additionally, there is a longer-term indicative aspirational route to the east of the town as shown in the LAP (Figure 4-19).

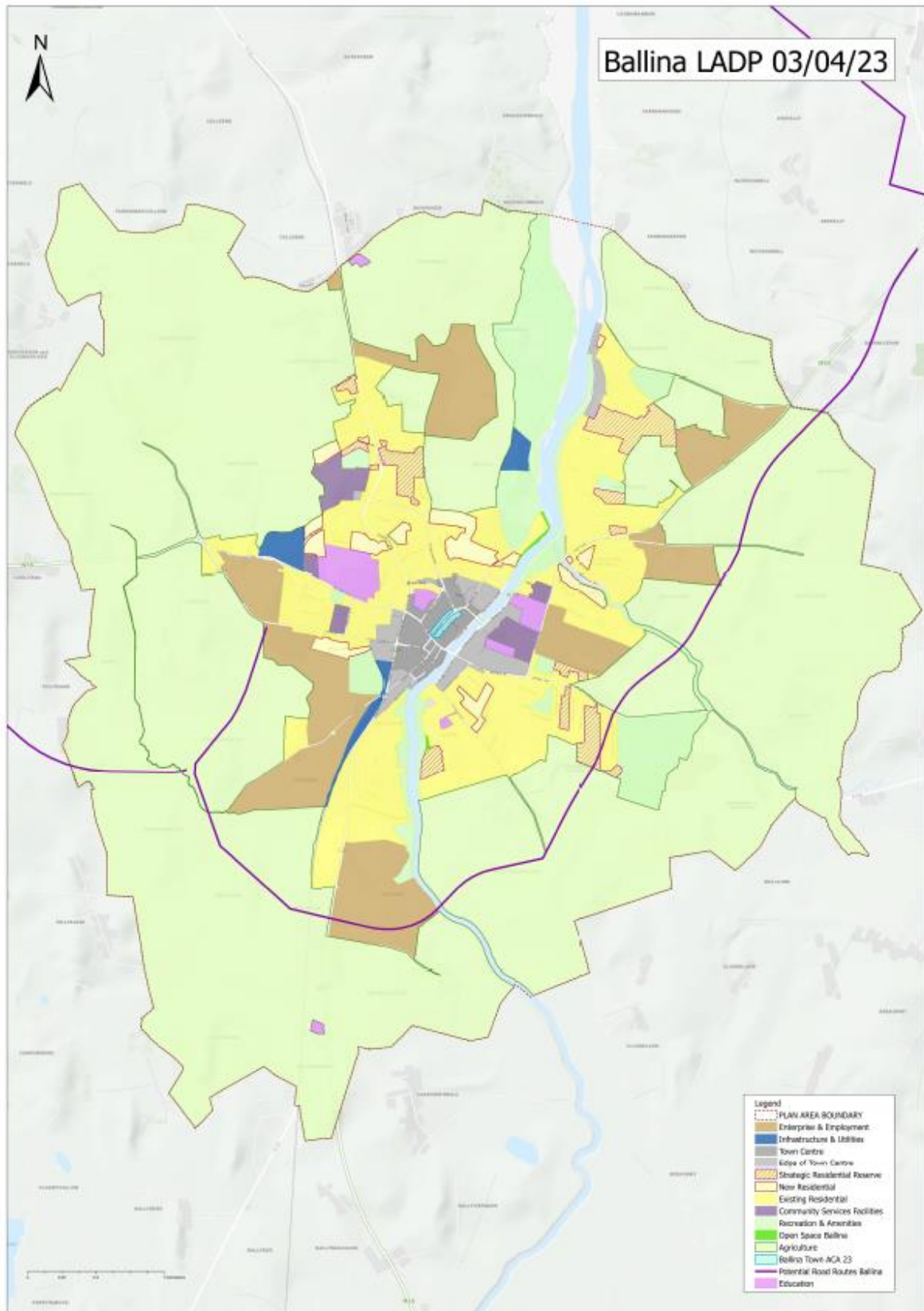


Figure 4-19 Ballina LAP Proposals with Proposed Road Route shown in Purple

This route is not currently being progressed by TII and would require full feasibility assessment, option selection and statutory processes prior to proceeding.

The Local Area model has been used to carry out an initial high-level analysis of potential traffic impact of this route, in conjunction with the proposed N26 Ballina Bypass Phase 1 Emerging Preferred Option Corridor. The indicative route and results are shown in Figure 4-20.

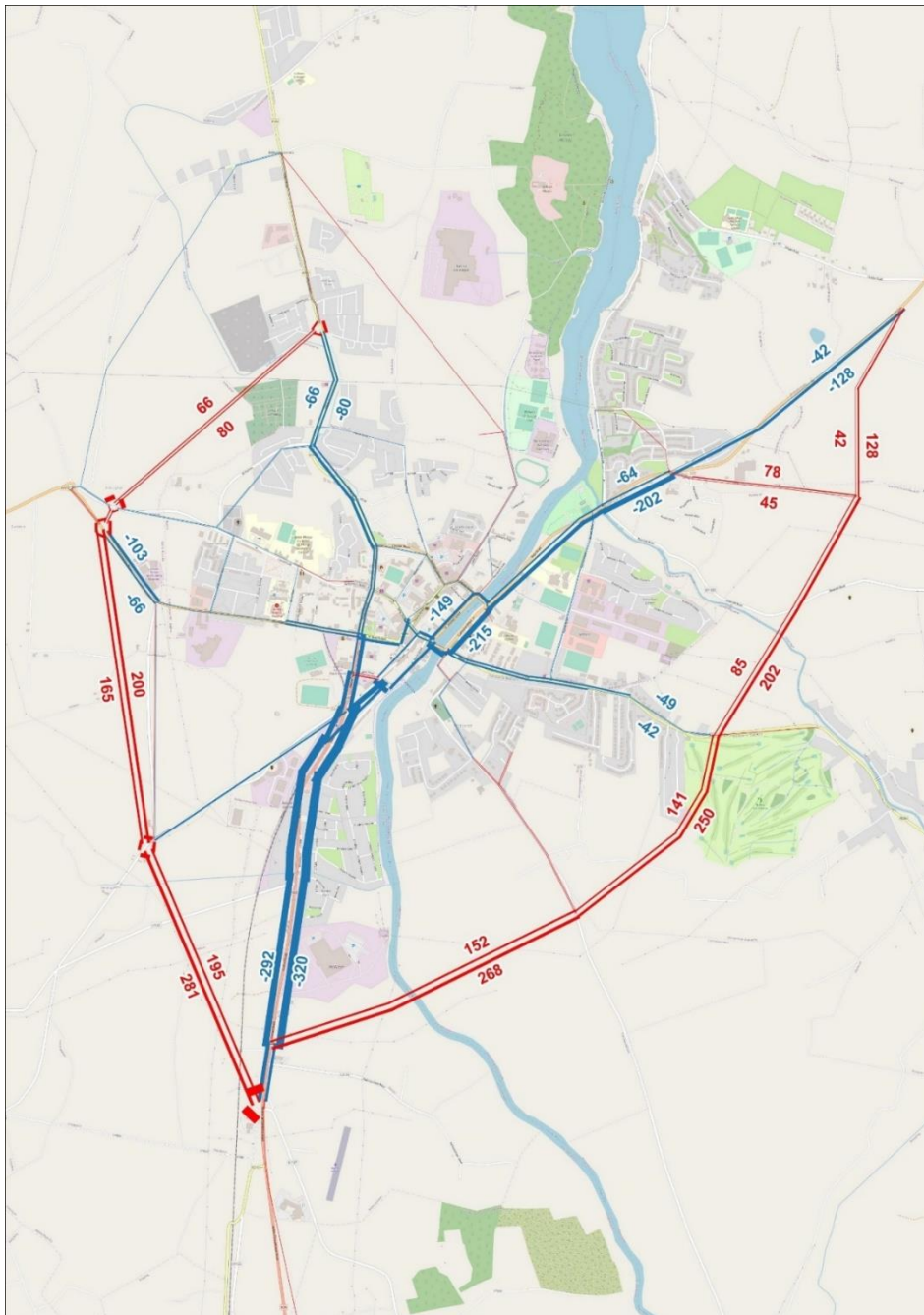


Figure 4-20 Flow Difference Plot (AM Peak) for N26 Bypass and Eastern Bypass

The addition of the Eastern Bypass would provide a reduction of 612 vehicles per hour from N26 Station Road and 266 vehicles per hour from N59 Downhill Road.

There is also a significant reduction in traffic volumes along the quays (Upper Bridge, Lower Bridge, Emmet Street and Cathedral Street, Kilalla Road, Abbey Street, Lord Edward Street, Telling Street, Tolan Street, James Connolly Street and Morrison Terrace.

The route could unlock potential in the future for additional management of traffic in the town centre area, enabling more allocation of road space on town centre streets to public realm enhancements, active travel, and public transport, providing an overall positive mode shift. This route would be subject to further analysis in the future in line with normal application procedures and processes.

4.7 Future Travel Demand

4.7.1 Integration of Land Use and Transportation

The Ballina LAP relates to town centre regeneration and focuses on sustainable development with the delivery of new housing within the existing footprint of the town (compact growth), in the town centre brownfield/infill sites, on undeveloped lands on edge of town centre within established neighbourhoods to the west and north of the town and through the densification and consolidation of those neighbourhood areas.

The proposed land use policy of compact growth will ensure that the existing transport demand patterns are substantially sustained. Future development will fundamentally build on the strength of established development areas and hence demand patterns.

4.7.2 Transport Demand

The Ballina Local Area Model (LAM) was developed in line with the National Demand Forecasting Model (NDFM) which takes input attributes such as land-use data, population etc., and estimates the total quantity of daily travel demand produced by, and attracted to, the Study Area. Therefore, transport demand characteristics have been fully accounted for in the Options Assessment process.

In agreement with the LAP, the LTP supports the development a robust and design-led urban regeneration and development strategy to maximise the strengths of the town and to promote sustainable movement and to:

- Integrate new and regenerated areas within the historic core in a contemporary manner that complements the existing urban structure and heritage of the town;
- Create an integrated and commercially robust, liveable and sustainable town;
- Ensure that best practice urban design principles are applied to all new development, based on the principle that well-planned and integrated development enhances the sustainability, attractiveness and liveability of an area;

- Ensure new residential development is to be accommodated within the existing built-up footprint of the town on brownfield/vacant/infill sites in the town centre, existing and new residential areas, at appropriate densities, and optimising existing social and physical infrastructure.

Therefore, the movement and transport policy of the area seeks to promote and develop a sustainable, integrated transport system for Ballina that prioritises walking, cycling and public transport, and provides an appropriate level of road infrastructure, road capacity and traffic management to support future development and enhance connectivity to and from regional towns and cities. This will be achieved through a demand management design approach to include:

- Effective integration of transport and land use through pursuing compact growth through the application of the 15 minute town approach;
- Improved accessibility to existing residential areas to encourage and facilitate active mobility; and
- Implementation of a suite of measures to encourage sustainable transportation within the Plan area.

4.8 SWOT Analysis

A SWOT (Strengths, Weaknesses, Opportunities and Threats) exercise has been undertaken for the Ballina area. This analysis is based on all of the data and other information as outlined in Sections 4.1-4.7.

The SWOT analysis is shown in Table 4-2

Table 4-2 SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • The Town Centre is compact and within the walking and cycling catchment of the residential areas. • The existing pedestrian network is extensive with coverage across the vast majority of the Ballina Town Area and there is a high level of footfall in the town centre. • Vehicular traffic in the town centre is forgiving towards pedestrians • The current road network can cater for demand and operates largely within capacity. There are strong links to National and Regional roads. • The Ballina Urban Greenway and recent improvements • The existing intercity services provide reasonable connections to nearby towns by rail and bus. • Ballina Train Station is located in close proximity to the Town Centre • Schools are located in the Town Centre • The current road network can cater for demand and operates largely within capacity. There are strong links to National and Regional roads. • Existing awareness of the local, regional and national policies and strategies. • Land-use Policy to encourage compact development within the Town area • Implemented strategies have been well received 	<ul style="list-style-type: none"> • Several major roundabout junctions are lacking adequate pedestrian and cycle facilities. • Some existing pedestrian routes are discontinuous within parts of the Town Centre and other areas. • Within Ballina the existing on-road cycle facilities are discontinuous and are located primarily in the periphery of the Town, don't extend to/through the Town Centre and don't link all of the main amenities (i.e. schools, shops, recreational areas) to the residential areas. • The train station is poorly connected to the town centre and the existing local link services are infrequent. The existing bus services provide poor connectivity within the town centre and town area. • Severance caused by the N59 and River Moy. • The area has developed with private vehicles being predominant mode of transport and as a result there is a high level of car dependency, even for short trips. • Greenhouse gas emissions arising from an over reliance on car usage, and he impacts on the health of the general population arising from an over reliance on car usage.
Opportunities	Threats
<ul style="list-style-type: none"> • The N26 bypass will remove vehicles from local network, particularly through traffic HGV movements which will allow scope for junction redesign to cater for active travel modes. Assess the feasibility of the long term indicative eastern bypass route. • To connect the main origin and destinations via a functional active travel network so as to make cycling the most attractive mode choice. • The street network (carparks, laneways, housing estates etc) to allow for filtered permeability. • Improve public realm with a more integrated streetscape and increase amenities through the provision of mobility hubs and relocation of parking spaces. • Facilitating latent demand for public transport, walking and cycling • Boost tourism • A new active travel bridge to overcome severance caused by the N59 and River Moy. • Introduce bus route(s) to connect the main origin and destinations via a functional bus network so as to make public transport the most attractive mode choice. • A net reduction in greenhouse gas emissions through modal shift by discouraging private car as the dominant mode choice will lead to an improvement in the general health of the population. This will align the transport strategy of the town with government policies and targets 	<ul style="list-style-type: none"> • Improvements to the pedestrian network will require reducing the vehicular capacity of the road network and relocation of parking. • Inability to overcome physical severance to provide linkages. • Public Transport services must be affordable to the user and economically viable for the operator. • An increased fuel costs in line with climate change action targets and travel time increases due an increase in car usage in line with the current over-reliance on private cars within the area. • Further construction of low density, impermeable housing estates • Insufficient co-ordination of land use and transport plans. • Future peripheral education and employment development. • Availability of funding.

5 Plan Principles and Objectives

Based on the assessment conducted, a set of principles and objectives were established to help address the different transport challenges identified. As per the ABTA methodology, these principles and objectives are derived from National, Regional and Local Policies, Baseline Assessment and Stakeholder Engagement,

5.1 Key Transport Challenges to be Addressed

5.1.1 Competing Transport Demand

Section 4.4 in Baseline Assessment shows that there are high levels of traffic travelling along the National Routes that pass through the town centre, particularly on the quays and Upper Bridge. The N26 and N59 provide a level of service for connections from residential areas to employment, education, retail, and leisure centres in addition to their function as strategic national roads. As a result, there is competing transport demand along these routes for through traffic and local traffic. Figure 5-1 shows the National Road network through the town.

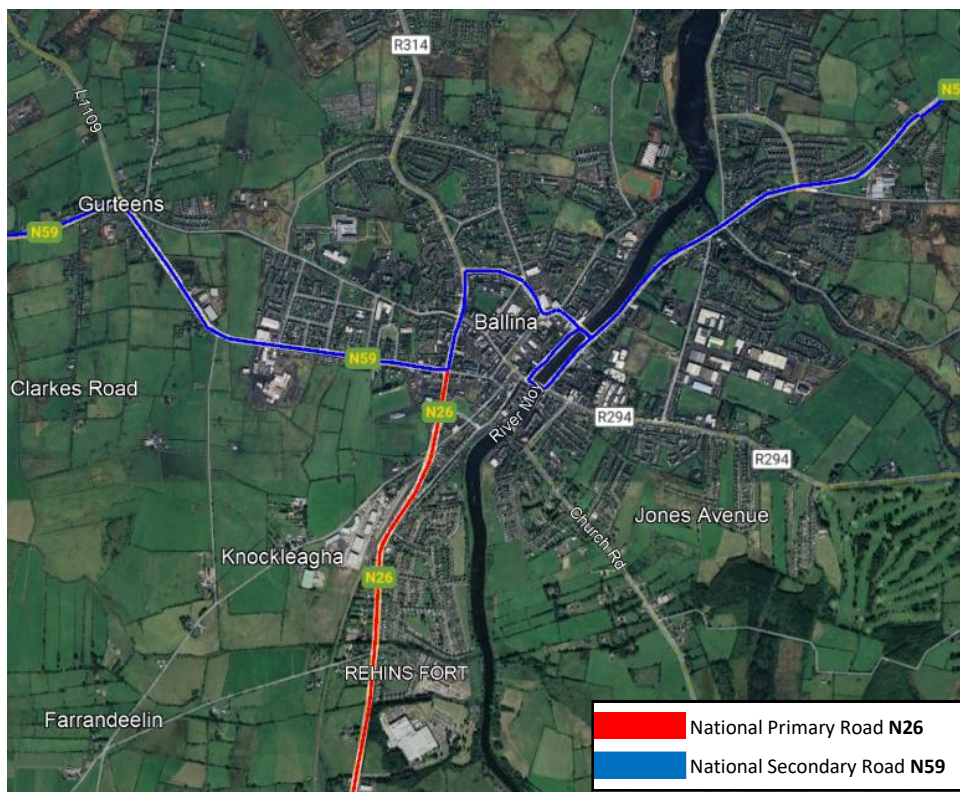


Figure 5-1 National Road Network in Ballina

Along these town centre routes, the longer distance trips are typically made by private car or HGV due to distance, purpose and lack of alternative modes. As such, the town centre streets have developed as National Roads to provide the infrastructure necessary to cater for the through traffic. There is no accessible active travel network to cater for the local trips. This has led to an over-reliance on private car for trips that can feasibly be made by sustainable modes, in particular active travel modes, as they are shorter by nature and don't require the movement of goods/deliveries

The through traffic could feasibly be removed from the town centre streets via a bypass of the N26 to the southwest, which is currently being developed by TII, and the N59 to the east and northwest of the town. This would allow for the reallocation of the existing road space to adequately cater to active travel modes to create a 15-minute town within the town area. It is therefore important to consider the preservation of a transport corridor on the outskirts of the town boundary to allow for the provision of a town bypass if considered necessary in the future.

Ballina is strategically located as the first crossing point of the River Moy and the lack of existing diversion routes makes it important to retain this transport corridor. It is recognised as a gateway from the Westport-Castlebar Economic Growth Cluster corridor to north Mayo and southwest Sligo. However, the town also enjoys a vibrant social life and culture scene and is a regional and national destination for festivals and events. The challenge to retain the functionality of the area as a transport corridor whilst providing a sustainable transport network that will enhance the public realm to complement the emerging demand for active travel in the area.

5.1.2 Severance/Barriers

Ballina is well suited to active travel as shown by the walking and cycling catchments (Section 4.1), but private car is still the dominant mode of transport. Several barriers and severances within the town have been identified as causing a resistance within the community to active travel.

5.1.2.1 Town Periphery

There is a major spatial disconnection between the commercial core and the employment clusters around the periphery. The regeneration of the town centre can assist in the delivery of opportunities for initiating new and improved high-quality links between the historic town core and new developments at the periphery.

The town centre can be described as being bounded to the north by N59 (Humbert Street, Circular Road and Dillon Terrace), Emmet Street to the east, Tolan Street and Bury Street to the south and to the west by N59 (Teeling Street and Pound Street) (Figure 5-1).



Figure 5-1 Ballina Town Centre

The town centre boundaries are inadvertently set by the respective active travel barriers at the periphery. The approaches to the centre along N59 (Clare Street and Sligo Road), Abbey Street, N26 (Kevin Barry Street), N59 (Lord Edward Street) and Kilala Road are all lacking adequate active travel facilities.

These routes are impeding active travel from the residential areas to the town centre. Many of the barriers that are causing severance can be remedied with interventions such as junction redesign, introduction of controlled crossing points, provision of dedicated cycle facilities and footpath widening.

The Ballina Town Centre is largely permeable with a network of laneways and traffic calmed streets. Recent interventions such as buildouts and zebra crossings have contributed to a more pedestrian friendly environment however the centre is still a car dominated environment.

The ATOS mapping shows that the town centre enjoys a Level A level of service for active modes. The town centre needs to be reimagined to cater primarily for people and not cars to create a high-quality public realm with an integrated walking network with mixed land use to fully utilise the level of accessibility that exists.

The ATOS mapping also shows that there is a notable difference in the level of connectivity for walking and cycling outside of town centre for all parameters assessed.

Removing these barriers, starting from the town centre boundaries and moving outwards will increase the accessibility catchment of the town centre.

5.1.2.2 N59

The N59 is the main link road in the town and acts as an inner relief road for local traffic as well as a through route for external traffic. The route runs in a north/south and east/west direction traversing the northeast of the town to the southwest, passing through the town centre.

The key junctions along the N59 are lacking pedestrian and cyclist facilities and in addition there are very few crossing points. The N59 is therefore causing severance for active travel users. Also, N59 Lord Edward Street is currently designated as a National Road, with no space available to provide cycling infrastructure. The N59 encompasses several key streets within the town centre, including:

- N59 Clare Street;
- N59 Lower Bridge;
- N59 Cathedral Street;
- N59 Upper Bridge;
- N59 Emmet Street;
- N59 Dillon Terrace;
- N59 Humbert Street;
- N59 Circular Road;
- N59 Pound Street;
- N59 Teeling Street; and
- N59 Lord Edward Street.

In particular, the N59 crossing of the River Moy is circuitous for road users. Both observationally and from the OD surveys carried out, most users in the east-west direction are leaving the N59 at the Upper Bridge and re-joining at the Font Junction via Tolan Street, O'Rahilly Street and Bury Street. This rat-running is bringing excessive traffic onto town centre streets and is acting as a barrier to active travel modes.

The POWSCAR data shows that there is a significant number of local trips from zones that cross the N59 being made by private car (Section 4.4).

Improving active travel facilities along the route will increase permeability and the accessibility of the town centre to active travel users.

5.1.2.3 River Moy

The River Moy runs in a north-south direction through the town. The Upper and Lower Bridges, which are one-way and represent the only vehicular crossing of the river, form part of the N59 and are heavily trafficked. The footpath on each bridge is below

the desired width and there are no cycle facilities. The priority crossings at each extent bring pedestrians to a small refuge island that is central to the high traffic volumes.

Salmon Wier Bridge provides an additional pedestrian and cycle river crossing to the south of the Upper Bridge although it is poorly connected on the eastern side. Lower Bridge is the most northern crossing point of the River Moy and is therefore serving as a 'bottle neck', facilitating movement for all modes from the wider area. The car dominated environment is hostile for pedestrians and cyclists.

The current route for pedestrians and cyclists from the north-east side of the town (The Quays/ Quicgnalecka/ Rivalsade/ Sligo Road) to the town centre is circuitous for residents with the Lower Bridge being the first crossing point. The Bunree Bridge crossing of the River Brusna is also lacking adequate active travel facilities. Improved linkages across the river to the north of the town would provide a more direct connection from the east side, a primarily residential area, to the town centre including employment and education zones.

5.1.2.4 Junctions

Several junctions have been identified as being barriers to active travel for their lack of pedestrian and cyclist facilities and the prominence of their locations/locations they serve.

Namely these junctions are:

- N26-Station Road, N26-Raheen Row, Hill Street
- N59-Lord Edward Street, Mercy Road
- Tone Street, Market Street, Garden Street (R294)
- R294, Bunree Road, Abbey Street
- Convent Hill and St. Mary School Entrance
- Convent Hill and Fenian Row
- Lord Edward Street, Kevin Barry Street, Bury Street, Teeling Street
- McDermott Street, Teeling Street, Garden Street
- Sligo Road-Lower Bridge-Cathedral Road
- Cathedral Road-Abbey Street-Lower Bridge Road-Upper Bridge
- Upper Bridge-Tolan Street-Emmet Street
- Emmet Street-Pearse Street-Bachelors Walk-Lower Bridge
- Sligo Road, Downhill, N59 and Riverslade
- Convent Hill & Sli Eachtra
- Sli Eachtra, Killala Road & R314

Junction redesign to accommodate active travel modes at these locations will make the town centre more accessible to pedestrians and cyclists and contribute to a more sustainable transport network in the town.

5.1.2.5 Discontinuities in the Active Travel Network

The NMU Audit (Appendix 3) has identified several constraints in the exiting network that are discouraging active travel. These findings are summarised as:

- Absence of footpaths along pedestrian desire lines;
- Discontinuities in footpath provisions;
- Vertical separation of footpath and carriageway;
- Inadequate width of footpath/shared surfaces;
- Absence of pedestrian crossings on likely desire lines;
- Inadequate inter-visibility at crossings;
- Lengthy pedestrian crossings;
- Footpath condition;
- Absence of hazard tactile paving;
- Cycle lane pavement condition;
- Discontinuities in cycle network;
- Separation of cycle lanes and parking;
- Drainage/ponding;
- Lighting; and
- Filtered permeability opportunities.

Several of these active travel barriers can be classed as maintenance issues and can be readily addressed by MCC whilst others will require detailed design and planning to remedy.

5.1.3 Reliance on Private Car

The transport network is designed to provide the most efficiency for road vehicle users which has inadvertently created several barriers to active travel. These barriers are causing the town to continually develop with an over reliance on private cars, particularly for short trips.

Car ownership is typically high in rural areas, and it is important to recognise that car ownership is a necessity for many residents. However, particularly for those living in the town centre, there needs to more sustainable mode choices for local trips with private car being reserved for lengthy commuter/out-of-town trips.

On-street parking in the town centre should be reserved for residents only. Visitors should utilise the towns many surface car parks with parking tariffs to encourage use of the peripheral car parks.

Indiscriminate parking practices are prevalent in the town centre and enforcement is low. This is creating a car dominant environment that is actively deterring active travel as cars are blocking cycle lanes, footpaths and pedestrian crossings.

5.2 LTP Principles

The LTP aims to propose schemes to deliver the on-street infrastructure necessary to provide continuous and consistent Active Travel links. These links will cater for commuting, leisure, tourist, and family cycling, as well as improved accessibility for pedestrians. The proposed schemes must not only increase accessibility and permeability within the immediate study area, but also provide enhanced and safer connectivity with other areas and routes. Ultimately the routes should be delivered to improve safety, reduced vehicle speeds, reduce journey times, and contribute towards increased numbers of trips being made by bicycle and by foot in the local catchment.

The overall principles of the LTP are:

- To promote mode shift to sustainable modes whilst providing a vision for the achievement of a reduction in car dependency and shift to sustainable modes of transport;
- To develop integrated transport that can meet the planned future travel demand, in the context of the statutory plans informing the future development of the Ballina Town Area;
- Identify policy interventions and infrastructure measures required to enable modal shift including walking, cycling, scooting and public transport and a reduction in the need to travel;
- To maintain or improve the reliability of journey times on key routes;
- To create a transport system that is accessible to all population cohorts;
- To provide a transport system that supports the economy and the growing population of the town;
- Identify opportunities for the integration of transport and land use policy proposals;
- Enhance quality of life and the attractiveness of the urban environment through high quality landscape and biodiversity interventions;
- Reduce air and noise pollution, greenhouse gas emissions and energy consumption;
- Provide a transport system that supports the economy by connecting to key employment areas and supports the growing population of the Ballina Town Area;
- To protect and enhance the built and natural environment; and
- Ensure economic viability, social equity, and environmental quality.

To achieve these principles, a clear set of objectives are developed following which the developed options will include solutions contributing directly and indirectly to improved, sustainable and safer pedestrian, cyclist, road, and public transport network, spread over a period of time. The overall network which follows the principles will be achieved through the objectives for each of these modes as described in Section 5.3).

The objectives listed are SMART (Specific, Measurable, Accurate, Realistic and Timely), and have undergone SMART analysis as shown in Appendix 8

5.3 LTP Objectives

5.3.1 Pedestrian Network

The overall objective of the pedestrian network in Ballina is to connect the main origin and destinations via a functional pedestrian network with adequate crossing facilities to make walking the most attractive mode choice. This will primarily focus on upgrades and repairs to key “day to day” routes between residential areas and local education, employment and community facilities. Measures will include resurfacing, kerb repairs, widening, drainage and landscaping as well as improved public lighting, security and signage for walking route to enhance visibility of existing links to create a more connected and safer pedestrian network. The existing provision will be enhanced with new pedestrian links to overcome severance caused by the N59 and River Moy and allow for the potential of pedestrianisation of key areas. Table 5-1 shows the specific objectives for the pedestrian network.

Table 5-1 LTP Objectives - Pedestrian Network

Objective	Description
P1	To enhance the existing facilities within town centre streets to create a people-first environment that encourages increased footfall in the area.
P2	To improve crossing points within the town at major junctions and along N59, N26, Abbey Street, Church Road, Killala Road, Castle Road, Bohernasup and McDermott Street.
P3	To provide continuous pedestrian facilities along the N26 to connect Rehins NS, Hollister, Grand National Hotel and Rehins Housing Estate to the town centre.
P4	To improve pedestrian facilities across the River Moy, at the Upper and Lower Bridges through a new active travel link and dedicated pedestrian facilities at the junctions.
P5	Improve the pedestrian connection between Ballina Train Station and Ballina Bus Station to the town centre.
P6	To enhance the current pedestrian facilities on McDermott Street so that it can adequately cater for the demand at school times and to tie in with SRTS.
P7	Improved filtered permeability through the use of laneways and the opening up of cul-de-sacs for pedestrians to increase directness and connectivity.to enhance access to homes, jobs, schools, shops, public transport and services.
P8	To remove traffic from town centre streets to allow for potential pedestrianisation (ie; Market Square and Pearse Street)
P9	To create new active travel links to reduce severance caused by the River Moy, particularly to improve connectivity to the north-east (The Quays/Quignalecka) of the town.

5.3.2 Cycle Network

The objective of the cycle network in Ballina is to deliver a high-quality and coherent network that attracts users of all ages and capabilities. To encourage the greatest mode shift in the population, the network must be delivered to provide safe and legible routes to connect the main trip demand centres. Investment should be prioritised to schemes that will deliver the greatest modal shift potential and focus on primary connections that link to secondary and feeder routes. Table 5-2 shows the specific objectives for the cycle network.

Table 5-2 LTP Objectives - Cycle Network

Objective	Description
C1	To develop a continuous and linked cycling network within the town of Ballina comprised of greenway, primary, secondary and feeder routes to connect the residential, education, employment, retail, commercial, healthcare and community centres.
C2	Create a network that can cater for predicted current and future demand for commuter, delivery, leisure and tourist cyclists that is accessible to all population cohorts.
C3	Make streets more conducive to cycling through reallocating space to provide the cross section to NCM standard.
C4	Provision of dedicated cycle facilities at major junctions (Upper Bridge, Lower Bridge, Circular Road Roundabout, Market Square, Pearse Street, The Font, and Sligo Road Roundabout)
C5	Provide dedicated cycle facilities along the N26 to connect Rehins NS, Hollister, Grand National Hotel and Rehins Housing Estate to the town centre.
C6	Improve the cycle connection between Ballina Train Station and Ballina Bus Station to the town centre.
C7	To provide two-way cycle facilities on McDermott Street so that it can adequately cater for the demand at school times and to tie in with SRTS.
C8	To remove traffic from town centre streets to allow for the provision of adequate cycle facilities in key areas of high-demand levels (ie; Lord Edward Street and Market Square)
C9	To reduce traffic volumes within the town to make the road network more conducive to cycling. Particularly on routes where the available width is too narrow to provide dedicated cycle facilities for low-medium demand levels (ie; Sligo road, Abbey Street, Killalla Road, Church Road and Castle Road)
C10	Provide cycle infrastructure throughout the town centre to include covered cycle parking, parking for adapted bikes and e-bike charging points.
C11	Create permeability links to provide direction cycle routes and alternative cycle routes to main roads.

5.3.3 Public Transport Network

To establish the public transport network within Ballina as an accessible and functional service to all, it is vital to ensure convenient access from residential, employment, education, healthcare and retail facilities to public transport stops. The existing connection from Ballina Train Station and Ballina Bus Station to the town centre is a car dominated environment with few active travel facilities. Improving this link is a key objective of the LTP. When this is established, the benefits of optimised routing and timetabling of the public transport can be realised. As Ballina has a growing population, there is the possibility of a high-frequency local bus service. Table 5-3 shows the specific objectives for the public transport network.

Table 5-3 LTP Objectives - Transport Network

Objective	Description
PT1	Improve the active travel connection between Ballina Train Station and Ballina Bus Station to the town centre.
PT2	Enhance the existing rail and bus services through co-ordinated timetabling to facilitate quick interchange between local and regional services.
PT3	Improve the routing and frequency of existing bus services, including the possible expansion of the 'Local Link' bus network to include short distance trips within the Ballina Town Area that are accessible to the wider population.
PT4	Improve the routing and frequency of existing rail services.
PT5	Development of a potential local high-frequency bus service for the town.
PT6	Development of 'Park and Ride' infrastructure
PT7	Development of a central bus stop at Humbert Street with covered and secure waiting area and welfare facilities to allow for the pedestrianisation of Market Square

5.3.4 Road Network

The overriding objective of the road network is to reduce vehicular traffic congestion, especially in the town centre, to facilitate safer and improved active travel. This will contribute to reduced emissions, improved public realm and improved well-being of the population. To achieve this, the road layout can be altered to provide for active travel modes, traffic management measures put in place and new links opened so that through traffic can bypass the town centre. It is an aim of the LTP to provide for active travel modes whilst maintaining the capacity of national routes the currently traverse the town in tandem with providing safe and sustainable active travel infrastructure. Table 5-4 shows the specific objectives for the road network.

Table 5-4 LTP Objectives - Road Network

Objective	Description
R1	Introduce traffic management measures to more effectively route vehicles to the N59 and N26 rather than the town centre streets (traffic management measures to allow 2-way traffic on Lower Bridge to keep traffic on the N59).
R2	Retain the capacity of the road network to cater for the through-traffic trips that are utilising the N26 and N59.
R3	Formalising the through link from Tesco to Pearse Street, through the Penneys Car Park, to allow for the pedestrianisation of Market Square and Pearse Street.
R4	Provision of alternative routes for bypassing traffic to allow for enhanced active travel, public realm and public transport facilities in key areas of high-demand levels by means of the N26 Ballina Bypass Phase 1 and consideration of the long-term indicative proposal to provide an eastern bypass.
R5	Development of town Parking Strategy.

6 Plan Development

The Ballina LTP has been developed in conjunction with the Ballina and Environs LAP. The LAP aims *“to support and grow the role of the Key Town of Ballina, to create a sustainable and competitive town that supports the health and well-being of the people of Ballina , providing an attractive destination, as a place in which to live, work, invest, do business and visit, offering high quality employment and educational opportunities within strong and vibrant sustainable communities, whilst ensuring a transition to a low carbon and climate resilient town that supports high environmental quality”*.

The Ballina LTP is aimed at providing a functional and active travel network from the town centre outwards. It has been prepared in collaboration with the NTA and runs concurrent with the LAP. The LTP presents an evidence-based assessment of the town, which takes into consideration the location, land-use and transport infrastructure and provides a suite of recommendations for various modes of travel to serve forecasted travel demand based on population & employment growth targets for Ballina.

6.1 Plan Development Approach

A key aim of the Ballina LTP is to improve the integration between Land Use and Transport Planning. In the development of scenarios for assessment there has been an iterative approach required to achieve integration across transport and land use options. It provides an appraisal of the current transport environment bringing sustainable transport considerations to the forefront. In particular, the LTP provides alternatives to car-based travel, including the promotion of active travel and alternative technologies, as well as a strategy for the delivery of sustainable transport.

The town centre itself is largely accessible for active travel modes (as shown by the ATOS analysis) with an expansive and permeable network that is enhanced by the Ballina Urban Greenway. However, the low level of active travel mode share indicates that the safety and accessibility needs to be enhanced

The provision of active travel infrastructure (dedicated cycle facilities, bike parking, e-bike charging etc) and mobility hubs will enhance the sustainable transport network to make it the most affordable, accessible, convenient and efficient choice of transport within the town centre.

The key transport challenges and barriers to active travel identified from the baseline assessment have shown that the town centre periphery is not conducive to active travel modes, and this is creating a car dominant environment within the town centre itself. Therefore, by addressing these severances to active travel and encouraging a modal shift for commuter, school and leisure trips within the town, traffic volumes will reduce within the town centre.

The aims of the plan development are to;

- Create a ‘15min town’ (ie improve accessibility and connectivity within Ballina so that residents can reach all necessary services with a 15minute walk/cycle);

- Utilise a 'centre out approach' - the ATOS mapping shows that accessibility within the centre is OK and that the issue is accessibility to the centre. Interventions providing the greatest accessibility to the largest catchment will be prioritised.
- Consider the Road User Hierarchy and to propose a network that is functional for all;
- Encouraging active travel trips within the Ballina town area - particularly for local trips (less than 2km) which make up approximately 59% of car trips on town streets.
- Improving active travel links between the town centre / commercial areas and residential areas;
- Removing blockages to active travel that are causing severance - providing high quality continuous pedestrian and cyclist facilities through junctions and provide crossings at desire lines; and
- Improve accessibility and frequency of Public Transport services.
- Capitalise on the potential through traffic reduction associated with the proposed N26 Ballina Bypass Phase 1 to enhance active travel infrastructure.

The approach methodology of the plan development has identified what is needed within Ballina to create an environment that is promotive of active travel. The objectives of the proposals are to achieve the following outcomes:

- Increase uptake in active travel trips from surrounding residential areas to the town centre to be facilitated by active travel network improvements that will reduce car reliance and car traffic levels in the town centre core, enabling delivery of further public realm upgrades and rebalancing of streets in favour of 'people' with enhanced active travel environment.
- Capitalise on the benefits of active travel to improve public realm through improved street design and accessibility;
- Improve the frequency and accessibility of the public transport services in the town;
- Create a functional and cohesive transport network that promotes active travel as the most timely, cost-effective and efficient mode;
- Contribute to the national emissions targets as outlined in CAP23 and allow Ballina to become a leading town for sustainable transport.

It is also recommended that an approach towards building Sustainable Drainage Systems (SuDS) is followed while implementing these proposals. These recommendations include:

- Preference for permeable paving when re-surfacing
- Linking in SuDS features where path widening, or creation of cycle lanes allows the opportunity
- Incorporating SuDS while building new links, mobility hubs, footpaths and cycle lanes

6.2 Option Development

Part 2b of the ABTA process involves the initial options generation by mode. Options were developed for walking, cycling, public transport and private vehicles to their respective best standard guidelines to provide an adequate level of service.

Each mode proposal has the option of Do-Nothing, Do-Minimum and Do-Something. Do Nothing simply refers to the existing state of the infrastructure. Do Minimum refers to upgrades which majorly include resurfacing, kerb adjustments, and line markings, drainage, and landscaping upgrades; and Do-Something consists of one or more alternatives which may involve provision of new infrastructure. DMURS/NCM guidelines will be adhered to as standard unless unfeasible.

For walking, the preferred option includes upgrading footpath to a minimum of 2m width on either side of the road. If a footpath is missing, then the option is to provide a new footpath in that location.

For cycling, the preferred option includes provision of segregated cycle tracks on both sides of the road. If there is a constraint of space then the other options included provision of cycle lanes (on one side of the road or two-way), provision of shared streets etc. The areas that are along River Moy, and towards leisure centres, with limited space on road, could be provided with greenways.

The options for public transport focus on connectivity of the existing train and bus station to the town centre. Optimum timetabling as well as enhancing the existing Local Link network are proposed. A potential indicative high-frequency bus service is also assessed.

For private vehicles, the options developed include changes to road layouts to improve traffic flow, traffic management options to effectively route traffic through the town centre and the provision of new road links to remove traffic from the town centre.

The options development for the network are shown in Appendix 4.

All the key junctions in the town are proposed to be upgraded with continuous active travel facilities. In the busy areas, especially around the town centre, priority crossings could be provided for pedestrian and cyclists or junctions could be signalised. Following junctions were modelled with new layouts of signalised junctions taking into account different scenarios of traffic management to test and support different proposals:

6.3 Option Assessment

Part 3 of the ABTA process is Options Assessment. The assessment is based on a two-stage approach, as per ABTA guidance:

- Initially a “Screening of Options Long List” assessment was carried out on all possible options per mode for each link. This process was a high level “sifting”

process in order to determine the practicality of the options developed. A simple pass/fail result was given for each option at this stage. This was determined using a high-level qualitative method based on professional judgement and a general appreciation for existing physical conditions/constraints within the study area from available survey information and site visits. Options were considered to fail the sifting process if there were immediate and apparent design issues including geographical, economic, social or environmental issues that made them impracticable.

- The options that passed the sifting stage were progressed to an MCA. The options per mode were assessed for each link and the feasible options were compiled to generate network options per link, ie to propose a cross section for each road in the network that caters for pedestrians, cyclists and road users. As part of the iterative process, the options per mode were looked at in conjunction with one another to develop the most refined network proposal.

The network options were developed to meet the objectives of LTP following the plan development strategy include direct and indirect solutions for improved pedestrian, cyclist facilities, and public transport network whilst maintaining the standard of the road network. Each road link in Ballina has been critically assessed to provide solutions to the challenges discussed in previous sections. These solutions consist of sets of options which are further assessed using a Multi Criteria Analysis. Some of the options that required more analysis are backed by traffic modelling such as signalisation of junctions, traffic management proposals and new road links.

The options generated within Part 2b: Options Development of the ABTA process was measured against the SWOT analysis from Part 1: Baseline Assessment to identify all weaknesses.

The Do Nothing, Do Minimum and Do Something options are assessed for key routes within each area/designation. Broad cross sections were developed for each scenario and assessed for each route.

The sifting process for the road layout, key junctions and public transport network is added as Appendix 5 with the MCA shown in Appendix 6.

6.3.1 Initial Option Assessment by Mode

The options were assessed per mode with priority assigned as per the Road User Hierarchy (Section 3.2.1).

6.3.1.1 Walking

The options assessment for walking prioritised looking at the current discontinuities, standard, condition and saturation of the network with proposals assessed to create an integrated network for Ballina.

The ATOS data shows that there is a good level of connection throughout the town for pedestrians. Coupled with the low mode share from the POWSCAR data, the standard of these linkages appears to be dissuading local users. Therefore, the key focuses when assessing the options for pedestrians are:

- Upgrades and repairs to “day to day” key routes, to including remediating discontinuities, between residential areas and local education, employment and community facilities.
- Installation of new crossing facilities along main roads and at major junctions, particularly along the N59, N26, Abbey Street, Church Road, Castle Road and McDermott Street.
- Improved filtered permeability through the use of laneways and the opening up of cul-de-sacs for pedestrians to increase directness and connectivity.
- To remove traffic from town centre streets to allow for potential pedestrianisation.
- Creation of new links to overcome severance caused by the River Moy.

6.3.1.2 Cycling

As the current mode share for cycling within Ballina is relatively low and as the current network is disjointed, the options assessment was disposed to catering for potential demand including the linking of existing trip demand zones and future trip demand zones as influenced by the LAP land zonings.

The POWSCAR analysis shows that the town centre, schools, residential estates and employment areas have the maximum trip demand. Although the majority of trips within these areas are within the feasible cycling and walking catchment, most of the trips are currently done by cars.

The town centre, which acts as a centre point for most trips within the catchment due to providing the only bridging points of the River Moy, needs to provide high-quality active travel infrastructure to initiate a meaningful mode shift within the town. Therefore, the cycle network was developed from the ‘town centre out’ to connect to the school district (McDermott Street and N26), residential estates (Along N26, N59, Kilalla Road and Abbey Street) and large employers at the town periphery (Hollister and Coca-Cola)

The available cross section width of the potential new cycle links was looked at to ascertain what facilities can be achieved was determined as part of the sifting analysis. The MCA options assessment focused on:

- Development of a connected and continuous cycle network comprised of greenway, primary, secondary and feeder routes to connect the residential,

education, employment, retail, commercial, healthcare and community centres that can cater for predicated current and future demand.

- Provision of dedicated cycle facilities at junctions.
- Create a network that can cater for predicted current and future demand for commuter, delivery, leisure and tourist cyclists that is accessible to all population cohorts.
- Reallocate road space to make the network more conducive to cycling. Particularly on routes where the available width is too narrow to provide dedicated cycle facilities.
- Improved filtered permeability through the use of laneways and the opening up of cul-de-sacs for cyclists to increase directness and connectivity.

6.3.1.3 Public Transport

The public transport provision currently focuses on trips to large urban areas (Dublin and Galway). There is a need to be enhance local provision (Castlebar, Westport and Sligo) with minimal interchange delays. The train station and bus station are located just 400m apart, however, there is no meaningful active travel corridor into the town centre. As the town has a growing population, there is a possibility to implement a high-frequency local bus service. The options were assessed to:

- Enhance connectivity of Ballina Train Station and Ballina Bus Station with the provision of improved active travel connections and 'Park and Ride' infrastructure.
- Enhance the existing rail and bus services through co-ordinated timetabling to facilitate quick interchange between local and regional services.
- Expand the 'Local Link' bus network.
- Development of a potential indicative local bus service for the town.
- Development of a central bus stop at Humbert Street.

6.3.1.4 Road Network

Ballina is a major transit route with a large volume of through traffic utilising the N59 and N26. This traffic demand is competing for space within the town centre with sustainable modes. The options have been assessed to reallocate the available space in the town centre to sustainable modes whilst continuing to provide the current accessibility of the road network that users are accustomed to. Factors that were assessed in relation to the road network were:

- Redesign of road layout to allocate space to sustainable modes.
 - The impact of traffic management measures to more effectively route vehicles to the N59 and N26 rather than the town centre streets (traffic management measures to allow 2-way traffic on Lower Bridge to keep traffic on the N59).
-

- Retain the capacity of the road network to cater for the through-traffic trips that are utilising the N26 and N59.
- Provision of alternative routes to remove though traffic from the town centre streets to allow for enhanced active travel, public realm and public transport facilities in key areas.

Using the traffic modelling results, junction upgrade options were refined into proposals. This is discussed in detail in section 8.

More details on initial option development can be found in Appendix 4.

6.3.2 Refinement of EPO

An iterative process was used to refine the overall network EPO. Following the MCA analysis, the options went through a series of sense checks to ensure that they were wholly supportive of the LTP objective to create an integrated and cohesive transport network. The options were refined so they will achieve the best transport network for the town.

This process allows for the necessary consideration of alternatives, land use and demand management measures required to achieve integration across transport and land use options. This iterative assessment of the emerging transport networks by mode is key to influencing the prioritisation of schemes for implementation and overall delivery of the plan.

6.3.2.1 Review Against Objectives

Following the MCA, the options were reviewed against the initial LTP objectives per mode to ensure that there was alignment between the assessment process and the initial objectives.

6.3.2.2 Integration of Mode Specific EPOs to Generate a Cohesive Transport Network

The EPOs for each mode per link were looked at in relation to each other. This was carried out to ensure that the emerging preferred high-quality pedestrian route correlated with the cycle route and that the proposed road network supported the active travel network.

This process also sense-checked the emerging overall network proposal to guarantee that the proposal for each link was complementary to the proposals on adjacent links to deliver a connected network.

6.3.2.3 LAP Land Use Zones

The proposed LAP land use zoning, particularly the newly zoned lands, will influence travel patterns in the area.

The proposed network option was overlaid with the LAP zoning map to futureproof the network design and ensure that planned future developments sites were proposed

in locations that can be served by walking, cycling and public transport. It is imperative that the intended catchment of the land use (ie school students, office workers, commercial workers etc) can easily access the site.

6.3.2.4 *Serving Trip Demand*

The future development will serve to build on the strength of established development areas and therefore the LTP proposals have the overarching responsibility to mitigate the existing weaknesses and develop a sustainable network. The fundamental principle of this step of the assessment process was that only a quality network will attract users and stimulate a modal shift in the population.

The weaknesses of the options in providing for the demand in a manner that encourages sustainable travel choices was looked at and remedial measures put forward.

The quality of the provision for each mode (for example, capacity, ease of access and cost to the user) was considered. In particular, the network was looked at from the user's perspective and the attractiveness of each option was assessed in terms of cost, time, ease of use and the convenience of a particular mode for certain trips.

6.3.2.5 *Avoid-Shift-Improve*

A guiding principle of the LTP is the Avoid-Shift-Improve demand management strategy.

The 'avoid' measures were assessed by the LAP land use zonings through the policy of town centre regeneration that focuses on sustainable development within the existing footprint of the town (compact growth). Development of brownfield/infill sites in the town centre and densification and consolidation of established neighbourhoods within the town will 'avoid' longer distance trips and tie in with active travel alternatives to private car use.

The delivery of a high-quality sustainable transport network is key to encouraging modal 'shift'. The measures selected for the network were evaluated to ensure that they help the existing network to operate efficiently. This is achieved either through capacity enhancements or by reducing pressure on certain locations within transport network by encouraging re-routing of trips. Demand management measures within the proposed package are included as secondary measures, ie not requiring infrastructure but can reduce the requirement for physical transport improvements, or allow these to be focused towards different trip types; for example, combining demand management options to reduce car travel demand, such as parking provision restraint, with physical improvements to busy junctions to give pedestrians and cyclists priority.

Measures to 'improve' the trips within the town were evaluated through the possibility of new road links that bypassed town centre streets to alleviate through-traffic congestion and free up space to allow for the 'improvement' of active travel facilities including the possibility of full pedestrianisation of some areas.

6.4 Network Development by Mode

An overview of the proposed Local Transport Network (LTP) for pedestrians and cyclists are shown in Figure 6-1 in the context of the LAP land use zones.

Based on the analysis performed to date, the NTA considers that whilst LTP should continue to be as closely aligned and integrated with LAP as possible, the LTP should be viewed as a standalone plan, and considered as an input to the LAP. The NTA recommends that as part of the finalisation of the Ballina LTP, the LTP should consider, but not be bound by, the final amendments made to the LAP. This consideration should look to incorporate changes, as far as possible, where they would complement and enhance the LTP, but any changes should not materially impact on the LTP design or proposals and should align with the key transport planning principles of the plan.

The network is an outcome of multiple iterations of the ABTA process, and it ties in with other schemes such as existing greenway, Inter-Urban Cycle Connects and SRTS. Additionally, the study area boundary of LTP has been developed to align with LAP boundary through an iterative process, and the proposed network considers establishing good active travel connections throughout the town whilst the focus being on connections between the town centre, residential (existing, new and strategic reserved) areas, education zones and employment zoned lands in the LAP. These linkages to development lands aim to enhance the connectivity to promote compact growth and active travel accessibility to key areas.

It can be seen from Figure 6-1 that the extent of the proposed active travel network is designed to serve the different land use zones. The LTP proposals extend up to the boundary between development zones and agricultural land. The proposals connect existing facilities such as schools, residential areas, town centre, employment and community service areas. With the help of active travel bridges, continuous cycling and walking connection can be established across East and West of Ballina. This will overcome the severance caused by the River Moy and provide a meaningful connection from the residential areas in the east to the retail, employment and education centres in the west. Several permeability links which can be provided in short to medium term will open safe inter- and intra-zonal connections for example, between the Pearse Street and Emmet Street, Market Square and Pearse Street, main roads and future employment areas, existing facilities and proposed greenways etc.

The plan also focuses on establishing good active travel connections to existing public transport services such as between the existing train station and the town centre. Connections to future proposals will be provided in conjunction with the developments and can range from medium to long term. For example, upgraded cycle facilities and greenways will be developed near employment zones such as Ballina Beverages, Hollister, future development areas on the Sligo Road etc.

The proposals are subject to change based on feasibility studies, public realm proposals and potential generated from other infrastructure projects. A new active travel link connecting residential areas between Creggs Road and Quay Lane, as part

of SRTS, will allow for the provision of safer active travel facilities along the route. This link is also envisaged form part of the active travel access to the land to the east, zoned for Enterprise and Employment (IDA Site). The development of these links will provide active travel facilities offline from the N59 which has a posted speed limit of 100km/hr.

The potential development of active travel facilities along the N59 from the roundabout at N59/Quignalecka/Behy Road towards Creggs Cross, in consultation with TII and in accordance with TII publication DN-GEO-03030, is considered a long-term objective of LTP.

Mode specific maps are detailed from Figure 6-2 to Figure 6-6 which is discussed in detail in sections below. Together, all the components of the proposals discussed in this section will result in a safe and continuous sustainable transport network with options for alternative routes. These proposals are further segregated into different packages which are discussed in detail in Section 8.

6.4.1 Pedestrian and Cyclist Network

The resultant active travel networks are a combination of upgraded cycle facilities, proposed shared streets, proposed, and upgraded footpaths, active travel bridges, permeability links, new access links, junction upgrades etc. These networks per mode, pedestrian and cyclist, are shown in Figure 6-2 and 6-3 respectively. Along with these proposals, junction upgrades and new crossings are proposed which are presented in Figure 6-4.

6.4.2 Public Transport Network

An enhanced public transport network, including the potential introduction of a high frequency bus service and integration with the existing local link is show in Figure 6-5. It should be noted that the bus routes are indicative and are subject to further engagement and analysis with NTA.

6.4.3 Road Network

The road network proposals are shown in Figure 6-6.

The formalisation of the link road between Market Street and Pearse Street, through the existing Penneys Car Park, is proposed to be implemented in the short term. This enhancement of the existing link will allow consideration and feasibility assessment for the future pedestrianisation of Market Square.

The additional road proposals area focused on how Ballina town centre interacts with the wider strategic road network. Several relief link roads are proposed which would reduce traffic congestion on key roads such as Church Road, Bury Street, Sli Ectra Road, and Quay Road. Such link roads will result in improved access, the opening of sustainable landbanks and the removal of orbital trips from congested town centre links. These links may thus increase the potential for Ballina to become a leading town for sustainable transport with 10-15 minutes cycling and walking catchment.

The proposals include the N26 Ballina Bypass Phase 1 which is to be delivered in medium term as well as additional links which are long-term (potential) indicative proposals. A high-level analysis was carried out using the LAM to understand the potential traffic impact of these proposals and is shown in Appendix 2.

The N26 Ballina Bypass Phase 1 is currently being progressed by TII. It will act as a link road to the N59, passing through the newly zoned Enterprise and Employment lands to the west of the town. It will also serve as a distributor road, diverting traffic away from Lord Edward Street by providing a new orbital route. The route will serve as a western relief road to reduce traffic levels on the urban section of the N26 and at the Font Junction. This reduction in demand will allow for dedicated active travel facilities through the reallocation of road space and junction upgrades with a particular focus on Lord Edward Street and Teeling Street.

In line with the LAP Land Zoning objectives, it is important to consider the preservation of transport corridors on the outskirts of the town boundary to allow for access to the planned future development lands. This access roads have the potential to facilitate orbital routes to the north west and east of the town. The routes would serve as relief roads that will remove through traffic and 'free-up' the existing road space in town centre to allow for a 'people first' design approach to provide enhanced active travel, public realm and public transport facilities.

The routes require feasibility studies, strategic assessments and detailed route option selection. Therefore, they are long-term indicative proposals subject to further analysis in the future.

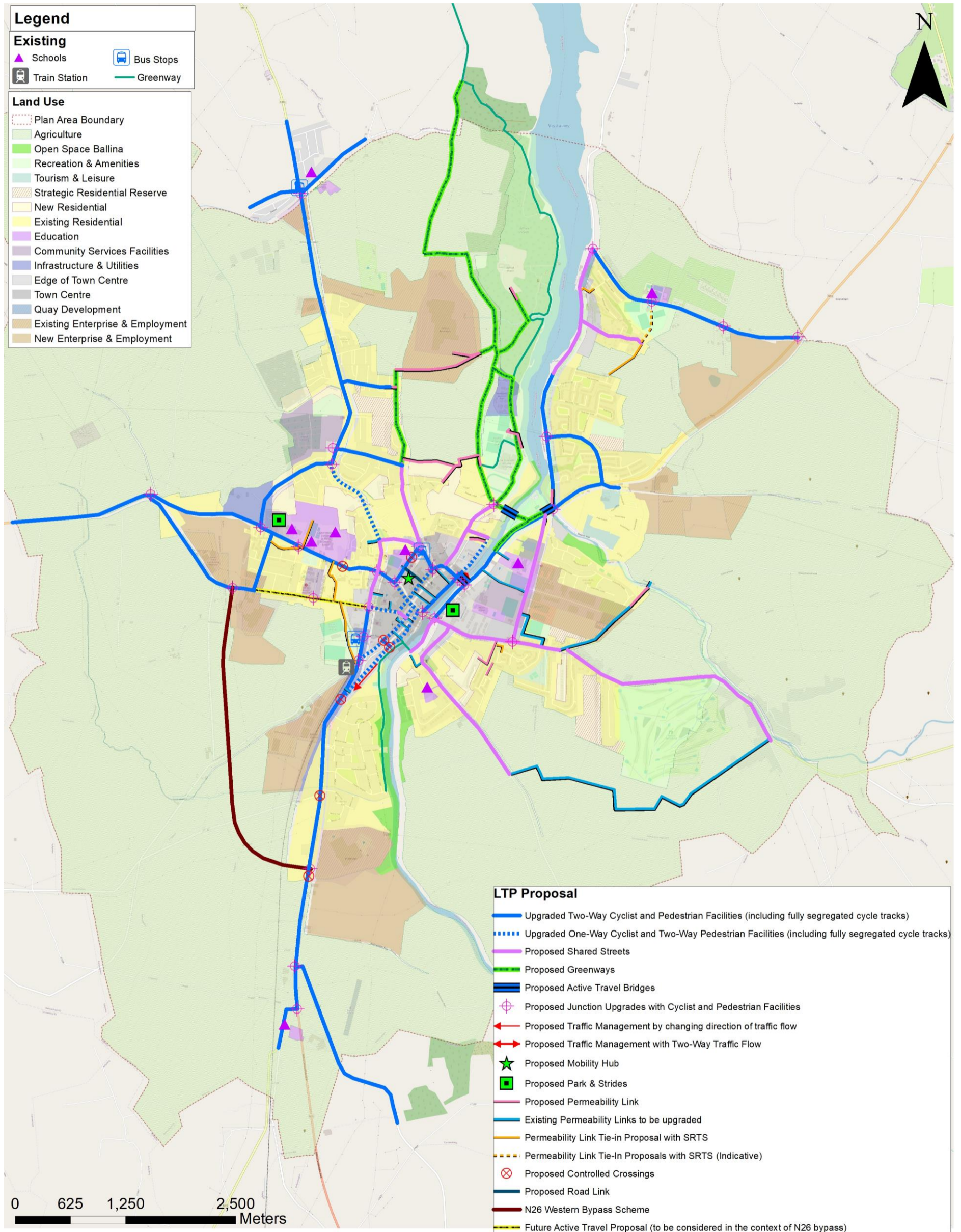


Figure 6-1: Plan Development Concepts: LTP Development In The Context Of LAP Land Use Zones

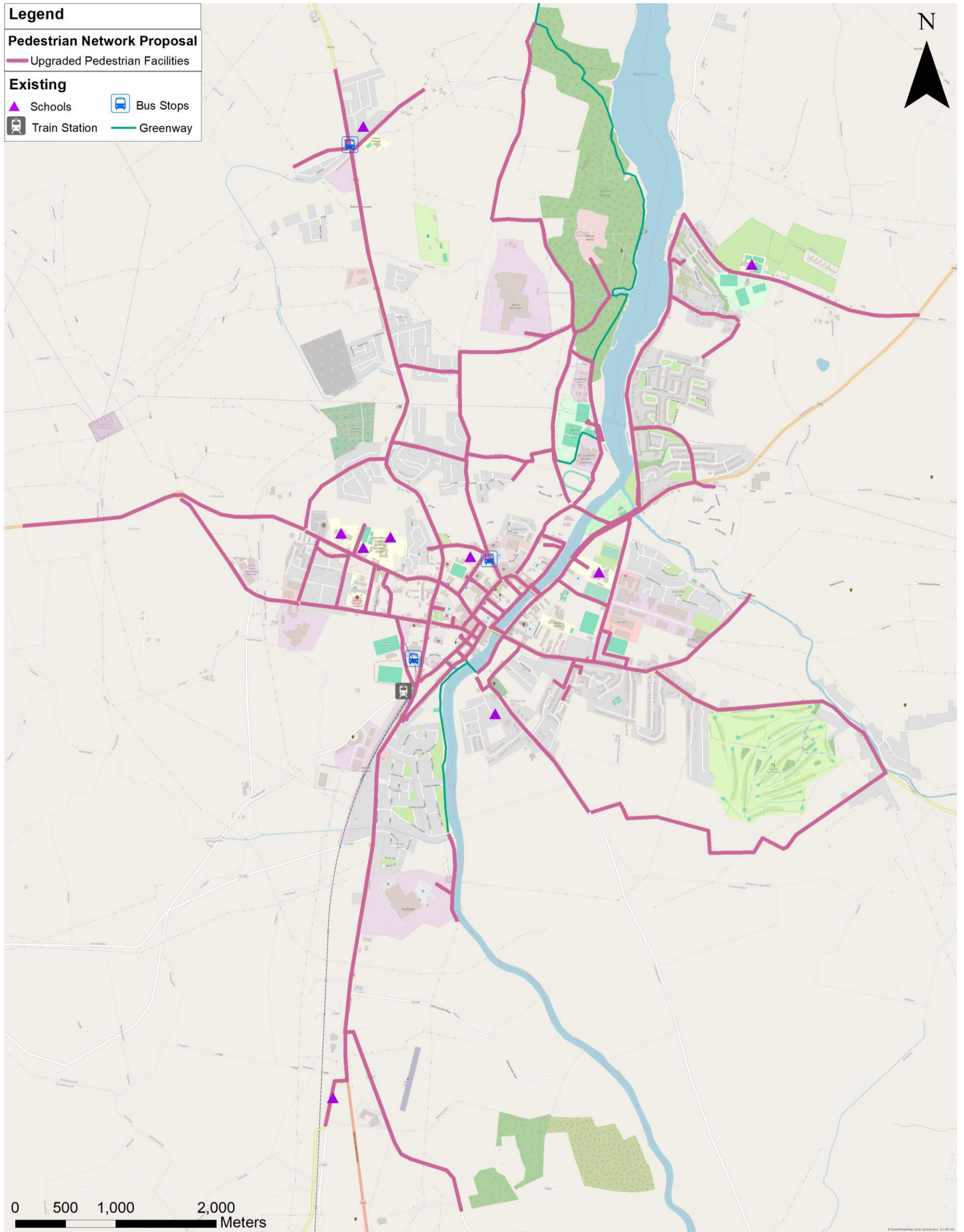


Figure 6-2: Plan Development Concept – Pedestrian Network Proposals

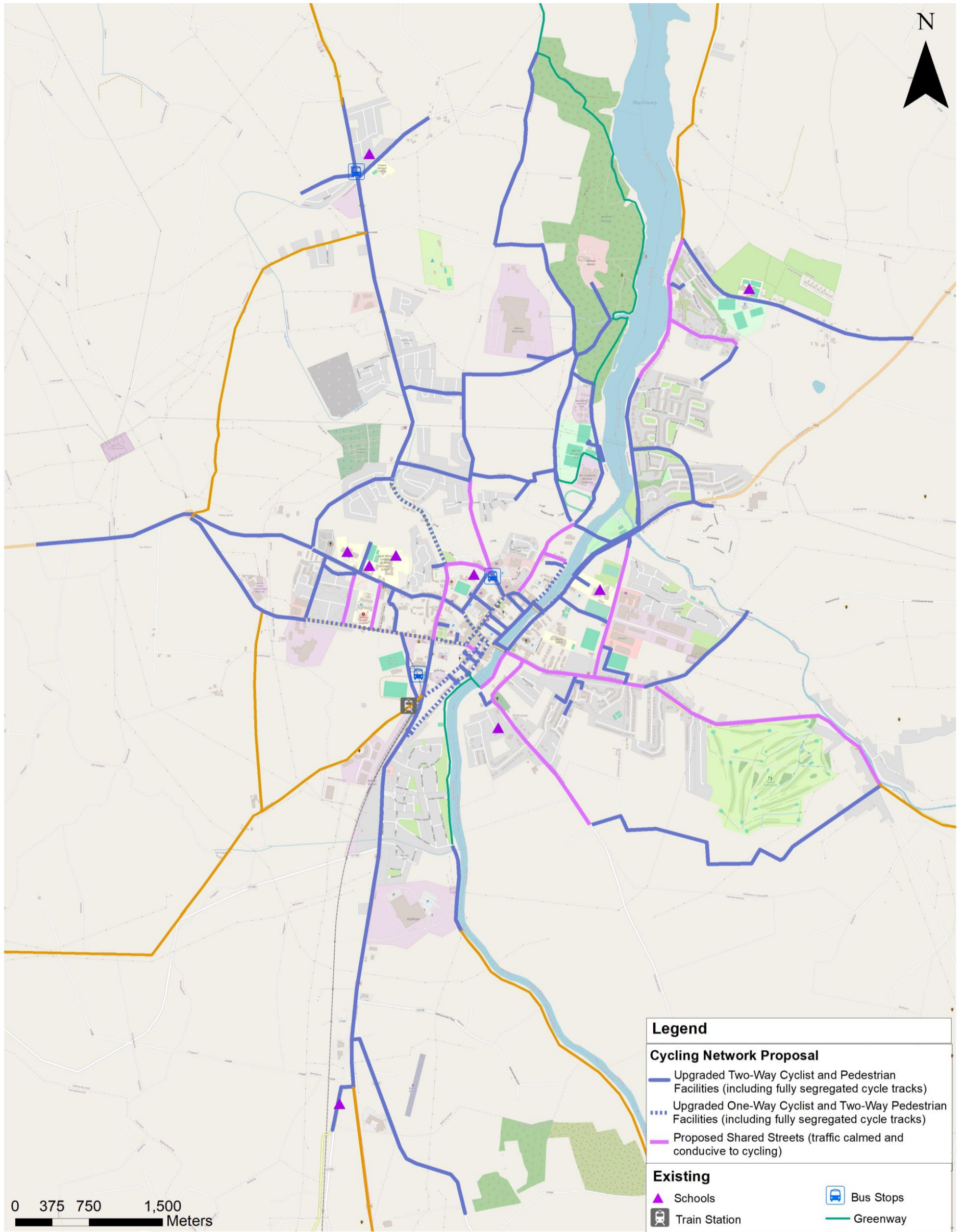


Figure 6-3: Plan Development Concept – Cycling Network Proposals

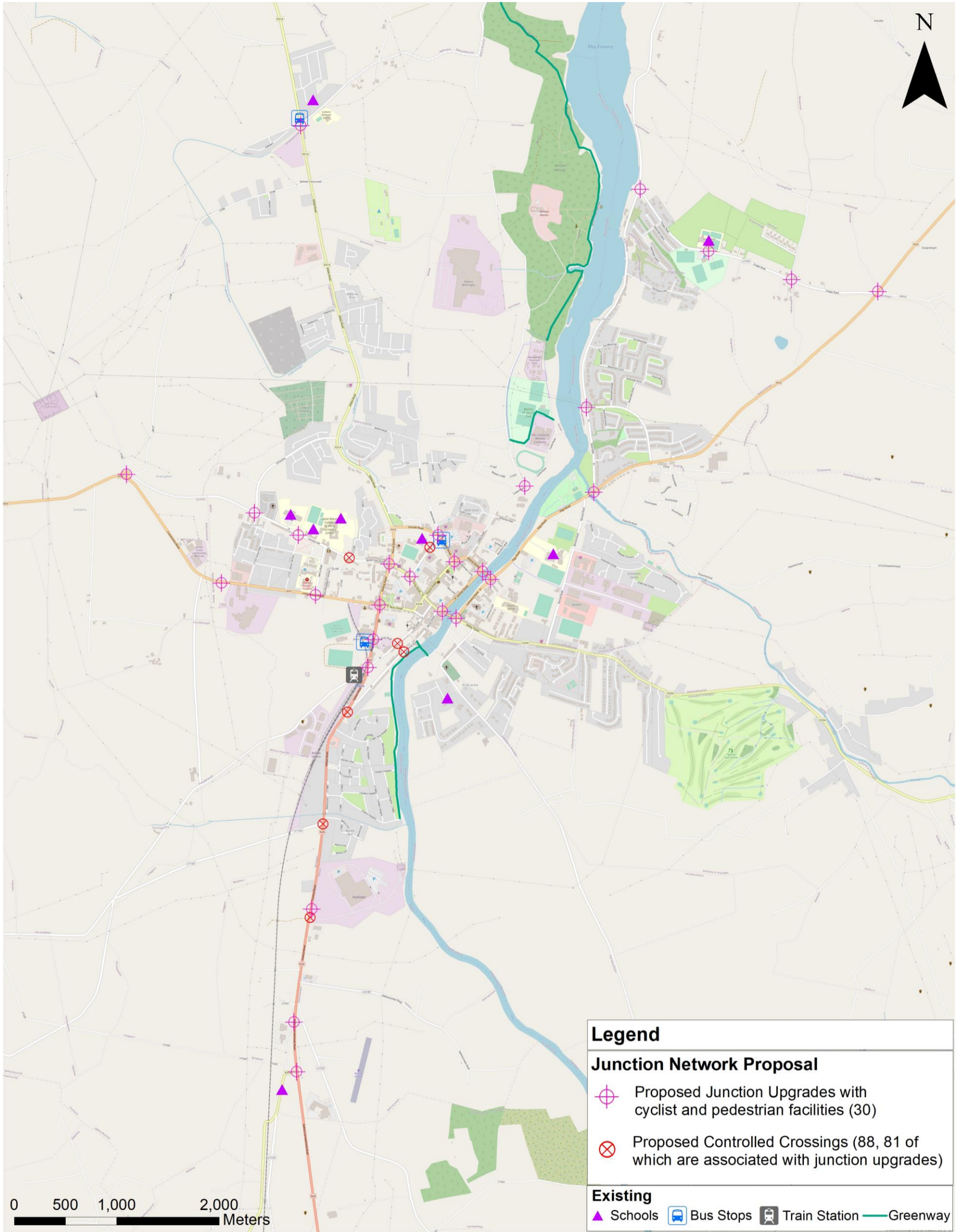


Figure 6-4: Plan Development Concept – Junction Network Proposals

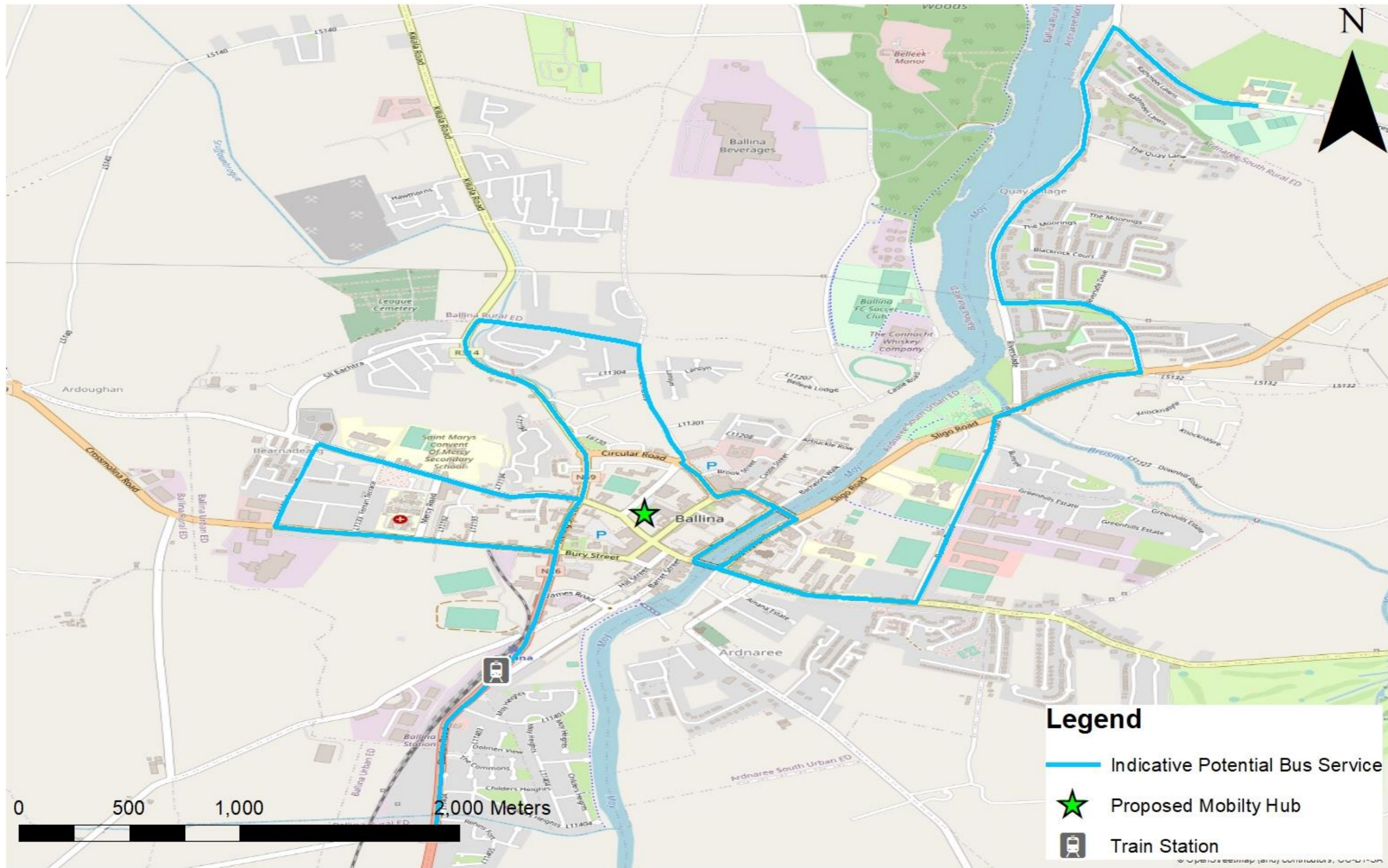


Figure 6-5: Plan Development Concept – Potential Public Transport Proposals (Indicative)

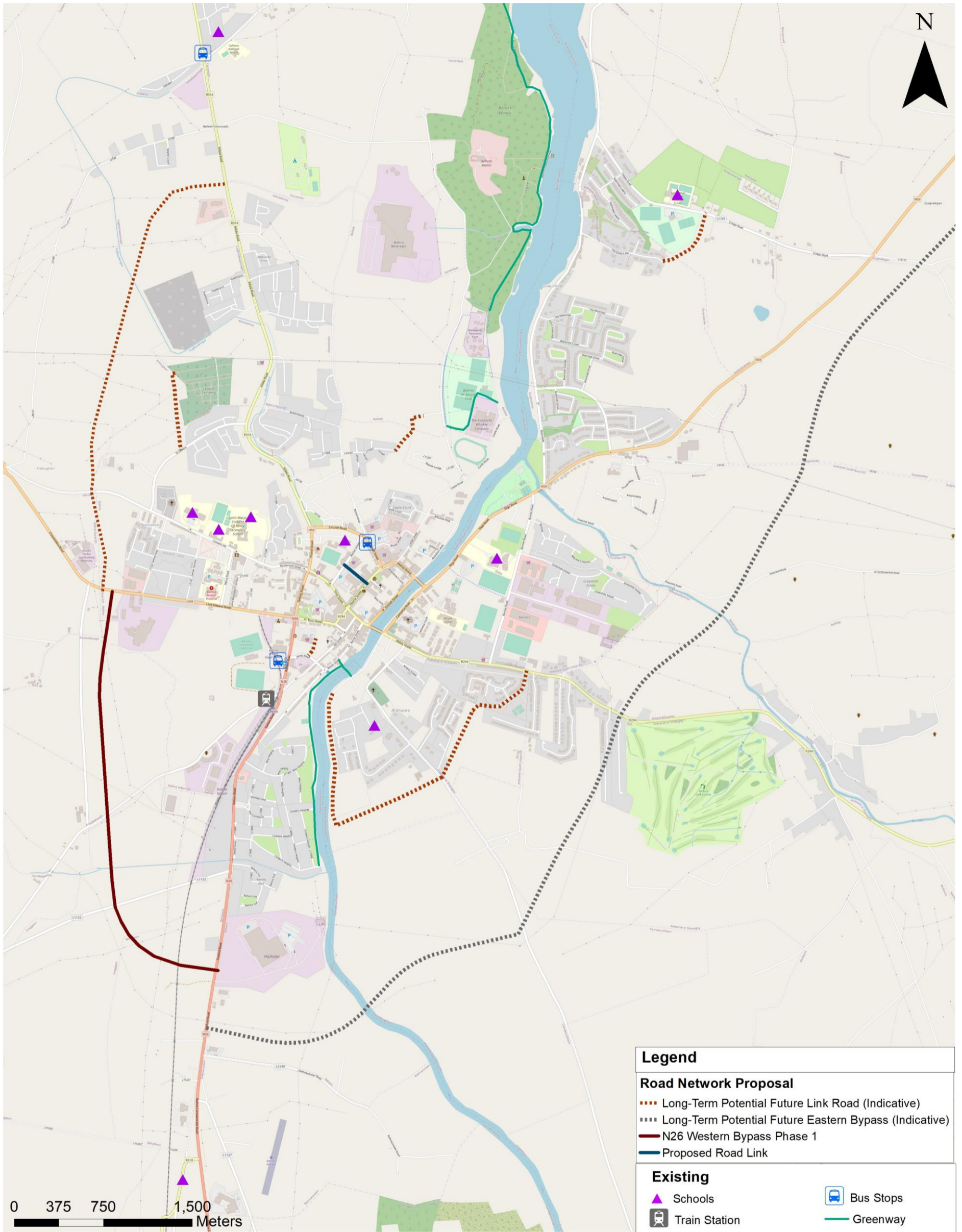


Figure 6-6: Plan Development Concept – Road Network Proposals

7 Public Transport

Ballina is served by both rail and bus with services focusing on inter-urban connections. The council will promote the use of the existing public transport network and strive to improve the facilities in the town, with the possibility of a local bus service to be explored.

Strategic improvements within both the rail and bus networks have the potential to tap into an existing latent demand and maximise uptake in a sustainable transport network. These key improvements will focus primarily on timetabling, routing and connectivity of public transport facilities and require little infrastructure. The possible development of a local service will require the provision of bus stops and associated ancillary infrastructure.

It is envisaged that the improvements required within the public transport system will be planned and developed by MCC in close cooperation with the NTA, Iarnród Éireann and Bus Éireann. This inter-agency approach will ensure that the most efficient, equitable and economical network is delivered.

With the delivery of a public transport network out of the sole remit of MCC, indicative proposals have been developed for discussion with the relevant stakeholders.

7.1 Rail

The rail network improvements focus primarily on service connections from the train station to the Town Centre for sustainable modes (Proposal 5) and on increased frequency of rail services (to be determined with Irish Rail).

7.2 Bus

The bus network improvements similarly incorporate increased frequency of the existing Local Link service (to be determined with the NTA) but also incorporate infrastructural changes to facilitate the delivery of a high frequency bus route to service the town.

The route has been designed to connect the main residential areas to the town centre, employment areas, schools, hospital, train station and the greenspaces. It can be described as connecting Hollister to Quay School via McDermott Street, Libradore, Town Centre and Bunree. The proposed bus route is shown in Figure 9-27 with the envisaged 300m catchment (for 30 no. bus stops) shown in Figure 7-1

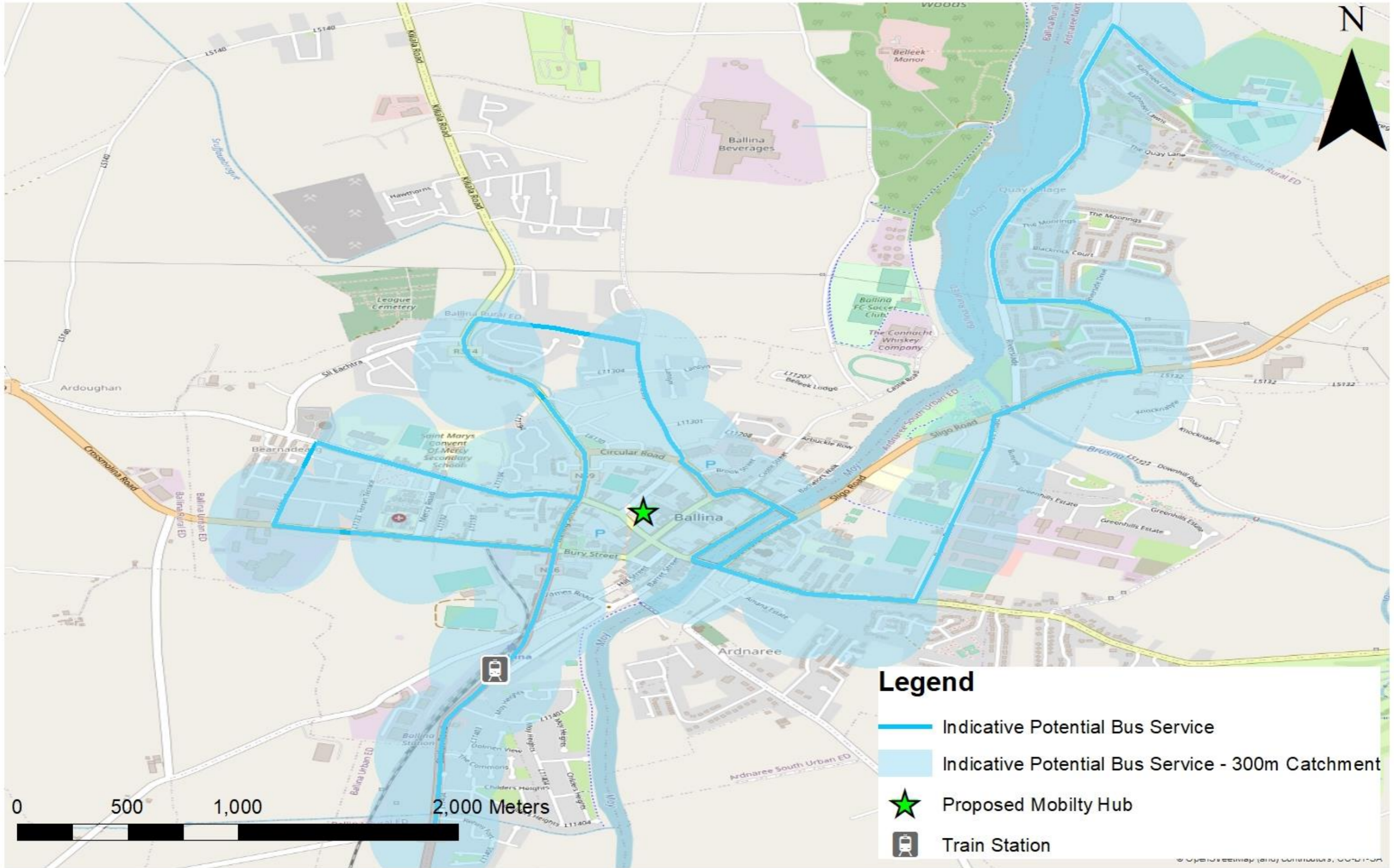


Figure 7-1 Indicative Potential Bus Service with 300m Catchment

The proposed bus route will also connect with a proposed Mobility Hub in Market Square via a central bus stop located on Circular Road. This hub will have the potential to facilitate interchange, particularly with the Local Link services. The proposed bus network is shown in Figure 7-2.

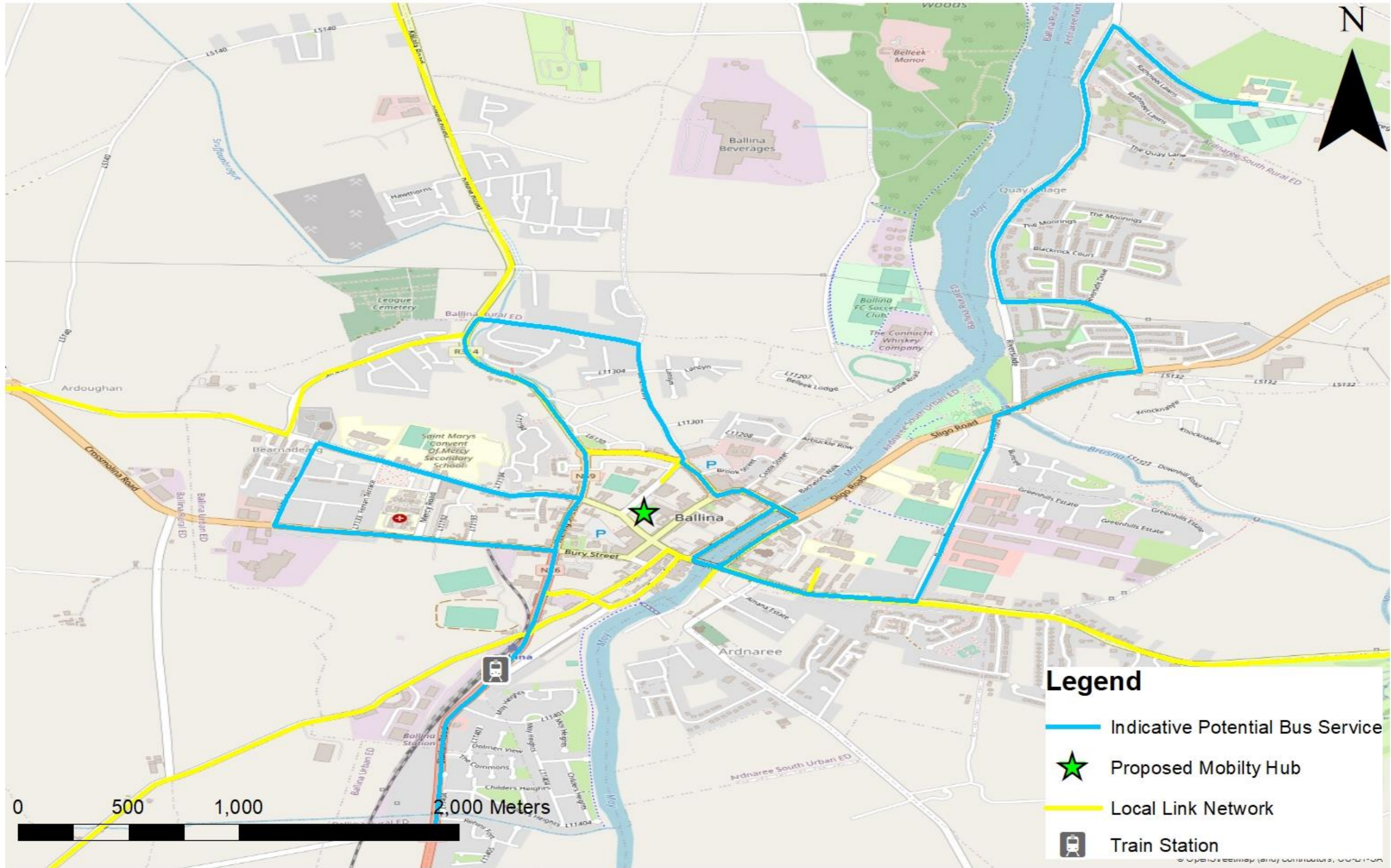


Figure 7-2 Proposed Bus Network

The linear bus route proposed runs in an east/west direction and covers a distance of approximately 10.8km.

The route is bi-directional (with an allowance for one-way traffic along McDermott Street and the Quays) and includes 60 stops (ie; approximately 30 stops in each direction). The general distribution of bus stops is indicative and is considered to be sensible as offers good coverage for general access to bus services for residents.

The proposed frequency is 1 bus every 30minutes with timetables generated to facilitate interchange with Local Link services in the Town Centre (to be determined with the NTA).

The proposed bus routes will expand local bus facilities to all members of the population. Ancillary infrastructure that could support the local bus network include:

- Sheltered bus stops that are universally accessible;
- Cycle parking at the main trip attractor stops (town centre, train station etc);
- Public Information / Tourist boards; and
- Wayfinding information.

Provision of a local bus service within the town offers a new mode for residents to utilise. Therefore, the delivery of this scheme has the highest potential to encourage mode shift to sustainable modes. A campaign to promote a public transport through increased visibility and advertising will be needed to inspire uptake. This will encourage a net reduction in greenhouse gas emissions through modal shift by encouraging public transport as a meaningful mode of transport.

Funding for this project is available from the NTA through the Connecting Ireland Rural Mobility Plan but there remains a challenge to generate a fare structure that makes the service affordable to the user and economically viable for the operator.

Further analysis and consideration should be given to how Ballina's hinterland could be served by demand-responsive or "community" travel initiatives, as these locations are essentially car-dependent at present and there would be clear benefits in seeking to open up sustainable travel options for those who have less or no access to car travel.

8 Plan Delivery

The Area Based Transport Assessment (ABTA) of the Ballina Town Area provided several proposals for the development of a sustainable transport network. The Emerging Preferred Options (EPO's) have been developed to create a connected and cohesive network that is attractive and legible to the user. This is key to encourage a high uptake of the proposed infrastructure and to generate a positive public perception of the proposals.

Additionally, the implementation of the EPO's is crucial to public perception. If the construction and implementation process is not efficient and cohesive, the works will be deemed a nuisance by the local community and therefore uptake will be low. The network should be delivered in a practical and feasible manner to develop key routes along desire lines that link the residential areas to the main centres of employment, education, retail and recreation services within the town.

To ensure this, the selected options are prioritised into separate proposals, to be implemented in different phases, which will cover the overall development of transport of the town of Ballina. The proposals should be delivered to ensure that all measures are mutually supportive in achieving the objectives of the strategy. Investment should be prioritised in schemes that will deliver the greatest modal shift potential. The EPO's have therefore been allocated into five proposals with supporting auxiliary measures that offer a deliverable package of works for the design and construction stages. These proposals have been developed to achieve the objectives of each mode as set out in Section 6 and range from short, medium to long term measures.

The schemes include proposals for continuous and standardised pedestrian facilities, dedicated cycle facilities, traffic management strategies, mobility hubs, park and stride/bike facilities, filtered permeability links, controlled crossings, junction upgrades, active travel bridges, greenways and road links. All these proposals together will improve the accessibility of Ballina by active travel modes. These proposals will also serve as safer routes for pedestrians and cyclists to access key destinations such as education, retail, and employment areas. The routes covered along each of these proposals will have improved public lighting, safety, and signage.

The factors on which each proposal's prioritisation is based is discussed in Section 8.1. An overview of the schedule of proposals is shown in Section 8.2. The individual proposals are presented and discussed in detail in Section 8.3 - Section 8.8.

It should also be noted that the individual projects will be subjected to public consultation, environmental assessments, heritage studies, relevant statutory procedures, and consultation with the relevant statutory stakeholders. Projects with

potential impact on National Roads will be developed in consultation with TII in accordance with TII publication DN-GEO-03030, including the development of the appropriate design reports for TII approval.

8.1 Proposal Prioritisation

The proposed network should be implemented on a staged basis, according to their priority and feasibility to contribute to a sustainable and robust transport network. Priority is assigned to routes based on the concentration of trip attractors and the number of connecting/overlapping routes through which they pass. The feasibility of implementation and scope to encourage modal shift is also vitally important and is dependent on ease of construction and necessary further assessments.

The car-dominant environment will abate with the improvement of linkages to the town centre for active travel modes for education, commuter and shopping trips. These linkages need to be improved in a logical and coherent way that provides maximum yield potential. Transit routes that pass through high trip attractor locations and where multiple desire routes overlap will have the greatest level of uptake.

As outlined in Section 4.1 and demonstrated by the ATOS analysis, the town centre is relatively permeable with the need identified for multiple small interventions such as provision of cycling infrastructure, increased crossing points, traffic management measures, permeability links, mobility hubs and frequent bike parking. Due to its strategic location, the development of town centre is crucial to Ballina. The majority of trips pass through the centre as it provides the only point to cross the River Moy. Its enhancement will increase the visibility of the proposed sustainable transport network which will be needed to influence travel behaviour. The town centre links the majority of the residential areas in Ballina with the identified main travel trip attractors (Section 4.2) and is therefore considered as a destination and transit route. Therefore, the enrichment of the town centre is a component of all the proposals, and the division of proposals has been done in a manner that each proposal converges around the town centre.

The LTP network is divided into five strategic proposals and an auxiliary proposal with implementation timeframes ranging from short, medium to long-term. This is discussed in Section 8.1.1 to Section 8.1.3. Proposals 1 and 2 are short term (2-3 years), Proposals 3 and 4 are medium term (3-5years) and Proposal 5 is long term (5+ years). Along with these five proposals, an Auxiliary Proposal has been developed to support the wider network containing elements that can be delivered in parallel with other proposals. Figure 8-1 presents the extent of the five proposals and the Auxiliary Proposal.

8.1.1 Short Term Proposals

Short term proposals include the projects that are expected to be delivered in a span of 2-3 years. These represent flagship schemes that will be visible to all residents and visitors. These projects have the potential to showcase the best practice standards and will generate a positive public perception and a high level of uptake. The projects include infrastructure which is of the highest priority and is feasible to develop over a short span of time, and which also covers the selected options in the ABTA process that serve as the solutions to the key problems identified in Ballina.

Proposal 1 includes the N26 from St Joseph's National School (Rehins NS) to the Font Junction. The proposal also covers adjacent local streets in the area and provides a route for cyclists to access the Town Centre. Teeling Street is excluded from the proposal as it is a national road and lacks space to provide dedicated cycle facilities in the short-term. As shown in the LAM model, the N26 currently also has one of the highest vehicular traffic volumes which could be reduced with a modal shift to active travel and public transport. The area south of the town along the N26 corridor has the highest local trip demand after the town centre. Providing active travel facilities along the N26 to the town centre will increase connectivity to the train station, bus stops, schools, leisure centres, major residential areas, employment area and town centre via active travel. The proposal will also provide standard connections to the existing greenway in the south and active travel bridge (Salmon Weir Bridge) by means of upgraded permeability links. Along most of the stretch of this road, there is enough space to provide the active travel facilities. Therefore, this proposal could be reasonably delivered in a short period of time.

Proposal 2 focuses on reducing congestion caused by the school run and providing safe active travel facilities around schools, particularly around McDermott Street and Killala Road which is a primary objective of the LTP. Along with this, the proposal includes components to enhance active travel permeability of the town centre and increasing potential for public realm projects in the future such as pedestrianisation of streets.

Together Proposal 1 and 2 will cover the key desire lines for active travel and provide safe active travel environment around schools.

8.1.2 Medium Term Proposals

Medium-term proposals are expected to be delivered in 3-5 years. These proposals will include projects of high priority which require a more detailed feasibility study for route selection and environmental impact assessment. These projects would contribute to a continuous and robust active travel network within the town of Ballina by providing linkages between the town centre and key employment and residential areas located in the peripheral zones. Such proposals also include traffic congestion

relief schemes which would help in generating capacity in the town for long term pedestrianisation of streets, bus priority, and additional active travel infrastructure in space constrained areas.

Proposal 3 includes the Upper and Lower Bridge area, N59 Clare Street, Quay Road, Creggs Road and Riverslade. This is proposed to be a medium-term solution as it requires further detailed design and environmental impact assessment to overcome the noted barriers/severances in the areas, majorly linked to River Moy and space constraints. This includes widening of the existing cross section, provision of an active travel bridge adjacent to the Lower Bridge, significant junction redesign and traffic management proposals to be informed through stakeholder consultation. The proposal presents a strong opportunity to encourage modal shift for local trips within the town centre through the removal of excess traffic travelling along the quays between the Upper and Lower Bridges, and provision of active travel infrastructure close in the town centre which would provide a link between residential areas, town centre and major schools along West and East of the town divided by River Moy.

Proposal 4 facilitates a tie-in with the N26 Ballina Bypass Phase 1 Emerging Preferred Option and other active travel proposals which are to be considered in the context of the bypass. The N26 Ballina Bypass Phase 1 will connect future and present employment zones to residential zones and reduce congestion along N26. Through diverting traffic away from the Font Junction, Lord Edward Street can be reimaged to provide for active travel modes to create an active travel corridor to the town centre. Provision of active travel facilities along Crossmolina Road and north of McDermott Street will connect the peripheral employment zones with the town centre once the other components of this proposal are in place.

8.1.3 Long Term Proposals

Proposal 5 is a long-term indicative proposal which may be delivered in a span of 10+ years, subject to detailed assessment and consultation. This proposal includes potential indicative routes for relief roads, link roads and bypasses to free up road space on key routes leading to the town centre to provide for active travel modes in instances where the current road width is too narrow for dedicated facilities. In the context of the future planned land use development in Ballina, it is imperative that the vehicular traffic congestion decreases. Providing active travel infrastructure and improved public transport services has the potential to promote modal shift, however, the traffic which is bypassing the town is still expected to add to the vehicular congestion due to the expected background traffic growth from the development of the wider area. The relief roads and link roads will help in reducing the vehicular congestion and will also utilise the opportunity to provide direct and safe pedestrian and cycle routes, for example in conjunction with linear parks or other areas of open space.

The **Auxiliary Proposal** can be progressed in parallel with Proposal 1-4, which are short to medium term proposals. The proposal can be broken down into several smaller schemes, some with quick turnaround times, and will be generally well perceived by the public. This proposal includes components which would link peripheral agriculture, education, residential, employment and recreational areas, majorly in the North of Ballina, with the town centre by means of cycle facilities, permeability links, greenways, and active travel bridges. Other components include shared streets in the town centre, provision of new footpaths, upgrading permeability links, and providing cycle facilities in the areas which have sufficient space.

8.2 Schedule of Proposals

Table 8-1 show a schedule of the infrastructure proposed on a short- and medium-term basis as well as the proposals that can be carried out in parallel with these depending on the associated construction schedule. Figure 8.1 presents the extents of all proposals, and Figure 8.2 gives an overview of proposals with the focus on Ballina town centre.

Table 8-1 Schedule of Proposals

Infrastructure	Timeline				Total
	Short Term (Proposals 1 & 2)	Medium Term (Proposals 3 & 4)	Long Term (Proposal 5)	Concurrent (Auxiliary Proposal)	
Proposed/Upgraded Two-Way Cycle Facilities (km per direction)	23.5	10.0		1.6	35.1
Proposed/Upgraded One-Way Cycle Facilities (km per direction)	0.6	0.6		1.1	2.3
Upgraded Pedestrian Facilities (km)	22.6	15.6		22.4	60.6
Proposed Pedestrian Facilities (km)	2.2			0.4	2.6
Proposed Shared Streets (km)	0.7	1.0		5.7	7.4
Proposed Greenway (km)	0.5		-	7	7.5
Proposed Active Travel Bridge	-	1		2	3
Proposed Junction Upgrades	13	11		6	30
Proposed Traffic Management with by Changing Direction of Traffic Flow	1		-		1
Proposed Traffic Management with Two-Way Traffic Flow		1	-		1

Infrastructure	Timeline				Total
	Short Term (Proposals 1 & 2)	Medium Term (Proposals 3 & 4)	Long Term (Proposal 5)	Concurrent (Auxiliary Proposal)	
Proposed Mobility Hub	1		-		1
Proposed 'Park and Stride'	2	-	-		2
Proposed Permeability Link	3	-	-	10	13
Upgraded Permeability Link	8	3	-	4	15
Proposed Permeability Link to Tie-In with SRTS	4		-	3	7
Proposed Road Link (total length in km)	0.2				0.2
Proposed Controlled Crossings	43	33	-	10	86
N26 Ballina Bypass Phase 1		2.5			2.5
Future Active Travel Proposal (to be considered in context of N26 Bypass)		0.8			0.8
Future Link Road (total length in km) (Indicative)			5.5		5.5
Future Eastern Bypass (total length in km) (Indicative)	-		7.5		7.5

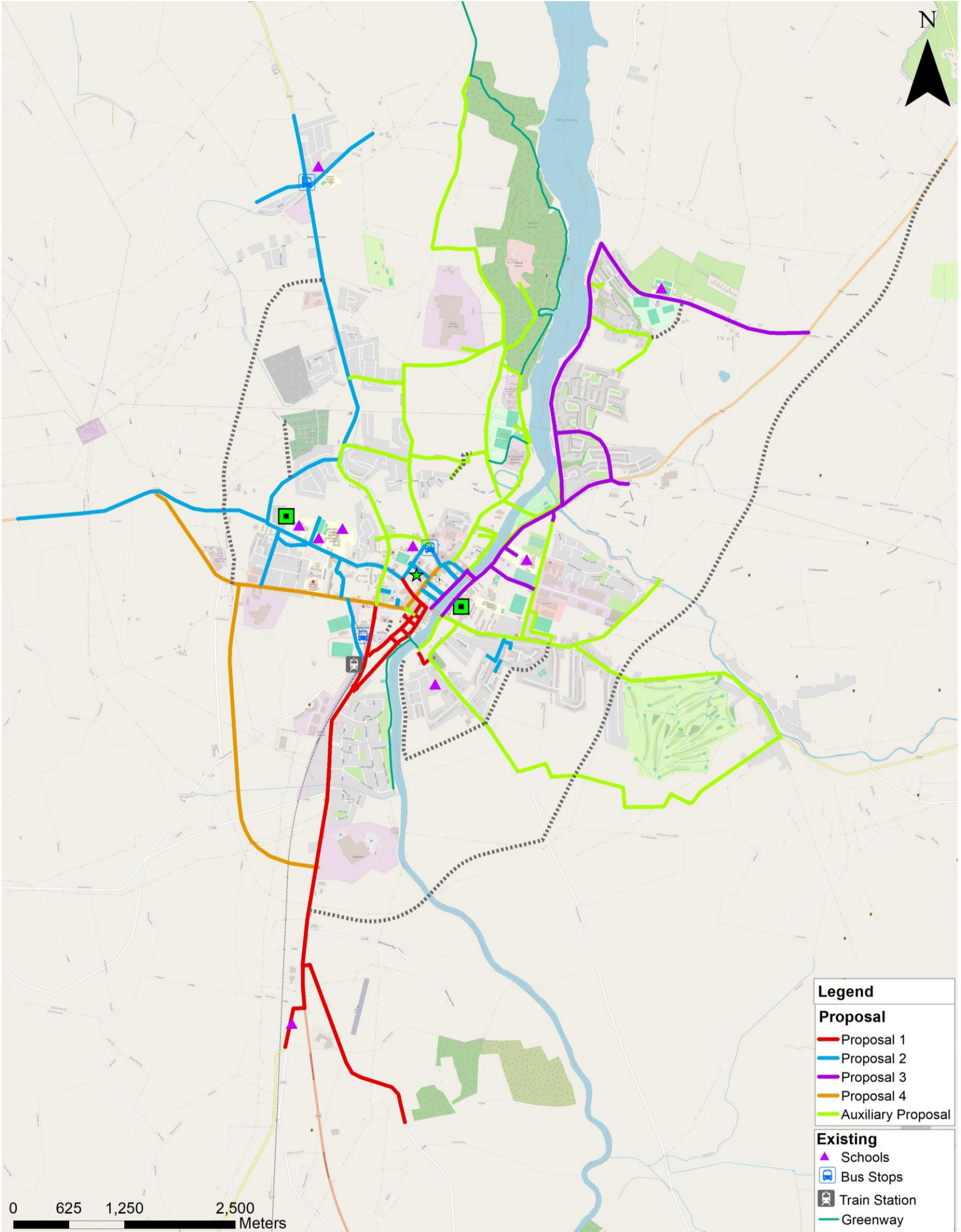


Figure 8-1 LTP Extent of Proposals

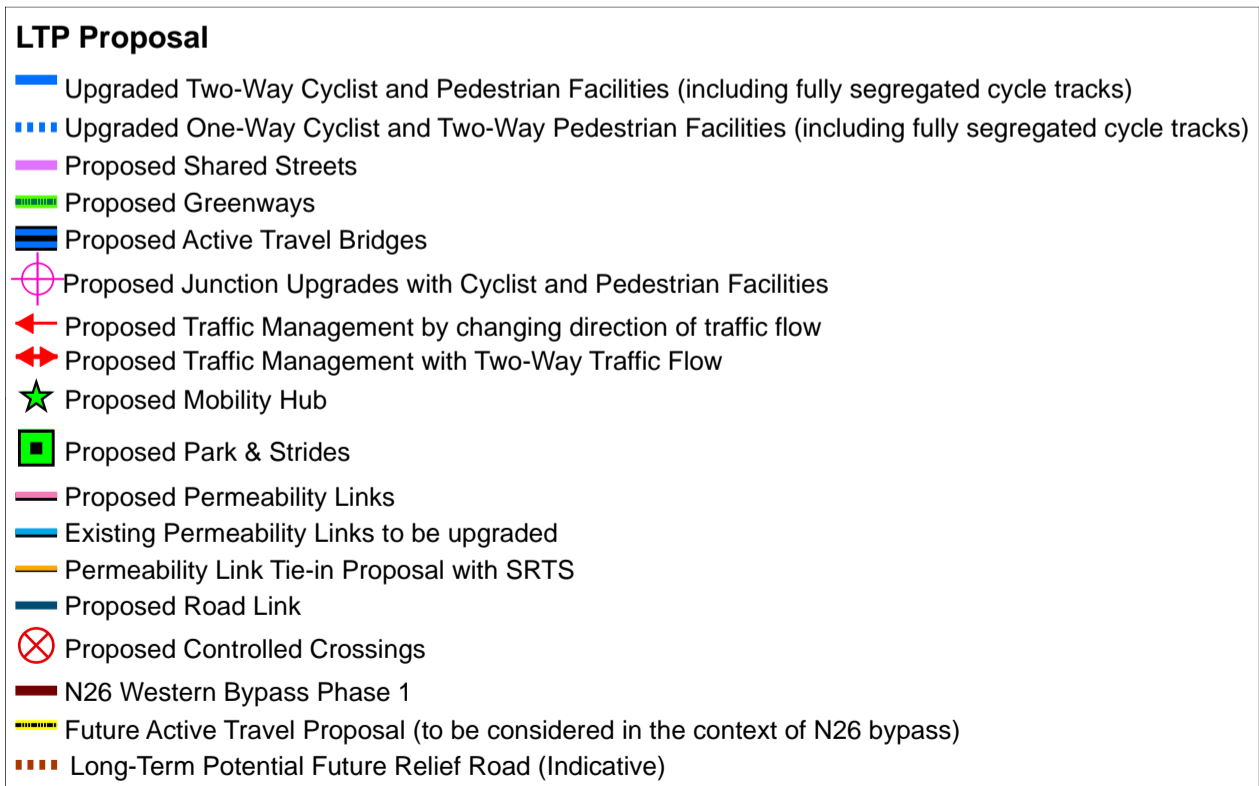
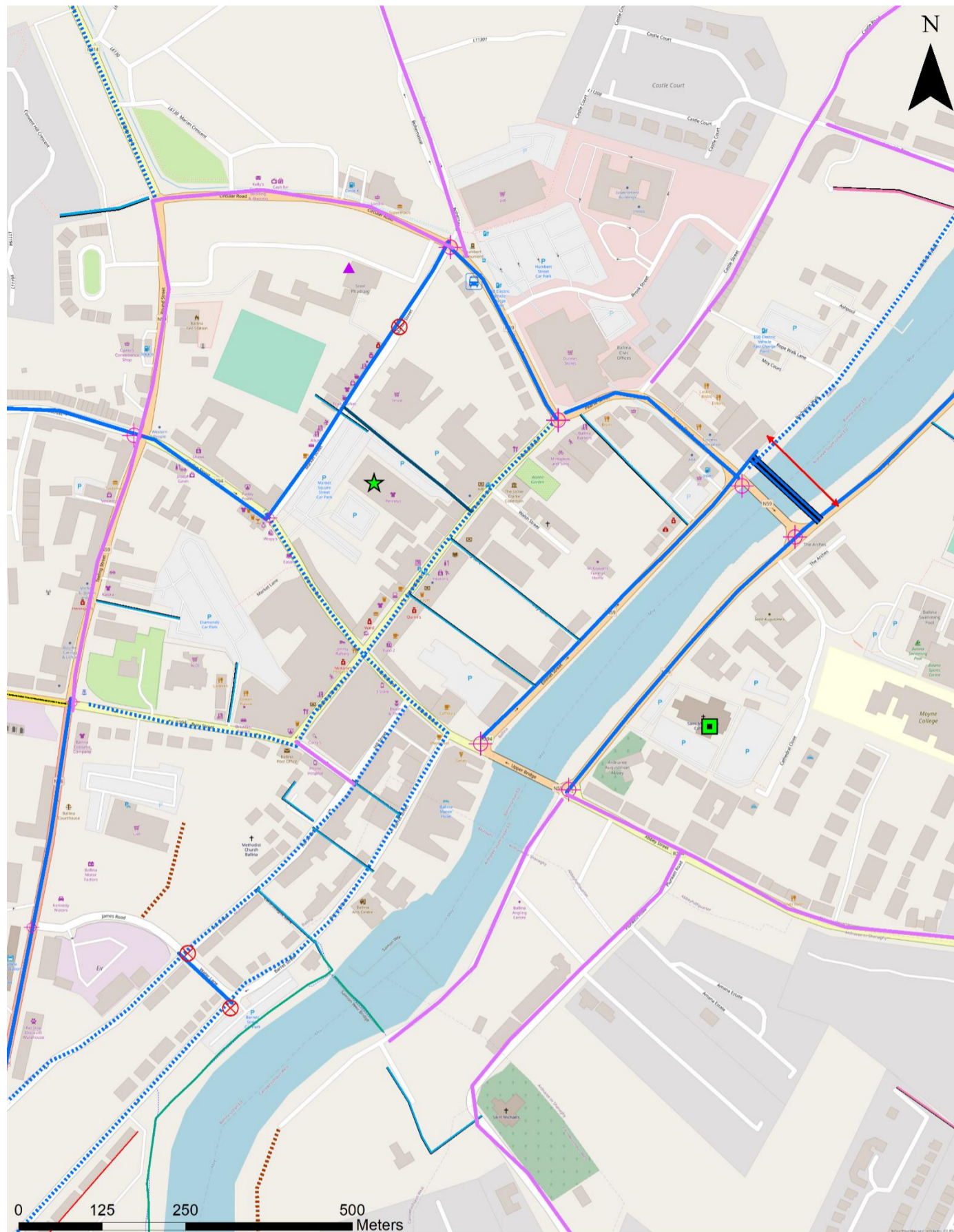


Figure 8-2: LTP Proposals – Town Centre

8.3 Proposal 1

Proposal 1 is outlined as a short-term scheme. The route is centred along the N26 to provide an active travel connection from the area to the south of Ballina to the town centre. The routes include several large employers, residential estates, Rehins National School, Ballina Train Station and Ballina Bus Station. Proposal 1 also incorporates the adjacent side streets to the N26 that connect to the town centre including:

- James Connolly Street;
- James Road;
- Water Lane;
- Morrison Terrace; and
- Tone Street (Lower)

The southern extent is marked by several employment hubs (car garages, laboratories, warehouse, hotels etc) and Rehins NS. The proposal facilitates an active travel connection from this area to the town centre and the residential route through which it passes.

Additionally, the area to the west of the rail-line and Moy Valley Business Park is also proposed to be provided with improved active travel facilities. This is to improve the existing level of service and to facilitate a connection to the land between the N26 and N59 which is zoned for Enterprise and Employment in the LAP.

The proposal also presents the opportunity to enhance the connectivity of Ballina Train Station. The station is noted as being currently inaccessible for active travel modes with poor connections to the town centre.

Proposal 1 is shown in Figure 8-3, with zoomed in around town centre in Figure 8-4. Details of Proposal 1 are presented in Table 8-2.

Legend

Proposal 1

- Upgraded Two-Way Cyclist and Pedestrian Facilities (including fully segregated cycle tracks)
- - - - Upgraded One-Way Cyclist and Two-Way Pedestrian Facilities (including fully segregated cycle tracks)
- Proposed Greenway
- ⊕ Proposed Junction Upgrades with Cyclist and Pedestrian Facilities
- ← Proposed Traffic Management by changing direction of traffic flow
- ★ Proposed Mobility Hub
- Proposed Permeability Link
- Existing Permeability Links to be upgraded
- ⊗ Proposed Controlled Crossings

Existing

- ▲ Schools
- 🚌 Bus Stops
- 🚉 Train Station
- Greenway
- ⊗ Controlled Crossings

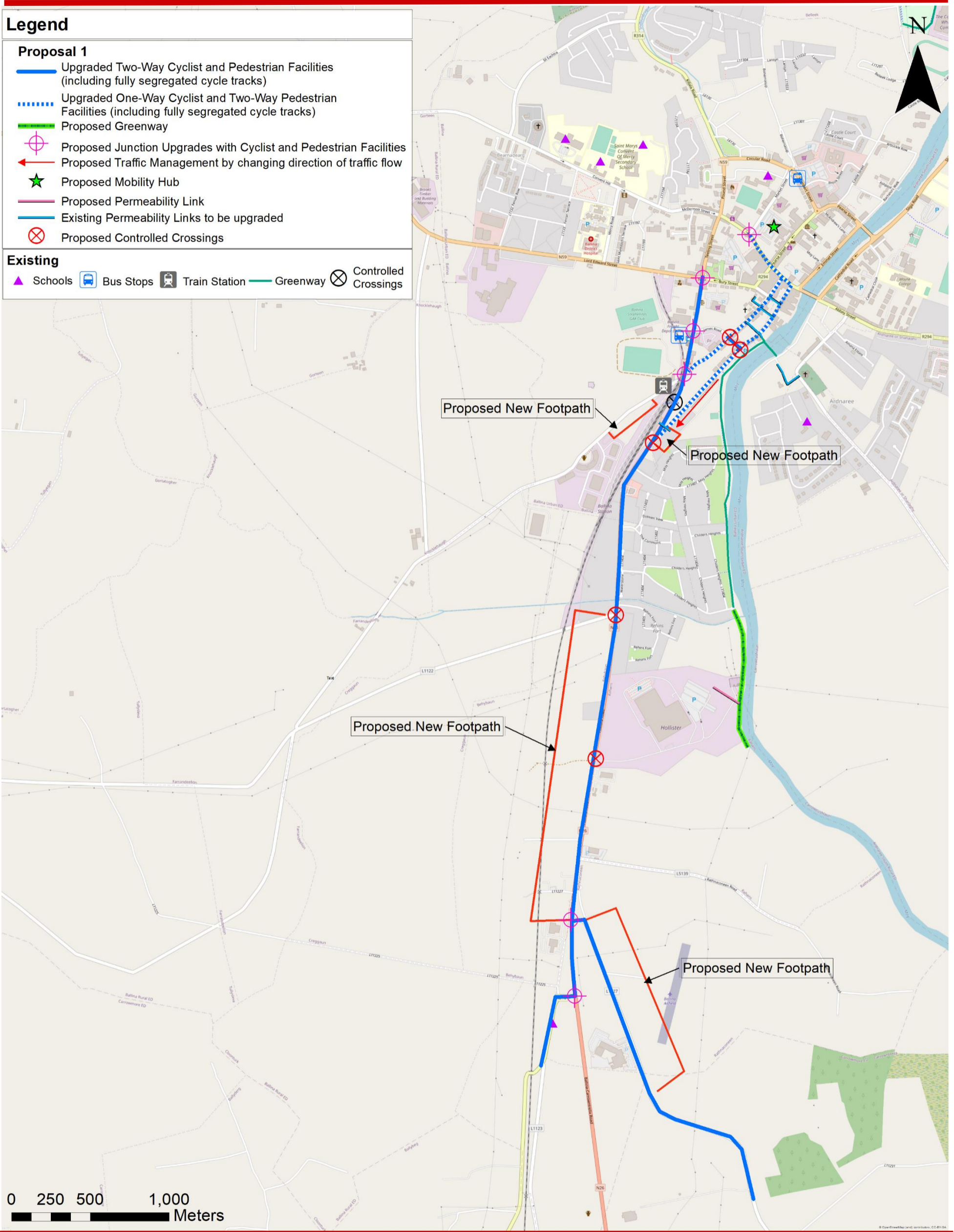


Figure 8-3: Proposal 1

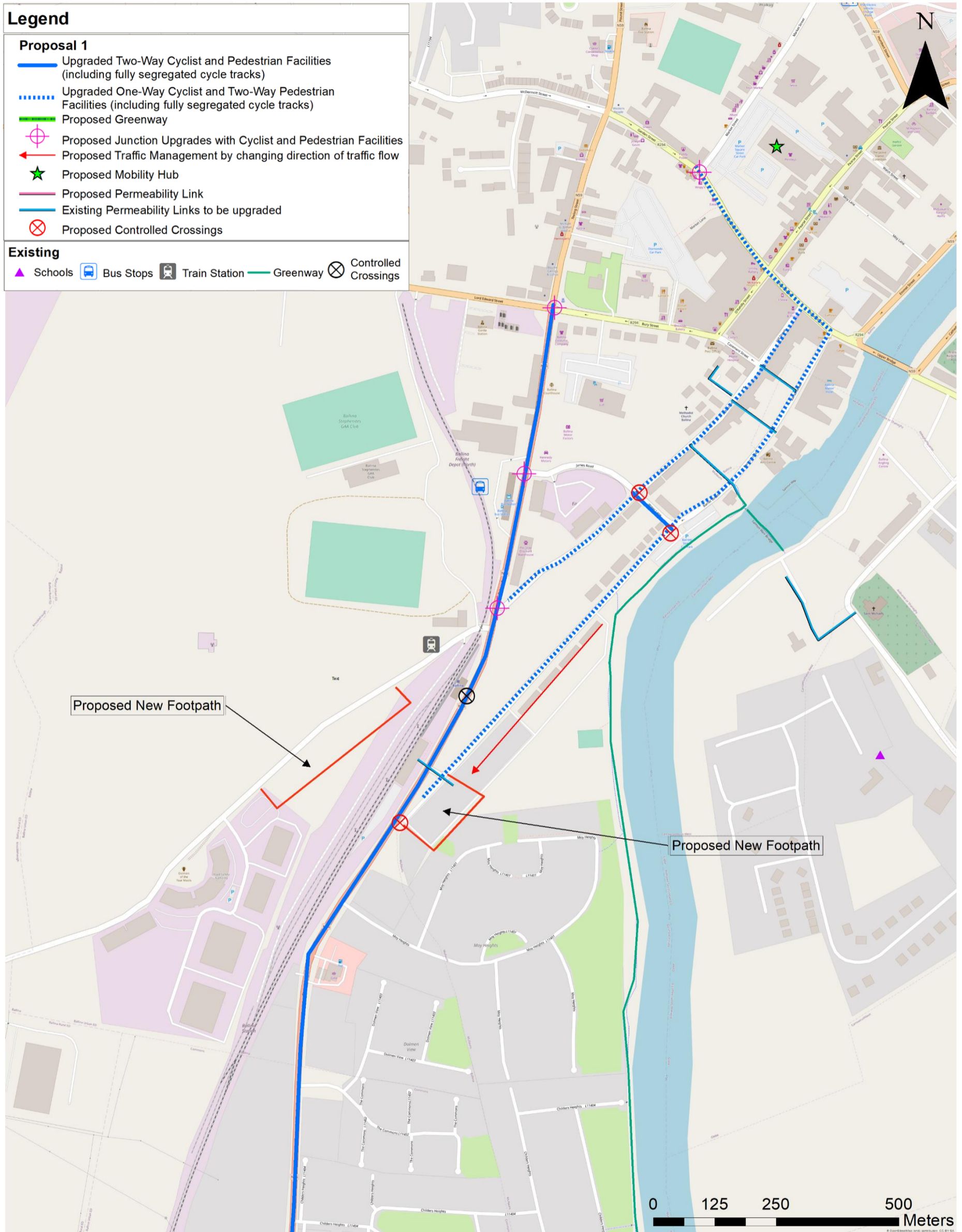


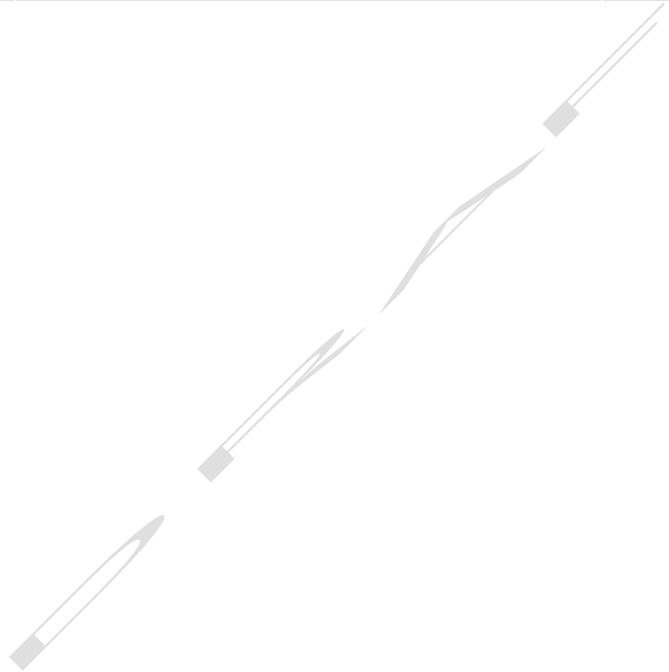
Figure 8-4: Proposal 1- Zoomed In

Table 8-2 Proposal 1 Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MC A	EP O	Obj. Achieved
Proposed/Upgraded Cycle Facilities (2-way length)	9.6km	<ul style="list-style-type: none"> N26 South N26 Kevin Barry Street Water Lane L1127 R310 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed/Upgraded One-Way Cycle Facilities	0.6km	<ul style="list-style-type: none"> Morrison Terrace James Conolly Street Hill Street Barret Street Tone Street (Lower) Tolan Street 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Upgraded Pedestrian Facilities (2-way length)	7.4km	<ul style="list-style-type: none"> N26 South N26 Kevin Barry Street James Conolly Street Hill Street Water Lane Morrison Terrace Tone Street (Lower) Tolan Street Barret Street L1127 R310 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed Pedestrian Facilities (2-way length)	2.2km	<ul style="list-style-type: none"> N26 – southwest Moy Valley Business Park Morrison Terrace 	Short Term	3	4.1	5.1	6.1	7.1	8.1

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MC A	EP O	Obj. Achieved
Proposed Greenway	0.5	<ul style="list-style-type: none"> River Moy (Southwest extent behind Hollister) 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed Junction Upgrades	6	<ul style="list-style-type: none"> N26 and James Connolly Street N26 and James Road N59 Lord Edward Street, N26 Kevin Barry Street, Bury Street, N26 Teeling Street Tone Street, Garden Street, Market Street N26 and L1127 N26 and R310 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed Traffic Management by Changing Direction of Traffic Flow	1	<ul style="list-style-type: none"> Morrison Terrace 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed Mobility Hub	1	<ul style="list-style-type: none"> Market Square 	Short Term	3	4.1	5.1	6.1	7.1	8.1
Proposed Permeability Link	1	<ul style="list-style-type: none"> Hollister and Proposed Greenway 							
Existing Permeability Link to be Upgraded	4	<ul style="list-style-type: none"> Morrison Terrace and N26 James Connolly Street and Barrett Street Barrett Street and Wesley Ct Link from Church Road to Salmon Weir Bridge 	Short Term	3	4.1	5.1	6.1	7.1	8.1

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MC A	EP O	Obj. Achieved
Proposed Controlled Crossings (Additional to Junction Upgrades)	5	<ul style="list-style-type: none"> • N26 Hollister • N26 Rehins Fort • Morrison Terrace • Water Lane and James Connolly Street • Water Lane and Barrett Street 	Short Term	3	4.1	5.1	6.1	7.1	8.1



8.3.1 Proposal Overview

Proposal 1 proposes short-term active travel and sustainable transport strategies along the N26, originating from the Foxford Road (including roads along Rehins National School and Charles River Laboratories) and going towards Kevin Barry Street along Station Road. The Proposal covers the area around Ballina Train Station and Ballina Bus Station. The route then travels along Hill Street and Barret Street, encompassing a stretch of residential space, before terminating at Garden Street. Figure 8-3 shows the map of Proposal 1 highlighting the proposals.

Existing facilities for active travel in this area are limited and include sub-standard cycle lanes that form a largely discontinuous network. Footpaths are present along most of the extents but are intermittently terminated. The facilities for active travel modes are poor and leading to delays in journey times for sustainable modes.

The Ballina Urban Greenway runs parallel to the route, alongside the River Moy. There are several connections to the greenway through the adjacent housing estates. The greenway terminates at Salmon Weir Bridge, slightly south of the town centre.

8.3.1.1 Pedestrian Facilities

Existing footpaths will be upgraded to DMURS standards where possible. New footpaths will be added in the areas where it becomes discontinuous on either side of the road. In cases where it is not possible to provide a new footpath, safe crossings will be provided. The upgraded pedestrian facilities will be designed to meet standards for safe accessibility by the mobility impaired. Several controlled crossings are proposed for pedestrians to cross safely at desire lines near residential areas.

8.3.1.2 Cycle Facilities

As a part of Proposal 1, segregated cycle tracks are proposed along the N26. One-way cycle tracks/lanes are proposed along Hill Street, Barret Street and Tone Street. These streets are only open for one-way vehicular traffic, and the road space is constrained by presence of on-street car parking. To ensure that the proposed cycling infrastructure is safe and is of high quality, the proposed cycle route along these streets is kept as one-way.

The proposal also includes junction redesign to include for safe cycle movements.

8.3.1.3 Greenway Upgrades

There is a small stretch (0.9km) of greenway to the south of the town centre from Salmon Weir Bridge to Rehins Fort housing estate. Salmon Weir Bridge is an active travel bridge that serves as a crossing of the River Moy in the south. This existing greenway is connected to the east via Salmon Weir Bridge which marks the end of the greenway. The greenway ends abruptly and there is no facility for cyclists and pedestrians to cross on the east of the existing active travel bridge. The proposal includes an extension of this greenway in the south. The proposed greenway will

extend to Hollister and may be linked to the Inter Urban Cycle Connect Proposal in the future.

8.3.1.4 Crossing Facilities

In addition to the provision of the proposed active travel infrastructure in Proposal 1, six junctions are proposed to be upgraded with controlled crossings to provide safe pedestrian and cyclist movements. This amounts to the provision of 15 crossings across the junctions in addition to five crossing points. Figure 8-5 presents some examples of standard crossing facilities.



Figure 8-5: : Examples of standard crossing facilities for pedestrians and cyclists

8.3.1.5 Mobility Hub

A mobility hub is proposed to increase the visibility of active travel modes within Ballina. The aim of the hub is to offer a public space where facilities are provided to promote and sustain active travel. A mobility hub is proposed to be located in Market Square Car Park. The



mobility hub will be developed as a pleasant public realm space that provides access to shared modes of transport (Go-Cars and bicycle sharing systems such as Lime), charging stations for e-bikes and electric cars, bicycle parking, taxi stations, private car parking, waiting areas and welfare facilities. The hub will be designed such that it meets accessibility and safety standards for people with disabilities. There will be

digital services available to access public transport and alternative shared modes. The proposed location of mobility hub is close to the town center, which will allow people to walk to the key destinations (commercial, educational, employment etc.) from the hub. The proposed active travel network would link public transport stations to the mobility hub, creating an opportunity for Park and Ride/Bike.

8.3.1.6 Permeability Links

Ballina is well-connected via a network of laneways and carparks that facilitates the efficient movement of pedestrians and cyclist through the area. However, several of these links are sub-standard with respect to the NTA's Permeability Best practice Guide.

As a part of Proposal 1, a new permeability link is proposed to link the proposed greenway to Hollister. Existing permeability links between Hill Street and Barrett Street, Station Road and Morrison Street, Church Road and Salmon Weir Bridge will be upgraded. The upgrades will make these links safer and more attractive routes for all population cohorts. This will be done through widening (where possible), resurfacing, public lighting provision/upgrades, enhanced security, and increased wayfinding signage.

8.3.1.7 Traffic Management

Morrison Terrace is a one-way road which leads into the town of Ballina via Waterlane Road and James Connolly Street. Some of the traffic coming along N26 takes this route to access the town, instead of going via James Road. This causes unwanted congestion in the area, and at the junctions along Waterlane. To reduce congestion and improve traffic management, it is proposed to reverse the direction of flow of traffic along Morrison Terrace. Figure 8-6 Shows the existing and proposed direction of traffic flow in this area.

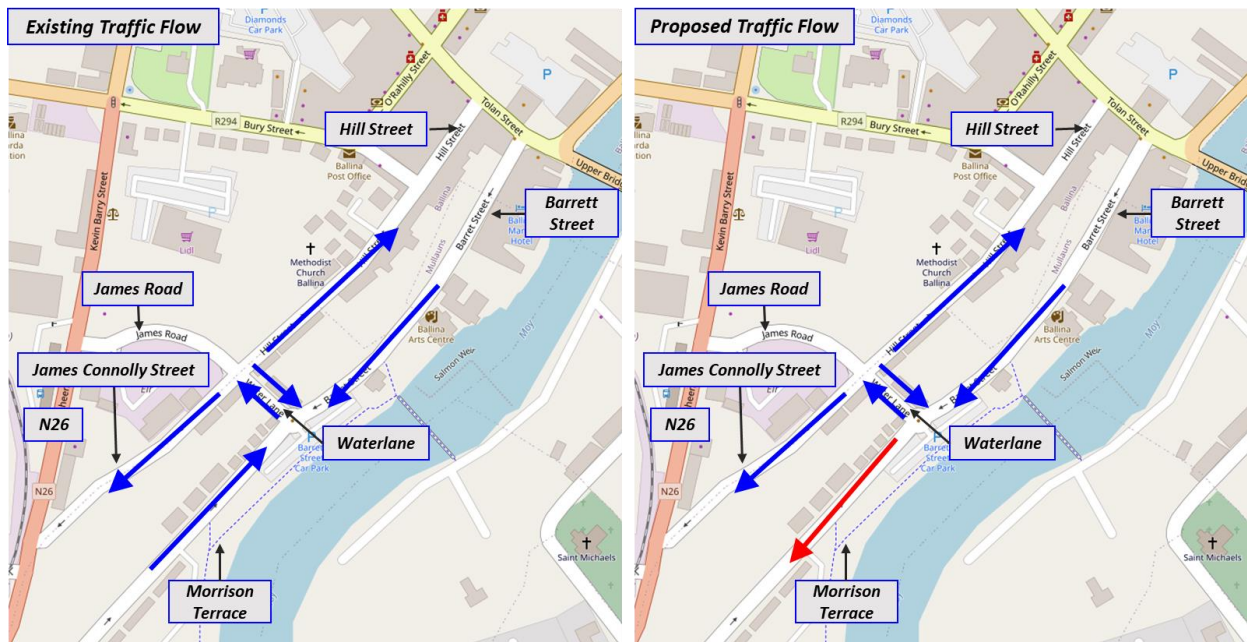


Figure 8-6: Proposed Traffic Management at Morrison Terrace

Additionally, it is proposed to remove the left turning lane from Kevin Barry Street at the junction of Kevin Barry, Bury, Lord Edward and Teeling street to cater for continuous segregated cycle facilities along N26. This proposal is tested by modelling the proposed junction using LinSig for both AM and PM peaks. The results show that the junction will perform well during the PM peak with overall saturation less than 90%. During the AM peak, the junction may approach its full capacity, however, with N26 Western bypass in place (Emerging Preferred Option Corridor) it is expected that the traffic flow will reduce significantly on this junction adding to improved junction performance.

8.3.2 Objectives Achieved

Proposal 1 of the LTP for Ballina has been developed to meet several objectives pertaining to safe and efficient travel using the pedestrian network, cycle network, public transport, and road network.

The objectives achieved, as per Section 5, are outlined in Appendix 8.

8.4 Proposal 2

This proposal provides a high-quality active travel route connecting the west of Ballina to the town centre and includes a tie in with the SRTS Draft Delivery Plan for Scoil Íosa. The scheme provides continuous improved high-quality pedestrian and cyclist facilities within the town centre via Market Square, where the Barracks regeneration scheme is underway. The scheme connects to several schools along McDermott Street and to Culleens NS on Killala Road as well as to Ballina District Hospital and several residential roads.

This active travel route will attract demand through the removal of several previously identified severances and barriers to create a safe and attractive facility. These include improved accessibility and connectivity at:

- Market Square including the adjacent junctions;
- Killala Road connecting major school to residential areas; and
- McDermott Street up to N59 along Gurteens Roundabout including tie in with SRTS Draft Delivery Plan for Scoil Íosa.

The route also proposes public realm enhancements including at the Market Square, Tone Street and McDermott Street. The route will provide safe active travel facilities within the central school area. With the associated improvement in public realm, it will stimulate modal shift and generate a positive public perception of sustainable transport measures. This proposal contains concept designs of interventions to improve infrastructure outside and on the routes to school with the aim of increasing the number of children who walk, cycle or scoot to school. This addresses the need for prioritisation of pedestrians & cyclists on McDermott Street via: cycle entrances to schools, segregation of existing cycle lane, widened footpath, permeability links, pedestrian crossings & bollards to prevent illegal parking.

The route has a strong connection and opportunity to be delivered in tandem with the SRTS programme for McDermott Street and maximise the yield potential of both schemes.

Details of Proposal 2 are shown in Figure 8-7 and Table 8-3.

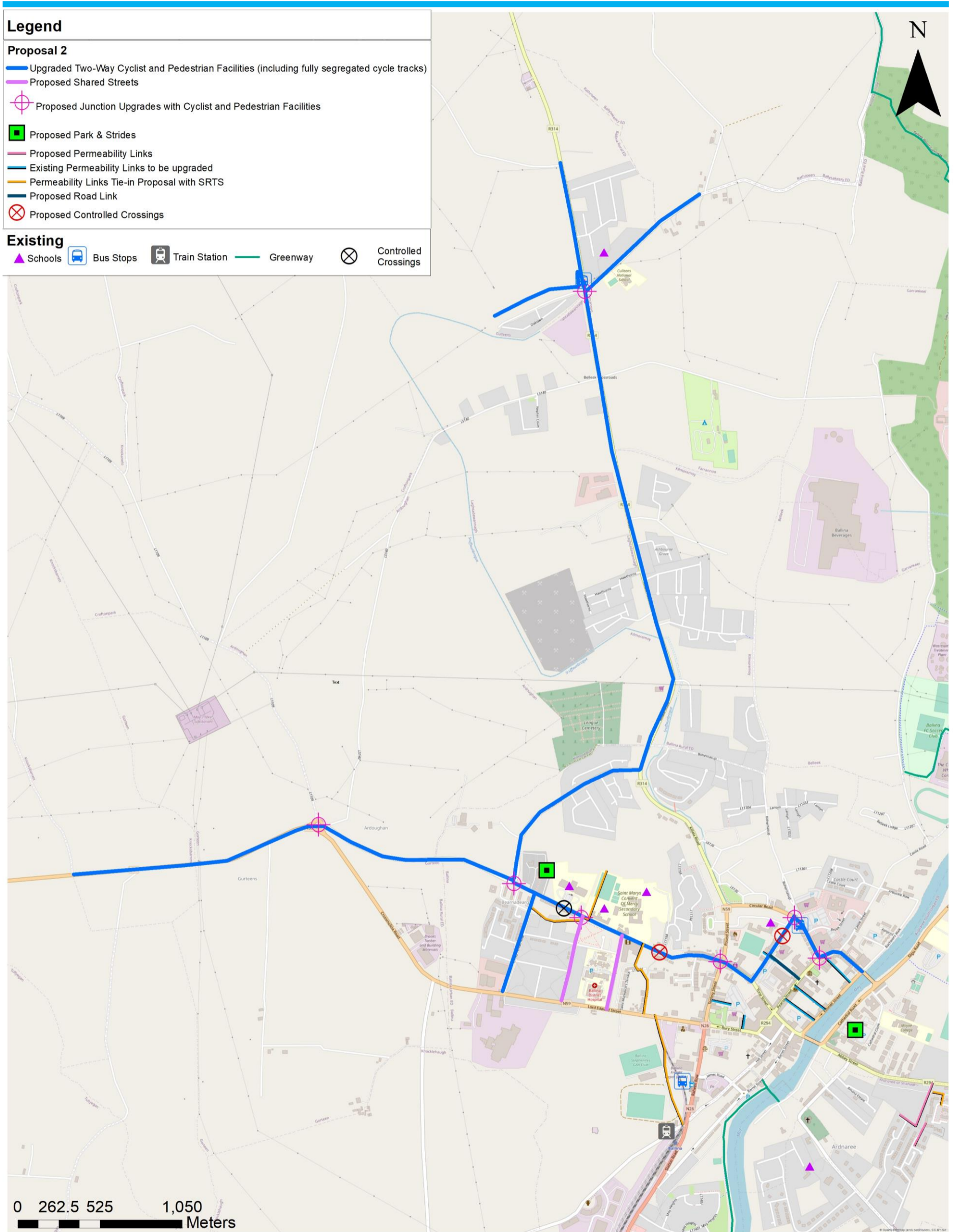


Figure 8-7: Proposal 2

Table 8-3 Proposal 2 Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	MCA	Sifting	EPO	Obj. Achieved
Proposed/Upgraded Cycle Facilities (2-way length)	13.9m	<ul style="list-style-type: none"> • N59 Dillon Terrace • N59 Humbert Street • Market Square • Tone Street (Upper) • McDermott Street • Fenian Terrace • Killala Terrace • Gurteens Road • N59 Crossmolina Road 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Upgraded Pedestrian Facilities (2-way length)	15.2km	<ul style="list-style-type: none"> • N59 Dillon Terrace • N59 Humbert Street • Market Square • Tone Street (Upper) • McDermott Street • Fenian Terrace • Killala Terrace • Gurteens Road • N59 Crossmolina Road • Ferran Terrace • Mercy Road 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Proposed Shared Street	0.7km	<ul style="list-style-type: none"> • Ferran Terrace • Mercy Road 	Short Term	3	4.2	5.2	6.2	7.2	8.2

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	MCA	Sifting	EPO	Obj. Achieved
Proposed Junction Upgrades	7	<ul style="list-style-type: none"> Dillon Terrace, Humbert Street and Nally Street Market Square, Bohernasup, Circular Road and Humbert Street Circular Road, Teeling Street, Pound Street and McDermott Street McDermott Street and Mercy Road McDermott Street and Fenian Row Gurteens Road and N59 Roundabout Killala Road, R314 and Oaklawn Road 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Proposed Park & Stride	2	<ul style="list-style-type: none"> Cathedral Road Car Park St Patricks Church Car Park 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Proposed Permeability Link	2	<ul style="list-style-type: none"> Abbey Street to The Spires 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Existing Permeability Links to be Upgraded	4	<ul style="list-style-type: none"> McAndrew Lane Emmet Street and Pearse Street Teeling Street Bury Street 	Short Term	3	4.2	5.2	6.2	7.2	8.2

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	MCA	Sifting	EPO	Obj. Achieved
Proposed as part of Safe Routes to School Programme	4	<ul style="list-style-type: none"> St Patricks Estate Link from Mercy Road to Rocés Terrace Link from Ballina Train Station to Lord EDWARD Stret (via the back of Stephanites GAA Club) Link from Church Rod to St. Michaels NS 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Proposed Road Link	0.2km	<ul style="list-style-type: none"> Market Square Car Park to Pearse Street 	Short Term	3	4.2	5.2	6.2	7.2	8.2
Proposed Controlled Crossings	2	<ul style="list-style-type: none"> Market Square McDermott Street 	Short Term	3	4.2	5.2	6.2	7.2	8.2

8.4.1 Proposal Overview

Proposal 2 proposes short-term active travel and sustainable transport strategies along the McDermott Street, Killala Road, Tone Street, Market Square and N59 Humbert Street. Figure 8-7 shows the map of Proposal 2 highlighting all the proposals.

The existing cycle lane along McDermott St. at the front of school is unprotected and runs on the outside of on-street parking which creates safety issues for cyclists and is not in line with the National Cycle Manual guidance. Footpaths are present on both sides of the roads along most of the stretch. The active travel facilities along Killala road are not up to standards. There are several junctions along this route and they lack safe and standard facilities for pedestrians and cyclists to cross, leading to a car-dominated environment in the town. Several schools and colleges are also located in proximity to this area.

8.4.1.1 Cycle and Pedestrian Facilities

Existing cycle lanes along this stretch are proposed to be upgraded to fully segregated cycle tracks which will continue through all the junctions along the way. New cycle tracks will be added in the stretches which lack cycle facilities. Footpaths will be upgraded to DMURS standards along these routes. New footpaths will be added where footpaths are missing along either side of the roads. In special cases where it is not possible to add a new footpath, safe crossings will be provided. The upgraded pedestrian facilities will be designed to meet standards for safe accessibility by the mobility impaired. Figure 8-8 shows some examples of segregated cycle facilities which are also made accessible by adaptive bicycles.



Figure 8-8: Indicative layouts for segregated cycle tracks

8.4.1.2 Shared Streets

As a part of this proposal, Mercy Road and Ferran Terrace will be developed into standard shared streets between cyclists and motor vehicles. These streets will include a continuous segregated footpath on either side of the street up to DMURS standards. The speed limit would range between 20-50 kmph. Speed calming measures such as proper signs, speed ramps/speed tables, raised crossings and curb extensions shall be implemented. The surface of shared streets shall be designed such that they are distinguishable, and the tactile pavements make the streets accessible to visually impaired cohorts as well.

8.4.1.3 Permeability Links

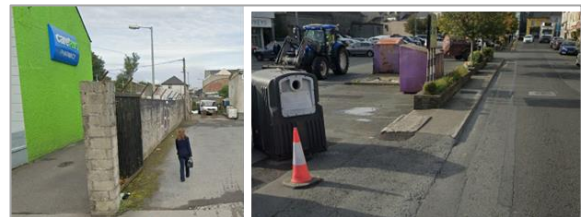
Two existing permeability links are proposed to be upgraded as a part of the Proposal. McAndrew Lane will contribute to a safe and continuous cycle and pedestrian network, and the permeability link on Market Street will provide a safer laneway from the car park to the main street. These links will provide highly visible upgraded paved pedestrian links with safe crossings for pedestrians and cyclists to easily access key destinations. Car parks such as Market Square Car Park and Diamond Square Car park are providing key active travel routes but are of a similar sub-standard quality. As a result, these links, while been recognised as key connectors are likely only attracting confident and experienced users.

The proposal also includes provision of permeability links that tie-in with SRTS scheme which are links between- Station Road and Lord Edward Street, Lord Edward Street and McDermott Street, McDermott Street and Scoil Iosa and beside R294.

These links will provide highly visible upgraded paved pedestrian links with safe crossings for pedestrians and cyclists to easily access key destinations such as schools.

8.4.1.4 Crossing Facilities

Several new controlled crossings are proposed along this route to allow pedestrians and cyclists to cross safely at desired lines near residential areas, commercial areas and schools providing increasing permeability into town via active travel modes. The adjacent figure shows the existing condition of the areas where permeability links are proposed.



The Proposal also proposes upgrades to five junctions along the route to include crossing facilities.

8.4.1.5 Park and Stride

It is proposed to utilise St. Patrick's Church Car Park and St. Muredach's Cathedral Car Park as Park and Stride facilities. This will facilitate a drop-off zone for cars to be parked away from the school gate and benefit Mayo College, St. Muredach's College, St. Dymphna's School, Scoil Iosa and St. Mary's Convent. These Park and Stride facilities will help to reduce congestion in front of schools in this area, and will contribute to a safer, more sustainable, active travel friendly environment for children.

8.4.1.6 Proposed Road Link

Market Street and Pearse Street are busy areas within Ballina town centre with several commercial attractions for the public. These streets are planned to be pedestrianised in the long term as part of the public realm improvement Proposal. Proposal 1 proposes

a mobility hub in Market Square Street Car Park which would increase the active travel in the area. To improve the accessibility of the area, Proposal 2 proposes to upgrade the Market Square Street Car Park access road from Pearse Street into a standard 2-way road link. The proposed road link will provide a direct and safe connection between Market Street and Pearse Street, with access to the proposed mobility hub. The proposed road link includes segregated cyclist and pedestrian facilities up to DMURS standards.

8.4.1.7 Junction Upgrades

Another proposal is to convert the existing roundabout along Circular Road, Bohernasup Road, Humbert Street, and Market Street into a signalised junction with pedestrian and cyclist crossings. This proposal is also tested and supported by modelling with dedicated pedestrian phase for both AM and PM peak in LinSig. The results show that the proposed signalised junction is expected to perform well with an overall saturation below 80% in all scenarios.

Figure 8-9 summarises the Proposal and shows:

- The proposed road cross-section of Market Sqaure;
- The proposed layout of the junction of Circular Road, Bohernasup Road, Humbert Street, and Market Street which is proposed to be converted into a signallised junction with pedestrian and cyclist crossings; and



Figure 8-10 Artist's Impression of Tone Street



Figure 8-11 Artist's Impression of McDermott Street



Figure 8-12 Artist's Impression of Market Square

8.4.2 Objectives Achieved

Proposal 2 of the LTP for Ballina has been developed to meet several objectives pertaining to safe and efficient travel using the pedestrian network, cycle network, public transport, and road network.

The objectives achieved, as per Section 5, are outlined in Appendix 8.

8.5 Proposal 3

This proposal provides a high-quality active travel route connecting east to west across the River Moy incorporating new active travel bridge connections and traffic management changes to reduce traffic levels on the Quays at Cathedral Road and Emmet Street and significantly reducing traffic on the southern (upper) bridge crossing by allowing two way traffic on the northern bridge. The junctions at both sides of both river crossings are to be signalised to incorporate pedestrian/cyclist crossings to remove the severance caused by high traffic volumes.

The scheme provides continuous improved high-quality pedestrian and cyclist facilities connecting the large residential area to the northeast through the town.

This northeast active travel route will attract demand through the removal of several previously identified severances and barriers to create a safe and attractive facility. These include improved accessibility and connectivity at:

- N59 Sligo Road bridge crossing or River Brusna;
- Upper and Lower Bridge including the adjacent junctions;

The route will form an active travel spine through the town with several flagship elements such as improved crossing of the River Moy with traffic management and active travel measures. The associated improvement in public realm will stimulate modal shift and generate a positive public perception of sustainable transport measures. The route also proposes public realm enhancements including at the Lower Bridge, and upgrading of permeability links connecting Sligo Road, R294 (Abbey Street) and Downhill Street to the residential and employment areas. The reduced traffic levels on the quays at Cathedral Road and Emmet Street will enable Public Realm Schemes that will complement the urban regeneration strategy as described in the LAP.

The development of Proposal 3 and the Quay School SRTS will provide active travel links to Quay School and the zoned Enterprise and Employment lands (IDA site) at N59/Creggs Road. The element of Proposal 3 relating to Active Travel connectivity to the IDA site, will be progressed to facilitate active travel trips to and from the IDA site with consideration of the development of the site should it be considered necessary by the Planning Authority at the time.

The development of Riverslade and Quay Road for active travel modes ties into the proposed SRTS Delivery Plan for Quay School, which provides several permeability linkages leading from the residential estates to Creggs Road (Section 8.8 Auxiliary Proposal).

A long-term objective of the LTP, subsequent to Proposal 3, is to develop appropriate active travel facilities along the N59 from the roundabout at N59/Quignalecka/Behy Road towards Creggs Cross which will require landtake and appropriate setbacks along the N59. Further conceptual development of the link will be undertaken by the

Planning Authority in consultation TII in accordance with TII Publication DN-GEO-03030.

Details of Proposal 3 are shown in Figure 8-13 and Table 8-4.

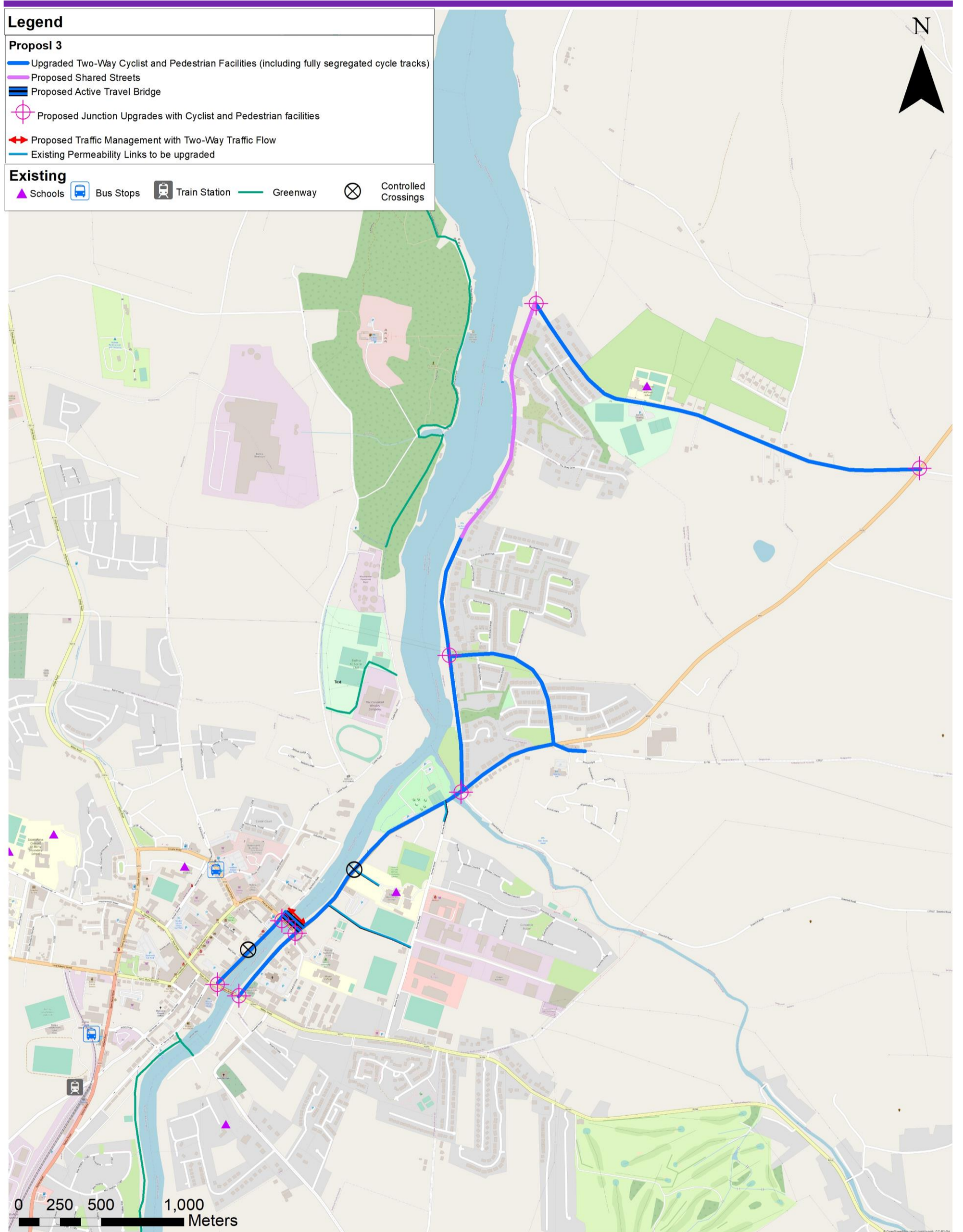


Figure 8-13: Proposal 3

Table 8-4 Proposal 3 Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	MCA	Sifting	EPO	Obj. Achieved
Proposed/Upgraded Cycle Facilities (2-way length)	8.0km	<ul style="list-style-type: none"> • Creggs Road • Riverslade • Quignalecka • N59 Sligo Road • Behy Road • N59 Clare Street • N59 Lower Bridge • N59 Cathedral Street • N59 Upper Bridge • N59 Emmet Street 	Medium Term	3	4.3	5.3	6.3	7.3	8.3
Upgraded Pedestrian Facilities (2-way length)	8.08km	<ul style="list-style-type: none"> • Creggs Road • Riverslade • Quignalecka • N59 Sligo Road • Behy Road • N59 Clare Street • N59 Lower Bridge • N59 Cathedral Street • N59 Upper Bridge • N59 Emmet Street 	Medium Term	3	4.3	5.3	6.3	7.3	8.3
Proposed Shared Street	1.0km	<ul style="list-style-type: none"> • Quay Road 	Medium Term	3	4.3	5.3	6.3	7.3	8.3
Proposed Active Travel Bridge	1	<ul style="list-style-type: none"> • Lower Bridge 	Medium Term	3	4.3	5.3	6.3	7.3	8.3

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	MCA	Sifting	EPO	Obj. Achieved
Proposed Junction Upgrades	8	<ul style="list-style-type: none"> Riverslade and Quignalecka Sligo Road, Downhill, N59 and Riverslade Sligo Road-Lower Bridge-Cathedral Road Cathedral Road-Abbey Street-Lower Bridge Road-Upper Bridge Upper Bridge-Tolan Street-Emmet Street Emmet Street-Pearse Street-Bachelors Walk-Lower Bridge Creggs Road and Quay Road Creggs Road and N59 	Medium Term	3	4.3	5.3	6.3	7.3	8.3
Proposed Traffic Management with Two-Way Traffic Flow	70m	<ul style="list-style-type: none"> Lower Bridge 	Medium Term	3	4.3	5.3	6.3	7.3	8.3
Existing Permeability Links to be Upgraded	3	<ul style="list-style-type: none"> Link from Bunree Road to Sligo Road Links from Sligo Road Link to St Muredachs College 	Medium Term	3	4.3	5.3	6.3	7.3	8.3

8.5.1 Proposal Overview

Proposal 3 proposes medium-term active travel and sustainable transport strategies along the N59. The Proposal covers an extent of Ballina on the northeast of River Moy, including Lower and Upper Bridge.

Figure 8-13 shows the map of Proposal 3 highlighting all the proposals. Existing facilities in this area include sub-standard and discontinuous cycle lanes along Convent Hill and Sligo Road. Footpaths are present on both sides of the roads along most of the stretch. There are several junctions along this route and they lack safe and standard facilities for pedestrians and cyclists to cross, leading to a car-dominated environment in the town. Some schools and colleges are also located in proximity to this area.

8.5.1.1 Cycle and Pedestrian Facilities

Existing cycle lanes along this stretch are proposed to be upgraded to fully segregated cycle tracks which will continue through all the junctions along the way. New cycle tracks will be added in the stretches which lack cycle facilities. Footpaths will be upgraded to DMURS standards along these routes. New footpaths will be added where footpaths are missing along either side of the roads. The upgraded pedestrian facilities will be designed to meet standards for safe accessibility by the mobility impaired.

8.5.1.2 Shared Streets

As a part of this proposal, Quay Road will be converted into a standard shared street to cater for safe active travel connections between major schools and residential areas. These streets will include a continuous segregated footpath on either side of the street up to DMURS standards. The speed limit would range between 20-50 kmph. Speed calming measures such as proper signs, speed ramps/speed tables, raised crossings and curb extensions shall be implemented. The surface of shared streets shall be designed such that they are distinguishable, and the tactile pavements make the streets accessible to visually impaired cohorts as well.

8.5.1.3 Permeability Links

Three existing permeability links are proposed to be upgraded as a part of the Proposal. These existing permeability links connect N59 Sligo Road to Bunree Road, St. Muredach's College and Car Park's in the area. These links will provide highly visible upgraded paved pedestrian links with safe crossings for pedestrians and cyclists to easily access key destinations.

8.5.1.4 Traffic Management

The Upper and Lower Bridges serve as an entry and exit to the town for most of the traffic coming from N26 and N59. These bridges along with Cathedral Road and Emmet Street are one-way for vehicular traffic. Most of the traffic which crosses the

bridge to bypass the town has to go through the town centre given the direction of traffic flow. The four junctions at the either ends of the bridges are currently unsignalised and have minimal crossing facilities for pedestrians and cyclists. Figure 8-14 and Figure 8-15 show the current traffic flow routes of the road network.



Figure 8-14: Existing Traffic Flow Routes of the Upper Bridge and Lower Bridge

Figure 8-15 shows that this arrangement is leading to motorists who travel along the N59 through Ballina to leave the N59 at the Upper Bridge and re-join ant the Kevin Barry Street/Bury Street Junction (Actual Route shown in red). This is due to the current traffic management measures being circuitous as the N59 circumnavigates the town centre (Desired Route shown in green).



Figure 8-15 Existing Traffic Flow Routes along the N59 Westbound

As part of the EPO, the Lower Bridge is proposed to be opened for two-way vehicular traffic which would help to reduce the excess traffic flow in the town centre by providing a direct route for the vehicles to bypass the town. The proposed traffic flow route is shown in Figure 8-16.

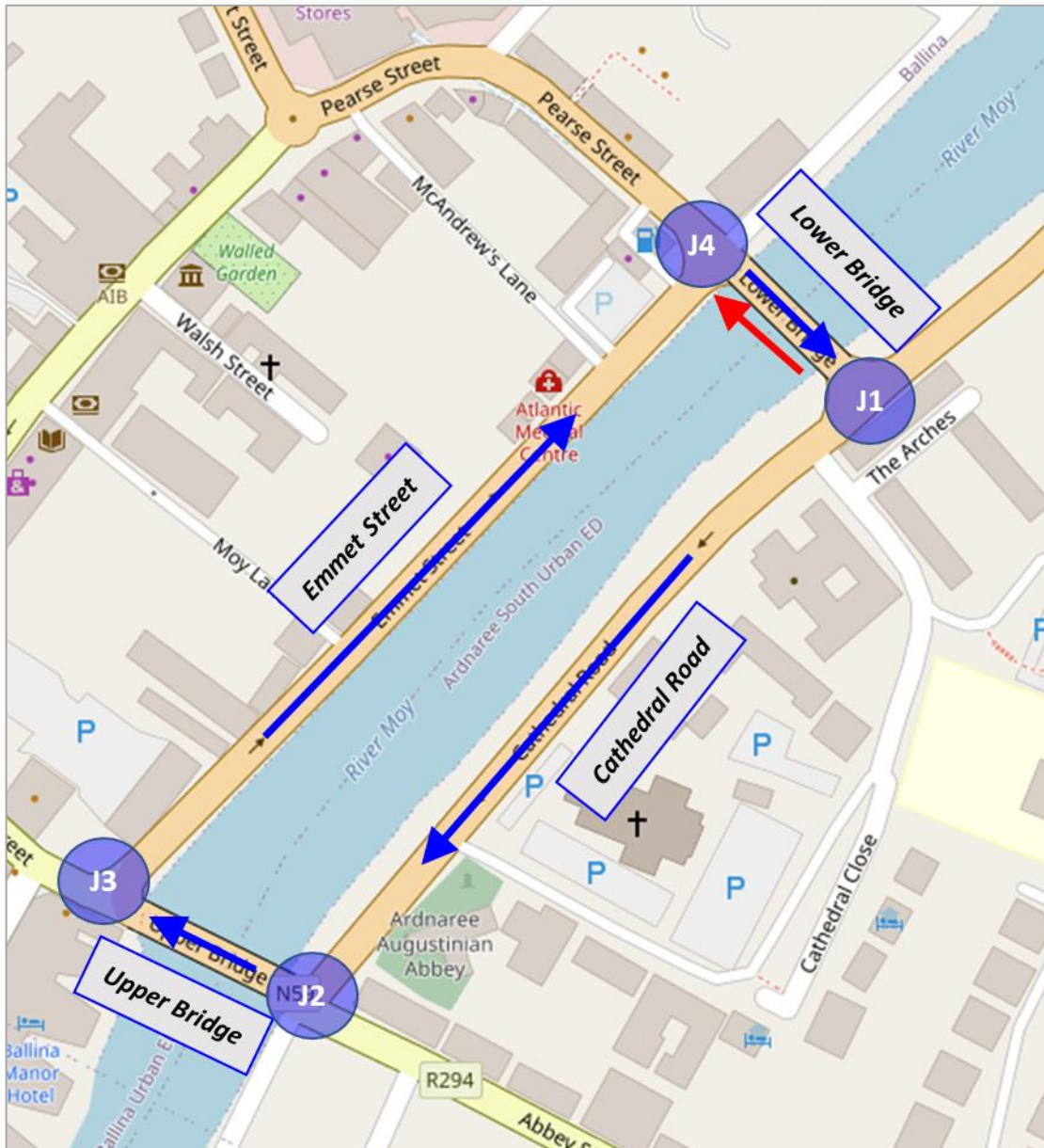


Figure 8-16: Proposed Traffic Flow Routes of the Upper Bridge and Lower Bridge

Figure 8-17 shows that by facilitating two-way traffic on the Lower Bridge, traffic traveling west along the N59 will be encouraged to stay on the N59 as this will now be the most direct route.

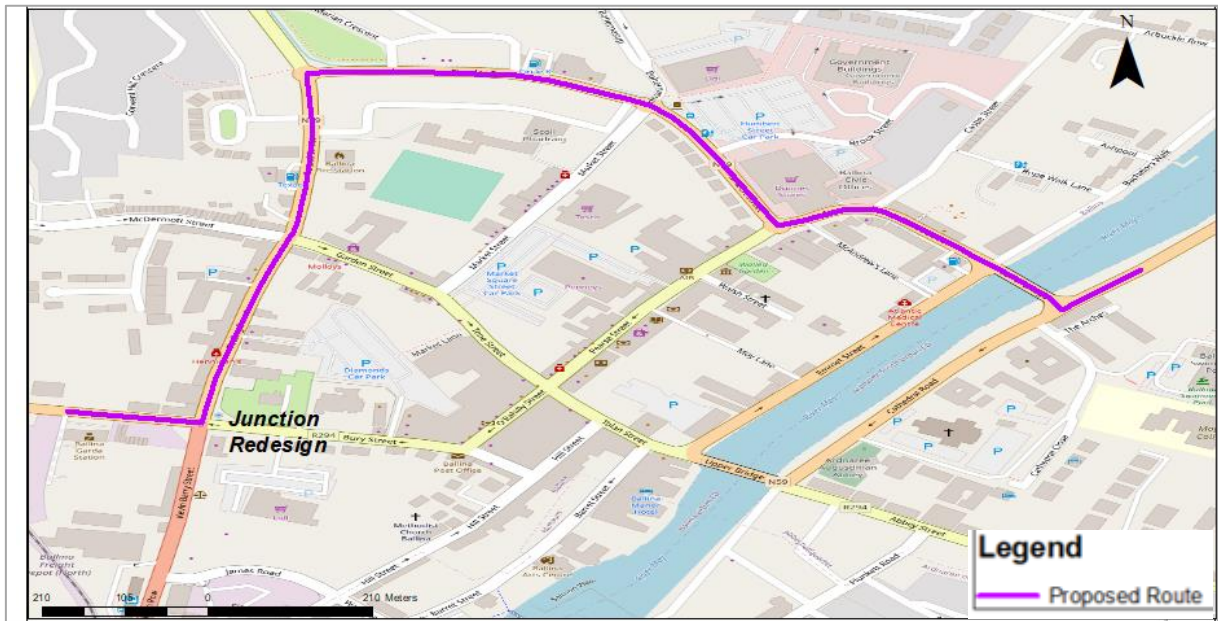


Figure 8-17 Proposed Traffic Flow Routes along the N59 Westbound

This traffic management proposal will only impact traffic travelling west on the N59. Detailed traffic modelling has been undertaken for this scenario and to evaluate the quantum of traffic that will be removed from the town centre. The impact of two-way traffic along the Lower Bridge is shown in Figure 8-18.

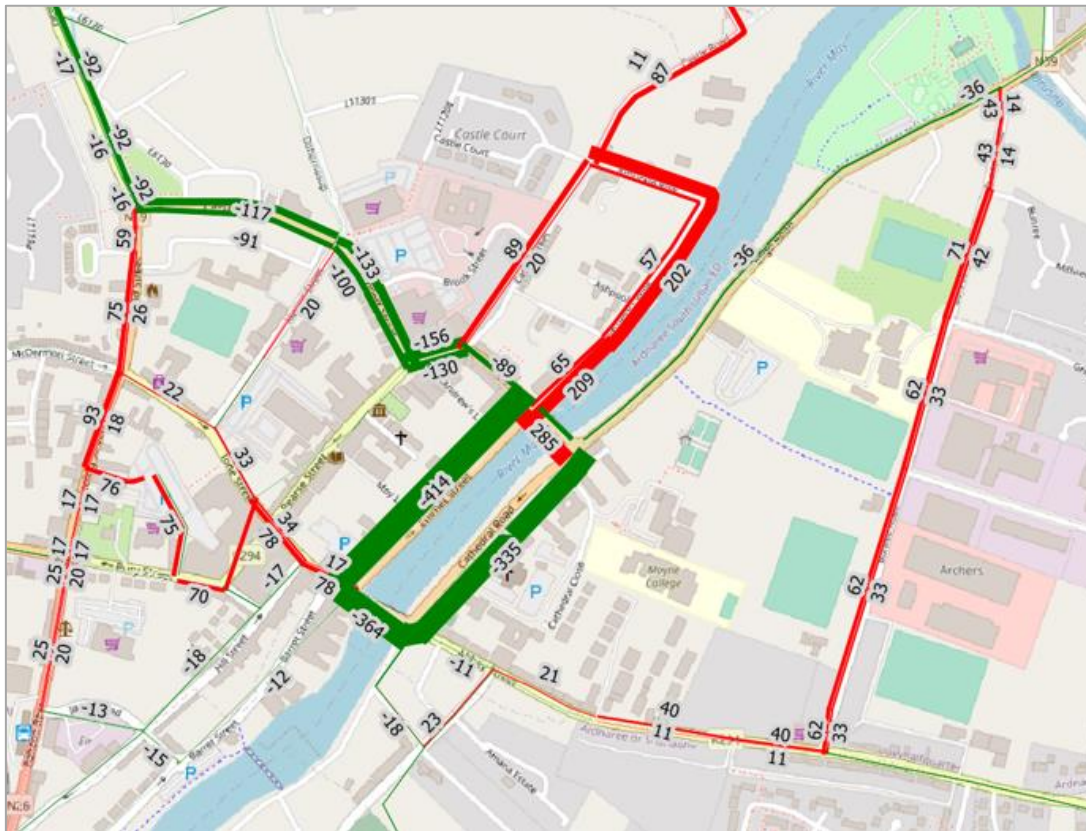


Figure 8-18: Impact of 2-way traffic along the Lower Bridge (peak hour traffic flow change)

8.5.1.5 Active Travel Bridge

As a part of this proposal, a cantilevered active travel bridge is proposed along the Lower Bridge. Currently, Ballina lacks active travel connections between the West and the East of river Moy in the north and central areas of the town. An existing active travel bridge is in the South of Ballina called Salmon Weir Bridge which is at approximately 550 meters distance from the new proposed bridge. The Lower Bridge does not have sufficient width to provide standard cycle lanes and footpaths. There is a narrow footpath on the Lower Bridge which would be accommodated into traffic lanes as part of the traffic management proposal discussed above. The proposed cantilevered active travel bridge will play a significant role in overcoming existing barriers and providing active travel connection between the town centre and the East of the town of Ballina. This proposal is subject to a more detailed study and environmental impact assessment.

8.5.1.6 Junction Upgrades

All four of the peripheral junctions are proposed to be signalised and active travel bridges are proposed to be cantilevered off the Lower Bridge and Upper Bridge. These bridges will contribute to a net reduction in greenhouse gas emissions through modal

shift by encouraging walking and cycling as a mode of transport. Additionally, the introduction of the northern bridge at the Lower bridge will result in increased carriageway width to facilitate the traffic management proposals. This proposal is supported by modelling all four junctions as signal-controlled junctions with dedicated pedestrian phase for both AM and PM Peak using LinSig. The modelling also takes into account the new estimated traffic flow generated by opening the Lower Bridge to two-way vehicular traffic. The modelling of this proposal shows that the junctions are expected to perform within threshold limits with overall saturation below 85%.

Figure 8-19 summarises the Proposal and shows the proposed layout around the junction of Lower Bridge, Sligo Road and Cathedral Road.

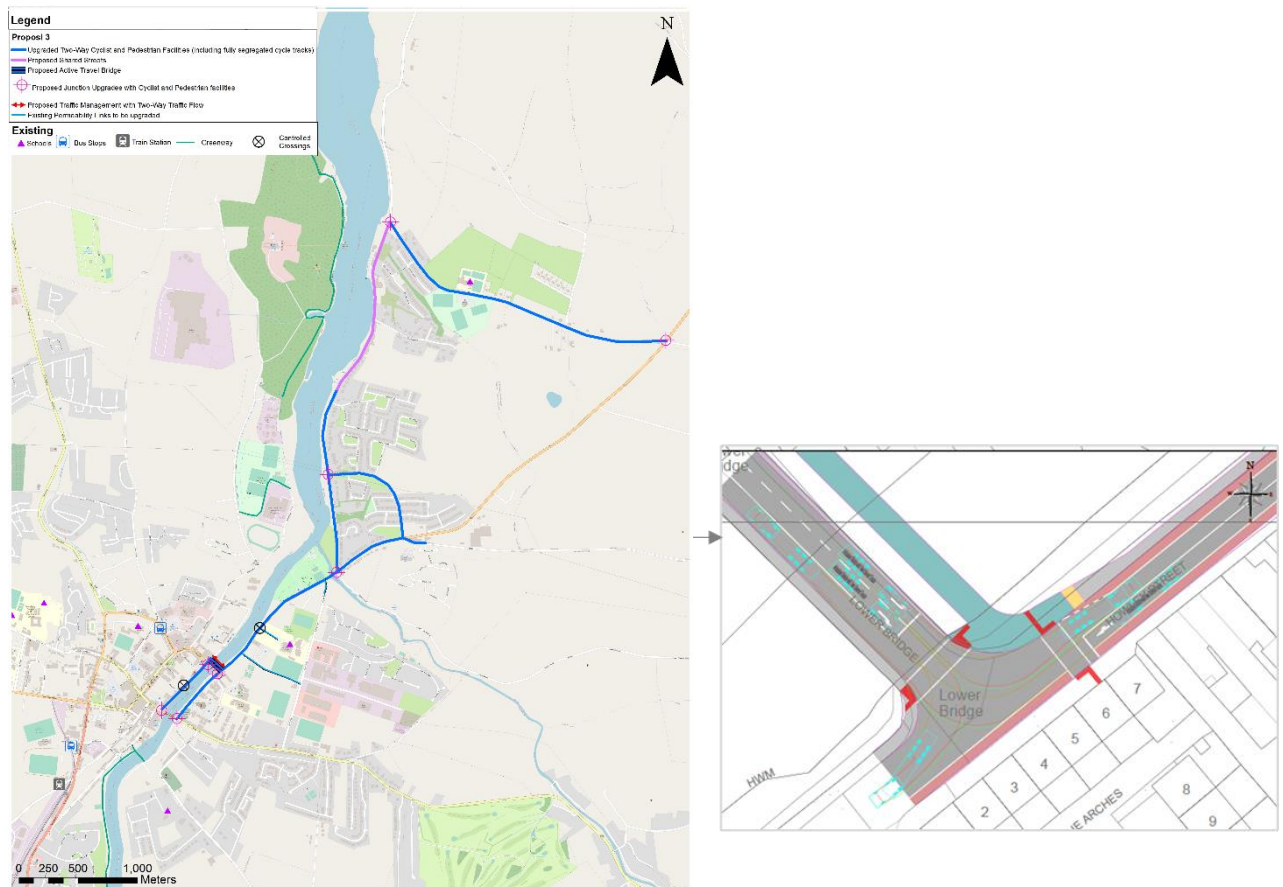


Figure 8-19: Proposed layout as a part of Proposal 3



Figure 8-20 Artists Impression of the Lower Bridge with Two-way Traffic

8.5.2 Objectives Achieved

Proposal 3 of the LTP for Ballina has been developed to meet several objectives pertaining to safe and efficient travel using the pedestrian network, cycle network, public transport, and road network.

The objectives achieved, as per Section 5, are outlined in Appendix 8.

8.6 Proposal 4

Proposal 4 is a medium-term proposal as there are elements that need further strategic assessment and conceptualisation before the scheme can be implemented. Proposal 4 facilitates ties in with the N26 Western Ballina Bypass Phase 1 Emerging Preferred Option which is being progressed by TII and is in the process of Phase 2 Option Selection.

Currently, the cross section of the eastern extent of Lord Edward Street is too narrow to provide dedicated cycle facilities and the designation of a shared street is not appropriate for the traffic volumes associated with a National Road. The development of the proposed bypass will allow for the consideration of future active travel proposals. These could include traffic management measures to include either a shared street or a one-way system for vehicles to provide for dedicated cycle facilities to mirror McDermott Street. Diverting vehicular traffic away from Lord Edward Street is needed to abate the current car-centric design and provide for active travel modes.

Additional elements of this proposal include one-way (contra-flow) cycle facilities along the one-way roads of Bury Street, O’Rahilly Street and Pearse Street. The proposal also includes provision of cycle facilities along the Crossmolina Road, north of Convent Hill and within the town centre. These facilities will help in connecting the west of the town of Ballina to the town centre and contribute towards development of a 15 minute town.

Details of the proposal are shown in Figure 8-21 and Table 8-75.

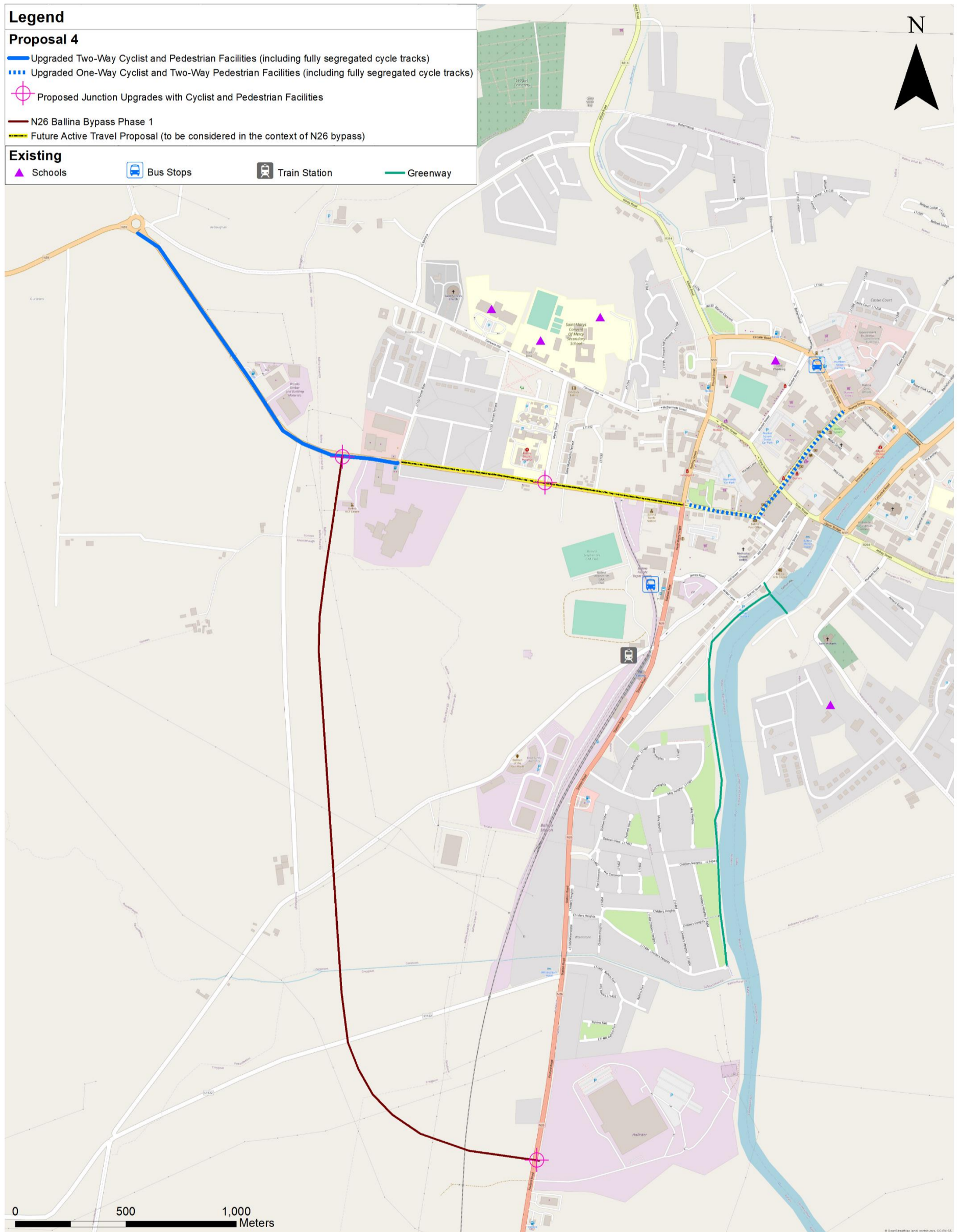


Figure 8-21: Proposal 4

Table 8-5 Proposal 4 Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MCA	EPO	Obj. Achieved
Proposed/Upgraded Two-Way Cycle Facilities (2-way length)	2.0km	<ul style="list-style-type: none"> N59 Crossmolina Road 	Medium Term	3	4.4	5.4	6.4	7.4	8.4
Proposed/Upgraded One-Way Cycle Facilities (2-way length)	0.6km	<ul style="list-style-type: none"> Bury Street O'Rahilly Street Pearse Street 	Medium Term	3	4.4	5.4	6.4	7.4	8.4
Upgraded Pedestrian Facilities (2-way length)	6.6km	<ul style="list-style-type: none"> N59 Crossmolina Road Bury Street O'Rahilly Street Pearse Street 	Medium Term	3	4.4	5.4	6.4	7.4	8.4
Proposed Junction Upgrades	3	<ul style="list-style-type: none"> Mercy Road and N59 Lord Edward Street N26 Ballina Bypass Phase 1 and N26 N26 Ballina Bypass Phase 1 and Crossmolina Road 	Medium Term	3	4.4	5.4	6.4	7.4	8.4
Proposed Bypass	2.5 km	<ul style="list-style-type: none"> N26 Ballina Bypass Phase 1 	Medium Term	3	4.4	5.4	6.4	7.4	8.4
Future Active Travel Proposal (to be considered in context of N26 Bypass)	0.8km	<ul style="list-style-type: none"> N59 Lord Edward Street 	Medium Term	3	4.4	5.4	6.4	7.4	8.4

8.6.1 Proposal Overview

Proposal 4 proposes medium-term active travel and sustainable transport strategies along Lord Edward Street, Bury Street, Pearse Street, O’Rahilly Street, Crossmolina Street and north of Convent Hill. Figure 8-21 shows the map of Proposal 4 highlighting the proposals.

Existing facilities for active travel in this area only include footpaths which become discontinuous on approach to the junctions. Controlled crossing facilities for pedestrians and cyclists are lacking at junctions in the area. The area lacks road connections between the future employment areas and the existing road network.

8.6.1.1 N26 Ballina Bypass Phase 1

The N26 Ballina Bypass Phase 1 will connect N26 Station Road to N59 Crossmolina Road. The scheme is currently being progressed by TII and is undergoing the route and option selection phase. The potential impact of this bypass, which is envisaged to operate as a relief road for the west of the town, is discussed in detailed in Section 4.6.1.

8.6.1.2 Future Active Travel Proposal

The N26 Ballina Bypass Phase 1 has the potential to change the dynamic of Lord Edward Street and be a key element in managing traffic flow in the area. The link will act as a corridor to access the newly zoned Enterprise and Employment land to the west but will also serve as a distributor road, diverting traffic away from Lord Edward Street. The associated traffic reduction along Lord Edward Street will facilitate enhanced active travel permeability.

The impact of a distributor road would allow for Lord Edward Street to permit one-way traffic in the outbound direction from the Font Junction to Fenian Row. In this instance, Lord Edward Street would operate in the opposite direction to McDermott Street. This traffic management intervention will allow for the provision of dedicated cycle facilities with little impact to vehicular traffic due to the distributor road.

Alternatively, the provision of an orbital route for westbound traffic could provide enough traffic relief to Lord Edward Street to allow for the designation of the route as a shared street with traffic calming measures that are conducive to cycling.

8.6.1.3 Cycle and Pedestrian Facilities

One-way cycle facilities are proposed along one-way road links- Pearse Street, O’Rahilly Street and Bury Street. Two-way cycle facilities will be provided along N59 Crossmolina Road. These facilities will link in with other active travel proposals and provide a continuous and safe active travel connections between residential zones, town centre, future mobility hub and employment zones. These facilities will include fully segregated cycle tracks which will continue through all the junctions along the

way. Footpaths will be upgraded to DMURS standards along these routes. New footpaths will be added where footpaths are missing along either side of the roads. The upgraded pedestrian facilities will be designed to meet standards for safe accessibility by the mobility impaired.

8.6.1.4 Junction Upgrades

As a part of this proposal, two new junctions are proposed along N26 Foxford Road and N59 Crossmolina Road. These junctions will safely link N26 Ballina Bypass Phase 1 Emerging Preferred Option to the existing road infrastructure. The junctions will include standard crossings for pedestrians and cyclists. Another proposal includes upgradation of existing junction along Lord Edward Street and Mercy Road to cater for safe pedestrians' and cyclists' crossings near Ballina District Hospital and residential areas.

8.6.2 Objectives Achieved

Proposal 4 of the LTP for Ballina has been developed to meet several objectives pertaining to safe and efficient travel using the pedestrian network, cycle network, public transport, and road network. In particular, Proposal 4 provides scope to reimagine Lord Edward Street. It allows for the consideration of filtered permeability, provision of dedicated cycle facilities and traffic calming through the reduction in vehicular demand for the route.

The objectives achieved, as per Section 5, are outlined in Appendix 8.

8.7 Proposal 5

Proposal 5 is a long-term aspirational scheme. The scheme focuses on the removal of both existing and future through traffic from the town centre through the development of the strategic road network and how it connects with the local road network within Ballina. It is therefore important to consider the preservation transport corridors on the outskirts of the town boundary.

The evolution of the road network to provide for active travel modes along the key demand routes in the town centre is needed to deviate from a car-centric public realm to a people first public realm. The key routes where intervention is needed generate the road space needed to provide for active travel modes are:

- Church Road;
- Quay Road
- Bury Street
- Abbey Street;
- Healy Terrace;
- Killala Road;
- N59 Dillon Terrace;
- N59 Humbert Street;
- N59 Circular Road; and
- N59 Pound Street.

Through relief roads, link roads and bypasses, road space can be allocated to facilitate a sustainable transport network. The routes require feasibility studies, strategic assessments and detailed route option selection. Therefore, they are long-term indicative proposals subject to further analysis in the future.

Proposal 5 is shown in Figure 8-22 with the schedule shown in Table 8-6

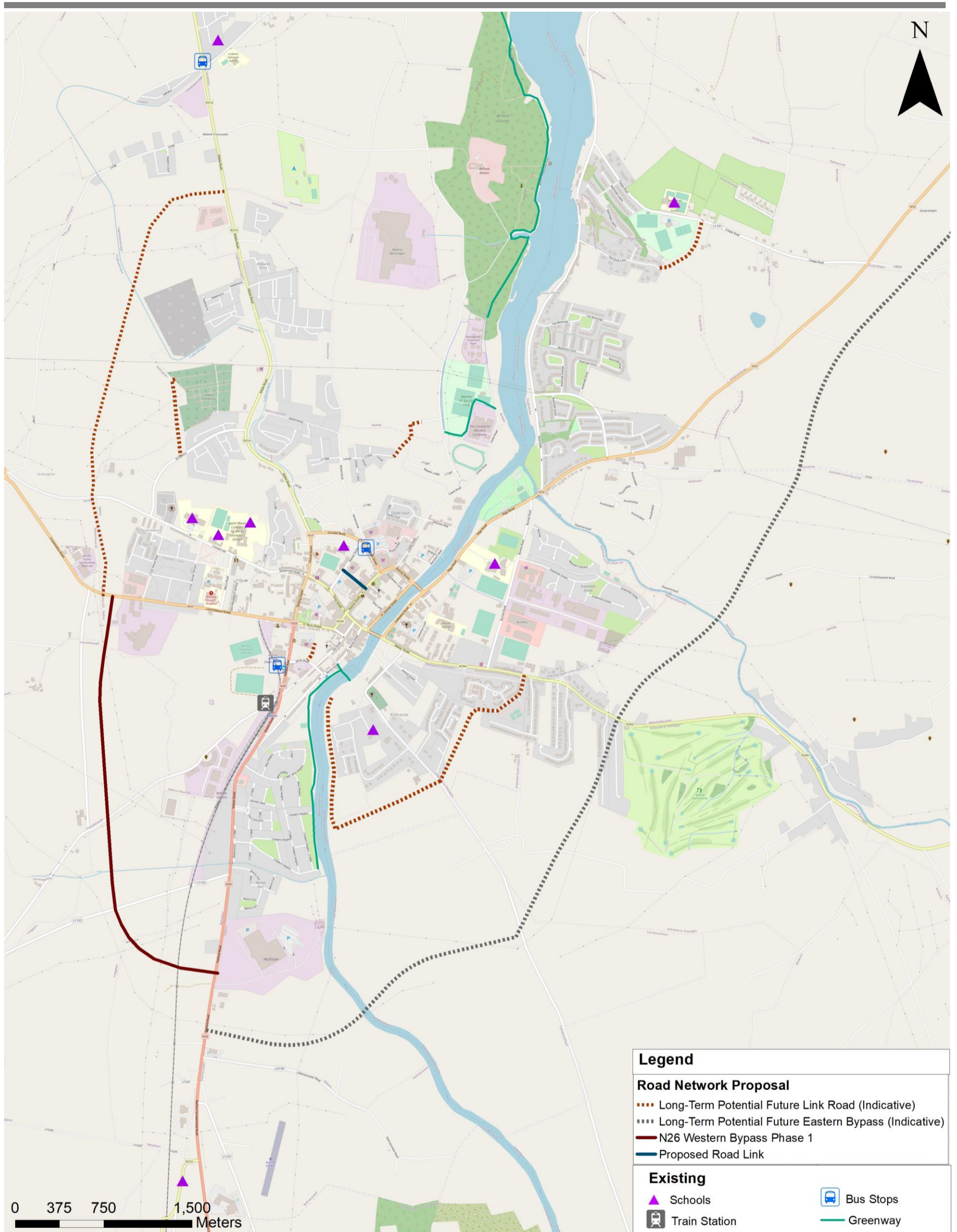


Figure 8-22: Proposal 5

Table 8-6 Proposal 5 Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MCA	EPO	Obj. Achieved
Proposed Future Link Road (Indicative)	5.5km	<ul style="list-style-type: none"> • N59 Crossmolina Road to Killala Road • Church Road to Healy Terrace via Cluain Na Rí • Lower Bridge Road to Glebe Road • James Road to Lidl • Sli Ectra to Leigue Cemetery • Creggs Road to The Quay Lane 	Long Term	-	-	-	-	-	8.5
Proposed Future Eastern Bypass (Indicative)	7.5km	<ul style="list-style-type: none"> • N59 Sligo Road to N26 Rehins Fort 	Long Term	-	-	-	-	-	8.5

8.7.1 Proposal Overview

8.7.1.1 Link Road

The extension of the N26 Ballina Bypass Phase 1 to provide a western link road extending to the north would reduce traffic flows on Killala Road and the N59 Teeling and Pound Street. These routes currently lack space for providing dedicated active travel facilities.

The development of an inner link road to connect Church Road to Healy Terrace would provide an alternative route for vehicular traffic to Abbey Street and Plunkett Road. Similarly, a new link road along River Moy linking into Glebe Road will provide an alternative route for traffic going along Church Road via Lower Bridge Road. These provisions would allow for traffic management measures to remediate the existing pinch point at Church Road where the existing layout consists of a sharp bend and a narrow footpath that doesn't connect to Salmon Wier Bridge or St Michaels's NS.

The link road beside Leigue Cemetery will improve road safety for access to community facility and provide safe vehicular and active travel access to existing link road Sli Eachtra. The existing access to the Cemetery is very restricted given the significant amount of traffic passing the cemetery. The proposed road link will cater for improved connectivity to the neighbourhood park and provide an alternative entry/exit link to the Cemetery. A link road providing an alternative route to Lidl car park beside Bury Street will help in relieving traffic going through the town centre.

A new road link connecting residential areas between Creggs Road and Quay Lane will allow for the provision of safer active travel facilities along the route. This link road is also envisaged form part of the active travel access to the land to the east, zoned for Enterprise and Employment as well as being a potential public transport route. Further conceptual development of the link will be undertaken by the Planning Authority in consultation TII in accordance with TII Publication DN-GEO-03030.

Another link road proposal includes a link between two residential areas along Bohernasup Road and Castle Road linking Belleek Lodge and Lansyn Roads. This alternative route will reduce unnecessary travel detours through the town centre.

8.7.1.2 Bypass

Providing an out-of-town crossing of the River Moy to the south via an eastern bypass is in line with the development of the adjacent land that is zoned for Enterprise and Employment. This would greatly alleviate traffic within the town centre and allow for the progression of a 15 minute town that would not be hindered by the severance caused by the N26 and N59 and their bypassing traffic volumes. The potential for the bypass is therefore considered through the reservation of a long-term aspirational transit corridor to allow for future potential development and further town centre enhancements.

8.8 Auxiliary Proposals

The Auxiliary Proposals can be progressed in parallel with Proposal 1, 2 and 3. They are envisaged to be commenced in the short term with some having the potential to be initiated immediately and others within 5years. The proposal can be broken down into several schemes that can be progressed independently of each other and include:

- Greenways;
- Two-way cycle facilities;
- One-way cycle facilities;
- Upgraded and Proposed footpaths;
- Shared Streets;
- Active travel bridges;
- Junction Upgrades;
- New permeability links;
- Refurbishment of existing permeability links;
- Permeability Link Proposals Tie-In with SRTS.

Some of the proposals within the scheme can be accelerated as rapid build schemes that will have a quick design and construction times and a relatively low cost. Others are more complex and would require detailed design, additional assessments and statutory consultations and planning. These schemes typically represent flagship projects that will greatly enhance the public realm of the area and encourage modal shift such as active travel bridges.

The components of Auxiliary Proposals, while being physically independent of one another, connect to create a coherent and complete active travel network. Therefore, the progression of one element should be considerate of the whole network so that the delivery of the overall proposal is practical.

As these schemes span the town, there is scope to improve public realm through streetscape/landscape design along the links and to create a sense of community within the town area and contribute to the urban regeneration of the town area.

Details of Auxiliary Proposals are shown in Figure 8-23 and Table 8-7.

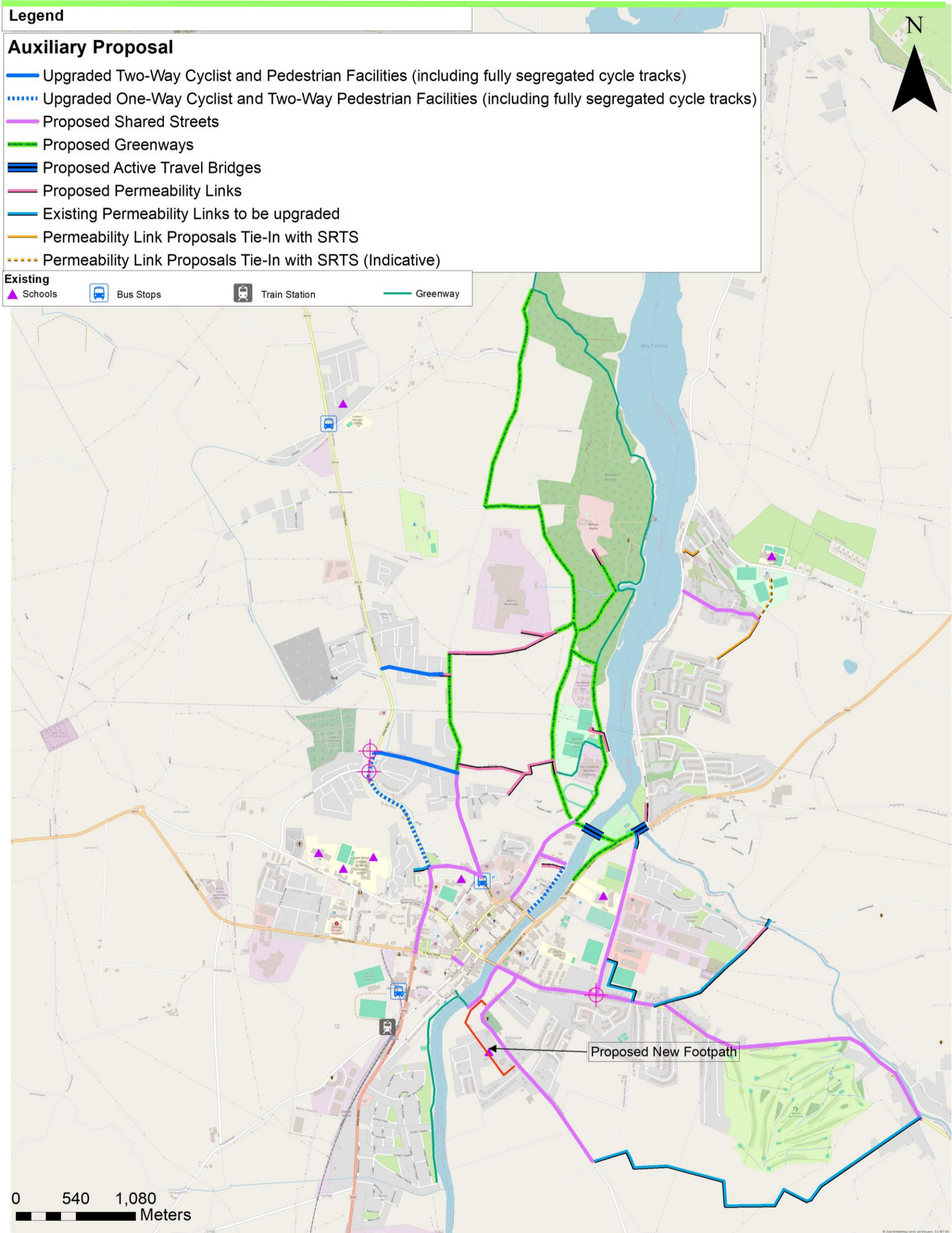


Figure 8-23: Auxiliary Proposals

Table 8-7 Auxiliary Proposal Schedule

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MCA	EPO	Obj. Achieved
Proposed/Upgraded Two Cycle Facilities (2-way length)	1.m	<ul style="list-style-type: none"> • Libradore • Castlefield Manor 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed/Upgraded One-Way Cycle Facilities (2-way length)	1.1km	<ul style="list-style-type: none"> • Kilala Road • Bachelor's Walk 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Pedestrian Facilities (2-way length)	0.4km	<ul style="list-style-type: none"> • Church Road 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Upgraded Pedestrian Facilities (2-way length)	22.4km	<ul style="list-style-type: none"> • Church Road • Abbey Street/Healy's Terrace • Bunree Road • Lower Bridge Road • Nally Street • Bohernasup • N59 Circular Road • N59 Pound Street • N59 Teeling Street • Kilala Road • Bachelor's Walk 	Medium Term	3	4.5	5.5	6.5	7.5	8.6

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MCA	EPO	Obj. Achieved
Proposed Shared Streets	5.7km	<ul style="list-style-type: none"> • Church Road • Abbey Street/Healy's Terrace • Bunree Road • Lower Bridge Road • Nally Street • Castle Road • Bohernasup • N59 Circular Road • N59 Pound Street • N59 Teeling Street 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Greenway	7.0km	<ul style="list-style-type: none"> • Beleek Woods to Bachelor's Walk • Old French Road • Tom Ruane Park 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Active Travel Bridges (Additional to Permeability Links)	2	<ul style="list-style-type: none"> • River Brusna at Bunree Bridge • River Moy at Castle Road 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Junction Upgrades	6	<ul style="list-style-type: none"> • Beleek Manor • Abbey Street and Bunree Road • Labrador and Kilala Road • Sly Eachtra and Kilala Road • Creggs Road and Car Park • Creggs Road and Rathwell 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Permeability Link	10	<ul style="list-style-type: none"> • Riverslade (Tom Ruane Park) • Link to Ballina Soccer Club • Link to Beleek Castle 	Medium Term	3	4.5	5.5	6.5	7.5	8.6

Infrastructure	Targets	Locations	Timeline	Reference to Appendices					
				NMU Audit	Options Dev.	Sifting	MCA	EPO	Obj. Achieved
		<ul style="list-style-type: none"> • Beleek Lodge to Lansing • Link to Coca-Cola Factory • Link from proposed Greenway to Castlefield Manor • Libradore • Link from Beleek Manor to Bohernasup • Bachelors Walk to School • Link along ESB Access Road to Downhill Road 							
Existing Permeability Links to be Upgraded	4	<ul style="list-style-type: none"> • Link along ESB Access Road to Downhill Road • Link from R294 to Bunree Road • Link from R294 to Church Road through Ballina Golf Course • Link from Killala Road to Convent Hill Crescent 	Medium Term	3	4.5	5.5	6.5	7.5	8.6
Proposed Permeability Link to Tie-In with SRTS	3	<ul style="list-style-type: none"> • The Moorings to Quay Lane • Quay Lane to Creggs Road (Quay School) • Quay Road to Rathmeel Lawns 	Short Term	-	-	-	-	-	-

8.8.1 Proposal Overview

Auxiliary Proposal is a short to medium-term active travel and sustainable transport strategy focused on improving the filtered permeability of the town of Ballina by proposing new greenway, active travel bridges, shared streets, cycle facilities and permeability links and upgrading the existing.

8.8.1.1 Active Travel Bridges

In terms of active travel, Ballina lacks a connection in the north between the East and West regions which are divided by the River Moy. The first crossing point from a south to north direction is the Lower Bridge and involves a circuitous route for users. Therefore, a key proposal of the Proposal is to overcome this severance and reduce journey times for active travel modes by providing links along desire lines.

An active travel bridge is proposed to connect Castle Road to Sligo Road. This link will reduce travel distance by approximately 900 m.

The bridge crossing of the River Brosna on the N59 is narrow and lacks adequate pedestrian and cycle facilities. It is therefore considered as a barrier to active travel in the area. Proposal 3 proposes to cantilever and active travel bridge from the western extent of the bridge.

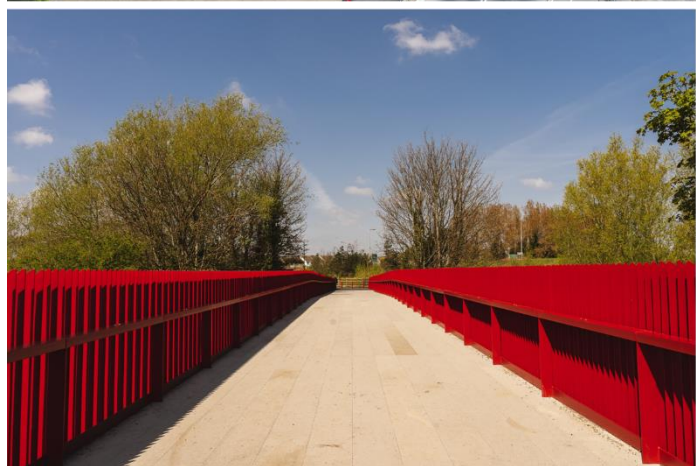


Figure 8-24: An example of a layout of an active travel bridge

Figure 8-24 shows an example of a standard active travel bridge. The introduction of these links will increase connectivity within the area and provide a level of filtered permeability that will encourage a mode shift to active travel modes.

8.8.1.2 Greenway Upgrades

The proposals include an extension of the Ballina Urban Greenway along Castle Road and Sligo Road (N59). These two links are proposed to be connected at Arbuckle Row and Tom Ruane Park via the aforementioned proposed bridge for active travel modes and greenway links. The greenway extension will also utilise the proposed cantilevered bridge across the River Brosna along the N59. In the North, the proposed greenway will extend to recreational and amenities area via Old French Road whilst covering the area around Belleek Manor and Ballina Beverages.



Figure 8-25: Examples of standard greenway routes

Several permeability links are proposed along the length of the greenway route to link the proposed greenway with the existing infrastructure as well as to provide enhanced access to recreational and industrial areas such as Ballina FC Soccer Club and Coca Cola (Ballina Beverages). Figure 8-25 shows some examples of standard greenway routes.

8.8.1.3 Permeability Link Upgrades

Ballina is well-connected via a network of laneways and car parks that facilitates the efficient movement of pedestrians and cyclist through the area. However, several of these links are sub-standard with respect to the NTA's Permeability Best practice Guide.

Permeability links along Bunree Road (via Ardnaree Sarsfield GAA Club and connection to Clare Street), ESB service road, Killala Road (connecting to Convent Hill Crescent) lack adequate pedestrian and cycle facilities, signage, traffic calming measures and dedicated crossings. As a result, this link, while been recognised as key connectors are likely only attracting confident and experienced users.

Additional to these permeability links, there is a tie-in with SRTS scheme to provide standard permeability links, in short-term, which would link the existing residential areas along Quay Lane and Creggs Road to Quay National School. Further permeability enhancement through The Moorings Estate will be explored in conjunction with the progression of the SRTS programme. These links also have the potential to provide an enhanced active travel connection the Enterprise and Employment development site at Quignashee, located to the east of Quay Lane. The development of these links will provide active travel facilities offline from the N59 which has a posted speed limit of 80km/hr.

This proposal proposes upgrades to these links to make them safe and provide attractive routes for all population cohorts. This will be done through widening (where possible), resurfacing, public lighting provision/upgrades, enhanced security and increased wayfinding signage. Figure 8-26 presents some examples of standard permeability links and laneways.



Figure 8-26: Examples of standard permeability links

Additional proposals include the provision of a one-directional cycle track and upgraded footpath along Bachelor's Walk. This would provide a link between the proposed greenway and active travel bridge with the centre of the town.

Dedicated crossing points along Castle Road to join up the existing alternating footpaths are proposed to provide safe crossings for pedestrians and cyclists accessing the proposed greenway.

8.8.1.4 Cycle and Pedestrian Facilities

Existing active travel facilities along the routes shown in Figure 8-213 include footpaths that become discontinuous in certain stretches and at the approach to junctions. Several areas with existing footpaths have sub-standard pavements, making them unsafe for general use. The proposals include new segregated cycle tracks for two-way cyclist traffic. Footpaths will be upgraded to DMURS standards along these routes. New footpaths will be added where footpaths are missing along either side of the roads. In instances where it is not possible to provide a new footpath, safe crossings will be provided to connect the network. The upgraded pedestrian facilities will be designed to meet standards for safe accessibility by the mobility impaired. A junction upgrade is also proposed under this proposal. Junction upgrades will include a provision for cycle and pedestrian movements across all arms to facilitate safe crossings.

8.8.1.5 Shared Streets

The proposals also incorporate the provision of standard shared streets between cyclists and motor vehicles, with a continuous segregated footpath on either side of

the street up to DMURS standards. The design of shared streets within the town centre shall be done by keeping in focus the quality of the public realm, and the priority of pedestrians, cyclists, public transport, and people with disability. Footpaths would be at least 1.8 m wide, and the road width would be made adequate with tighter corner radii at the junctions to regulate the speed of turning vehicles. Speed Limit would range between 20-50 kmph with proper signs indicating the start of shared

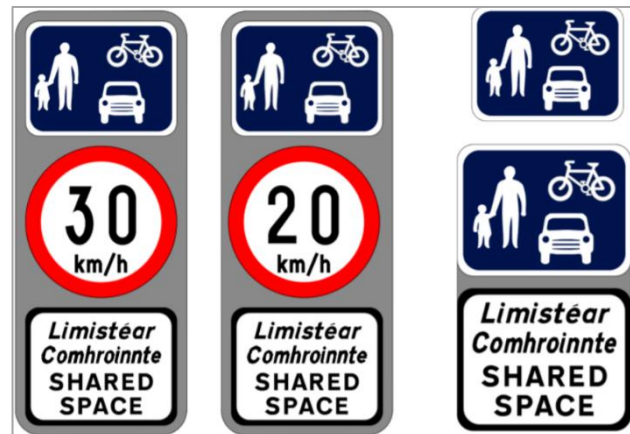


Figure 8-27: Signs for indicating start of shared streets

streets. Two-way streets shall have provisions for two-way cyclists. One-way streets could be open for one-way cyclists, contra-flow cyclists, or two-way cyclists. In all the streets, priority shall be given to pedestrians. The width of the streets and traffic volume would determine the speed limit on the road and the function of the streets. Speed calming measures such as proper signs, speed ramps/speed tables, raised crossings and curb extensions shall be implemented. The surface of shared streets shall be designed such that they are distinguishable, and the tactile pavements make the streets accessible to visually impaired cohorts as well. Figure 8-28 presents some examples of shared streets.

Safe crossings for pedestrians and cyclists at junctions and near key destinations such as parking, schools, and commercial spaces shall be added. There shall be designated space for bicycle parking and several charging points for e-bikes shall be installed. The Proposals are primarily sustainable transport Proposals but their impact on public realm is noted. The streetscape redesign has a unique potential to contribute positively to the public realm of the area through improved landscaping, land use integration, and visual cohesion of the area.



Figure 8-28: Examples of shared streets

8.8.2 Objectives Achieved

Auxiliary Proposal of the LTP for Ballina has been developed to meet several objectives pertaining to safe and efficient travel using the pedestrian network, cycle network, public transport, and road network.

The objectives achieved, as per Section 5, are outlined in Appendix 8.

8.9 Policy Interventions

There are a number of supporting measures arising from local and government incentives available to MCC to contribute to the development of a sustainable transport network. Policy interventions have the potential of being quick to implement and having a quick and correspondingly high impact. These complementary measures support the objectives of the LTP schemes proposed in Section 8 and will underpin the sustainable development of the transport network. These measures have the advantage of being quick to implement with little required infrastructure and readily available funding through the relevant government bodies. The principal of these policies is to incite behavioural change by providing the necessary groundwork to demonstrate the benefits of sustainable modes of travel.

The successful implementation of these measures will significantly contribute to a positive public opinion of the development of a sustainable transport network. This will be achieved through a visible and tangible impact such as reduced congestion in the town centre.

8.9.1 Parking Strategy

It is noted that the development at the Military Barracks (Market Square) has resulted in a loss of approximately 100 car parking spaces. Traffic Wardens have confirmed that despite the overall reduction in spaces the most recently constructed public car parks circa 2011/2012 at Barret Street & Bachelor's Walk remain under utilised.

In addition it may be noted that a local community group working towards achieving Irelands Greenist Town status for Ballina completed an assessment of car parks in June on a busy Saturday at 2pm. The survey was uploaded on social media and also recognised that there is not a deficiency in parking. This study also took account of private car parks such as pawn Office lane & the Cathedral grounds. Concluding that there is ample parking within 5 mins of town centre.

The parking provision in Ballina (Table 8-8) is considered above demand. A 'drive around' survey identified a deficiency in parking signage to direct motorists to town car parks. It is now proposed that an additional six signs will be installed at strategic locations to ensure that all car parks are visible. Any new measures implemented will reduce town centre parking demand.

Table 8-8 Car Parking Provision

Carpark	Total No. of Spaces
Market Square	92
Teeling St	271
Emmett Street	71
Humbert Street	215
Barrett Street	59
Bachelors Walk	65
Car Park Total:	853
On-street Parking Total:	306

Indiscriminate parking practices is prevalent in the town centre and enforcement is low. This dangerous and illegal parking is a deterrent to active travel modes and is reinforcing a car dominated environment.

Parking tariffs in the town should be revised for the current 'Red', 'Orange' and 'Green' zones for both 'Pay & Display' and monthly permit rates.

A comprehensive Parking Strategy containing an enforcement plan and reviewed parking tariffs, particularly for non-residential on street parking is needed. This will utilise the low occupancy peripheral car parks (Barrett Street and Bachelors Walk) and free up space in the town centre to provide a functional active travel network to deliver a lasting transformative change in how short journeys are made within the town.

8.9.2 Active Travel Strategy

A Ballina Town Active Travel Strategy to guide the delivery of sustainable development that promotes active travel in line with the Mayo County Development Plan 2022 – 2028 should be developed.

This strategy, and it's associated working group, will propose and prioritise schemes, monitor and evaluate the delivery of active travel schemes and look to the future of active travel in Ballina. The Strategy should detail ambitions to increase the number of people choosing active travel for everyday short journeys and sets out a wide array of infrastructure and initiatives designed to support that goal.

This strategy should be a live document under constant review, with published quarterly updates. It should serve to communicate the progress of the development of the active travel network and invite feedback from the public.

8.9.3 Public Realm Enhancement Strategies

The schemes collectively cover the majority of the Ballina Town Area. Although they are primarily sustainable transport schemes, they will also incorporate public realm design.

This will be achieved through the implementation of best practice guidelines as set out in the DMURS. The public realm will be designed to include:

- Simple street structures with active edges and high permeability that is easy to navigate to reduce travel distances;
- High quality street environments to attract pedestrians and cyclists;
- A balance between segregation and integration to have multi-functional streets to enhance connectivity;
- A transport network that maximises efficiency and improves accessibility;
- Facilitate a modal shift away from private car by increased access to retailing by public transport, cycling and walking;
- A sustainable transport network through walking, cycling and public transport use to reduce reliance on fossil fuels and transport related emissions.

Due to the enhanced connectivity, it is envisaged that the town centre will see high levels of pedestrians and cyclists from not only trips to the area itself but from trips that make use of the area as a transit route. Where there are shared spaces proposed in the town centre, priority will be designated to pedestrians/cyclists. This will improve public realm and provide a respite from vehicular traffic in the town.

In particular, the Upper Bridge, Lower Bridge, Pearse Street and Market Street will see an enhance public realm. In the long term, there is potential to pedestrianise Pearse Street and/or Market Street. Based on such public realm proposals, some of the cycle routes shown in Proposal 1 and 2 (Section 8.3 and 8.4) may vary. This is subject to feasibility studies, amendment to on-street car parking and statutory consultation. Figure 8-29 below presents examples of public realm space designs which could be implemented in Ballina.



Figure 8-29: Proposed (Indicative) Layouts for streets in Ballina

8.9.4 Supporting Strategies

The supporting strategies will not necessarily be delivered by MCC but by working community groups and/or private operators through consultation with MCC.

Recommended strategies to be implemented alongside the LTP delivery include:

- E-Cargo Bike Pilot Initiative;
- Bleeper Bike Sharing Scheme;
- Cycle without Age;
- Cycle parking provision throughout the town;
- Public Information campaigns;
- Smarter Travel Plans with existing employment and education centres to include promotion of 'Bike to Work' and 'Mobility Management Plans'; and
- GoCar Car Sharing;

9 Mode Shift Impact

The Ballina LTP will support the CAP23 and contribute to reducing Ireland’s transport related emissions. The promotion of active travel schemes will be crucial to encourage the mode shift needed to meet the target of a 50% reduction by 2030 as well as a 20% reduction in vehicle kilometres travelled.

The potential impact of the measures proposed in the various proposals has been assessed by considering the existing car trips local to the area of influence of the individual schemes that could be attracted to active modes as a result of the provision of the infrastructure.

The catchment area per Proposal is defined as Local Area Model zones within 200m of the proposed scheme. The travel demand has been extracted from the NTA WRM for a 2016 calibrated base year. The daily demand includes trips of all purposes.

The percentage of existing car trips that will be attracted to move to active modes is difficult to accurately predict because there are many variables in addition to new active travel infrastructure that influence behavioural change, including incentive schemes, safe routes to school programmes, fuel price, willingness to change for climate action reasons etc. For this reason, the potential impact has been calculated assuming that 20% and 30% of car trips with origins and destinations local to the infrastructure route can be encouraged to change to active modes. Table 9-1 shows the mode shift impact per proposal.

Table 9-1 Mode Shift Impact per Proposal

Trips in Catchment (2016 Base Year)		Private Car Trips Remaining with		Increase in Sustainable Mode Trips with	
All Modes	Private Car	30% Mode Shift to Sustainable Modes	20% Mode Shift to Sustainable Modes	30% Mode Shift to Sustainable Modes	20% Mode Shift to Sustainable Modes
12420	8041	5629	6433	2412	1608

Of the trips that were reassigned from private car to sustainable modes, it was assumed that 60% of these trips would become walking trips and 40% would become cycling trips. The larger percentage increase in cycle trips over and above the current is due to the fact that the proposals provide a greater increase in the level of service offered to cyclists and hence a greater uptake is expected. Table 9-2 and Table 9-3 show the mode shift increase and the potential carbon reduction.

Table 9-2 Mode Shift Impact per Mode (Carbon Emissions are calculated as per Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections)

	30% Mode Shift to Sustainable Modes	20% Mode Shift to Sustainable Modes
Increase in Cycle Mode Share	965	643
Increase in Walking Mode Share	1447	965
Decrease in Private Car Mode Share	2412	1608
Carbon Reduction	727t per annum	484t per annum

Table 9-3 Potential Mode Share

	Mode Share		
	2016 Census	30% shift from car for local trips influenced by schemes	20% shift from car for local trips influenced by schemes
Private Car	66%	37%	42%
Cycle	3%	10%	8%
Walk	29%	47%	44%
Public Transport	3%	6%	6%

10 Monitoring and Review

As part of the implementation of the LTP, a comprehensive monitoring and evaluation framework should be established.

The review process shall be iterative and be carried out upon the completion of each scheme or deployment of each strategy. Method can include, but not limited to:

- NTA Household Travel Surveys;
- Census Data;
- Surveys;
- Quality/Accessibility Audits;
- Automatic Counters; and
- Consultation with schools and businesses to encourage the reporting of progress with their Mobility Management plans.

The performance of the LTP will be measured in relation to the progress made towards the LTP objectives, evidence of increased use of sustainable modes of transport, evidence of reduced reliance on private car travel and scheme appraisals.

The review findings shall be used to adapt the LTP implementation and refocus investment where necessary to ensure the mode split targets are met.

The LTP should be noted as being subject to change from these review findings and any notable changes in national or regional policy.

Therefore, the LTP can be considered as the output of an iterative process to ensure the delivery of a sustainable transport network that best suits the needs of the ever-changing community it is designed to serve. As such, it should be under consistent review and updated according, with a proposed 2-year review period for short term proposals, 3-5 year review for medium term proposals and 10 year review for long term proposals.

The monitoring results should facilitate adjustments to the plan delivery as appropriate. Whether the plan is yielding value for money should also be assessed, bearing in mind the difficulty of achieving significant growth in active travel numbers at an early stage of network development.

Given the urgent need for change and the political challenges often facing implementation, the use of trials and temporary interventions can be effective, quick, and provide crucial early data on what works and what needs to be adapted in a given context.

Appendix 1

Policy Context, Design Guidance and Data Collection

Appendix 2

LAM Report

Appendix 3

NMU Audit

Appendix 4

Options Development

Appendix 5

Options Assessment: Sifting

Appendix 6

Options Assessment: MCA

Appendix 7

EPO

Appendix 8

Objectives Achieved

Appendix 9

Stakeholder Consultation

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