

Active Travel Infrastructure - Mullaghmatt (Horseshoe) Bridge

Planning Report

Monaghan County Council

14/11/2023



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1. Introduction

1.1. Scheme Overview

Monaghan County Council (the Client/MCC) as the Contracting Authority, appointed Atkins (the Consultant) to provide Engineering Multi-disciplinary Consultancy and Design services for the Concept development, Option selection, Preliminary design, Statutory processes, Detailed design, and Construction support for the delivery of a pedestrian and cyclist footbridge within Monaghan Town. The footbridge will be located adjacent to an existing vehicular Bridge structure in the townland of Mullaghmatt, and its purpose is to enhance active travel infrastructure across the Ulster Canal. Figure 1-1 below illustrates the location of the proposed footbridge.

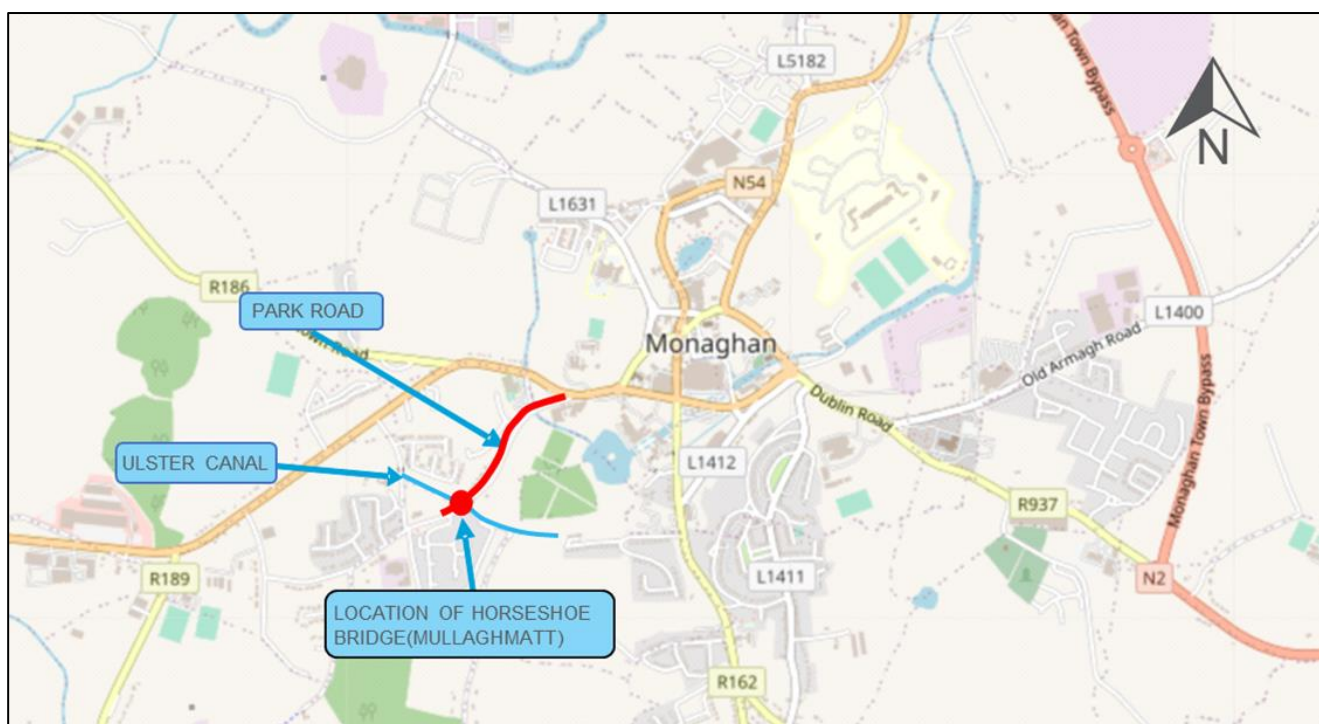


Figure 1-1 - Proposed Bridge Location

1.2. Stakeholder Consultation

Stakeholder consultation has been undertaken with the following key stakeholders:

- National Transport Authority & Monaghan County Council
- Waterways Ireland
- All other relevant bodies

1.3. Part 8 Planning Documentation

This Part 8 planning report has been prepared in accordance with Part 8 of the Planning and Development Regulations, 2001 as amended. This report should be read in conjunction with the following complementary documentation:

- Drawing(s):
 - 5213957-ATK-01-ZZ-DR-ST-900811 – Site Context and Boundaries Map
 - 5213957-ATK-01-ZZ-DR-ST-900812 – Site Location Map
 - 5213957-ATK-01-ZZ-DR-ST-900813 – Existing Site Layout Plan
 - 5213957-ATK-01-ZZ-DR-ST-900814 – Planning Drawing (Site Layout Plan)
 - 5213957-ATK-01-ZZ-DR-ST-900815 – Planning Drawing (Cross Sections and Elevation)
- Appropriate Assessment Screening Report (*Atkins Ref: 5213957DG0045*)
- Environmental Impact Assessment Screening Report (*Atkins Ref: 5213957DG0046*)

- Archaeological Impact Assessment & Architectural Heritage Impact Assessment (*Refs: AHIA MON BRD 1123 and AIA Final*)
- Tree Impact Summary (*Atkins Ref: 5213957DG0071*)
- Stage 1 Road Safety Audit and Stage 1 Quality Audit (*Atkins Ref: 5213957DG0041/28*)
- Traffic Modelling Report (*Atkins Ref: 5213957DG0039*)

2. Purpose of the Scheme

2.1. Project Aim & Objectives

The overall purpose of the Project is to provide linkage and permeability to existing and proposed active travel provisions in the town which will integrate with the overall active travel policy for Monaghan Town. This will improve safety and contribute towards an increased number of trips in the area by pedestrians and cyclists.

The objectives for the scheme are based on multi criteria requirements outlined by the Department of Transport in their report 'Common Appraisal Framework for Transport Projects and Programmes (March 2016, updated October 2021)' (CAF). The multi-criteria headings are as follows:

- **Safety:** To reduce the potential for conflict between all road users along the route through the provision of a facility which is in line with the current standards. The project will seek to improve safety for vulnerable road users by providing safe means of passage across the Ulster Canal.
- **Physical Activity:** Provide improved opportunities for pedestrians and cyclists, thereby promoting physical activity, through improvements to footpaths and crossings, and the provision of new cycling facilities.
- **Environment:** To minimise impacts on the receiving environment.
- **Accessibility & Social Inclusion:** To improve accessibility for all road users and bring social inclusion benefits to those for whom non-motorised means are the predominate form of transit.
- **Integration:** To support the strategies set out in national and regional policies and guidelines.
- **Economy:** To provide an investment that offers good value for money.

In addition to the above CAF objectives, the project seeks to meet the following localised objectives:

- Provide a sustainable transport alternative for the workers.
- Facilitate students to walk/cycle to the educational campus.
- Link to the existing Ulster Canal Greenway which passes through Monaghan Town and is planned to be extended east across the border to Middletown in Co. Armagh and west to Smithborough and Clones in the coming years. This will provide a safe link for residents living in the town to the greenway.
- Provide a valuable leisure amenity for the local population; and
- Encourage active travel in preference to motorised travel, which will result in clear sustainability and health benefits.

2.2. Design Principles

The proposed infrastructure has been designed in accordance with the guidance set out in the NTA's National Cycle Manual (NCM) and the Design Manual for Urban Roads and Streets (DMURS).

The following principles were considered:

- **Road Safety:** Measures should be implemented which increase safety and the perception of safety.
- **Coherence:** Route and link type should have continuity and layout to be obvious at junctions.
- **Directness:** Route should be direct, minimising delays and bestowing the advantage to cyclists.
- **Comfort:** Routes should be of adequate width and surface quality with minimal delays.
- **Attractiveness:** Route should be well maintained with landscaping and adequate lighting.

3. Planning and Policy Context

National, Regional and Local planning policy has been considered to ascertain compliance and is summarised below.

3.1. National Transport Policy

The purpose of NIFTI is to plan for how Ireland will invest in its transport system over the coming years and decades. As part of Project Ireland 2040, it notes that the population of Ireland will grow to almost 5.7 million people by 2040. This framework aims to improve the transport system while focusing on the most environmentally sustainable modes of transport so that the increase in demand brought on by the increased population is met sustainably.

NIFTI notes that decarbonising the transport sector is an urgent priority in the context of our climate change targets, and so aims to support sustainable mobility wherever it is feasible and encourage modal shift to these modes, namely active travel, and public transport. The Framework recognises that many of the same measures that reduce greenhouse gas emissions can also have a beneficial impact for other elements of environmental sustainability. Increased public transport and alternative fuel usage can help to improve air quality and reduce noise pollution, while active travel brings health benefits.

The four NIFTI Investment Priorities, which identify what will be invested in, are supplemented by modal and Intervention Hierarchies, which set out how NIFTI will undertake investment. It can be seen below in Figure 3-1 and Figure 3-2 that active travel is a core element of the four identified Investment Priorities and that NIFTI emphasises active travel as the most desirable mode of transport in the framework.



Figure 3-1 - NIFTI Four Investment Priorities (source: gov.ie/transport)

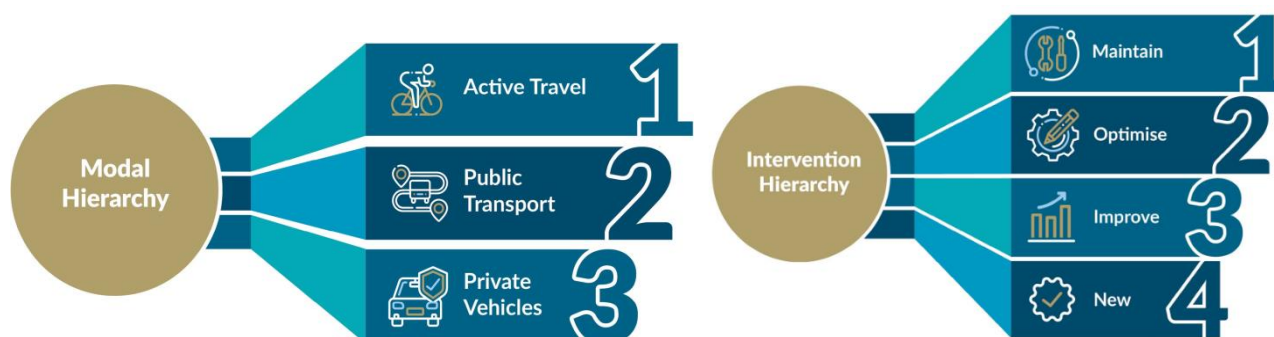


Figure 3-2 - NIFTI Modal and Intervention Hierarchies (source: gov.ie/transport)

NIFTI recognises that investments in transport networks and services, and the policies that drive these investments, can impact on the environment, and several environmental assessments have been carried out in parallel with its development, which includes a Strategic Environmental Assessment (SEA), which highlighted

several potential impacts associated with the outcomes, Investment Priorities and Hierarchies proposed by NIFTI, as follows:

- Negative Impacts include, but are not limited to:
 - Short-term/localised negative impacts on water quality and increased noise pollution during construction.
 - Localised increases in pollution or increased CO2 emissions, or localised climate vulnerability such as flooding.
 - Long-term impacts on biodiversity, landscape, or cultural heritage features because of new infrastructure developments.
 - Long-term impacts because of land-take and changes in land use required for new developments.
- Positive Impacts include, but are not limited to:
 - Positive impacts to population and human health because of increased safety, with improvements to signage, adequate road surfacing, junction upgrades or realignment works.
 - Benefits for the economy, tourism and regional connectivity providing better social inclusion.
 - Reduced carbon emissions and improved air quality because of sustainable mobility developments.
 - Reduction in localised noise pollution and vibration because of development in sustainable and active travel modes and actions to promote electric vehicles.

3.1.1.1. National Sustainable Mobility Policy

In parallel with NIFTI, the Department of Transport has published a new National Sustainable Mobility Policy. This sets out the policy framework for walking, cycling and public transport to support Ireland's overall requirement to achieve a 51% reduction in greenhouse gas emissions by 2030. The new policy is primarily focused on measures to promote and facilitate active travel and public transport for all thereby encouraging less private car usage nationally to support the Government's climate commitment.

The policy outlines a set of actions to increase active travel infrastructure provision and improve public transport capacity and services across the country. These will be supported by behavioural change and demand management measures to make sustainable transport modes the preferred choice for as many people as possible. The Climate Action Plan sets out additional measures to promote other complementary transport mitigation measures such as the switch over to electric car usage and greater use of renewable fuels for transport.

3.1.2. National Cycle Policy Framework 2009 – 2020

The backdrop to this policy is the government's transport policy for Ireland. The NCPF sets out a suite of interventions to improve the ease and safety of cycling to achieve greater mode share going forward. The framework states that the focus needs to be on:

- Reducing volumes of through-traffic, especially Heavy Goods Vehicles (HGVs), in city and town centres and especially in the vicinity of schools and colleges.
- Calming traffic/enforcing low traffic speeds in urban areas.
- Making junctions safe for cyclists and removing cyclist-unfriendly multi-lane one-way street systems.
- Paying special attention to integrating cycling and public transport.

Other interventions include the following:

- Schools will be a strong focus of the NCPF.
- Supporting the provision of dedicated signed rural cycle networks for Cycling Tourism.
- Ensuring surfaces used by cyclists are maintained to a high standard and are well lit.
- Ensuring that all cycling networks are sign-posted to a high standard.
- Supporting the provision of secure cycle parking at all destinations of importance.
- Integrating cycling and Public Transport, including cycle parking at stations, and the capability to carry bikes on Public Transport services.
- Creation of municipal bike systems to complement an improved Public Transport system.
- Ensuring proposals cater for a 10% modal share of cyclists.

The NCPF states that making provision for cyclists in the urban environment does not merely consist of providing dedicated cycling facilities, but also involves wider traffic interventions that benefit all vulnerable road users.

3.1.3. National Cycle Manual 2011 – Present

The National Cycling Manual (NCM) embraces the principles of Sustainable Safety, as this will offer a safe traffic environment for all road users including cyclists. The five principles of Sustainable Safety are described in the NCM (Section 1.1) and noted below:

- Functionality – i.e., the design which is fit for purpose is safer.
- Homogeneity – i.e., reducing the relative speed, mass and directional differences of different road users sharing the same space increases safety.
- Legibility – i.e., a road environment that all road users can read and understand is safer.
- Forgivingness – i.e., environments that contribute to benign outcomes of accidents are safer (“passive safety”).
- Self-awareness – i.e., where road users are aware of their own abilities and limitations to negotiate a road environment, the environment is safer.

The NCM offers guidance on integrating the bicycle in the design of urban areas. Throughout the option selection and design process of this project the NCM is used.

3.1.4. National Cycle Network (NCN)

The National Cycle Network is one of the initiatives being rolled out by the Department of Transport, Tourism & Sport. Over the next ten years, the Department hopes to work with local authorities to create a network of high-quality, long-distance, off-road walking and cycling paths. See Figure 3-3 below for the proposed routes. These routes will become ‘trip attractors’, thus increasing the tourism amenities in the country, and opening the countryside for the enjoyment of visitors and local people alike. The NCN measures in Co. Monaghan include the reopening of the tow path along the section of the disused Ulster Canal which flows through Monaghan town. This is discussed below.

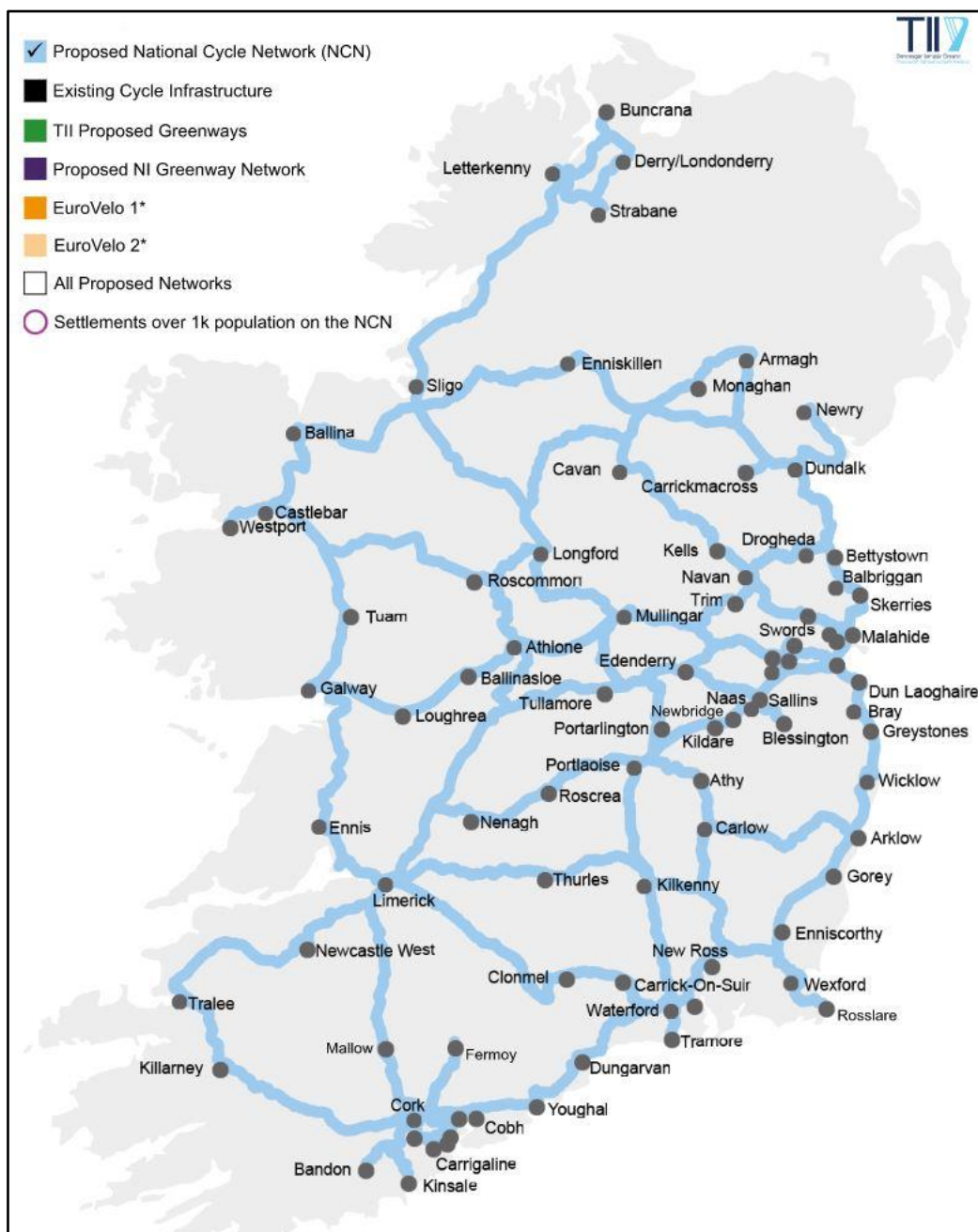


Figure 3-3 - Proposed National Cycle Network (NCN)

3.1.5. Climate Action Plan 2023

The Climate Action Plan (CAP) sets out a course of action over the coming years to address climate disruption, which is acknowledged as having diverse and wide-ranging impacts. The document outlines the aims for each sector of industry in Ireland. Electricity, Transport, Built Environment, Industry, Agriculture and Waste have all been assessed in the document with a roadmap laid out to deliver a reduction of emissions in each of these sectors between 2023 and 2030, and to reach net zero nationally by no later than 2050.

As part of the plans for a significant cut in transport emissions, the CAP sets a target of a 50% increase in Active Travel journeys per day by 2030.

The promotion of walking, cycling and public transport, and a modal shift from the use of private vehicles will all contribute to the achievement of the targets set out in relation to climate action.

3.2. Local & Regional Policy

3.2.1. Walking & Cycling Strategy for County Monaghan 2021-2026

Monaghan County Council has produced a Walking & Cycling Strategy in response to the increasing demand from the community sector for more walking and cycling infrastructure and amenities, both to facilitate leisure activity and commuting. The strategy will help and guide the development of walking and cycling infrastructure and to support people to walk and cycle more, for wellbeing, recreation, active travel (journeys with a purpose, such as shopping or commuting to work) and economic gain (e.g., tourism). The strategy aims to develop safe and appealing walking & cycling infrastructure in Co. Monaghan and to create an environment in which people will find it easy and attractive to walk and cycle, both recreationally, and for everyday journeys.

5 no. themes are included in the strategy and are listed below:

- Theme 1: Governance & Resources: creating the internal conditions necessary to ensure successful delivery of the Strategy.
- Theme 2: Plan for a Sustainable Future: the role of walking and cycling in reducing carbon emissions, and the need for good town planning to facilitate this transition to more sustainable transport modes.
- Theme 3: Removing the barriers to walking and cycling: Make walking and cycling easy and safe options.
- Theme 4: Embed walking & cycling into everyday life in Co. Monaghan
- Theme 5: Continue to innovate and collaborate.

3.2.2. Monaghan County Development Plan 2019-2025

The Monaghan County Development Plan (MCDP) contains an overall strategy for the proper planning and sustainable development of County Monaghan over the lifetime of the Plan. It takes on board national and regional planning legislation and adapts them to take account of local conditions.

The MCDP fully supports the development of more walking and cycling infrastructure for both leisure and active travel purposes.

The Plan includes the following Cycling and Walking Policies:

- To promote and facilitate the development of walkways, cycleways, and recreational routes in appropriate locations throughout the County to deliver the objectives of the County Walking and Cycling Strategy and any subsequent strategy document.
- To promote and encourage the development of walks and cycleways in accordance with the Smarter Travel Policy and to protect established routes from development that would adversely impact upon them.
- To develop, in co-operation and consultation with adjoining local authorities and cross border bodies sections of the Ulster Canal Greenway Network to connect the main urban centres throughout central Ulster. The MCDP designates the Ulster Canal and Environs as an Area of Secondary Amenity.
- To encourage the provision of bicycle infrastructure such as shelters and parking facilities in appropriate locations and make provisions for such infrastructure in new developments.

Land use zoning around the Horseshoe Bridge includes 'Existing Residential' and 'Recreation and Amenity'. As per Table 9.3 of the MCDP, recreational facilities are 'Open for Consideration' on all land use zonings. A use that is 'open for consideration' is one that by reason of its nature and scale would not be in conflict with the primary zoning objective for the area subject to the proper planning and sustainable development of the area.

Project compliance with the relevant MCDP policies and objectives is set out in Appendix F.

3.2.3. The Ulster Canal Greenway

The Ulster Canal has lain derelict since it was abandoned in the 1930's by the Lagan Navigation Company. It ran from Quivvy Lough north of Belturbet in Co. Cavan (where it linked via the Erne system and the Ballyconnell canal to the Shannon), through Clones and Monaghan town on to Lough Neagh at Blackwatertown, from where it was possible to journey onwards to Belfast via the Lagan Canal. While the canal has been unnavigable by boat for many decades, the route of the canal is largely undisturbed, and the tow paths and banks are intact.

The Ulster Canal Greenway (UCG) (www.ulstercanalgreenway.com) is a project that provides a linear Greenway route following the line of the disused Ulster Canal.

- UCG Phase 1 is a 4.2km route around Monaghan Town which opened in 2013. It runs from Threemilehouse road on the west of the town to the N12 near the Coolshannagh roundabout.

- UCG Phase 2 is a 20km ongoing project to provide a greenway from Smithboro to Middletown, Co Armagh. The first section (7.8km) of this Phase 2 from the N12 to the NI Border was granted Part 8 Planning approval in July 2021.
- A further Part 8 application for the Monaghan to Smithborough leg is being prepared and will be submitted to Monaghan County Council before the end of the year.

Figure 3-4 below shows the route of the Ulster Canal Greenway through Monaghan town.



Figure 3-4 - Ulster Canal Tow Path through Monaghan Town

3.2.4. Regional Spatial & Economic Strategy (RSES) 2020-2032

Co. Monaghan belongs to the Northern and Western Regional Assembly, one of three Assemblies in Ireland. Each Assembly has interpreted Project Ireland 2040’s planning framework for their region, producing a Regional Spatial and Economic Strategy, whose purpose is to consider the local conditions and factor them into an appropriate response in developing the Strategy. In turn, each Local Authority is obliged to take its respective region’s RSES into account when developing local planning strategies.

The Strategy supports the development of greenways and networks of walking and cycling routes as tourism amenities as well as necessary active travel infrastructure. The Strategy heavily supports compact urban development with an emphasis on design which creates accessible, attractive, vibrant, and safe places to work, live, shop, and engage in community life. It sees the creation of permeable town centres where walking and cycling are given a competitive edge over motorised forms of transport as the future of sustainable placemaking, where people live within a short distance of the services and amenities they most frequently use.

4. Description of Existing Network

4.1. Park Road in the Proximity of Horseshoe Bridge

4.1.1. Road Network

Horseshoe Bridge is an existing bridge in the townland of Mullaghmatt. It carries Park Road over the disused Ulster Canal. Figure 4-1 illustrates the location of the bridge.

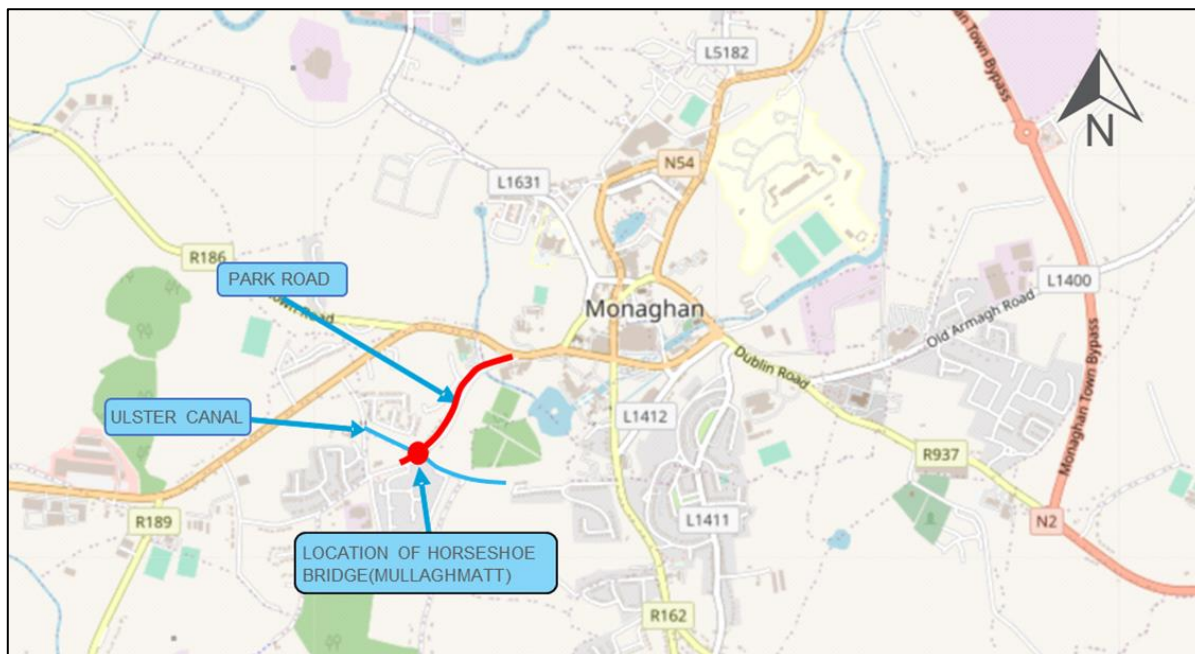


Figure 4-1 - Proposed Bridge Location

An aerial view of the existing Horseshoe Bridge and the surrounding road network is shown in Figure 4-2.

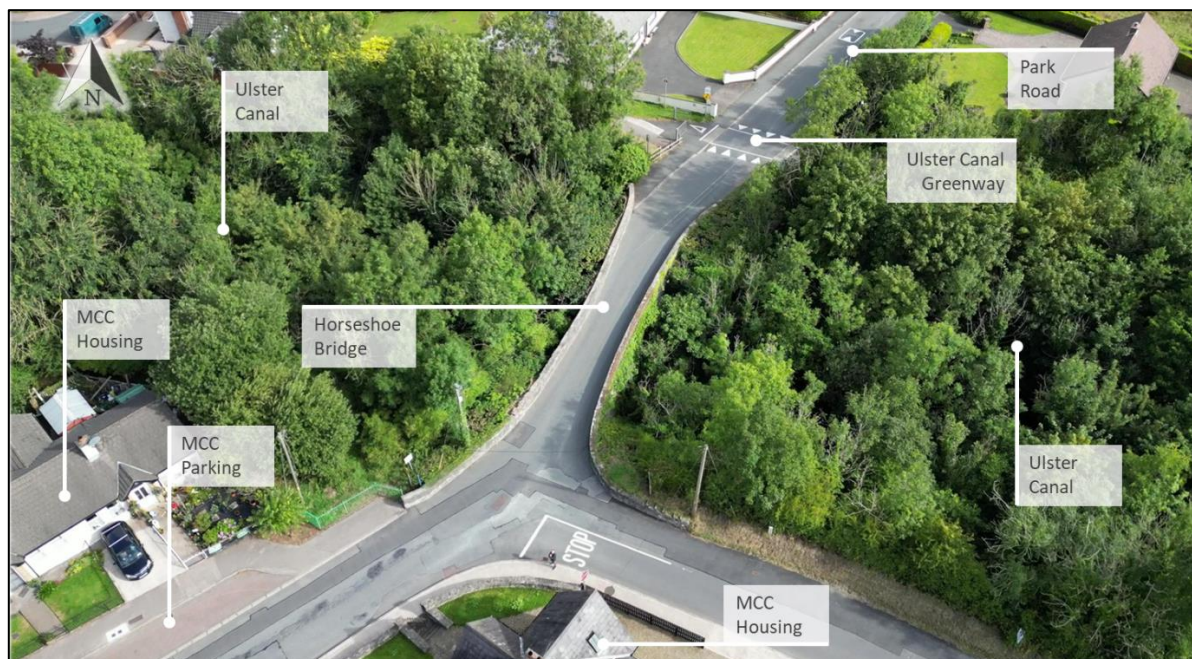


Figure 4-2 - Aerial View of Horseshoe Bridge

On the south side of the Bridge, the carriageway is 5.9m wide (approx.). Several parallel parking bays are located on the southwest side. Footpaths are located on the southeast and southwest sides. The footpaths

terminate in advance of the Bridge. Mullaghmatt side road (T-junction) is located on the southeast side. A view of the south side of the Bridge (facing north) is shown in Figure 4-3.



Figure 4-3 - Road cross section on south side of Horseshoe Bridge

The carriageway width on the Bridge varies and is 3.75m (min.) See Figure 4-4 for a view of the carriageway on the Bridge deck.



Figure 4-4 - Road cross section over Horseshoe Bridge

The carriageway width on the north side of the Bridge is 6m (approx.). A footpath is located on the northwest side. This footpath terminates in advance of the Bridge. The Ulster Canal Greenway intersects the roadway on the north side of the Bridge. See Figure 4-5 for a view of the north side of the Bridge (facing north).

There are no existing active travel provisions on the existing Bridge. This is an unsafe arrangement for non-motorised users.



Figure 4-5 - Road cross section on north side of Horseshoe Bridge

4.1.2. Horseshoe Bridge details

Horseshoe Bridge is listed on the National Inventory of Architectural Heritage (NIAH) with registration number 41303015. The bridge is separately listed as a Protected Structure in the Monaghan County Development Plan, Reference ID: Local 18. The Bridge carries Park Road over the disused Ulster Canal. It is a 5.8m single-span masonry arch structure. Masonry retaining walls support the road on both approaches. Please see Figure 4-6.



Figure 4-6 - Horseshoe Bridge west elevation

4.1.3. Junctions

Mullaghmatt Road intersects with Park Road at a T-junction on the southeast side of the Bridge. The Ulster Canal Greenway crosses Park Road on a raised table on the north side of the existing Bridge.

4.1.4. Public Transport

There are no bus stops within the extents of the scheme on Park Road.

4.1.5. Pedestrian & Cycle Facilities

There are footpaths on the northwest, southeast and southwest sides of Park Road. The footpaths do not extend over Horseshoe Bridge. There are no designated cycling facilities along this section of Park Road.

4.1.6. Collision History

No collisions have been recorded at this location in the recent past.

5. Description of Proposed Scheme

5.1. Preferred Option

Following the completion of a detailed Options Appraisal, undertaken in line with the Department of Transport's Common Appraisal Framework, the Preferred Option for the new Horseshoe pedestrian and cycling bridge is the construction of a new footbridge and embankments to the west side of the existing Bridge. Please refer to Appendix A for the Planning drawings which outlines the proposal. The proposed works are outlined as follows:

- A new pedestrian and cycle Bridge will be constructed on the west side of the existing Horseshoe Bridge.
- Pedestrians and cyclists traveling northbound and southbound will use the new bridge to cross the Ulster Canal.
- The Ulster Canal Greenway crossing will be a raised crossing with traffic signals.
- A new raised crossing with traffic signals will be established on the south side of the Bridge, to the south of the T-junction.
- A new segregated cycle track will be provided on Park Road, north of the Greenway, to enable southbound cyclists to access the Greenway crossing.
- Southbound cyclists will cross Park Road at the Greenway crossing, continue south across the new bridge and re-join the southbound carriageway via the new crossing on the south side of the bridge.
- Northbound and southbound motorists will continue to use the existing carriageway. Traffic flow across the existing Bridge will be regulated using a traffic signal shuttle system. Traffic signals will also be established on the Mullaghmat side road at the T-junction.
- A clear zone will be established on the south side of the Bridge to facilitate unobstructed access to an existing private entrance.

5.1.1. Structures

The proposed Bridge is a 27m single span, precast beam and slab structure which will be made integral with the abutments (see Figure 5-). The superstructure will comprise a single pretensioned W-beam with an in-situ concrete deck slab which varies in width from 3.0m (min) to 4.4m to accommodate the curved plan of the existing Bridge structure (refer to Figure 5-). The substructure will comprise full height abutments with wingwalls, founded on spread footings.

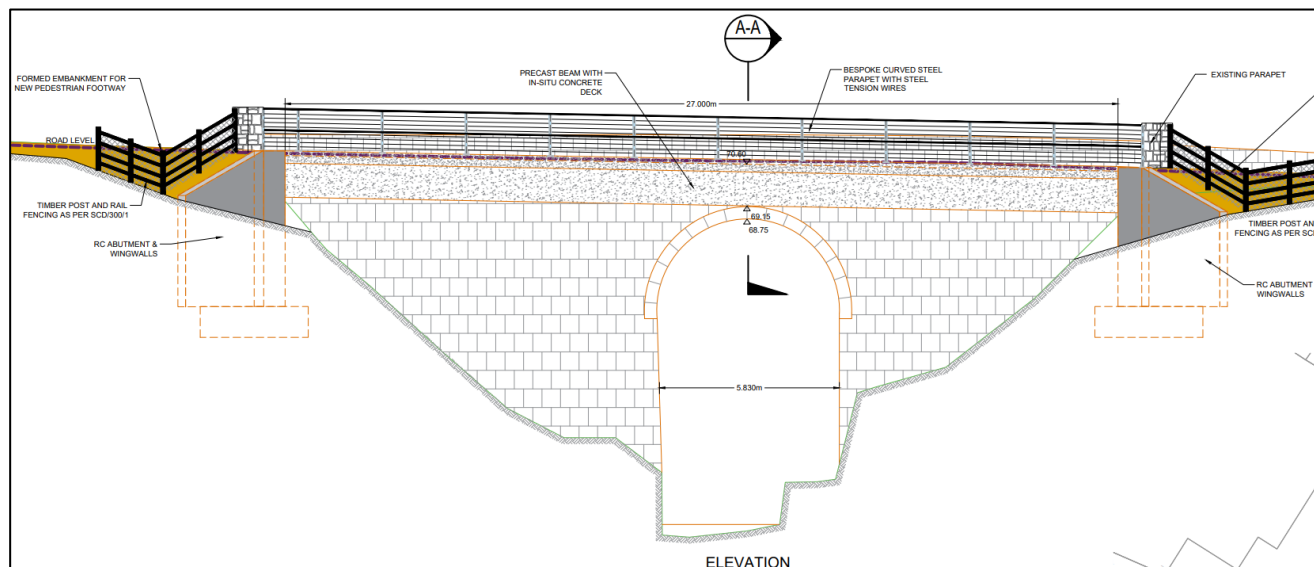


Figure 5-1 - Elevation of proposed Bridge

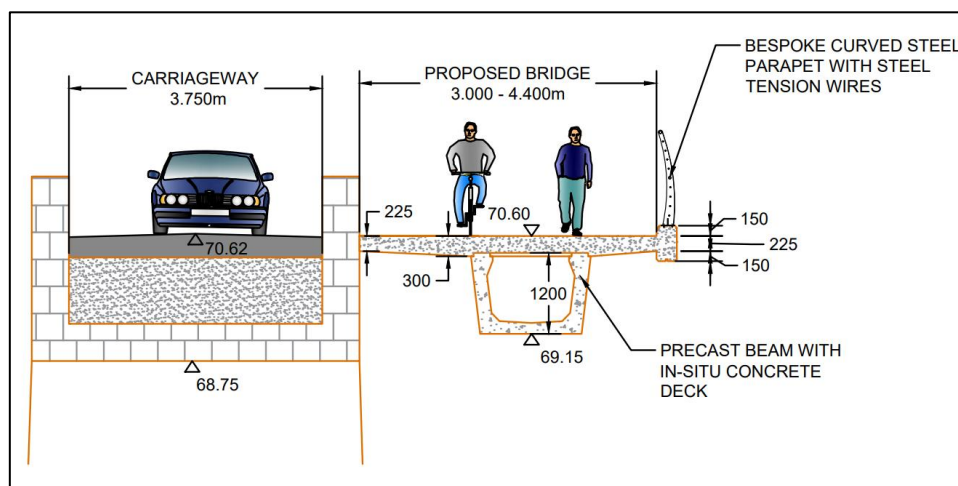


Figure 5-2 - Cross section of proposed Bridge

The Bridge length was selected to span across the full width of the canal, avoiding the need for a central support, and to maintain an unobstructed open view of the existing masonry Bridge. The proposed structure will be adjacent to the existing Bridge but there will be no load transfer between the structures.

To ensure the safety of pedestrians and cyclists, a 1.45m high steel parapet will be installed on the outer edge of the new Bridge. The final parapet form will be determined at Detailed Design stage. The existing Bridge parapet will remain on the inner edge. Additionally, a slip resistant surfacing layer will be applied to the top surface of the deck. Consideration will be given to an extra-high outer parapet or bridge enclosure during the detailed design phase.

The precast beam solution facilitates a straightforward construction process, as the beams can be easily craned into position.

5.2. Key Ancillary Elements

5.2.1. Junctions & Entrances

A stop line and traffic signals will be installed to the Mullaghmatt T-junction. This will facilitate the operation of the proposed traffic shuttle system across the existing Bridge.

5.2.2. Pedestrian Crossings

The raised pedestrian/cyclist crossings on the north and south side of the Bridge will meet the requirements of the Design Manual for Urban Roads and Streets (DMURS) guidelines (Section 4.3.2) and the Traffic Sign Manual (Section 7.16).

5.2.3. Drainage

The proposed works is unlikely to have a significant impact on the drainage of the main carriageway. Currently, the plan is to construct new footpaths and cycle tracks that will generally slope away from the road and discharge into nearby grass verges. However, the drainage specifications for the raised footpaths and Bridge deck will be developed as part of the detailed design phase.

5.2.4. Lighting & CCTV

The proposed infrastructure will be lit in accordance with current best practices and design guidelines for public lighting. To improve energy efficiency, it is recommended that all lighting within the scheme, including both new and existing fixtures, use LED technology. The details of this upgrade will be determined during the detailed design phase. The lighting will be designed to be wildlife sensitive.

There is an existing CCTV pole located on the north side of the existing bridge on the Ulster Canal Greenway. Consideration will be given to providing CCTV coverage to the new bridge with a view to deterring fly-tipping.

5.2.5. Pavements

In line with the National Cycle Manual's guidelines for providing the highest quality of service for cyclists, it is recommended to use a smooth asphalt surface course (SMA or AC10) for the proposed footpath/cycle track. Tactile paving will be installed as shown on the Preliminary Design Drawing.

To ensure that the carriageway pavement is in good condition, a pavement condition survey will be conducted to identify whether any repair works are needed. Based on the survey results, appropriate measures will be taken to maintain the quality of the carriageway pavement, ensuring that the road remains safe and accessible for all users.

5.2.6. Services

At the outset of the project, utility companies were contacted seeking information relating to their plant and ducting at the bridge. The following information was received.

Table 5-1 - Summary of Utility Companies' Infrastructure

Service Provider	Services Present
BT	No
Eir	Yes, underground through bridge
Enet	Yes, underground through bridge
ESB	Yes – overhead cables and light poles
GNI	No
Irish Water	Yes – Watermain underground through bridge, foul water services
Virgin Media	Unconfirmed

5.2.7. Land Take

The land take area is indicated in the preliminary design drawing, and it has been determined that no private land acquisition is necessary.

5.2.8. Tree Removal and Proposed Landscaping

To accommodate the provision of the necessary infrastructure, the proposed scheme requires the removal of trees/tree groups over the construction area and working area (6m offset approx. from permanent works). A tree survey has been undertaken in the vicinity of the bridge and based on the preliminary design. The expert advice of an arboriculturist has been used to determine the value, age, and condition of all trees/tree groups in the vicinity. A tree impact statement has been produced by the arboriculturist, the values from which are summarised in Appendix G. Landscaping, in the form of replacement trees and new trees is proposed and will be finalised in the Detailed Design Phase. The new embankment fill will be landscaped and sown with pollinator friendly species in compliance with Development Plan Policy HLP 6.

6. Environment Assessments

6.1. Appropriate Assessment

As part of the Preliminary Design Phase a Screening for Appropriate Assessment (AA) Report was undertaken (Atkins ref. 5213957DG0045, as contained within Appendix C). The purpose of the Screening for Appropriate Assessment Report is to determine the likelihood of significant effects, if any, that the proposed project could have on Natura 2000 sites either alone or in combination with other plans or projects.

Following the assessment detailed in this report, it can be concluded beyond reasonable scientific doubt that the proposed development will not, either individually or in combination with other plans or projects, give rise to any impacts which would constitute significant effects on Slieve Beagh SPA (site code: 004167) or any other Natura 2000 sites or any UK Protected Sites, in view of their conservation objectives.

Thus, Atkins recommended that it is not necessary for the proposed project to proceed to Appropriate Assessment. However, the competent authority will ultimately determine whether an AA is required or not.

6.2. Environmental Impact Assessment

As part of the Preliminary Design Phase an Environmental Impact Assessment Screening Report was prepared (Atkins ref. 5213957DG0046, as contained within Appendix B). The purpose of this report is to determine whether the project requires the preparation of an Environmental Impact Assessment Report (EIAR).

It is concluded that the proposed active travel bridge development is not a development type identified in Schedule 5 Part 1 or Part 2 of the Planning and Development Regulations 2001, as amended. There is no requirement under the EIA Directive for the proposed development to be subject to EIA.

7. Impact of the Proposed Scheme

7.1. Pedestrians, Cyclists, Traffic & Transportation

7.1.1. Pedestrians

The proposed design will offer a safe, accessible, and attractive option for pedestrians and cyclists to cross the canal. The new route will connect with existing footways on either side of the Bridge. Additionally, new, and improved crossings will be installed on both sides of the Bridge, ensuring safe and easy passage for pedestrians crossing Park Road.

The 2 no. new crossings will improve access and permeability for residents of Mullaghmatt residential estate on the south side of the Bridge to and from the Ulster Canal Greenway on the north side of the Bridge. To ensure that the new route is inclusive for all users, features such as tactile paving, flush kerbs, and raised crossings will be provided throughout. These features will be particularly beneficial for users with visual or mobility impairments.

7.1.2. Cyclists

The installation of controlled and formalised cycling facilities across the Ulster Canal will significantly enhance the safety of cyclists traversing Park Road and the Ulster Canal Greenway. With priority given to cyclists at traffic lights, cyclists will have a safer means of crossing Park Road. Furthermore, the introduction of high-quality cycling infrastructure will offer an appealing route for cyclists, linking numerous residential, educational, and commercial areas.

7.1.3. Vehicular Traffic

To enhance vehicular traffic over the existing Horseshoe Bridge that crosses the Ulster Canal, the following benefits will be realised:

- The current give-and-take traffic system will be replaced with a controlled traffic signal shuttle system.
- Drivers will no longer have to share the narrow road over the Horseshoe Bridge with cyclists and pedestrians.

Pedestrians and cyclists will have priority at the traffic signalised crossings, which may lead to increased journey times for vehicle traffic. A traffic analysis has been carried out to understand the impact of introducing lights (refer to Appendix D). It is estimated that the average peak AM and PM waiting times will be 20 seconds only.

The proposed measures will reduce the likelihood of conflicts between all road users, ultimately improving safety. Moreover, the improvements to pedestrian and cycling infrastructure will encourage a modal shift away from private vehicles, leading to a corresponding decrease in traffic volumes locally.

7.1.4. Road Safety

The scheme's preliminary design has been subject to an independent Stage 1 Road Safety Audit and Stage 1 Quality Audit (Appendix H), the findings of which will be accounted for in the proposals; and it will be subject to Stage 2 and 3 Road Safety Audits upon completion of the Detailed Design and after Construction, respectively.

7.1.5. Construction Traffic

During the construction phase, vehicular movement will increase in the immediate area, and temporary vertical elements such as hoarding or protective fencing, may be put in place. All construction impacts will be temporary. Prior to the commencement of works, the contractor should prepare a Construction Environmental Management Plan in line with best practice measures to avoid and minimise potential impacts on sensitive environmental receptors that could potentially occur during the construction phase.

7.2. Landscape & Visual

The proposed bridge location has been designed to minimise the requirement for land take, no private land take is necessary.

To accommodate the provision of the necessary infrastructure, the proposed scheme does require the removal of trees/tree groups adjacent to the protected structure. A targeted tree survey has been undertaken based on the preliminary design and the expert advice of an arboriculturist has been used to determine the value, age, and condition of all trees/tree groups. Replacement trees will be proposed at adjacent locations where possible. A net gain in trees is proposed as part of the scheme which will have a positive visual impact.

Molloy & Associates (Conservation Architects) have described the visual impact as follows:

- The proposed bridge is positioned above the single arch and aligns in height with the bridge capping, it makes every effort to minimise visual change from the public realm.
- The bridge structure and flanking walls remain intact in this proposal, further minimizing visual impacts.

7.3. Built & Cultural Heritage

An Archaeological Impact Assessment and Architectural Heritage Impact Assessment were undertaken by Archer Heritage Planning (Archaeologist) and Molloy & Associates Conservation Architects respectively (Appendix E).

Archaeological Impact Assessment Summary

There is low potential for the survival of archaeological remains at Horseshoe Bridge. It is recommended that; Continuous Archaeological Monitoring of all ground works take place at Horseshoe Bridge. All work is to be undertaken under licence to Department of Housing, local Government and Heritage (DHLGH).

Architectural Heritage Impact Assessment Summary

The existing bridge, whilst of significant heritage interest and contributing to a wider urban character of heritage interest, has the capacity to accommodate the proposed secondary bridge as proposed.

The existing bridge has heritage buildings in proximity. In response, the intervention has been designed to respect the character of these buildings and their enclosures, as interacting with a shared urban realm.

Following receipt of statutory consent and commencement of works, improved site access following clearance of works will enable a detailed survey of the existing structure to be carried out. Findings, which will be submitted with the Authority by way of qualification of the proposal, will inform a strategy for repair and conservation of vulnerable masonry at the existing bridge, together with improved presentation of its respective environs - all in order to visually enhance the heritage significance.

7.4. Land Use

Land use zoning around the Horseshoe Bridge includes 'Existing Residential' and 'Recreation and Amenity'. As per Table 9.3 of the MCDP, recreational facilities are 'Open for Consideration' on all land use zonings. A use that is 'open for consideration' is one that by reason of its nature and scale would not be in conflict with the primary zoning objective for the area subject to the proper planning and sustainable development of the area. The proposed scheme will provide Active Travel Infrastructure that can be used as a recreational amenity.

7.5. Other Environmental Impacts

Other Environmental Impacts (noise, air quality, etc) are as noted in the EIA Screening Report, which as noted in Section 6 is recommended to be screened out.)

7.6. Conclusion

The preliminary design for the scheme has been undertaken in line with DMURS and the NCM, developing the preferred options as outlined in the *Feasibility Study and Options Selection & Appraisal Report*.

The proposed improvements realised as part of the scheme align with the aims and objectives, as follows:

- **Safety (Conflict)**
 - Pedestrians and cyclists travelling over the Ulster canal will be segregated from vehicular traffic.
 - The potential for conflicts will be reduced through the provision of formalised crossing facilities on both sides of the Horseshoe Bridge.
- **Safety (Priority)**
 - Pedestrian and cyclists' priority will be improved at all junctions.
- **Safety (Vulnerable Road Users)**

- Vulnerable road will shall be catered for through formalised crossing facilities, footways, and the provision of kerbing and tactile paving in line with best practice.
- **Physical Activity**
 - The provision of the proposed facilities will bring enhancements for pedestrians and cyclists, thereby promoting physical activity, particularly for those travelling to the adjacent residential, recreational, commercial, and educational areas.
- **Accessibility and Social Inclusion**
 - Similarly, as with Physical Activity, accessibility and social inclusion will be improved for those road users who rely on a non-motorised means of transport.
- **Environment**
 - The impact on the environment is deemed to be minimal. An Environmental Impact Assessment screening and an Appropriate Assessment screening have both screened-out the proposals.
- **Integration and Economy**
 - From these benefits the proposals will offer good value for money, both at a strategic level, and to those individual users for whom the scheme will enable a modal switch from the private car to walking /cycling; and aligns with national, regional, and local policies, as outlined in Section 3.
- **Localised Objectives**
 - The proposals offer a sustainable alternative to workers and students and a valuable leisure amenity for the local community. Encouraging and promoting active travel which has clear sustainability and health benefits.
 - The proposal will provide a safe link for residents living in the town to the existing Ulster Canal Greenway which passes through Monaghan Town and is planned to be extended east across the border to Middletown in Co. Armagh and west to Smithborough and Clones in the coming years.

8. Submissions

Submissions or observations with respect to the proposed development, dealing with the proper planning and sustainable development of the area in which the development would be situated, may be made in writing to the Local Authority; Monaghan County Council, Planning section, No. 1 Dublin Street, Co. Monaghan, H18 X982. Submissions shall be made on or before the deadline as noted on Monaghan County Council's website with respect to the scheme (www.monaghan.ie).

Submissions should be headed: "Active Travel Infrastructure - Mullaghmat (Horseshoe) Bridge".

All comments, including names and address of those making submissions regarding this scheme will form part of the statutorily required report to be presented to the monthly meeting of Monaghan County Council.

Accordingly, these details will be included in the meeting minutes of that meeting and may appear in the public domain.

Appendices



Appendix A. Drawings

Appendix B. EIA Screening Report

Appendix C. AA Screening Report

Appendix D. Traffic Analysis Report

Appendix E. Archaeological & Architectural Heritage Impact Assessment

Appendix F. Compliance with MCDP

Appendix G. Tree Impact Summary

Appendix H. Stage 1 Road Safety Audit & Stage 1 Quality Audit

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