AtkinsRéalis

Westmeath County Council

May 2026
0086381

ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Route F Feasibility, Option Selection and Appraisal Report

Westmeath County Council

Notice

This document and its contents have been prepared and are intended solely as information for Westmeath County Council and use in relation to Athlone Active Travel Schemes Bundle.

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Document history

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Client signoff

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1. Introduction

1.1 Overview

Westmeath County Council (The Client/WCC) as the Contracting Authority and National Transport Authority (NTA), appointed AtkinsRéalis (the Consultant) to provide Engineering-led Multi-disciplinary Consultancy and Design services for the concept development & option selection, preliminary design and statutory processes of active travel provisions and associated works on the Athlone Active Travel Schemes Bundle.

The following are the key service requirements of the proposed project:

1. Identification of constraints and development of scheme options report including multi-criteria assessment of the proposed design options;
2. Development of a preliminary design and associated design report for the preferred option;
3. Obtain necessary statutory approval / consent for the proposed scheme;

The project is located in Athlone town, County Westmeath. The scheme extents and routes are highlighted in Figure 1-1. Figure 1-1 outlines 6 separate routes.

This report outlines active travel feasibility and options relating to Route F.

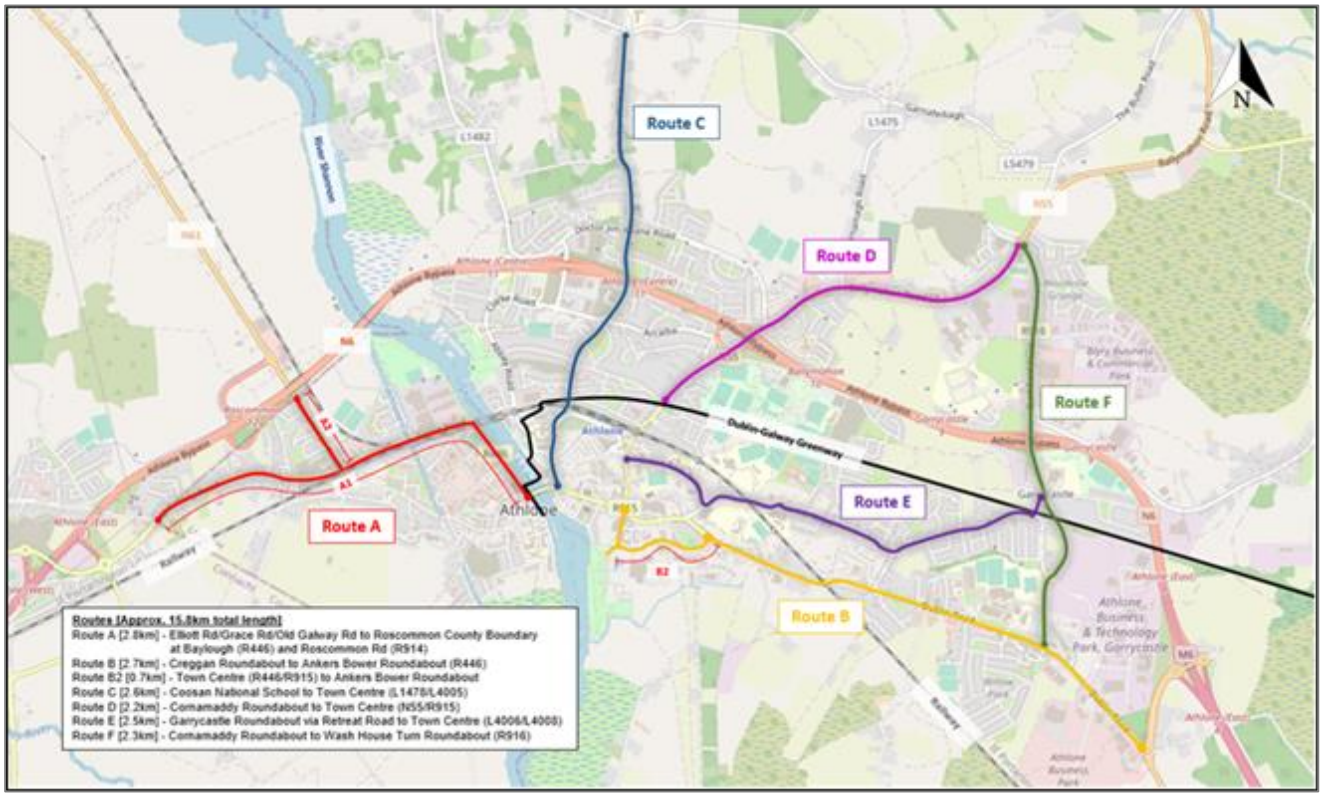


Figure 1-1 - Site Location and Pathfinder

The project is located in Athlone, a town on the border of counties Roscommon and Westmeath. It is situated on the southern coast of Lough Ree. In total there is approximately 15.8 km of active travel planned for Athlone. The 15.8 km identified has been divided into 6 separate sub routes, these routes are as follows:

- Route A [2.8 km] - Elliott Rd/Grace Rd/Old Galway Rd to Roscommon County Boundary at Baylough (R446) and Roscommon Rd (T914).

- Route A1 [2.3 km] - Tesco Express in Boylagh to Luan Gallery and St. Peter and Paul church (R446).
- Route A2 [0.5 km] - Junction of the Old Galway Road (R446) and Roscommon Road (R914) to the Roscommon County boundary (R914).

- Route B [2.7 km] - Creggan Roundabout to Town Centre (R446).
- Route B2 [0.7km] - Town Centre (R446/R915) to Ankers Bower Roundabout.
- Route C [2.6km] - Coosan National School to Town Centre (L1478/L4005).
- Route D [2.2km] - Cornamaddy Roundabout to Town Centre (N55/R915).
- Route E [2.5km] - Garrycastle Roundabout via Retreat Road to Town Centre (L4006/L4008).
- **Route F [2.3km] - Cornamaddy Roundabout to Wash House Turn Roundabout (R916).**

The purpose of this report is to present the feasibility study for the scheme; the options proposed; and the assessment and appraisal of these options for Route F.

1.2 Purpose of the Report

The purpose of this report is to present the feasibility study for Route F of the proposed scheme, the options proposed and the assessment and appraisal for the options, collectively referred to Route F under the project name: “Athlone Active Travel Schemes Bundle”. The report also comprises of the identification and evaluation of constraints following the methodology set in the National Transport Authority’s (NTA) 2020 Project Approval Guidelines (PAG).

1.3 Project Objectives and Expected Benefits

The overall purpose of the Athlone Active Travel Schemes Bundle is to provide upgraded pedestrian and cycling facilities in addition to facilitating any necessary infrastructure provisions to cater for future public transport upgrades.

The main aims of this project are:

- To design new/upgrade existing cycleways/pedestrian footpaths, in order to reduce public dependence on private vehicles as a primary mode of travel, using best practice standards and complementing the surrounding environment.
- To meet and accommodate WCC and stakeholder requirements.
- To meet planning, statutory and procurement requirements.

The Project Objectives are:

- Reduced public dependence on private vehicles as a primary mode of travel.
- Integration of safe and convenient alternatives.
- Enhance the area and contribute to a more attractive place.
- Provide safe pedestrian and cyclist facilities for school children and students to travel to and from school.
- Create opportunities to be physically active and reduce the negative consequences of car-based commuting.
- Provides sustainable travel options.
- Enhanced safety of Vulnerable Road Users.

The objectives for the scheme are based on multi criteria requirements outlined by the Department of Transport in their report *‘Transport Appraisal Framework (June 2023)’* (TAF). The multi-criteria headings are as follows:

- **Transport User Benefits and Other Economic Impacts:** To improve economic welfare of transport network users measuring the connectivity with existing and proposed public transport facilities as well as other economic impacts related to costs of construction and maintenance.
- **Accessibility Impacts:** To improve accessibility to key services, such as retail, healthcare and educational facilities and other high employment areas. Improvements for all road users and bring social inclusion benefits to those for whom non-motorised means are the predominate form of transit. This criterion will also assess four of the five main requirements for cycle-friendly infrastructure according to the Cycle Design Manual, which are: coherence, directness, comfort and attractiveness.
- **Social Impacts:** To improve accessibility for the socially, economically and physically disadvantaged groups; to provide increased health benefits by raising activity levels and to ensure gender impacts are addressed.
- **Land Use Impacts:** To integrate the scheme into strategic land use planning / strategies as set out in national and regional policies and guidelines.
- **Safety Impacts:** To reduce the potential for conflict between all road users along the routes through the provision of a facility which is in line with the current standards. The Scheme will seek to:
  - Improve safety and provide a better environment for vulnerable road users within the study area
  - Improve security by providing adequate lighting and visibility to deter anti-social behaviour.
- **Climate Change Impacts:** To reduce gas emissions in the transport sector by encouraging active travel through improved infrastructure and also to improve the robustness of infrastructure to be able to resist effects of climate change (extreme weather events).
- **Local Environmental Impacts:** To minimize impacts on the receiving environment, considering air quality, noise and vibration, biodiversity, water resources and soil quality, landscape and visual quality and cultural and heritage impacts.

2. Policy and Design Guidance

2.1 Policy Review

This chapter outlines the review of the relevant transport policies, guidance, and studies for the development of the Athlone Active Travel Schemes Bundle. Many long-lasting plans and policy objectives at all levels have been used to complete the policy review element of the Transport and Mobility Strategy. Furthermore, these will be used to inform the design decisions and to achieve the goals and objectives of the proposed network. The breakdown of the of policies reviewed and detailed in this section are listed in the following order:

- National Level Policy;
- Regional Level Policy; and
- Local Level Policy

2.2 National Level Policy

2.2.1 National Planning Framework (Project Ireland 2040)

Project Ireland 2040 – National Planning Framework (NPF) provides a high-level strategic planning framework to guide development and investment. Athlone is located at the Midland Region, which alongside the Eastern region, has experienced population growth at more than twice the national rate. A population of 2.85 million is forecast by 2040 in the Eastern and Midland Region; 500,000 more people than lives there at present.

The following policy objectives are relevant to the Athlone Active Travel Schemes Bundle:

- **National Policy Objective 4:** Ensure the creation of attractive, liveable, well-designed, high-quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.
- **National Policy Objective 27:** Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments and integrating physical activity facilities for all ages.
- **National Policy Objective 64**: Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions.

2.2.2 National Development Plan 2021 – 2030

The National Development Plan 2021-2030 (NDP) sets out the investment priorities that will underpin the successful implementation of the NPF. The NDP steers planning policy and guides investment decisions at a national, regional, and local level. Relevant priorities identified in the NDP are summarized below.

- **NSO 2 Enhanced Regional Connectivity:** The NDP lists the strategic investment priorities with active travel being the most important, followed by public transport, and finally national roads. In line with this prioritization, the plan highlights the need to deliver high-quality greenways and additional walking and cycling infrastructure across Ireland to support the shift to active travel modes.
- **NSO 4 Sustainable Mobility**: The NDP puts the highest priority for mobility investment on active travel. It notes that increasing modal share of walking and cycling is critical in ensuring Ireland meets its climate action goals.

- **NSO 8 Transitioning to a Climate-Neutral and Climate-Resilient Society**: The NDP commits to encouraging a significant modal shift away from fossil-fuel based transport. A key part of this is the provision of cycling and walking routes to provide sustainable transport options.

2.2.3 National Investment Framework for Transport in Ireland (NIFTI)

The National Investment Framework for Transport in Ireland (NIFTI) defines the Department of Transport's priorities for the future investment in the transport network to support the implementation of the National Development Plan. NIFTI defines the investment priorities for transportation in Ireland as:

- Mobility of people and goods in urban areas
- Protection and renewal
- Enhanced regional and rural connectivity
- Decarbonisation

Figure 2-1 - NIFTI Four Investment Priorities (source: gov.ie/transport)

To achieve these goals, NIFTI defines the modal hierarchy and transportation investment priorities. NIFTI gives the highest modal priority to active travel followed by public transport and finally private vehicles. This means that, when possible, active transport options should be considered first when attempting to achieve the stated investment priorities.

In addition to modal priority, NIFTI also defines an intervention hierarchy. This hierarchy states that investments should be made in the following order:

- Maintenance of existing infrastructures and assets
- Optimisation of the existing network and infrastructure
- Improvements to the existing infrastructure
- Construction of new infrastructure.

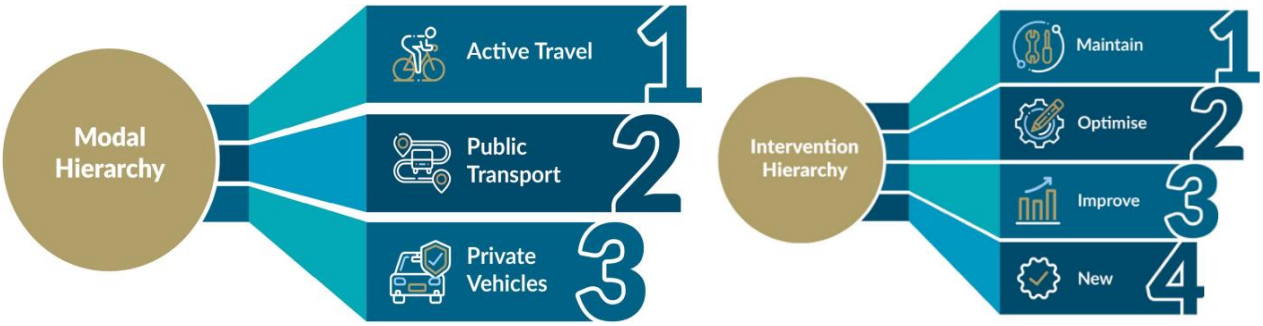


Figure 2-2 - NIFTI Modal and Intervention Hierarchies (source: gov.ie/transport)

As per the Intervention Hierarchy, NIFTI places emphasis on the use of existing assets (through maintenance, optimisation, or improvement), over the development of new. 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 a number of 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 as a result 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.

2.2.4 National Sustainable Mobility Policy

The Department of Transport published the National Sustainable Mobility Policy in April 2022. The Policy sets out the policy framework for active travel and public transport to support Ireland's overall requirement to achieve a 51% reduction in greenhouse gas emissions by 2030. The new policy will primarily focus 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 will outline 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 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. The Athlone Active Travel Schemes Bundle is in alignment with this plan and would contribute to the implementation of several key actions identified in the plan.

Figure 2-3 below illustrates the benefits of sustainable mobility which will be achieved by delivering the Athlone Active Travel Schemes Bundle.

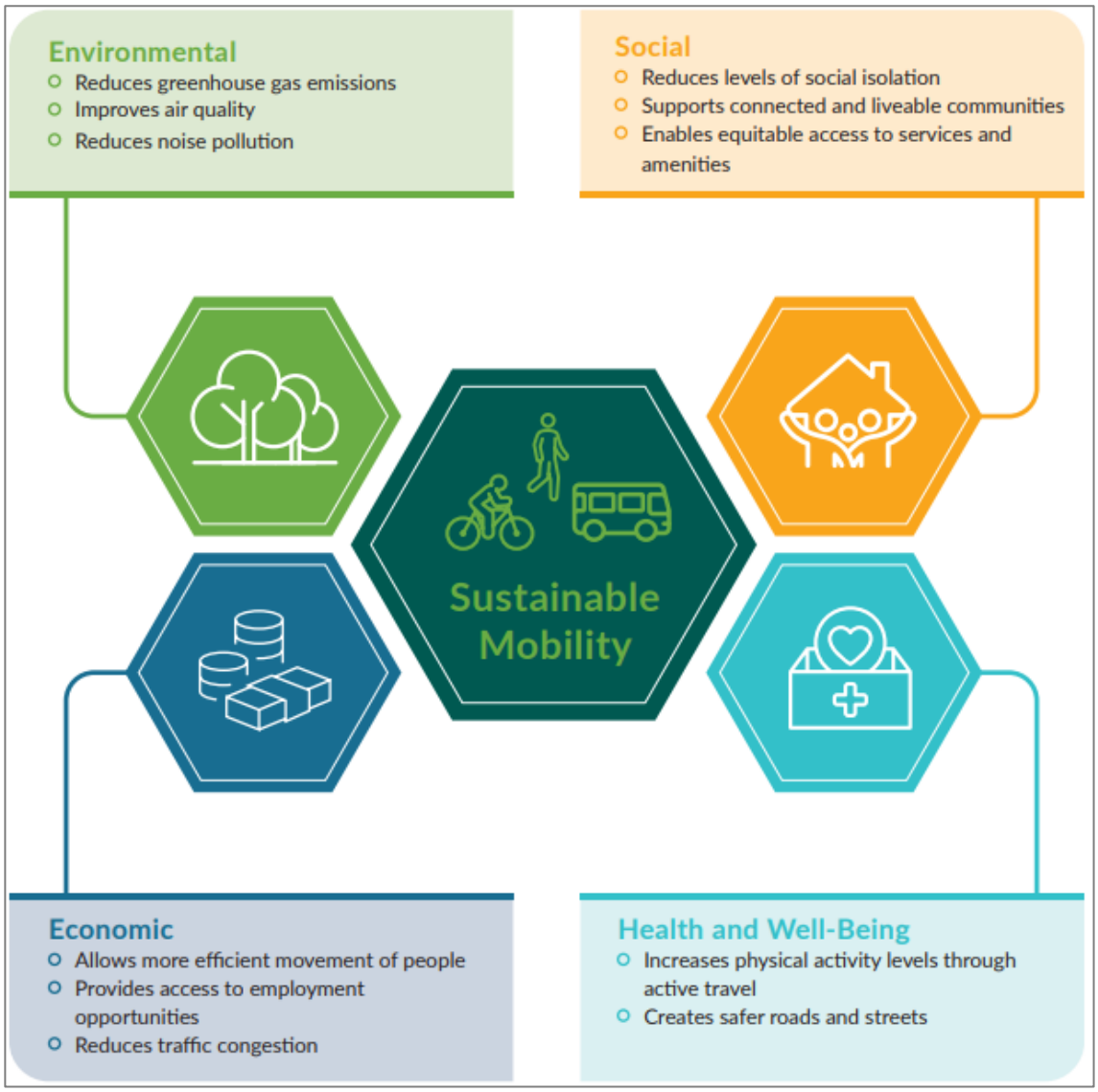


Figure 2-3 - Benefits of Sustainable Mobility

According to the NSMP, the above benefits can be achieved through ten goals, all of which are guided by three key principles, shown in Table 2-1.

Table 2-1 - NSMP Principles and Goals (source: National Sustainable Mobility Plan)

Principles	Goals
Safe and Green Mobility	1. Improve mobility safety.
	2. Decarbonise public transport.
	3. Expand availability of sustainable mobility in metropolitan areas.
	4. Expand availability of sustainable mobility in regional and rural areas.

	5. Encourage people to choose sustainable mobility over the private car. People Focused Mobility.
People Focused Mobility	**6. Take a whole of journey approach to mobility, promoting inclusive access for all.**
	7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model.
	8. Promote sustainable mobility through research and citizen engagement. Better Integrated Mobility.
Better Integrated Mobility	**9. Better integrate land use and transport planning at all levels.**
	10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation.

2.2.5 Climate Action Plan 2024

The Climate Action Plan (CAP24) 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 Land use have all been assessed in the document with a roadmap laid out to deliver a reduction of emissions in each of these sectors between 2021 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 CAP24 states an objective of 125,000 extra walking, cycling and public transport 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. The CAP24 also mentions the Pathfinder Programme and how the projects will be delivered meeting key criteria as health, well-being, place-making, permeability and universal design.

Specific actions identified in the plan that relate to the Athlone Active Travel Schemes Bundle are listed below.

- **Action TR/24/11:** Advance roll-out of walking/cycling infrastructure in line with National Cycle Network and CycleConnects plans.
- **Action TR/24/08:** Support and promote a modal shift towards healthy active and sustainable mobility and sustainable mobility in the design and delivery of LDA developments. Plan to reduce travel by private car and design to optimise connectivity and access to sustainable and active travel. Promote mobility management planning and e-mobility as well as options for car sharing/clubs.

2.2.6 Healthy Ireland Strategic Action Plan 2021 – 2025

The vision of the 'Healthy Ireland Strategy 2021-2025' is to create a healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level and is everyone's responsibility.

This policy is developed to encourage walking and cycling by developing physical activities into daily life and decreasing dependency on private cars and replacing this trip with cycling and walking includes public transport

as well which will also improve local air quality. This can play a vital role in overall obesity reduction programme which also supports demand management study. This measure comprises of health, environmental and urban land aids. The document sets out four central goals for improved wellbeing and outlines clear routes and strategies to achieve these goals. These goals are as listed below:

- Increase the proportion of people who are healthy at all stages of life;
- Reduce health inequalities;
- Protect the public from threats to health and wellbeing; and
- Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland.

2.2.7 NTA CycleConnects

The National Transport Authority (NTA) has opened the public consultation process for proposals to develop new cycle networks across 22 counties, forming part of the CycleConnects: Ireland's Cycle Network programme. This includes an urban cycle network in Athlone and a county network in the rest of Westmeath and Roscommon.

The Athlone network includes existing greenways, along with proposed primary and secondary routes. Primary urban routes are seen as high-quality cycle routes that can accommodate a high volume of cyclists typical in most urban areas. These will look to feature on major desire lines in town centres and form radial and orbital cycle routes in the major towns and cities. The inter urban routes are on-road cycle routes to link all key settlements and destinations outside urban areas both within the county and into adjacent counties. These may have potential to provide off-road/segregated routes parallel to the existing road in later years.

The draft proposals envisage an extensive cycling network across the 22 counties, complementing the cycling plans already developed for the Greater Dublin Area (Meath, Kildare, Wicklow and Dublin). Together these plans will create an overall comprehensive cycle network for Ireland.

This Proposals are in line with Action 28 of the Government's "National Sustainable Mobility Action Plan 2022-2025". They were developed following consultation with all local authorities and align with Transport Infrastructure Ireland's (TII) proposed National Cycle Network. The Athlone Active Travel Schemes Bundle extents form part of the following links as identified within the NTA's "Proposed Athlone Urban Cycle Network", as shown in Figure 2-4.

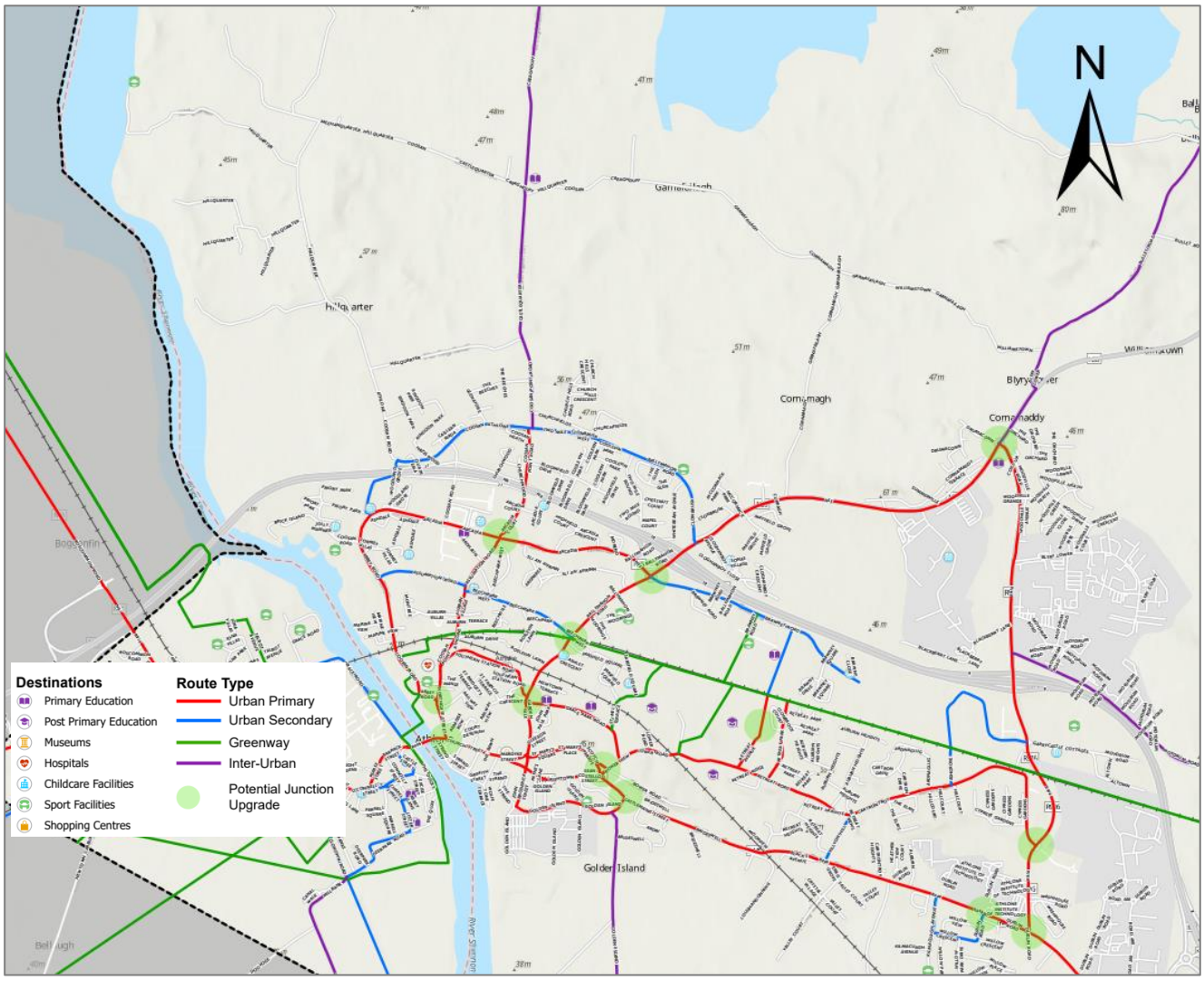


Figure 2-4 – NTA CycleConnects Routes in Athlone

The scheme extents form part of the following links as identified within the NTA's "Proposed Athlone Urban Cycle Network", as highlighted below for Route F.

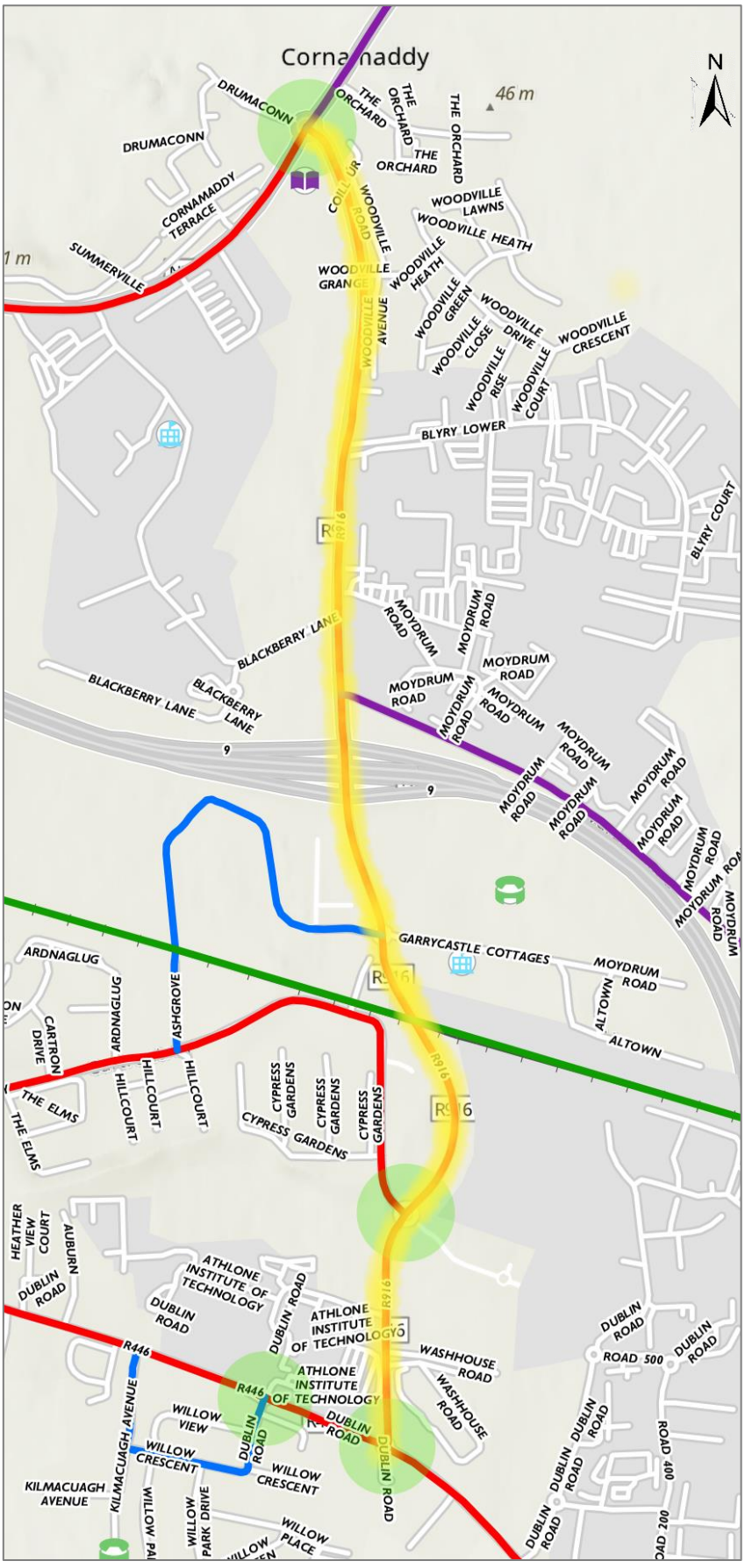


Figure 2-5 – Route F highlighted

2.2.8 National Cycle Policy Framework (NCPF) 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 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.

2.2.9 Get Ireland Active, 2016

- Healthy Ireland, a Framework for Improved health and wellbeing 2013-2025 is the national framework for seeking to improve the health and wellbeing of people living in Ireland. The framework identifies a number of broad inter-sectoral actions, one of which commits to the development of a plan to promote increased physical activity levels.
- Get Ireland Active aim is to increase physical activity levels across the entire population thereby helping to improve health and wellbeing. Get Ireland Active has developed a plan which will seek to ensure that no group is disadvantaged and recognises that targeted interventions are required to address and overcome barriers to participation which are experienced by some people.
- Get Ireland Active acknowledges the role that cycling can play in achieving physical activity targets. The plan highlights the importance of good planning to promote the use of cycling, stating that the layout of the environment has a significant impact on the levels of physical activity undertaken across age groups.
- "The built environment is an important determinant of physical activity behaviour. The way the built environment is designed, planned, and built can also act as a barrier to being active and can reinforce sedentary behaviour and car dependence."
- Cycling for transport or leisure is a form of physical activity that can easily be incorporated into the daily activities of many people.
- The development of cycling facilities in Athlone is a positive example of how the built environment can be developed to promote physical activity, improving the health and well-being of those that choose to travel by bike. Facilities like this will be used for a variety of journey purposes including travelling to work and school, which is an ideal opportunity to increase physical activity through everyday journeys.

2.3 Regional Level Policy

2.3.1 Regional Spatial and Economic Strategy for the Eastern and Midland Region, 2019-2031

The Regional Spatial and Economic Strategy is a strategic plan and investment framework to shape and manage growth in the Eastern and Midland Region. The RSES provides a roadmap for effective regional development identifying key strategic assets, opportunities and challenges and sets out policy responses to ensure the people's needs are met.

The document delivers a combination of response, design, and innovation in how the Eastern & Midlands Region does business, delivers homes, builds communities and values land-use – creating healthy places and promoting sustainable communities. The RSES introduces the concept of a Growth Framework to achieve this integration as it is considered that regional growth cannot be achieved in linear steps.

The "10-minute" settlement concept is proposed throughout the RSES as a means for delivering the land use and transport planning objectives, whereby a range of community facilities and services are accessible in short walking and cycling timeframes from homes or are accessible by high quality public transport to services in larger settlements.

The Strategy promotes cycling and walking as environmentally friendly, fuel efficient and healthy modes of transport to work, school, shopping and for recreational purposes. There are several Regional Policy Objectives (RPO) specifically promote the development of greenways in both urban and rural areas, as follows:

- **Regional Policy Objective (RPO) 4.4:** A cross boundary statutory Joint Urban Area Plan (UAP) for the Regional Growth Centre of Athlone shall be jointly prepared by Westmeath and Roscommon County Councils in collaboration with EMRA and NWRA. The UAP will support, the development of Athlone as an attractive, vibrant and highly accessible Regional Centre and economic driver for the centre of the Country.
- **RPO 4.7:** Support the development of a cross sectoral approach to promote Athlone as a key tourism destination in the Midlands, building on Fáilte Ireland's Hidden Heartlands brand and the forthcoming Shannon Tourism Masterplan to develop the recreation and amenity potential of waterways including the River Shannon and Lough Ree and the development of a greenway network including the Galway to Dublin Cycleway.
- **RPO 6.30:** Support existing smart city initiatives such as Smart Dublin and the All-Ireland Smart Cities Forum and support the development of smart city programmes in Athlone, Dundalk and Drogheda.
- **RPO 7.24:** Promote the development of a sustainable Strategic Greenway Network of national and regional routes, with a number of high-capacity flagship routes that can be extended and / or linked with local greenways and other cycling and walking infrastructure, notwithstanding that capacity of a greenway is limited to what is ecologically sustainable.
- **RPO 7.25:** Support local authorities and state agencies in the delivery of sustainable strategic greenways, blueways, and peatways projects in the Region under the Strategy for the Future Development of National and Regional Greenways.
- **RPO 8.13:** Support the Local Link Rural Transport Programme throughout rural areas of the Region.

The Regional Spatial and Economic Strategy states the transition to a low carbon society is a key challenge facing the region. Several primary areas are at the core of the transition strategy, in particular relevance to the Athlone Active Travel Schemes Bundle are the following areas:

- Sustainable development patterns which promote compact growth, reduce transport demand and encourage low carbon transport modes.
- Sustainable transport systems (people and freight).

2.3.2 Regional Spatial and Economic Strategy for the Northern and Western Region, 2020-2032

- **Regional Policy Objective (RPO) 3.7.1:** A cross-boundary Joint Plan shall be prepared by Westmeath County Council and Roscommon County Council in collaboration with the two Regional Assemblies to provide a coordinated planning framework for the future physical, economic, and social development of Athlone. The plan shall identify Athlone's functional urban area and adopt a boundary for the plan area in addition to the identification of strategic housing and employment development areas and infrastructure and investment requirements to promote greater coordination and sequential delivery of serviced lands for development, to realise Athlone's status as a Regional Growth Centre.
- **RPO 3.7.4:** Support the development of a cross sectoral approach to promote Athlone as a key tourism destination in the Midlands, building on Fáilte Ireland's Hidden Heartlands brand and the forthcoming Shannon Tourism Masterplan to develop the recreation and amenity potential of waterways including the River Shannon and Lough Ree and the development of a greenway network including the Galway to Dublin Cycleway.
- **RPO 3.7.16:** Promote Athlone as a sustainable transport hub, of national and regional importance and support the preparation of a joint Local Transport Plan between Westmeath and Roscommon County Councils in collaboration with transport agencies and key stakeholders to improve sustainable mobility in the town.
- **RPO 4.9:** To ensure provision is made for the expansion in accommodation, and facilities within key destination towns, such as Carrick on Shannon, Cavan, Roscommon Town and Athlone, together with necessary supporting infrastructural investments, including improvements in the public realm, transport links, accommodation, the night-time economy, and sustainable development of our natural and built economy.
- **RPO 4.10:** To ensure Orientation and Information Points targeted at 'Slow Tourism' market are provided at key Towns, such as Carrick on Shannon, Athlone, and Ballinasloe as an enabler for increasing bed-nights, and visitor numbers.
- **RPO 4.14:** Promote the development of integrated walking, cycling and bridle routes throughout the region as an activity for both international visitors and local tourists in a manner that is compatible with nature conservation and other environmental policies.
- **RPO 5.18:** The Regional Assembly shall collaborate with Local Authorities, Fáilte Ireland, Waterways Ireland, DTAS, and other relevant stakeholders in developing an integrated network of Greenways across the region's catchments. To support, and enable the development of sustainable Greenway projects, the NWRA will encourage and promote:

  (a) The advancement and growth of Greenways through several Key National and Regional Greenway Projects, which are high capacity, and which can in the medium/long term be extended and interlinked across County Boundaries and with Local Greenways, and other cycling/walking infrastructure.

  (b) Prioritisation of Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to the region and are regularly used by overseas and domestic visitors, and locals, thereby contributing to a healthier society through increased physical activity.

  (c) The appropriate development of local businesses, and start-ups in the vicinity of Greenway Projects.

  (d) The development of Greenways in accordance with an agreed code of practice.

  (e) Collaborative development of Greenways and Blueways, including feasibility and route selection studies to minimise impacts on environmentally sensitive areas.
- **RPO 5.19:** The Assembly supports the further development of Greenways as part of the Outdoor Recreational Plan for Public Lands and Waters in Ireland 2017-2021', as part of an overall improvement of facilities to enhance health and wellbeing across society.
- **RPO 6.26:** The walking and cycling offer within the region shall be improved to encourage more people to walk and cycle, through:

  (a) Preparation and implementation of Local Transport Plans for Galway Metropolitan Area, Regional Growth Centres and Key Towns, which shall encourage a travel mode shift from private vehicular use towards sustainable travel modes of walking, cycling and use of public transport.

  (b) Safe walking and cycle infrastructure shall be provided in urban and rural areas, the design shall be informed by published design manuals, included the Design Manual for Urban Roads and Streets (DMURS) and the NTA Cycle Manual.

  (c) Development of a network of Greenways.

- **RPO 6.50**: Continue to encourage Active Travel initiatives and where possible leverage technology and digital platforms to enhance the delivery of cycleway and walking infrastructure, particularly in our urban centres.
- **RPO 7.9:** Promote the provision of high-quality, accessible and suitably proportioned areas of public open spaces and promote linkage with social, cultural and heritage sites and buildings. In this process prioritise access for walking and cycling.

2.3.3 Westmeath County Council Development Plan 2021 – 2027

The Westmeath County Development Plan 2021-2027 state as an aim to "*achieve a sustainable, integrated and low carbon transport system with excellent connectivity within and to Westmeath*" which will be achieved by improving existing transport infrastructure in the county. The delivery and maintenance of a multi-modal transport network is essential to improve life quality and social cohesion, according to the plan.

The census 2016 outlined Westmeath as one of the counties with highest car usage in Ireland, with 72.9% of commutes to work done by private cars and just 3.5% done by public transport. In order to promote a modal shift into more sustainable transport modes, the council is aiming to achieve a balanced and sustainable pattern of movement. The plan also highlights that walking and cycling are the most sustainable modes of transport and key components to movement and accessibility.

The following policies and objectives have relevance in relation to the Athlone Active Travel Schemes Bundle scheme:

- **Core Strategy Policy Objectives (CPO) 2.3:** Prepare a joint statutory Joint Urban Area Plan (UAP) for Athlone with Roscommon County Council in collaboration with EMRA and NWRA.
- **CPO 2.4:** Promote Athlone as a sustainable transport hub, of national and regional importance and support the preparation of a Joint Transport Plan between Westmeath and Roscommon County Councils in collaboration with transport agencies and key stakeholders to improve sustainable mobility in the town.
- **CPO 2.7:** Promote consolidation in Self-Sustaining Growth Towns coupled with targeted investment where required to improve local employment, services, and sustainable transport options and to become more self-sustaining settlements, in line with settlement specific policy contained within Chapter 8 of the plan.
- **CPO 2.16:** Promote the integration of land use and transportation policies and to prioritise provision for cycling and walking travel modes and the strengthening of public transport.
- **CPO 3.7:** Apply higher densities to the higher order settlements of Athlone and Mullingar to align with their roles as Regional Growth Centre and Key Town, subject to good design and development management standards being met.
- **CPO 4.1:** Support sustainable transport infrastructure, by developing mixed use schemes, higher densities close to public transport hubs, safe walking routes in developments, promoting alternative modes of transport and reduce the need to travel.
- **CPO 4.37:** Develop public open spaces that have good connectivity and are accessible by safe, secure walking and cycling routes.
- **CPO 4.40:** Facilitate and encourage open space to be planned for on a multi-functional basis incorporating ecosystem services, climate change measures, green infrastructure, and key landscape features in their design.
- **CPO 5.15:** Support the development of Joint Economic, Transport and Retail Plans in collaboration with Roscommon County Council and all other relevant agencies, to facilitate the growth of Athlone as a regional economic driver.
- **CPO 5.42:** Support the development of Smart City initiatives in Athlone and Mullingar.
- **CPO 6.49:** Support the provision of walking and cycling links between lakes and nearby villages, towns, and visitor attractions, provided such developments do not negatively impact on sensitive environments.
- **CPO 6.56:** Continue to augment the visitor experience on the county's greenways, through the provision of ancillary infrastructure as required, having regard to the DTTAS 'Greenways and Cycle Routes Ancillary Infrastructure Guidelines', along with high quality signage and links to nearby visitor attractions and places of interest.

- **CPO 6.57:** Support the provision of visitor services within existing towns and villages, such as cafes, accommodation etc, by providing linkages with greenways, trails etc where appropriate.
- **CPO 6.58:** Continue to support the development of the Galway to Dublin Cycleway, completing the connection to the west of the River Shannon in Athlone and working with neighbouring counties and national bodies to complete and promote the entire route. The development of the cycleway shall comply with the provisions of the Habitats Directive and the Department of Transport, Tourism and Sport's "Dublin to Galway Greenway Plan 2017" and associated measures relating to environmental management and sustainable development.
- **CPO 6.59:** Support increased opportunities for off-road walking, including looped walks and longer distance trails, taking account of 'positive control points' in trail design, such as areas of natural beauty, lakeshores or rivers, bogs, built heritage and archaeological features and with links to towns and villages where services may be provided for walkers and hikers. In designing walking trails, the Sport Ireland Guide to Planning and Developing Recreational Trails will be consulted.
- **CPO 6.60:** Continue to maintain and further enhance the County's walking and cycling trails, striving to achieve National Trails accreditation and other standards as set by Sport Ireland, in partnership with local communities and landowners.
- **CPO 6.61:** Support the re-routing and upgrade of the Westmeath Way walking trail, bringing it off-road and link to scenic areas where possible, ensuring its status as an accredited National Waymarked way in the long term and exploring options such as the Walks Scheme for future maintenance.
- **CPO 6.62:** Support the provision of visitor interpretation along walking and cycling trails, including storyboards, artworks, and other media, to create a greater sense of place, connecting and immersing visitors in our local heritage and stories.
- **CPO 6.63:** Support the provision of services for visitors using walking and cycling trails which are appropriate to the location and activity, including bike service points, picnic benches at scenic locations, public toilets in remote areas etc.
- **CPO 6.66:** Support the delivery of a River Shannon walking and / or trail, from Athlone to Clonmacnoise in collaboration with local communities and Offaly County Council and from Athlone to the Royal Canal at Ballymahon in collaboration with Longford County Council.
- **CPO 6.67:** Promote the principles of 'Leave no Trace' in all trail information panels, promotional materials and events and use all statutory procedures to deter negative environmental impact resulting from use of our trails and outdoor recreation amenities.
- **CPO 7.3:** Encourage transition towards sustainable and low carbon transport modes through the promotion of alternative modes of transport and 'walkable communities' whereby a range of facilities and services will be accessible within short walking or cycling distance.
- **CPO 10.1:** Promote and deliver a sustainable, integrated, and low carbon transport system with ease of movement throughout County Westmeath by enhancing the existing transport infrastructure in terms of road, bus, rail, cycling and pedestrian facilities.
- **CPO 10.2:** Support the development of a low carbon transport system by continuing to promote modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport.
- **CPO 10.3:** Support the implementation of the following national and regional transport policies as they apply to Westmeath:

  - The National Planning Framework
  - The RSES for the Eastern and Midland Region
  - Smarter Travel, A Sustainable Transport Future 2009 – 2020
  - Design Manual for Urban Roads and Streets (DMURS)
  - Spatial Planning and National Roads - Guidelines for Planning Authorities 2012
  - National Cycling Policy Framework and National Cycle Manual
  - Strategy for the Future Development of National and Regional Greenways, 2018.
  - Local Link Rural Transport Programme Strategic Plan 2018 - 2022.

  The Council also supports the implementation of sustainable transport solutions.
- **CPO 10.4:** Seek to ensure primacy for transport options that provide for unit reductions in carbon emissions. This can most effectively be done by promoting public transport, walking, and cycling, and by actively seeking to reduce car use in circumstances where alternative options are available.

- **CPO 10.5:** Encourage transition towards sustainable and low carbon transport modes, through the promotion of alternative modes of transport, and 'walkable communities' together with promotion of compact urban forms close to public transport corridors to encourage more sustainable patterns of movement.
- **CPO 10.11:** Promote walking and cycling as efficient, healthy, and environmentally friendly modes of transport by securing the development of a network of direct, comfortable, convenient, and safe cycle routes and footpaths, particularly in urban areas and in the vicinity of schools.
- **CPO 10.12:** Improve pedestrian and cycle connectivity to stations and other public transport interchanges and request Iarnród Éireann to provide accommodation for bicycles on inter-city and commuter trains.
- **CPO 10.13:** Design pedestrian and cycling infrastructure in accordance with the principles, approaches and standards set out in the National Cycle Manual[1], the Design Manual for Urban Roads and Streets and international best practice.
- **CPO 10.14:** Encourage and seek sustainable transport movement at the earliest design stage of development proposals, to ensure accessibility by all modes of transport and all sections of society and promote the provision of parking space for bicycles in development schemes.
- **CPO 10.15:** Improve the streetscape environment for pedestrians, cyclists, and people with special mobility needs by providing facilities to enhance safety and convenience, including separation for pedestrian infrastructure from vehicular traffic.
- **CPO 10.16:** Provide better sign posting and public lighting where considered appropriate and ensure that the upgrading of roads will not impact negatively on the safety and perceived safety of cyclists.
- **CPO 10.17:** Work with the National Trails Office, Coillte, the Department of Planning, Housing and Local Government, the Department of Transport, Tourism and Sport, and other relevant stakeholders, to improve on the existing level of infrastructure and facilities for walking and cycling.
- **CPO 10.18:** Continue to develop an integrated and connected network of sustainable greenways and green routes within Westmeath and to adjoining counties, in accordance with the "Strategy for the Future Development of National and Regional Greenways".
- **CPO 10.19:** Progress the expansion of the National Cycle Network westwards from Athlone to the Roscommon County boundary.
- **CPO 10.22:** Support and promote the development of additional greenway links from the various towns/villages to the Old Rail Trail and Royal Canal Cycleways, subject to Environment and Habitats Requirements.
- **CPO 10.23:** Maximise both pedestrian and cycle connectivity to the network of existing greenways within the County.
- **CPO 10.24:** Protect established Greenways within the County against inappropriate new vehicular accesses and increased traffic movements.
- **CPO 10.25:** Carry out a permeability and connectivity audit of existing pedestrian and cycle facilities in all towns and villages.
- **CPO 10.28:** Ensure that new development proposals for public transport infrastructure are designed to be fully accessible to people with disabilities and older persons by adopting a universal design approach to the built environment, including footpaths, roads, pedestrian crossing points, bus stops, seating, and interchange facilities.
- **CPO 10.30:** Continue to work with the relevant transport providers, agencies, and stakeholders to facilitate the integration of active travel (walking, cycling etc.) with public transport, thereby making it easier for people to access and use the public transport system.
- **CPO 12.82:** Support the development of an integrated Strategic Greenway Network of national and regional routes and maximise connectivity to existing greenways and link with cycling and walking infrastructure.
- **CPO 12.83:** Support the delivery of sustainable strategic greenways, blueways and peatways projects in the County in accordance with the Strategy for the Future Development of National and Regional Greenways.
- **CPO 12.85:** Support the development of implementation plans for greenways throughout the county together with supporting environmental assessments.

[1] The National Cycle Manual was current at the time of publication of the County Development Plan; but has since been replaced by the Cycle Design Manual.

2.3.4 Westmeath Climate Change Adaptation Strategy 2024 – 2029

Westmeath County Council has prepared this Climate Action Plan 2024-2029, to create a low carbon and climate resilient County, by delivering and promoting best practice in climate action, at the local level. This is aligned to the Government's overall National Climate Objective, which seeks to pursue and achieve, by no later than the end of 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. As part of Irelands Climate Action and Low Carbon Development (Amendment) Act 2021 Westmeath County Council has committed to developing and implementing this county focused Climate Action Plan.

The plan focuses on five thematic areas with a view to assessing the actions which can be carried out in order to tackle climate breakdown at a local level by carrying out measures to decrease emissions and enhance biodiversity locally with a view to slowing down and ultimately reversing climate change while closely focusing on quality of life for Westmeath citizens.

- Theme 1: Governance and Leadership
- Theme 2: Built Environment and Transport
- Theme 3: Natural Environment and Green Infrastructure
- Theme 4: Resilience and Transition
- Theme 5: Sustainability and Resource Management

Several actions within the document are aligned with the proposed Athlone Active Travel Schemes Bundle. Under Theme 2 point 2.1, 2.9, 2.13, 2.16, 2.17, 2.18 the document states the intention to give priority to more sustainable transport options, reduce car use in County Westmeath, Promote and encourage a modal shift and increase active travel infrastructure to promote walking and cycling.

2.4 Local Level Policy

2.4.1 Athlone Local Area Plan 2014 – 2020 (Extended)

The Athlone Local Area Plan 2014-2020 set out a strategy for the sustainable development and planning of Athlone building upon the previous Athlone Town Plan 2008-2014. It also outlined the policies and objectives for the future development of the town and its environs.

Some objectives and policies from the town development plan that are still relevant to the Athlone Active Travel Schemes Bundle can be seen below:

- **Policy-EC10**: To continue to improve access to major areas of employment through sustainable transport modes.
- **Policy-AC1**: To create an environment in the Town Centre in which vehicles, cyclists and pedestrians can safely co-exist and share public space.
- **Policy-AC2**: To minimise vehicular traffic volumes in the town centre through traffic management measures. create an environment in the Town Centre in which vehicles, cyclists and pedestrians can safely co-exist and share public space.
- **Policy-TR2**: To promote the sustainable development of walking, cycling, public transport and other sustainable forms of transport in Athlone, as an alternative to the private car, by facilitating and promoting the development of necessary infrastructure and by promoting initiatives contained within “Smarter Travel, A Sustainable Transport Future 2009-2020”.
- **Policy-WC1**: To encourage and facilitate safe walking and cycling routes in Athlone, as a viable alternative to the private car, in accordance with initiatives contained within “Smarter Travel, A Sustainable Transport Future 2009-2020”
- **Policy-WC2**: To develop walking and cycling strategies within Athlone and between the Linked Gateway towns of Athlone and Mullingar and Athlone and Tullamore.
- **Policy-WC3**: To improve the streetscape environment for pedestrians, cyclists, and people with special mobility needs, by providing facilities to enhance safety and convenience.
- **Policy-WC4**: To provide for sustainable transport movement at the earliest design stage of development proposals to ensure accessibility by all modes of transport and all sections of society.
- **Policy-WC5**: To implement proposals for pedestrian and cycle routes along the River Shannon as prescribed in the Athlone Waterfront Strategy.
- **Policy-WC6**: To support and facilitate the development through Athlone of the National Cycle Network between Dublin and Galway, including the construction of a new pedestrian and cycle Bridge across the River Shannon, subject to the requirements of the Habitats Directive, Water Framework Directive and environmental sensitivities identified in the SEA being addressed.
- **Policy-WC7**: To support and facilitate the provision of a cycleway and walkway in Athlone within the corridor of the disused Mullingar to Athlone railway line, pending the re-opening of this line as a railway, subject to environmental sensitivities identified in the SEA being addressed.
- **Objective-PT12**: To provide pedestrian and cycle linkages across the River Shannon and canal.
- **Objective-WC1**: To further the development of an integrated cycle network in Athlone.
- **Objective-WC2**: To provide for signal-controlled pedestrian facilities at all crossing points with an audible signal and dished kerbs with tactile paving to assist visually and mobility-impaired persons in crossing roads.
- **Objective-WC14**: To provide a network of on-road and greenway pedestrian and cycle routes within the town.

2.4.2 Athlone Joint Urban Area Plan (with Roscommon Co. Co.) (Under Pre-Draft Public Consultation)

The Athlone Joint Urban Area Plan 2024-2030 will cover the broad aims of Westmeath County Council based on the national and regional objectives in relation to Athlone. Whilst the Athlone Joint Urban Area Plan is still being prepared a pre-draft Consultation Strategic Issues Paper has been published that presents an overview of the main issues and challenges affecting Athlone.

2.5 Design Guidance

2.5.1 Design Manual for Urban Roads and Streets

The Design Manual for Urban Road and Streets (DMURS) was updated in 2019 by department of Transport, Tourism and Sport. This document provides guidance regarding the integrated design approach for urban roads and streets focused on balancing the needs of all users and creating places that people want to live and spend time.

DMURS seeks to put well-designed streets at the heart of sustainable communities and supports boarder government policies on the environment, planning and transportation. DMURS provides the practical measures to achieve:

- Highly connected street which allow people to walk and cycle to key destinations in a direct and easy-to find manner.
- A safe and comfortable street environment for pedestrians and cyclists of all ages.
- Streets that contribute to the creation of attractive and lively communities.
- Streets that calm traffic via a range of design measures that make drivers more aware of their environment.

DMURS also supports Government policies on climate change by facilitating more sustainable forms of transportation such as walking, cycling and public transport so the need for car-borne trips is minimised in order to reduce greenhouse gas emissions and promote healthier lifestyles.

2.5.2 Cycle Design Manual

The Cycle Design Manual (CDM) was published by the NTA in September 2023 and provides guidance on the design of both on-road and off-road cycle facilities for both urban and rural locations. The CDM is to be used for the design of all new or improved cycle facilities in Ireland unless otherwise agreed with the relevant oversight body (e.g., NTA, TII, DoT, Local Authority).

The CDM outlines the context of designing cycle facilities in Ireland and the increased emphasis on segregation of facilities from motor traffic and provides information on what designers need to be aware of in regard to every aspect of cycle infrastructure design.

The CDM outlines the five main requirements for a cycle-friendly infrastructure, which are: safety, coherence, directness, comfort and attractiveness. These requirements shall be followed to attract new users and to fulfil the needs of existing cyclists. Throughout the option selection and design process of this scheme the CDM is used.

2.5.3 Rapid Build Guidance

In February 2023, the NTA published the advice note ‘Rapid Build Active Travel Facilities’ to provide guidance on cost-effective measures to provide high-quality walking and cycling infrastructure using rapid-build methods. Since the publication of the note, all active travel schemes are required to include rapid build options in the Feasibility Report.

Rapid build options are typically faster to implement on the ground than traditional construction methods and do not typically involve major construction works, mostly being accommodated within kerb-to-kerb boundary of the existing roadway, with limited effect on existing drainage. These options may include road marking, traffic restrictions, narrowing the carriageway, conversion of on-street parking into active travel facilities, among others.

The proposal to use rapid build options rather than traditional construction methods has been proposed in order to increase the rollout of active travel schemes in a cost-effective manner in conjunction with goals set under the Climate Action Plan and the National Investment Framework for Transport in Ireland (NIFTI).

There are five principles that guide the rapid build process:

- **Network Approach**: A focus to develop an interconnected walking and cycling network;
- **Segregation**: Provide fully segregated walking and cycling facility to attract more users into active travel;
- **Everyday Mobility**: Provide infrastructure suitable for everyday activities;
- **Inclusive Mobility**: Design that is suitable for all users of different ages and abilities;
- **Place Making and Biodiversity**: Provide facilities that protect the biodiversity and enhance the public realm.

The rapid build options process should include as a minimum:

1. The implementation of traffic calming measures, e.g., chicanes, build-outs, ramps, raised tables, etc, to reduce traffic speeds and volumes in order to accommodate pedestrians and increase safety for cyclists in mixed traffic with motorised vehicles;
2. The reduction of the carriageway width for vehicle traffic to introduce one-way or two-way protected cycle lanes;

The rebalance of the road space, e.g., removal of on-street parking, introduction of a one-way system, etc, to improve safety for pedestrian and cyclists and introduce dedicated cycle lanes.

2.5.4 Other Relevant Design Guidelines

In addition to guidelines from above mentioned documents, the following documents were also referred for the analysis:

- Traffic Sign Manual by Department of Transport
- Traffic Management Guidelines by Department of Transport
- Part M of the Building regulations by Department of Housing, Local Government and Heritage
- Rapid Build SRTS Front of School Improvements Advice Note by NTA
- Roundabout Retrofit – Including Rapid Build Options by NTA
- Zebra Crossing Pilot Scheme Technical Literature Review by NTA
- Greening and Nature-based SuDS for Active Travel Schemes by NTA
- Draft Protected Cycle Lanes by NTA
- TII Standards Publications
- Safe Route to School Design Guide by NTA
- Permeability Best Practice by NTA
- Building for Everyone by the National Disability Authority
- UK DETR Guidance on the use of Tactile Paving Surfaces.

3. Constraints Study

This identification and evaluation of constraints was carried out following the methodology and requirements set forth in the National Transport Authority's (NTA's) 2020 Project Approval Guidelines (PAG). For organisational purposes, the discussion of constraints within this report is divided into three principal categories including:

- **Natural constraints**, which include naturally occurring landscapes and features;
- **Artificial constraints**, which include features forming part of the built environment; and
- **External parameters**, which include design standards, policy, procedural, financial, and legal considerations.

3.1 Natural Constraints

An Environmental Constraints Study have been prepared and is included in Appendix A. The Environmental Constraints Study identifies the key environmental constraints within the study area and its vicinity, as follows:

- Topography;
- Land, Soils and Geology;
- Hydrology and Hydrogeology (including Flood Risk);
- Biodiversity;
- Archaeology, Architecture and Cultural Heritage;
- Air and Climate;
- Noise and Vibration;
- Licenced Facilities;
- Radon; and
- Landscape & Visual.

3.1.1 Summary / Recommendations

In summary, the study area is located entirely along existing roads within Athlone town with the following constraints identified as shown in Appendix A.

- Given the location, the proposed project will not result in any direct impacts to any European sites. There are 2 no. European sites with indirect hydrological connectivity from the proposed project; the River Shannon Callows SAC and Middle Shannon Callows SPA.
- The River Shannon Callows pNHA covers the same geographical area as the aforementioned SAC/SPA and the pNHA has the same indirect hydrological connectivity.
- Once the preliminary design has been completed, the proposed project will be subject to the Appropriate Assessment process to determine if the project will result in likely significant effects to any European sites.
- As detailed above, there will not be any likely interaction with the 3no. watercourses near Route F and as such significant water quality impacts are not anticipated.
- There will likely be some loss of landscape features like roadside trees and/or hedgerows as a result of the proposed project. There will likely be a loss of roadside grass verges as a result of the proposed project.
- As detailed above, the proposed project is almost entirely located within hardstanding areas including roadways and pathways. The proposed project will not result in the loss of any significant areas of semi natural habitats which could provide refuge or foraging sites for protected species. Trees and hedgerows will be required to be surveyed to assess the capability of supporting bat roosts and nesting birds.

- No invasive species have been recorded within the proposed project site, however, as there are invasive species within the area an invasive species survey will be required.
- As Route F does not pass through any NIAH features an appropriately qualified archaeologist / cultural heritage specialist will not be required as the project progresses.
- There are 3no. Geological Heritage Areas (GHAs) within the vicinity of the route. The River Shannon Callows GHA is located ca. 2.8km West of Route F, Loughandonning Mushroom Rock GHA is located ca. 1km West Route F and Tullin Mushroom Rock is located ca. 2km Northwest of Route F. As there are hydrological and hydrogeological connections to River Shannon Callows, mitigation measures will be implemented during construction to minimise / avoid impacts on the area.
- In a review of aerial imagery (Google Maps, 2024), there are a number of trees located along Route F. It is recommended that an Arboricultural Survey is undertaken along Route F as the project progresses.
- Given the urban nature of Route F, there are numerous sensitive receptors of Air Quality and Noise and Vibration nuisance during the construction works. Mitigation / protection measures will be implemented during construction to minimise / avoid impacts on sensitive receptors.

3.2 Artificial Constraints

Artificial constraints are human constructed features which may impact on or may be impacted by potential changes to the study area. The list provided below shows the general artificial constraints within the Athlone Active Travel Schemes Bundle study area that have been considered.

- Bus services
- Traffic conditions
- Road widths and pinch points
- Land-use, zoning and planned developments
- Utilities
- Archaeology, architecture and cultural heritage
- Junctions
- Traffic collisions
- Pavement condition
- Existing infrastructure deficiencies.

3.2.1 Existing Road Network

This report includes an assessment of Routes F for the purpose of Multi Criteria Analysis and assessment of the preferred route option.

Route F, approximately 2.3km in length commences from Cornamaddy Roundabout to Wash House Turn Roundabout (R916). Due to changes in the characteristics of the corridor, such as road width, presence of turning bays, presence of active travel facilities etc, Route F has been divided into four segments along with two major junctions, as shown in Figure 3-1.

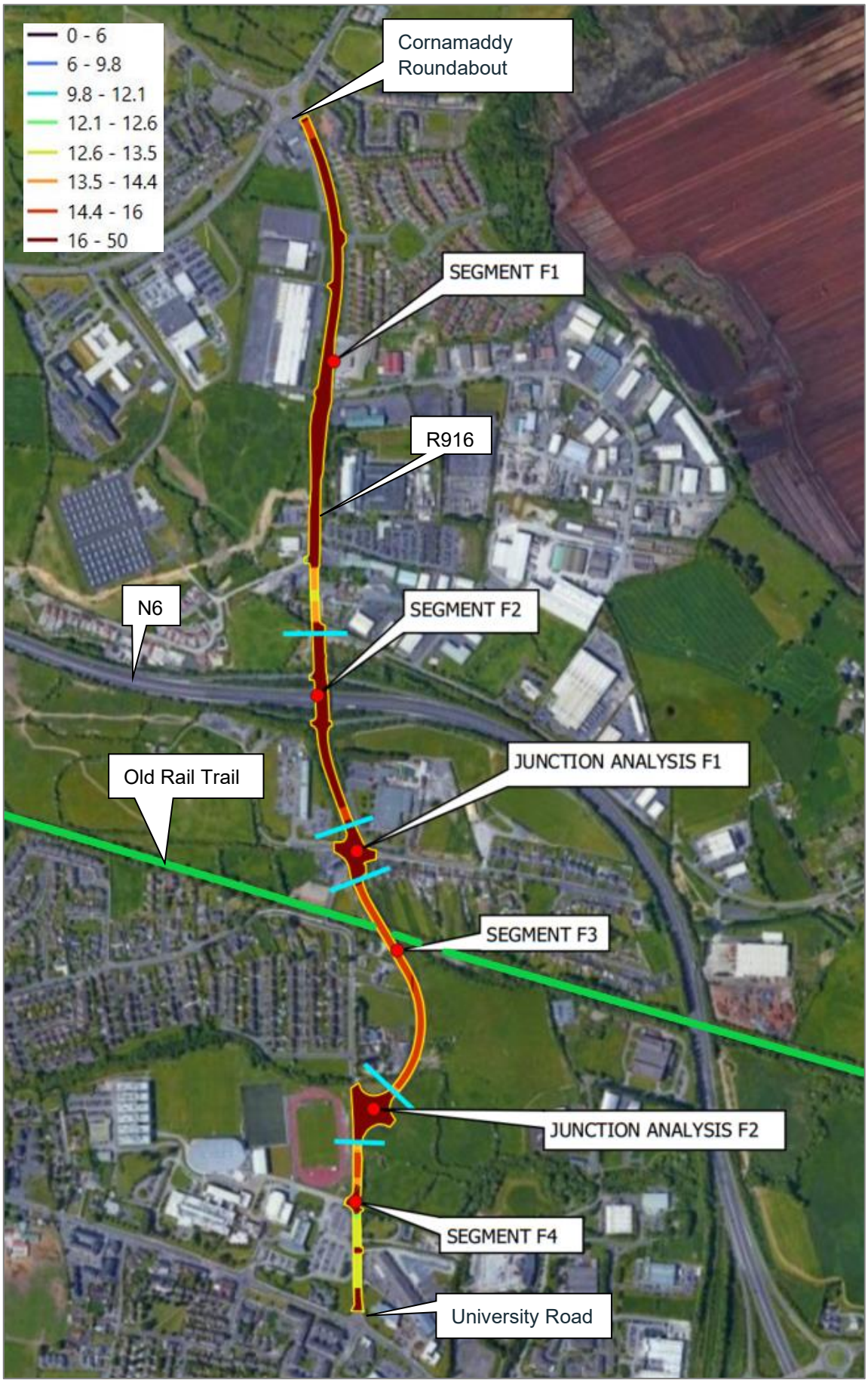


Figure 3-1 – Route F Segments and Width Analysis

3.2.1.1 Segment F1: Cornamaddy Roundabout to Moydrum Road Junction along Bushfield Road (R916)

Segment F1 extends from Cornamaddy Roundabout to Moydrum Road Junction along Bushfield Road (R916), approximately 950m in length. This segment contains one vehicular lane in each direction and footpaths on both sides of the carriageway. On the western side, the footpath is approximately 1.7m-2.3m wide and on the eastern side is approximately 1.7m-2.5m wide. There is an existing cycleway facility in form of a One-Way Mandatory Cycle Lane (approx. 1m wide).

There is no on-street parking present along this segment, but vehicles parked within the hard shoulder have been observed adjacent to the National Learning Network Blyry. There is approximately 145m long vehicle drop-off bay (both sides) located outside the Cornamaddy school entrance.

There is a total of six junctions located along this segment. There is one dedicated pedestrian crossing (zebra, with belisha beacons) located outside the Cornamaddy school entrance and one signal-controlled crossing located on the Moydrum Road Junction.

There are two bus services running along the segment, which are A2 and 819, as well as two bus stops located for northbound users and two bus stops for southbound users along this segment. The speed limit along the segment is 50km/h. The segment typical cross-sectional width varies from 12.6m-16.0m in width. (Note all measurements outlined have been taken from boundary wall to boundary wall encapsulating footpaths and trafficked carriageways).

Figure 3-2 provides an overview of the segment and Figure 3-3 shows the typical existing cross section.

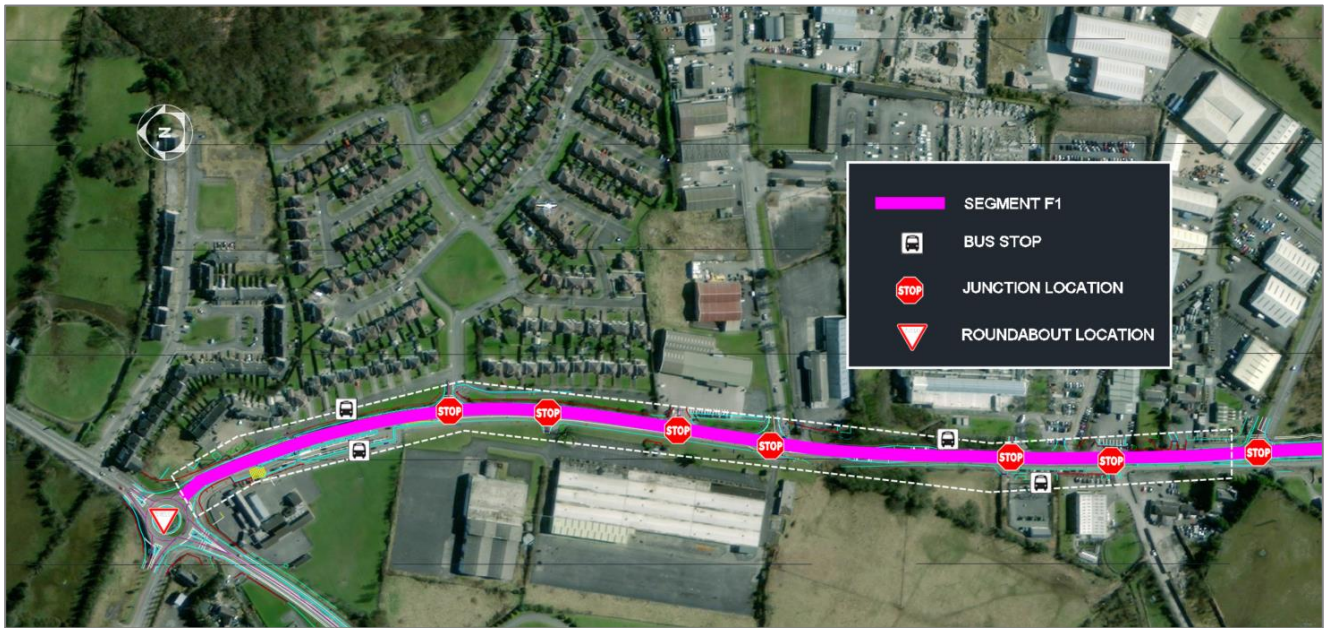


Figure 3-2 – Segment F1 Overview

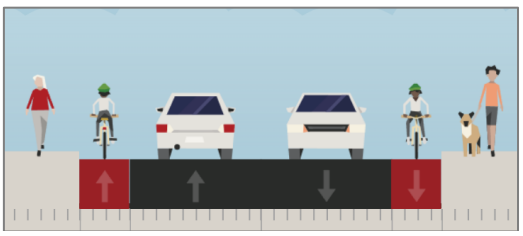


Figure 3-3 – Segment F1 Typical Cross Section

3.2.1.2 Segment F2: Moydrum Road Junction to Altown Garrycastle Roundabout along Bushfield Road (R916)

Segment F2 extends from Moydrum Road Junction to Altown Garrycastle Roundabout along Bushfield Road (R916), approximately 390m in length. This segment contains max. two vehicular lanes in each direction and footpaths on both sides of the carriageway.

On the western side, the footpath is approximately 1.7m-2.3m wide and on the eastern side is approximately 1.7m-2.5m wide. There is an existing cycle facility in form of a two-way cycle track (approx. 2.5m wide) located along this segment. The road along this segment links to N6 dual carriageway with a grade separated junction arrangement containing a 4-lane vehicular bridge along with a separate cycle/pedestrian bridge over the N6 dual carriageway adjacent to the vehicular overbridge.

There is no on-street parking area present along this segment. There is in total two junctions located along the segment. There is one uncontrolled crossing near the Altown Garrycastle Roundabout along this segment. There are two bus services running along the segment, which are A2, 819 with one bus stop located for the northbound commuters and two bus stops for southbound commuters along this segment. The speed limit along the segment is 50km/h. The segment typical cross-sectional varies in width from 13.5m-16.0m. (Note all measurements outlined have been taken from boundary wall to boundary wall encapsulating footpaths and trafficked carriageways).

Figure 3-4 provides an overview of the segment and Figure 3-5 shows the typical cross section.

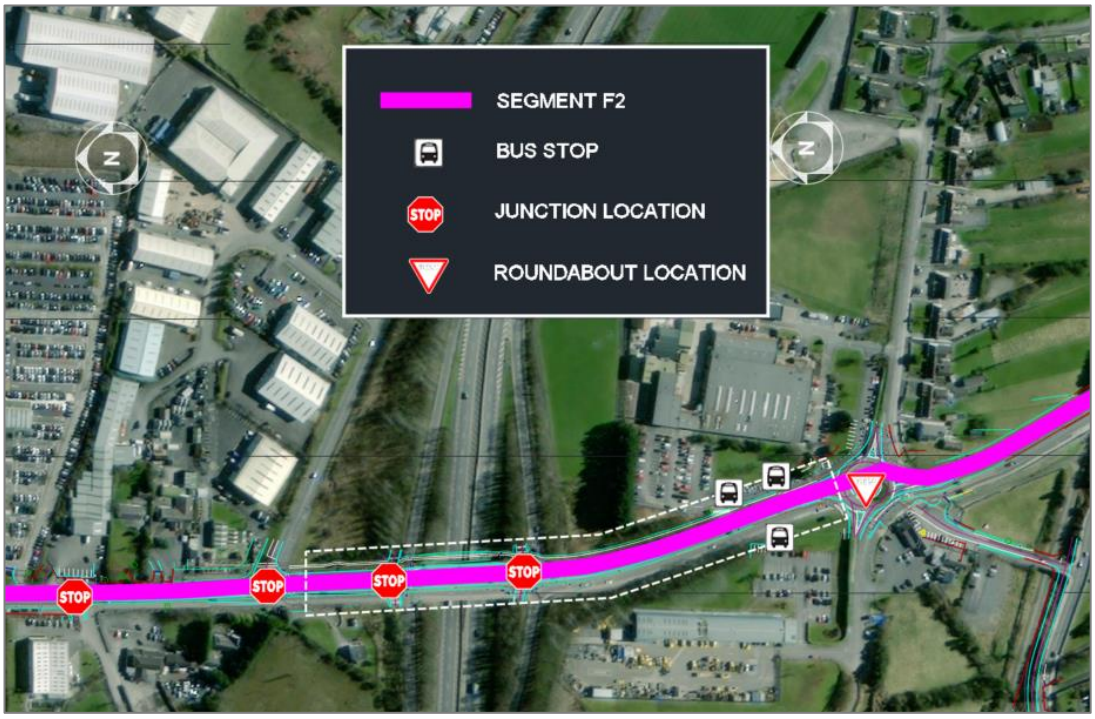


Figure 3-4 – Segment F2 Overview

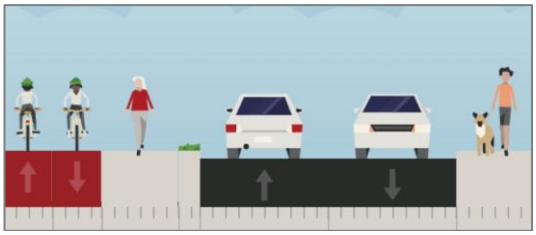


Figure 3-5 – Segment F2 Typical Cross Section

3.2.1.3 Segment F3: Altown Garrycastle Roundabout to Garrycastle Roundabout along Garrycastle Road (R916)

Segment F3 extends from Altown Garrycastle Roundabout to Garrycastle Roundabout along Garrycastle Road (R916), approximately 480m in length. This segment contains one vehicular lane in each direction and footpaths on both sides (approx. 1.6m-1.8m both sides) of the carriageway.

There is an existing cycleway facility in the form of One-Way Cycle tracks (approx. 1.2m-1.4 wide) located along both sides of the entire segment. There is neither on-street parking nor any junctions present along this segment. There are two uncontrolled crossing located at the start and the end of this segment. There are two bus services running along the segment, which are A2 & 819 service but no bus stops located within the segment. The speed limit is 50km/h. The segment typical cross-sectional varies in width from 14.4m-16.0m. (Note all measurements outlined have been taken from boundary wall to boundary wall encapsulating footpaths and trafficked carriageways).

Figure 3-6 provides an overview of the segment and Figure 3-7 shows the typical cross section.

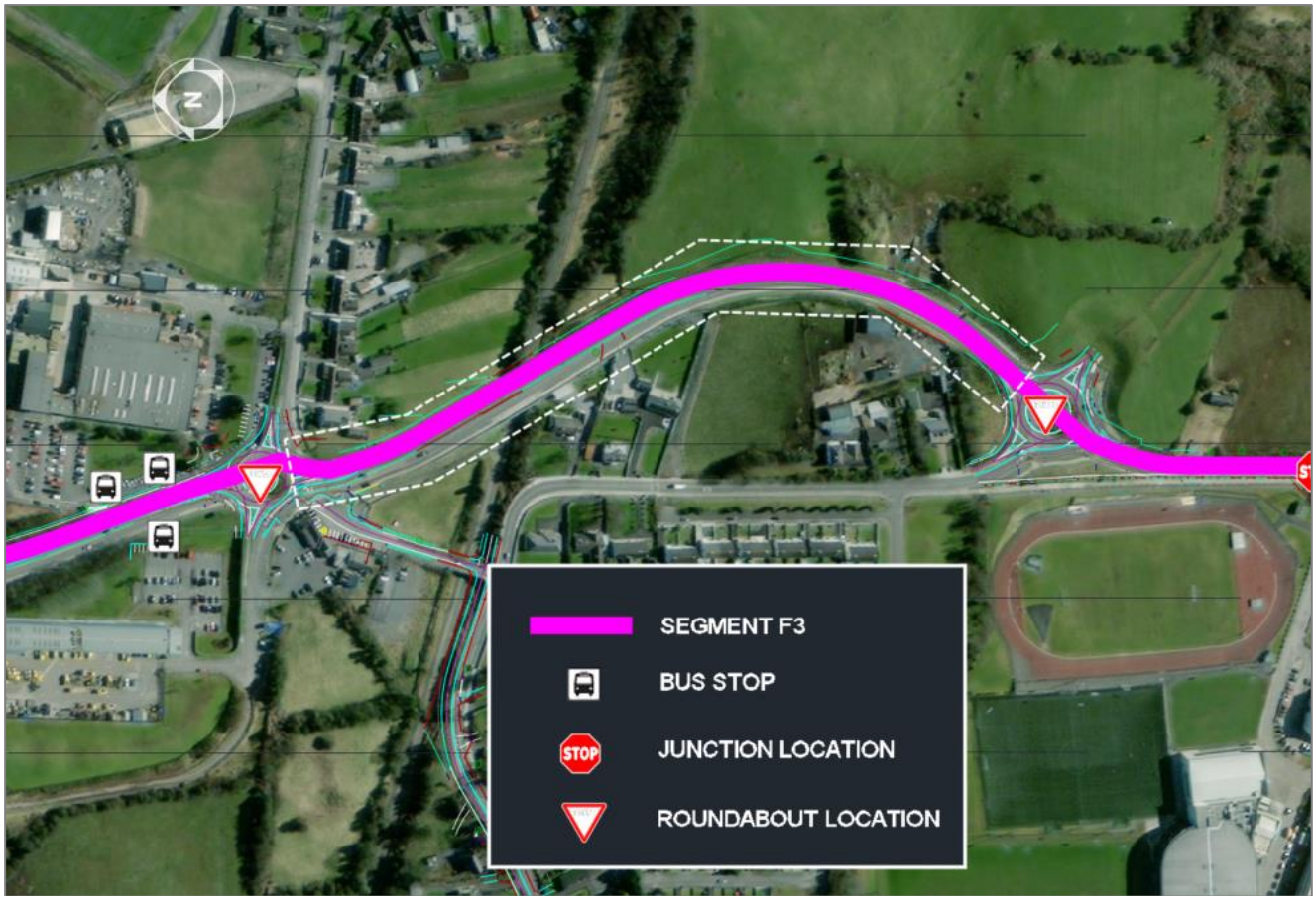


Figure 3-6 – Segment F3 Overview

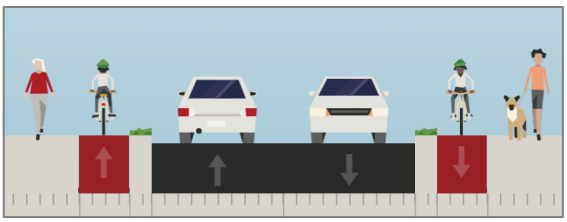


Figure 3-7 – Segment F3 Typical Cross Section

3.2.1.4 Segment F4: Garrycastle Roundabout to Wash House Turn Roundabout along University Road (R916)

Segment F4 extends from Garrycastle Roundabout to Wash House Turn Roundabout along University Road (R916), approximately 360m in length. This segment contains one vehicular lane in each direction and footpaths on both sides of the carriageway.

On the western side the footpath is approximately 1.4m-1.7m wide and on the remaining eastern side is approximately 1.7m-2.8m wide. There is an existing cycle facility in form of One-Way Cycle Lane on both sides (approx. 1.6m-1.8m wide) that starts from the Garrycastle Roundabout.

There is no on-street parking area present along this segment. There is a total of four junctions located along the segment. There is one dedicated pedestrian crossing (zebra, with belisha beacons) located in the middle of this segment. There is one bus service running along the segment, which is the 819 services as well as one bus stop located for the northbound commuters. The speed limit along the segment is 50km/h. The segment typical cross-sectional varies in width from 12.6m-16.0m. (Note all measurements outlined have been taken from boundary wall to boundary wall encapsulating footpaths and trafficked carriageways).

Figure 3-8 provides an overview of the segment and Figure 3-9 shows the typical cross section.

Figure 3-8 – Segment F4 Overview

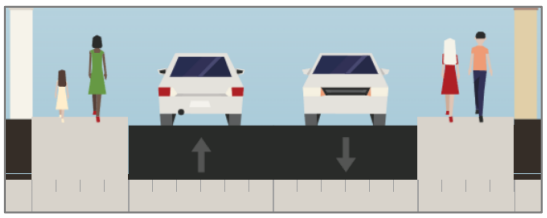


Figure 3-9 – Segment F4 Typical Cross Section

3.2.2 Cross Section Width Analysis

One of the most significant challenges to providing cycling infrastructure within an urban environment is the availability of space. To understand the space available along the existing corridors, a width analysis was completed using Geographic Information Systems (GIS) software and Lidar data. This analysis consisted of taking cross-section measurements from back of footpath to the corresponding back of footpath on the opposing side of the carriageway or boundary wall to boundary wall in some cases. This was carried out to identify the available road and footpath space at approximately one metre intervals along the corridor.

The results indicate the “typical” width of each segment of the corridor. This typical width was qualitatively determined based on engineering judgement and was taken to be the predominant width of the particular segment as shown in Figure 3-1. There were no pinch points identified along both segments of Route F.

3.2.3 Planned Developments

To understand planned changes to the corridor, existing planning applications were reviewed for a period extending back five years. For the purposes of this study, only significant new developments that are likely to generate a significant number of trips and developments that may encroach nearby to the existing corridor have been documented and are shown in Table 3-1 and outlined in Figure 3-10.

Table 3-1 - List of Approved Planning Applications

Planning Reference Number	Approval Status	Decision Date	Development Description
21172	CONDITIONAL	06/04/2021	Permission for the demolition of existing metal clad open storage area and the construction of a single storey flat roof Craft Apprentice Facility Classroom extension comprising two classrooms together with staff office and materials store circa 162 sq.m. total floor area, with roof mounted plant and parapet wall together with all associated site works
21107	CONDITIONAL	04/03/2021	Construction of an on-grade car park to accommodate 160 car spaces including site lighting, drainage and landscaping with a modified vehicle and pedestrian entrance off the R916 comprising wider internal access ramp. The proposal also includes a pedestrian link between the existing controlled pedestrian crossing on the R916 and the main campus comprising an opening to be formed in the existing campus boundary wall, a stairs and ramp off the R916 and an internal campus footpath.
2167	WITHDRAWN	16/02/2021	Retention permission for the recently constructed extension to the existing building, additional weighbridge and weighbridge office and site office
21361	CONDITIONAL	01/07/2021	Permission for the existing waste facility (waste permit reference number: WFP-WM-2016-0004-01) including existing warehouse building (626.6sqm), weighbridge office (17.7sqm), site office (23.4sqm), two weighbridges, two electric stop barriers, staff carpark, portable toilets, existing access onto the Washhouse road, boundary walls and fencing, yard lighting and associated services

Planning Reference Number	Approval Status	Decision Date	Development Description
21334	INCOMPLETED APPLICATION	14/06/2021	Full retention permission for the existing waste facility including existing warehouse building (626.6sqm), weighbridge office (17.7sqm), site office (23.4sqm), two weighbridges, two electric stop barriers, staff car park, portable toilets, existing access onto the Washhouse Road, boundary walls and fencing, yard lighting and associated services
197159	CONDITIONAL	30/07/2019	Construction of a new prefabricated storage unit and all associated ancillary site works
207010	CONDITIONAL	28/1/2020	A new three-storey extension to an existing warehouse building to contain cleanroom manufacturing facilities, laboratories, ancillary offices and all ancillary site works
2360050	CONDITIONAL	06/03/2023	Retention Permission and Permission at Unit 2, Moydrum Business Park, Moydrum Road, Garrankesh, Athlone, Co. Westmeath N37K5W4. The retention permission application consists off (1) retention for extending and elevational changes to the 3 and 2 storey extension of the existing warehouse building (previously granted under planning ref. 20/7010) to contain office, cleanroom and research facilities; (2) retention of the recladding of the original warehouse building; (3) External Signage; (4) Relocation of vehicular entrance; (5) ESB Sub station; and (6) External cleanroom plant and ancillary equipment. The permission application consists off (A) External signage and (B) 2 no. silos, and all ancillary site works
21491	CONDITIONAL	03/09/2021	Erect 970 m2 or 139.00 kw of photovoltaic panels on the roof of existing unit in our factory with all associated site works
197113	CONDITIONAL	23/05/2019	The development will consist of alterations, additions and demolitions to existing commercial unit to facilitate the development of a car showroom and workshop area to include new glazed frontage, cladding and signage and all associated siteworks and services including parking, boundary fencing, security and landscaping
21646	CONDITIONAL	7/9/2022	The development will consist of the following: (A) Demolition of 2 No. single storey dwelling houses and 1 No. domestic garage. (B) Construction of a 4-storey block of 20 No. apartments to accommodate 4 No. 1 bedroom and 16 No. 2 bedroom units along with the construction of a semi basement car park with provision of 19 car parking spaces, amenity space, communal open space, bicycle parking, bin storage and all ancillary site works. (C) Construction of a stand-alone 3 storey block of 6 No. 1 bedroom apartments and all ancillary site works
215	CONDITIONAL	08/01/2021	The change of use of part of the premises (625sqm) at northern end of building, from its existing permitted use as a self-contained warehouse/distribution store with office accommodation as per planning ref. no. 06/1072 to brewery for the purpose of brewing local beers (under the Dead Centre

Planning Reference Number	Approval Status	Decision Date	Development Description
			Brewing logo) and associated steam extract system, storage area, dispatch area and staff welfare facilities
2129	CONDITIONAL	6/6/2021	Permission for change of use of existing snooker/pool hall facility into student accommodation, including the demolition of some external walls and changes to elevations to incorporate windows to serve units. The proposed student accommodation will comprise three 4-bedroom units. Unit 1 (126sqm), Unit 2 (142sqm), Unit 3 (146sqm) including kitchens, dining, living rooms, stores, ensuite bathrooms and public/private open spaces provided in each unit including all associated site works
197145	CONDITIONAL	15/07/2019	Construction of a single-storey domestic garage and all associated site works
22132	CONDITIONAL	23/03/2022	Construction of an extension to the rear of the existing dwelling. The extension which will also include the conversion of an existing garage will include a new home office, playroom and home gym. The application will also include all elevation changes, minor siteworks and drainage.
22291	CONDITIONAL	30/05/2022	Construct an extension to the rear of existing dwelling. The extension will also include the conversion of an existing open roofed structure will include a new home office, playroom and home gym. The application will also include all elevation changes, minor site works and drainage
22103	REFUSED	11/03/2022	Retain the change of use of a former wholesalers/warehouse building to the use as a shop including ancillary staff offices and canteen, changes to the external finish of the building including new door openings to the North, South and East elevations, car parking and associated site works
207196	REFUSED	07/12/2020	To retain the change of use of a former wholesalers/warehouse building to the use as a shop including ancillary staff offices and canteen, changes to the external finish of the building including new door openings to the north, south and east elevations, car parking and associated site works
22408	CONDITIONAL	11/08/2022	construct a ground floor extension to the side of existing dwelling house to include new lounge and all associated site works
21600	CONDITIONAL	11/11/2021	The construction of a proposed two storey type dwelling (204m2) domestic garage and site entrance together with all associated site works
2131	CONDITIONAL	26/01/2021	Retention of single storey extensions to the west and south elevations of the existing dwelling and all associated site works

Figure 3-10 – Relevant Planning Applications (Route F)

3.2.4 Pavement Condition Survey

The pavement condition survey will be undertaken in advance of Phase 5 - Detailed Design Stage, to inform the detailed design.

3.2.5 Road Collision Data

At the time of the constraints study being completed, historical collision data, which is provided by the Road Safety Authority (RSA), was not available. Therefore, no collisions analysis has been completed. At this time, the RSA has not indicated when collision data will be available. Should this data become available during the continued progression of this project, the information will be evaluated, and a supplemental safety assessment addendum will be included as part of a future project-related report.

3.2.6 Traffic Data Survey

3.2.6.1 Traffic Conditions

Westmeath County Council provided AtkinsRéalis with Automatic Traffic Counts (ATC) data at several locations within the town which were carried out in Feb/Mar 2022. For the purpose of this report ATC data for Route F will be examined. Figure 3-11 indicates the locations of the survey data provided by WCC along the route corridor.

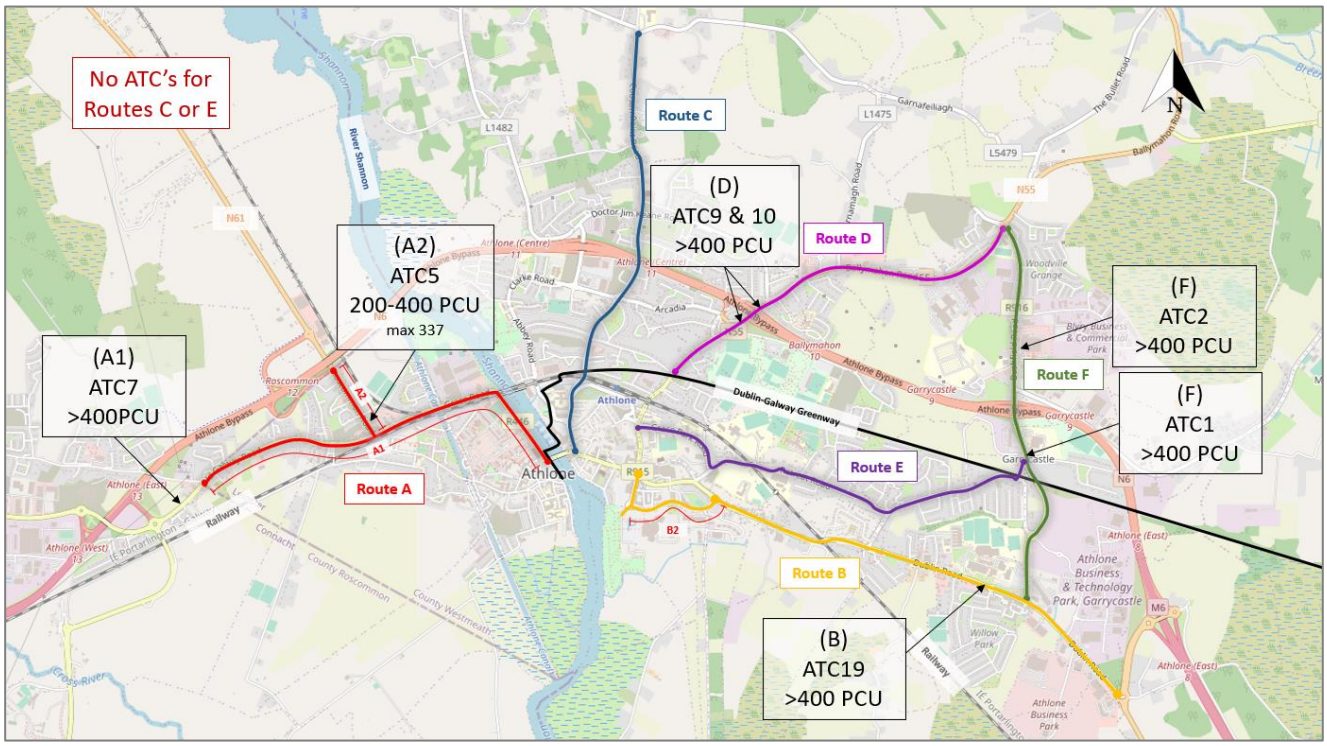


Figure 3-11 – Traffic Survey Location

Additional ATC and on-street parking beat surveys were requested to Westmeath Co. Co. and were carried out in January 2024. To identify the baseline traffic conditions along the corridor, these ATCs and parking data will be used. Figure 3-12 and Figure 3-13 indicates the location for the survey data provided by IDASO.

Traffic conditions along the route corridor were obtained from the Automatic Traffic Count (ATC) data carried out by IDASO for 24 hours a day for 7 days from Wednesday 24 January 2024 to Tuesday 30 January 2024. The parking surveys were conducted on Thursday 25 January 2024 and Saturday 27 January 2024 respectively.

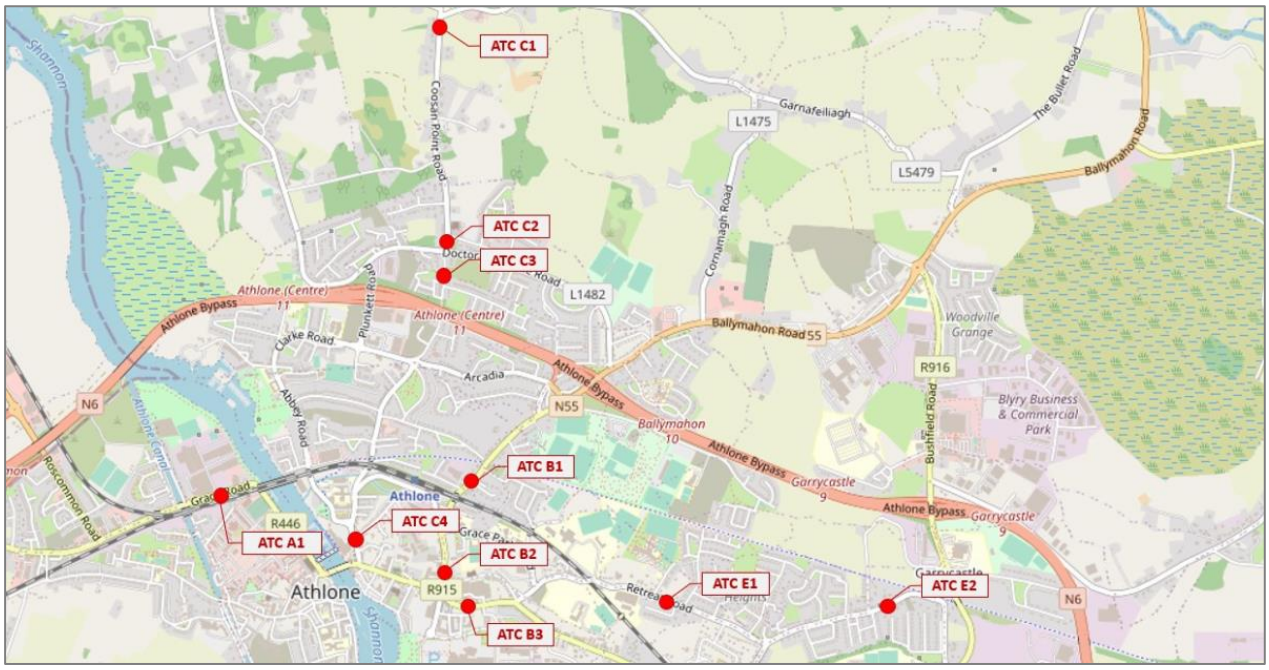


Figure 3-12 – ATC Survey Location

Figure 3-13 – Parking Survey Location

ATC data was obtained at different locations along all routes as indicated above, with 2no. ATC along Route F. The data presented in this section is representative of the average data for the weekdays, Monday to Friday, as it represents a more robust analysis.

A summary figure of the recorded vehicular volume is shown below in Figure 3-14. It is noted that traffic volumes are high at ATC F1 with an average weekday vehicular volume of 13,938 on R916 South of Junction 9 and ATC F2 with an average weekday vehicular volume of 10,668 on R916 North of Junction 9.

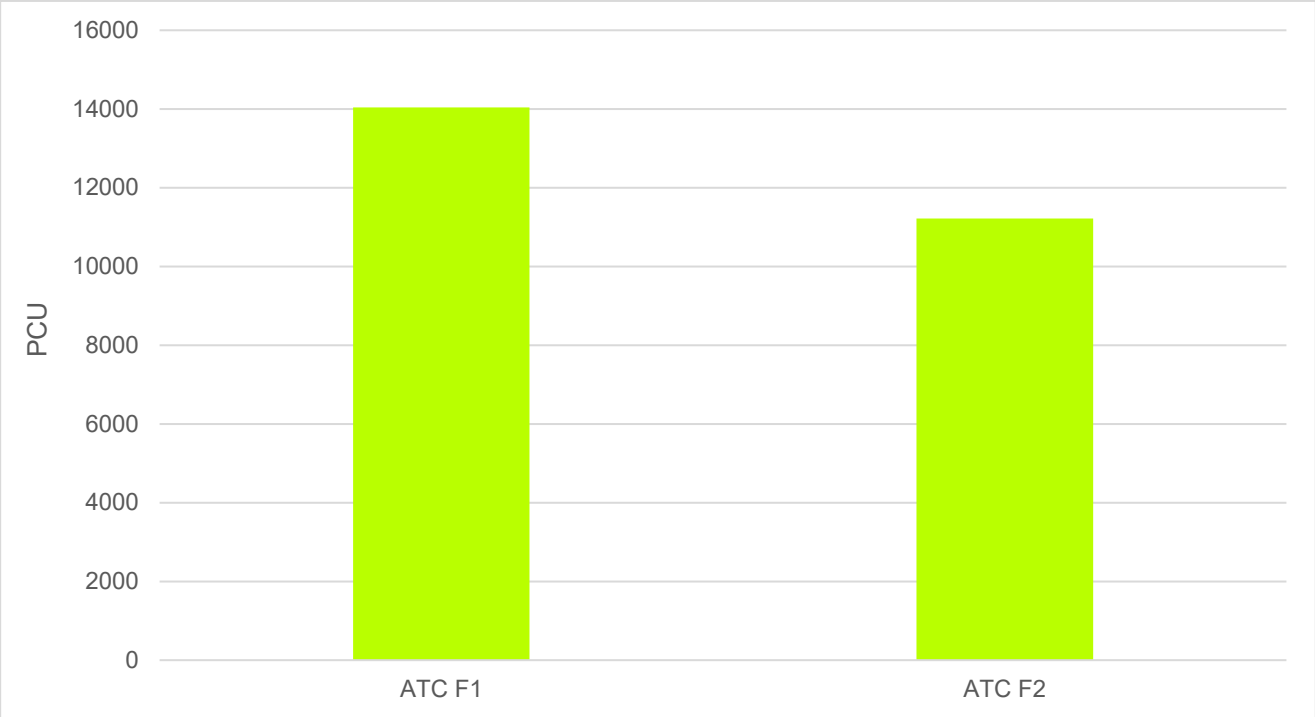


Figure 3-14 – Average Weekday Vehicle Volumes

Based on the traffic data, a comparison figure between vehicle classification was created as indicated in Figure 3-15. An average HGV percentage of 3.07% of 14,036 (Weekday average PCU) and 4.13% of 11,216 (Weekday average PCU) was noted for ATC F1 and ATC F2 respectively, calculated from the total volume of weekday traffic.

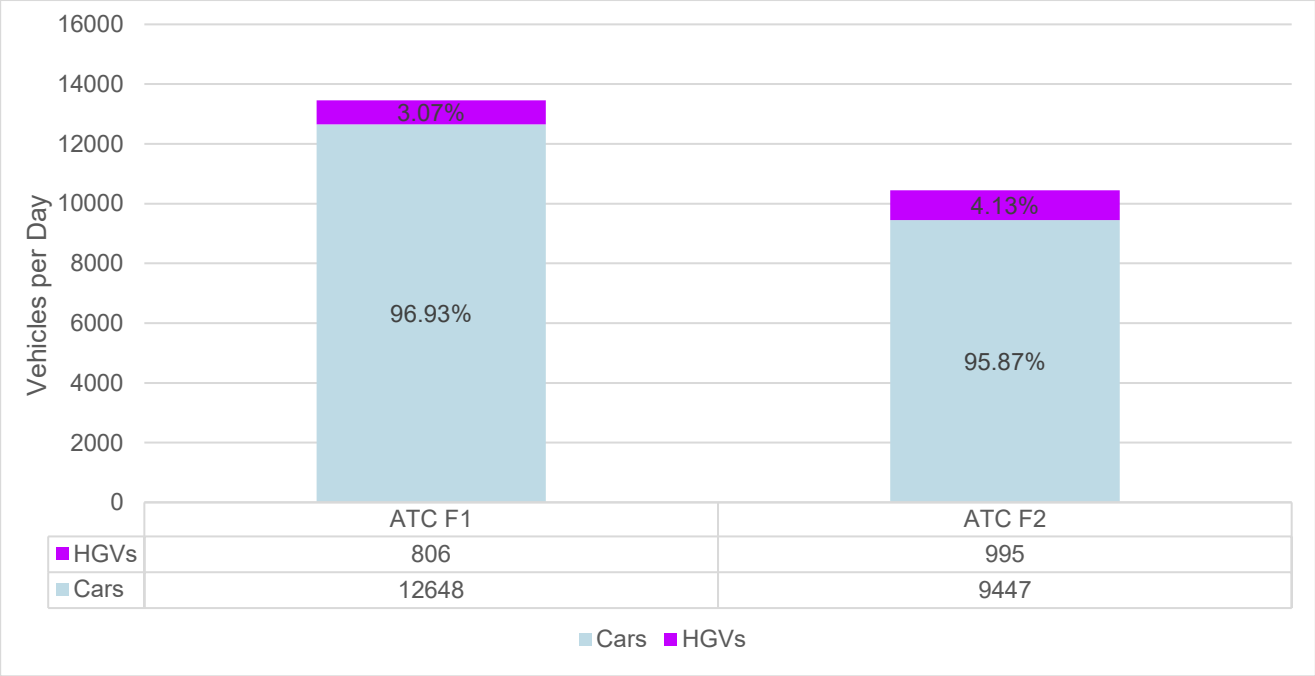


Figure 3-15 – Average Weekday Vehicle Volumes by Classification

The highest volume of traffic along the routes (total of both directions) was registered at ATC F1 with an average weekday of 14,036 vehicles per day. However, the highest number of vehicles for one direction was registered at ATC F1 with a southbound vehicles per day figure of 7,106.

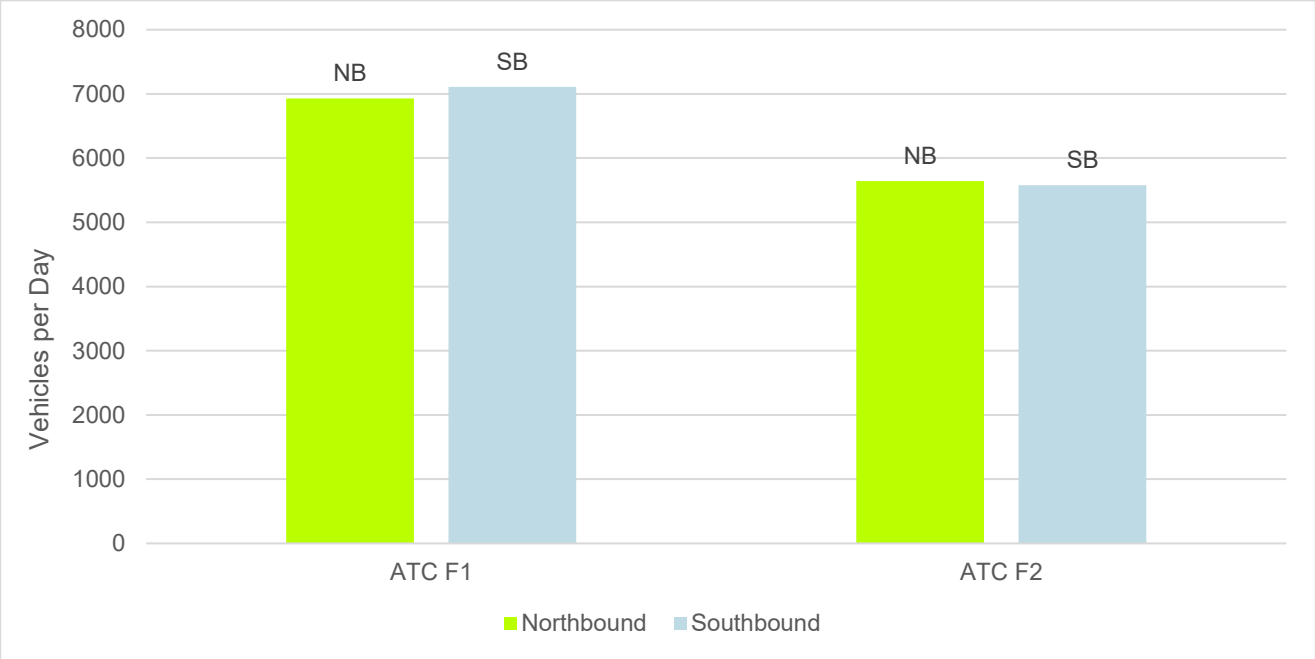


Figure 3-16 – Average Weekday Vehicle Volumes by Direction

The surveyed speed data are summarized below in Table 3-2. The speeds captured at ATC F2 is noted to be relatively high compared to the other locations.

Table 3-2 - Typical Speeds

Location	Direction	Posted Speed Limit (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)
ATC F1	Northbound	50	47.85	56.28
	Southbound	50	48.55	56.01
ATC F2	Northbound	50	56.78	67.03
	Southbound	50	52.78	64.36

3.2.7 Utilities

Existing utility information was collected from relevant providers, shown in Table 3-3. Maps of the available utility information is provided in Appendix B and cover the whole extent of Athlone town.

Table 3-3 - Existing Utilities in Athlone town

Utility Provider	Description
Electricity Supply Board (ESB)	Electricity
Eircom Ltd. (EIR)	Telecoms
Gas Networks Ireland	Gas distribution and transmission
Irish Water	Water Main and Wastewater
E-net	Telecoms
Aurora Telecoms	Telecoms
Virgin Media	Telecoms
BT Telecoms	Telecoms
Westmeath County Council	Stormwater
Siro	Telecoms
EU Networks	Telecoms

3.2.8 Public Transport

There are several bus routes operating in Athlone town, offering connection to Dublin City, Sligo, Mullingar, Dundalk, Galway, among other towns. The services are indicated in Figure 3-17.

Route A2 are the main local bus services operating within Athlone, both operated by Bus Éireann. This Route connects from Bellanamulla to Athlone Station, and finally to Kilmartin Centre, with each route utilizing different pathways as indicated in Figure 3-17. This service operates at 30-minute intervals, with around 26 services from 7am to 8pm per day in each direction for each route.

Route 819 is another route that connects Athlone to Mullingar. This route, however, is operated by TFI Local Link Longford Westmeath Roscommon. It has 6 services each way per day at 4-hour intervals. The route provides connection through Baylin, Walderstown, Ballymore, Killare, Castletown Geoghegan, and Ballina.

Athlone also has a railway station that provides rail services for between Galway-Dublin, and Westport/Ballina-Dublin.

The Galway-Dublin Line has 14 stops in total and has 11 services at the Athlone Railway Station per day in each direction.

The Westport/Ballina-Dublin Line has 19 stops in total and has 7 services at the Athlone Railway Station per day in each direction.

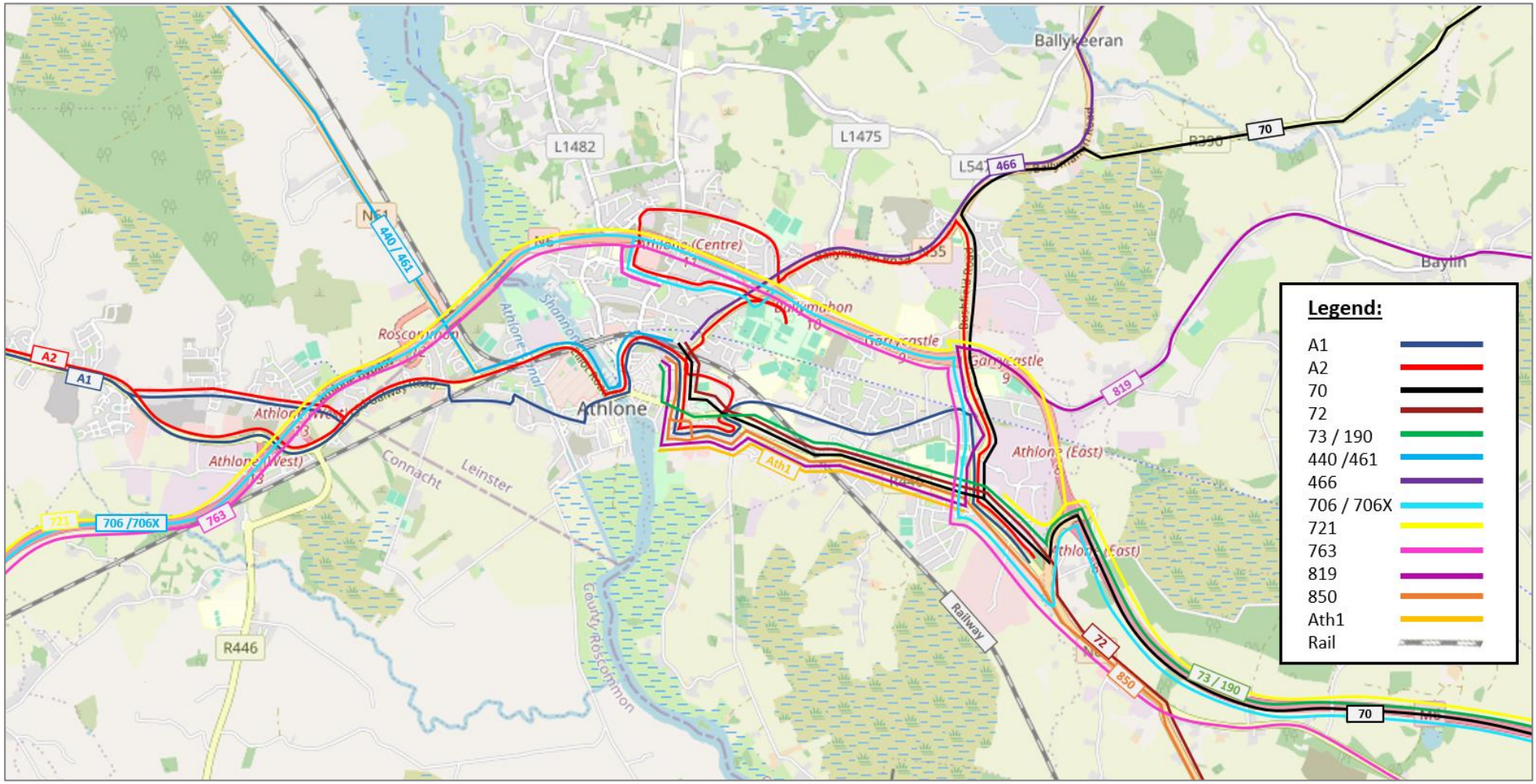


Figure 3-17 – Bus Services in Athlone

3.2.9 Land Use and Zoning

The Land Use Zoning Map for Athlone was consulted to obtain information on existing land use zoning and to obtain information of main trip generation areas within the town. Figure 3-18 shows the Athlone Land Use Zoning Map prepared as part of the Westmeath County Development Plan 2014 – 2020. The County Development Plan has been replaced to an updated version published in 2021, however, the land use map for Athlone is still currently valid until 2025.

Land-uses along Route F primarily comprises of Existing & Proposed Residential areas, Commercial areas, Education / Community & Institutional areas, Open Space areas, Enterprise & Employment areas, and Innovation Technology areas.

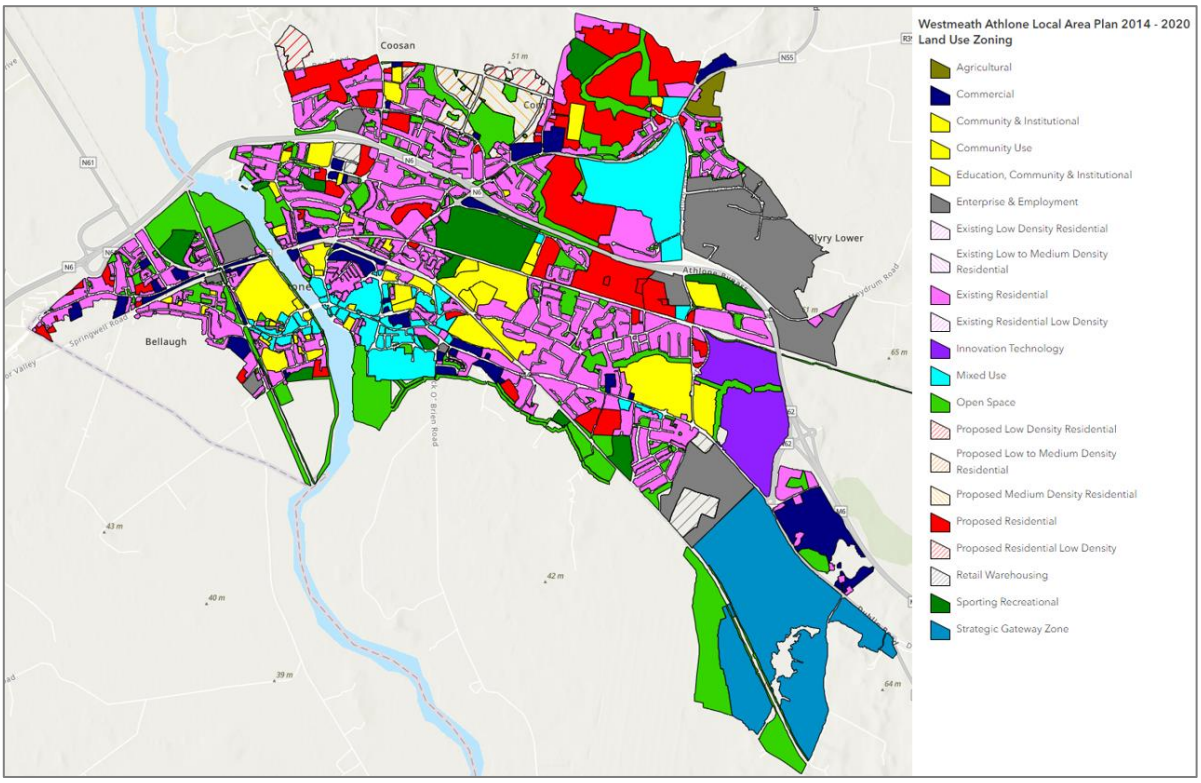


Figure 3-18 – Athlone Land Use Zoning Map

3.2.10 Invasive Species

Invasive Alien Plant Species (IAPS) are species that are introduced intentionally or unintentionally that can threaten native biodiversity, human health and ecosystem services, and potentially damage infrastructure, agricultural practices and forestry. The Technical Document (**The Management of Invasive Alien Plant Species on National Roads – Technical Guidance)** is based on an extensive literature review and analysis of best practice throughout Europe, and aims to provide the following:

- An overview of IAPS and their interactions with existing and proposed national roads.
- An outline of relevant legislation that both drives and regulates the management of IAPS in Ireland.
- An outline of the key IAPS management strategies that must be incorporated into the planning, construction practices and maintenance regimes of national roads.
- The processes for managing IAPS on national roads in Ireland.
- Information on the identification and ecology of IAPS present on Ireland's roadsides.

It should be noted an invasive species survey will be required on Route F, this survey will be carried out in June/July 2024 and all recommendations will be incorporated within the detail design stage.

3.3 Disability Audit

The existing conditions for visually and mobility impaired pedestrians along Route F do not align with the current design standards. The following issues have been identified:

- The existing footpath surface is in sub-standard condition, with some sections having a complete lack of footpath provisions (see example in Figure 3-19)
- The existing footpath varies in width (from an already sub-standard width (see example in Figure 3-20)
- Several junctions along the route have a lack of crossing facilities and tactile paving provisions (see example in Figure 3-21)
- Footpaths terminate prematurely with no crossing facility (see example in Figure 3-22)
- Relatively large corner radii are present at most junctions along the route which results in increased crossing times for vulnerable road users and higher entry/exit speeds for vehicles.

Figure 3-19 - Lack of Footpath Provision

Figure 3-20 - Varying Footpath Width

Figure 3-21 - Lack of Crossing Facilities and Tactile Paving

Figure 3-22 - Footpath Termination with No Crossing Facility

3.4 External Parameters

There are numerous other factors that influence the proposed scheme and therefore should be considered. The factors, referred to as external parameters, include other on-going projects in the area, funding considerations, construction phasing considerations, technical standards, and procedural and legal requirements. Each of these is discussed further in the following chapter.

3.4.1 Other Projects

There are no known additional transport infrastructures currently being developed within the site extents that could influence/impact the proposed scheme at the time of writing.

Westmeath County Council will seek funding for the network from the National Transport Authority (NTA) once approvals for the various stages identified in Project Approval Guidelines are obtained.

3.4.2 Construction Phasing

The construction phase timelines will be subject to funding, and approvals of preceding phases. The works will be phased to mitigate against disruption to all road users and adjacent commercial and residential premises, insofar as possible.

3.4.3 Technical Standards

The network will be designed to current design standards outlines in the Cycle Design Manual (CDM), Design Manual for Urban Roads and Streets (DMURS), National Transport Authority (NTA) publications and all relevant guidelines.

Throughout all stages, the developed design will comply with the following:

- The Westmeath County Development Plan policies and objectives, in particular with respect to visual standards in design, protected structures, and the natural and built environment.
- The requirements (reporting, meetings, statutory consents, approvals and cost management) of the NTA PAGs, and Appropriate protection of all National and EU designated sites and species of ecological importance and to include for any assessments required in accordance with the Habitat Directive 92/43 EEC and the Birds Directive (2009/147/EC)
- At this phase, the information regarding compound for construction is currently unavailable. However, it will be considered that the location will not impinge on protected sites such as SAC and proximate to invasive species.

3.4.4 Procedural and Legal Requirements

The scheme will be reviewed and developed in line with current procedural and legal requirements during all stages of the project lifecycle. All relevant local, regional, national and European legislation, guidelines, best practices and procedures will be reviewed and complied with where required.

3.5 Summary of Constraints

The findings concluded that the following **Environmental Constraints** must be considered in the development of feasible options and the preliminary design of the scheme:

The following **Artificial Constraints** must be considered in the development of feasible options of the proposed scheme:

- Existing engineering infrastructure (roads, junctions, private and commercial accesses, buildings and property lines etc)
- Existing public and private land ownership
- Existing public transport links
- Existing utilities
- Existing planning permissions
- Current traffic volumes.

The following **External Parameters** must be considered in the development of the design options for the proposed scheme:

- All other projects currently envisaged for the study area
- All technical standards requirements
- All procedural and legal requirements.

4. Option Selection Methodology

4.1 Overall Approach

The approach used to identify the Emerging Preferred Option for the Athlone Active Travel Schemes Bundle is aligned with the Transport Appraisal Framework (TAF), the Public Spending Code (PSC), and the NTA Project Approval Guidelines (PAGs).

Figure 4-1 outlines the option selection methodology to identify the Emerging Preferred Option for each route of the Athlone Active Travel Schemes Bundle. The appraisal will be completed in only one stage, Stage 1 Detailed Option Assessment, which aligns with the TAF. The Stage 1 will comprise the assessment of the link types as well as the major junctions, where bespoke options have to be considered.

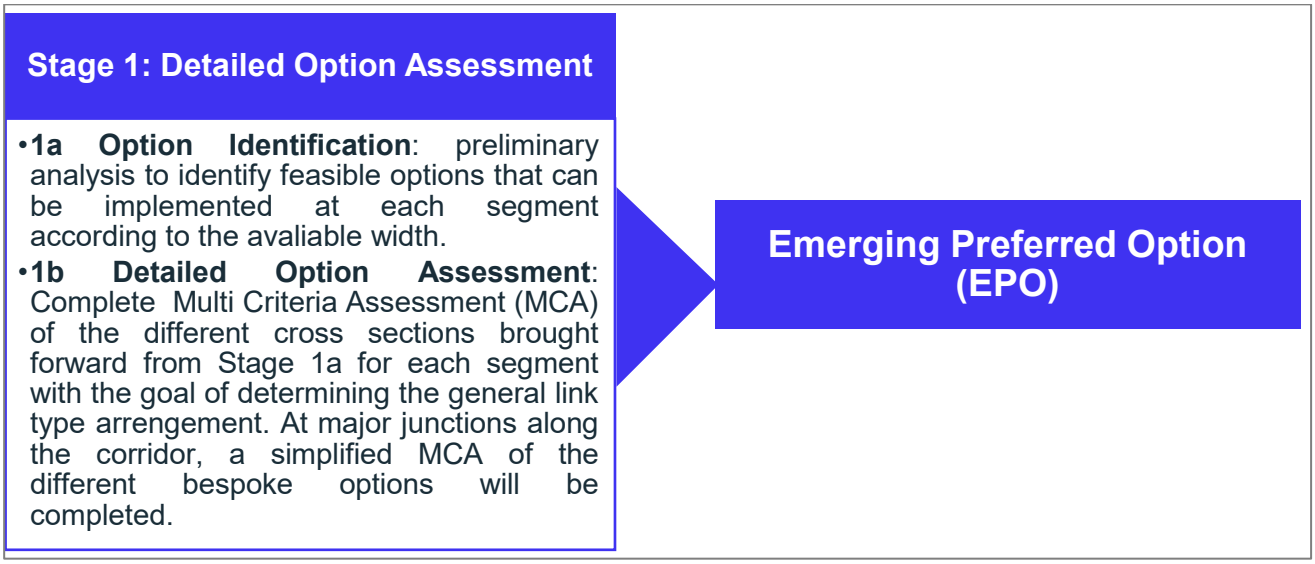


Figure 4-1 – Option Selection Methodology

4.2 Stage 1 Detailed Option Assessment Methodology

The Detailed Option Assessment process will focus on evaluating both link types and major junctions. The aim of this process is to develop and investigate the feasibility of alternative options based on other route development principles.

The initial process of the Stage 1 assessment, Stage 1a, will be to identify possible link type options for each segment based on the available width, obtained from topographical survey data (Lidar) and aerial imagery. This initial process is identified as a “Identification Process” and no weighting system will be applied to this process.

The next step is the Stage 1b Detailed Option Assessment. The methodology for the Stage 1b process focused on the following principles:

- Consideration of the user-hierarchy that promotes and prioritises sustainable forms of transportation starting with pedestrians, followed by cyclists, buses and private cars considered last. This is in line with Table 2.21 of DMURS. This inclusive approach was guided by DMURS section 2.2.2 which highlights children, elderly and disabled as the groups that are disproportionately affected by the threat of accident, community severance and the loss of social cohesion.

- Consideration of the link options depending on adjoining traffic regime, the need for segregation and the target quality of services as per Chapter 2.5 of the Cycle Design Manual.
- Consideration of PRAI landownership maps, Ordnance Survey and available Topographical Survey information, in terms of land take and the number of properties, accesses, etc that will be impacted with the proposed scheme.
- Consideration of likely construction costs associated with each option based on an internal cost database incorporating similar projects in Ireland in the last 5 years.
- Consideration to local environment and climate change aspects associated with each option assessed, based on the principles outlined in the TAF.

The Stage 1 MCA will consider six TAF criteria, obtained from the Transport Appraisal Framework Module 7.0 Detailed Guidance on Appraisal Techniques, published by the Department of Transport. The Climate Change criteria has been removed from the assessment as change in modal shift is already being assessed as part of Social Impacts, which cumulatively compares possible reduction in carbon emissions.

- Transport User Benefits and Other Economic Impacts
- Accessibility Impacts
- Social Impacts
- Land Use Impacts
- Safety Impacts
- Local Environmental Impacts.

Table 4-1 outlines the criteria and key impacts to be measured to assess the Stage 1b. The sub-criteria and key impacts to be measured have been developed by AtkinsRéalis based on the TAF publication, the NTA PAG, project objectives and the principles outlined above. Therefore, the outcome of the Stage 1b assessment is to compare the options brough forward from Stage 1a against project objectives through a detailed and rigorous assessment process in order to identify the Emerging Preferred Option for the scheme.

Table 4-1 - Stage 1b Detailed Option Assessment Criteria and Key Impacts

Criteria	Sub-criteria	Key Impacts to be Measured
Transport User Benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area
		Construction and maintenance
		Programme Impacts
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact
	Connectivity with public transport facilities	Connections to existing and proposed public transport
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)
		Impacts on loading and parking bays
	Coherence	Route consistency and continuity
	Directness	Directness along route and though junctions and maintenance of cyclist progression
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width
	Attractiveness	Attractiveness of the route

Criteria	Sub-criteria	Key Impacts to be Measured
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities
	Gender Impacts	How the proposal may have gender specific impacts
Land Use Impacts	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI
		Impact on green areas
Safety Impacts	Safety Impact	Segregation between cyclists and vehicles
		Segregation between cyclists and pedestrians
		Safety for all users regarding traffic volumes and speeds along route
		Conflicts at junctions and side roads between vehicles and cyclists
	Traffic	Impact on traffic capacity due to the proposals
Local Environmental Impacts	Air Quality	Air Quality Impact
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas
	Biodiversity	Impact on Biodiversity along scheme extents
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows
	Landscape and Visual Quality	Landscape and visual assessment
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA).

4.2.1 Stage 1b at Major Junctions

At major junctions, a similar process as discussed above will be utilised, however, as the process will only involve specific locations at short distances and junctions, it will be simplified with some sub-criteria removed and others unified however still maintaining six TAF criteria, as shown in Table 4-2.

Table 4-2 - Stage 1 Major Junctions Criteria and Considerations

Criteria	Sub-criteria	Key Impacts to be Measured
Transport User benefits and Other Economic Impacts	Cost impacts	Land acquisition area
		Construction and maintenance
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact
Accessibility Impacts	Coherence and Directness	Consistency, continuity, and directness along the route and through junctions and the maintenance of cyclists' progression
	Comfort and Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities
	Gender Impacts	How the proposal may have gender specific impacts
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI
		Impact on green areas
Safety Impact	Safety Impact	Segregation between cyclists and vehicles
		Segregation between cyclists and pedestrians
		Safety for all users regarding traffic volumes and speeds along route
	Traffic	Impact on traffic capacity due to the proposals
Local Environmental Impact	Air Quality	Air Quality Impact
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas
	Biodiversity	Impact on Biodiversity along scheme extents
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows
	Landscape and Visual Quality	Landscape and visual assessment

Criteria	Sub-criteria	Key Impacts to be Measured
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)

4.2.2 Scoring System

Each option is assessed relative to one another at the Stage 1b Detailed Option on a five-point ranking scale, shown in Table 4-3. The options were assessed against the above criteria in a performance matrix which describes how each option performs against the defined sub criteria in comparison with other options.

The performance matrix describes how each route performs against one another, showing their strengths and weaknesses compared to other options. The preferred option in segment was then determined based on which option is most advantageous compared to others. Consistency across adjacent segments will also be considered when determining the most appropriate cross-section typology for the route corridor.

Table 4-3 - Detailed Option Assessment Scoring Scale

Colour Coding	Rank Description
	Significant advantages to other options
	Some advantages to other options
	Neutral compared to other options
	Some disadvantages to other options
	Significant disadvantages to other options

5. Design Principles

5.1 Cycle Flows

The CDM states that in order to determine the width of the cycle facility, there needs to be an estimation of the cycle flows along the route. The CDM divides the cycle flows into two categories: higher or lower than 300 cyclists per hour. In order to obtain the estimated number of cyclists along each route, traffic count data from January 2024 and the NTA Cycle Propensity Tool[2] for the Western Region were used. The NTA cycle propensity tool provides a reference and two future scenarios, the high propensity, and the high propensity with e-bikes. The reference scenario is the NTA model for 2028 which considers cycling attitudes not significantly changed from the present. The two future scenarios increase the cycling usage, with the provision of safe cycle parking, growth of bike hire, increase of acceptance of cycling and financial supports similar to the Cycle to Work Scheme. The high propensity scenario with e-bikes also consider an increase in the speed by 4 km/h in a scenario where electric bicycles are more accessible.

5.1.1 Cycle Flows along Route F

Traffic volumes were obtained from Automated Traffic Counts (ATC) undertaken near the Athlone Training Centre R916 South of N6 Junction 9 of Route F. According to the ATCs, on the busiest day, the maximum ATC recorded was 13,938 vehicles travelling along the road on Thursday the 3rd of March 2022. The reference scenario in the cycle propensity tool zone located along Route F indicates that 84.9% of the trips along the area comprise of motorised vehicles and that 1.6% are cyclists during a 24-hour period. Therefore, based on the ATC and the cycle propensity values, it can be calculated that a total of 16,417 users travel along the road, be it by private cars, HGVs, bicycles or on foot. Based on the number of cyclists representing 1.6% of the total trips along the segment, it is expected that a total of 263 cyclists would travel along the road during the 24-hour period.

The high propensity with e-bike scenario of the cycle propensity tool along the route expects an increase in the cycle usage from the existing 1.6% to 4.1% with the improvement of existing cycle facility, creation of new networks and expansion of incentives to cycle rather than using private cars. Based on this, the expected number of cyclists along the route increases to 681 users during a 24-hour period.

At peak hours, Route F registered a maximum of 1322 vehicles Thursday the 3rd of March 2022, which represents 9.8% of the total max. vehicles during the 24-hour period. When bringing the numbers presented above to the peak period, the maximum number of cyclists expected is approximately 65 cyclists per hour (i.e., 681 x 9.8%). As for Route F, only one location was surveyed for traffic data, and the maximum number of cyclists expected based on the cycle propensity tool is 65 users per hour, it can be considered appropriate to base the calculations for the width of the cycle facility to cater for less than 300 users per hour.

[2] https://www.nationaltransport.ie/planning-and-investment/transport-modelling/regional-modelling-system/cycle-propensity-scenarios/

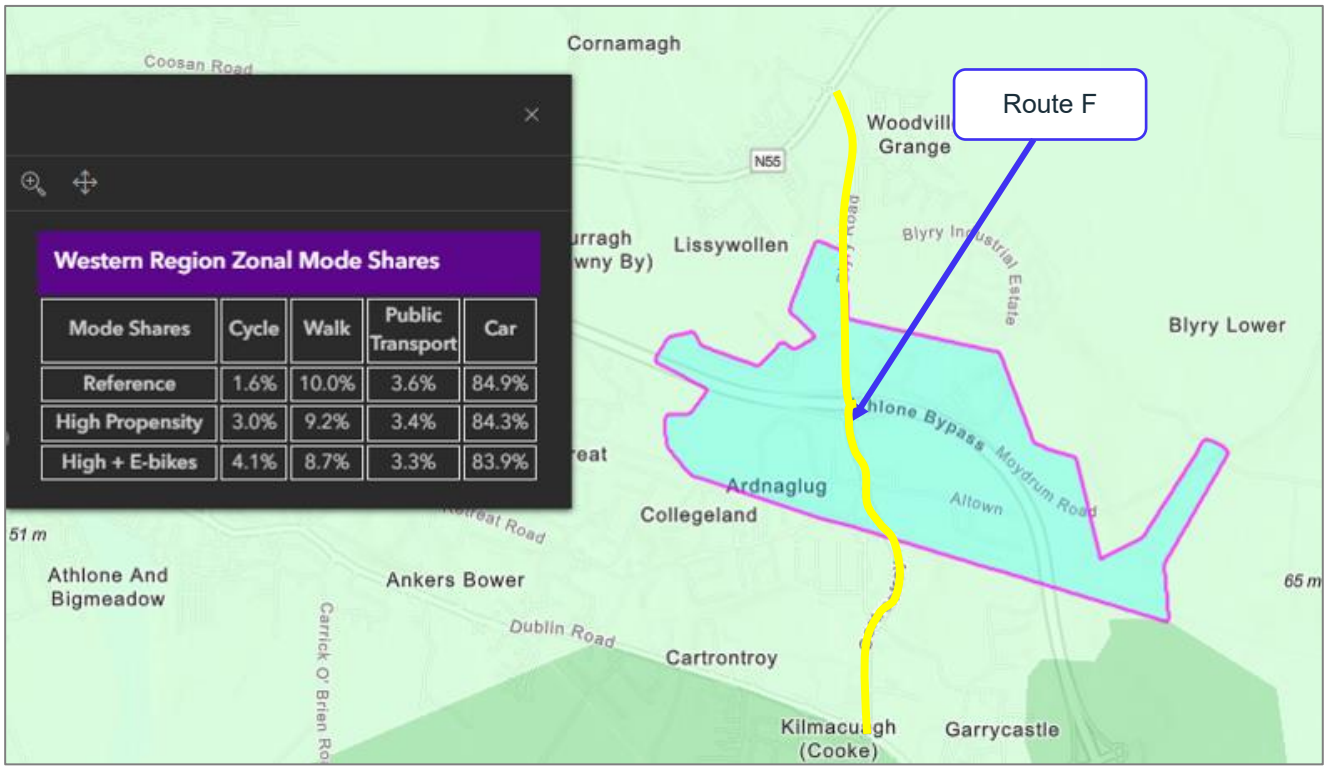


Figure 5-1 – Cycle Propensity Scenario Tool at Route F

Table 5-1 - Cycle Flows calculations (Route F)

ATC 1 R916 South of N6 Jn 9		Cycle Propensity Scenarios (Base reference)				Cycle Propensity Scenarios (High propensity)				Cycle Propensity Scenarios (High + E-bike propensity)			
	Total vehicles	% Car	Total trips based on CPS	% Base scenario	Cyclist' s base scenario	% Car	Total trips based on CPS	% High propensity	Cyclist' s base scenario	% Car	Total trips based on CPS	% High + E-bike propensity	Cyclist' s base scenario
Peak Hour (Thu 03-Mar-2022)	1322	84.9	1557	1.6	**25**	84.3	1568	3.0	**47**	83.9	1576	4.1	**65**
24h (Thu 03-Mar-2022)	13938	84.9	16417	1.6	**263**	84.3	16534	3.0	**496**	83.9	16613	4.1	**681**

5.2 Design Principles and Approaches

The following principles were considered in line with the Cycle Design Manual:

- Quality of service - Quality of Service is a measurement of the degree to which the attributes and needs of the cyclist are met. The aim of the scheme is to achieve the highest Quality of service available on each route.
- Effective Width calculator - The designed width of a cycle facility is comprised of the effective width, i.e. the space that is “usable” by cyclists, as well as the clearances that will be required in different circumstances.
- Segregation - Segregation refers to the physical separation of cyclists from motorised traffic. Where possible throughout the scheme a segregated cycle facility is to be provided.
- Transitions - Cyclists may frequently be required to make a transition to the right or left, from on-road to offroad etc. The scheme will be designed to limit the occurrence of transitions and where required, transitions will be designed to provide continuity, comfort, and safety to cyclists.
- Impacts on other road users – The scheme will look to minimise the impact on other road users while making a safer environment for all road users.
- Universal Design and Inclusive Mobility – The scheme shall be designed to be usable by all types of road users and all types of bicycles and wheeling equipment, where possible.

5.3 Link Types Options

Based on the constraints identified for Routes A and B, as outlined in Section 3 and the project objectives and expected benefits, outlined in Section 1.3, the options considered were based on an appropriately detailed assessment of each segment based on Lidar survey and online mapping, with the aim to provide high quality segregated cycle and pedestrian provision.

Thus, to define the width dimensions of the cross sections used in the study, the Cycle Design Manual (CDM) was used as the base document regarding the detail and width of the cycle facilities and the Design Manual for Urban Roads and Streets (DMURS) was used regarding to the detail and width of footpaths and carriageways. The NTA publication ‘Rapid Build Active Travel Facilities’ was also utilised regarding rapid build facility options.

The approach to the development of the cross-section options was to consider the highest provision of segregated cycle provision in the first instance, and to consider cross-section options that provide incrementally lower quality of service, as well as to consider options with sufficient width to provide rapid build options, in accordance with Table 2.1 of the CDM.

The following lists the cross-section typology options considered in order of highest quality of service to lowest:

- Standard Cycle Track
- Stepped Cycle Track
- Protected Cycle Lanes
- Shared Active Travel Facilities
- Cycling in Mixed Traffic
- Mandatory Cycle Lane

For each of the above cross-section options, a range of cross-section widths were also considered in order to provide flexibility in terms of the physical network constraints. The CDM states that the desirable minimum width should be used, however, where it cannot be achieved, incremental reductions can be applied towards the absolute minimum width. To facilitate the assessment, the cross-section option widths are based on CDM desirable width and absolute minimum width.

5.3.1 Standard Cycle Track

These options, detailed below, offer the highest level of service in terms of safety, comfort and quality for pedestrians and cyclists (active modes). These options can only be provided by traditional build construction methods, as they would require the realignment of kerb lines, construction of cycle track pavements, widening of footpaths (if required), changes to drainage system etc.

Two cross sections options are proposed which provide standard cycle track provision: one-way cycle track and two-way cycle track.

5.3.1.1 One Way Cycle Track

Figure 5-2 shows cross sections for one way cycle tracks. For one way cycle tracks with less than 300 cyclists per hour and a speed limit of 50km/h, the desirable minimum width is 2.2 m in each direction, which offers a cycle track central width of 2.0 m in each direction (B), no inside clearance (A) as the kerb between the cycle track and the footpath is 60mm high, and outside clearance (C) of 0.2m assuming a full hight kerb between it and the carriageway and no buffer (D) considering no contra-flow cycle movement. A 2.2m wide cycle track will ensure that cyclists can ride comfortably and overtake safely, adequately meeting the criteria required by the CDM. Considering the criteria required by DMURS, this option provides footpaths with a width of 2m per direction for pedestrians and a carriageway of 6m wide inside the town centre to safely accommodate buses and HGVs. These measures ensure pedestrian comfort when walking along and past other pedestrians and provide greater control of vehicle speeds due to the influence of the narrower carriageway on driver behaviour and awareness.

The absolute minimum width for one way cycle tracks according to the CDM requires a central width of 1.5m (B), no inside clearance (A), 0.2m outside clearance (C) assuming the full hight kerb and no buffer (D), which brings the cycle facility to 1.7m in each direction. The footpath width for the absolute minimum options would be 1.8m and the carriageway would be similar to described above, 6m in the town centre and elsewhere. The widths for this option are considered to provide pedestrian comfort and safety.

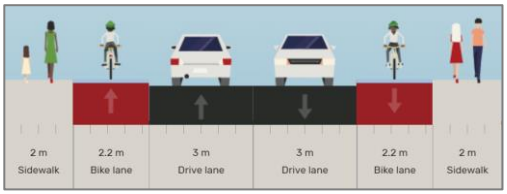
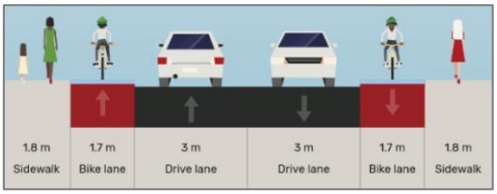
Cross Section	Desirable Minimum Width	Absolute Minimum Width
One-Way Cycle Track		

Figure 5-2 – One-Way Cycle Tracks

5.3.1.2 Two Way Cycle Track

Figure 5-3 shows cross sections for two-way cycle tracks. Two-way cycle tracks require a buffer as cyclists are travelling adjacent to oncoming traffic. The preferred buffer type, according to the CDM, are raised or planted verges, as they provide separation between cyclists and vehicles and prevents cyclists from swerving into the roadway.

For two-way cycle tracks with less than 300 cyclists per hour and on a road with a speed limit of 50km/h, the desirable minimum width according to the CDM is 0m for inside clearance (A), 3m wide central width (B), no outside clearance (C) and a buffer (D) of 0.5m, reaching a total of 3.5m. The carriageway width is considered as 6m, depending at the location, and the footpaths are 2m wide, according to DMURS.

For the absolute minimum width, the two-way cycle track central width (B) can be reduced to 2m, no inside clearance (A) and outside clearance (C) will be provided, and a buffer (D) of 0.3m will be located between the cycle track and the carriageway, with the total width of the cycle facility 2.3m. The road carriageway is also 6m wide, depending on if it is inside the town centre or not, and the footpath is 1.8m wide, according to the minimum requirements set in DMURS.

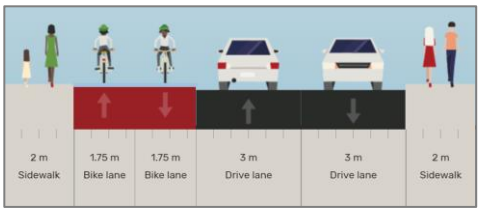
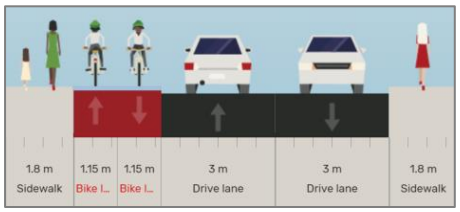
Cross Section	Desirable Minimum Width	Absolute Minimum Width
Two-Way Cycle Track		

Figure 5-3 – Two-Way Cycle Tracks

5.3.2 Stepped Cycle Tracks

Stepped cycle tracks are similar to standard cycle tracks, however, the kerb dividing the cycle facility to the roadway is raised up to 75mm above the carriageway and 60mm below the adjacent footpath. These facilities are ideal for locations with off-street accesses and driveways, as the footpath and cycle track can continue at the same level, which provides a better experience for both pedestrians and cyclists and enforce vehicles to reduce speeds. Stepped cycle tracks also do not provide buffer between the cycle facility and the carriageway. These facilities are not appropriate for two-way cycle as it does not offer sufficient protection to cycle against oncoming traffic.

The desirable minimum width for this type of facility is 2.2m on each side of the road. No inside clearance or buffer are included and only a 0.2m outside clearance (C) assuming more than 60mm kerb height is considered. The absolute minimum width is 1.7m, comprising of 1.5m central width (B) and 0.2m outside clearance (C). Figure 5-4 illustrates both options. The road carriageway and footpaths follow DMURS and are 6-6.5m and 1.8-2m, respectively.

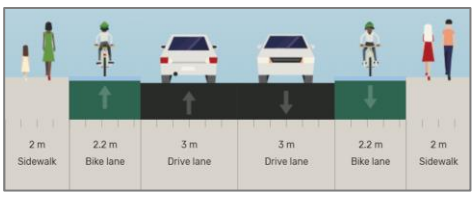
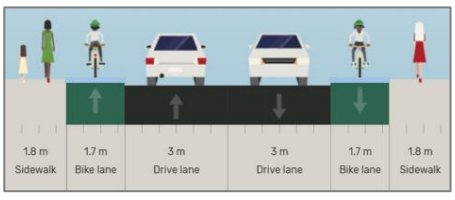
Cross Section	Desirable Minimum Width	Absolute Minimum Width
Stepped Cycle Track		

Figure 5-4 – Stepped Cycle Tracks

5.3.3 Protected Cycle Lanes

Protected Cycle Lanes (PCLs) are cycle lanes provided at carriageway level but, different from mandatory cycle lanes, they are physically segregated from vehicular traffic. There are several forms of segregation that can be implemented, such as continuous separator kerbs, modular islands, discrete modular elements (flexible bollards), planters, parking protected facilities, etc. PCLs are a common rapid build measure that can be implemented to provide segregation for cyclists with a lower cost, as it makes use of the existing kerb-to-kerb width and does not require the relocation of road drainage and other infrastructure.

For one-way facilities, the desirable minimum width is considered to be 2.40m, which comprise of 0.20m inside clearance (A), 2.0m central width (B), 0.2m of outside clearance (C) assuming more than 60mm kerb height and no buffer (D) considering no contra-flow cycle movement. The absolute minimum width is 1.90m on each side, which comprise of 0.20 (A), 1.5m (B), 0.2 (C) and no buffer (D).

For two-way cycle facilities, the desirable minimum width considered is 3.70m (0.20 (A), 3.0 (B), 0 (C) and 0.5 (D)) and 2.50m for the absolute minimum (0.20m (A), 2.0m (B), 0m (C) and 0.3m (D)).

Figure 5-5 illustrates the desirable and absolute minimum PCL cross-section arrangements considered. Similar to the other options described above, the footpaths will follow DMURS guidelines and are 2m for the desirable minimum and 1.8m for the absolute minimum. The road carriageway is the same for both options, however, considered 6.0 within the town centre and elsewhere.

These widths are indicative only and vary from the type of segregation provided, e.g., separator kerbs do not require the installation of a buffer zone, whereas flexible bollards higher than 600mm require a buffer of 0.5m and parking protected cycle lane require a buffer of 750mm.

Table 2.1 of the CDM indicates that protected cycle lanes may not be suitable for all users and a Departure from Standard is required if two-way vehicular traffic flows are higher than 400 PCU/h.

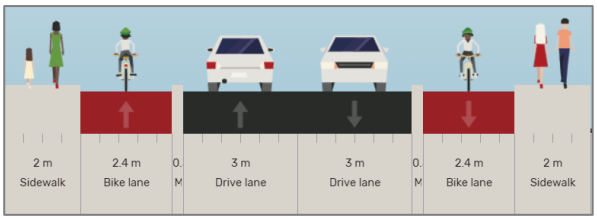
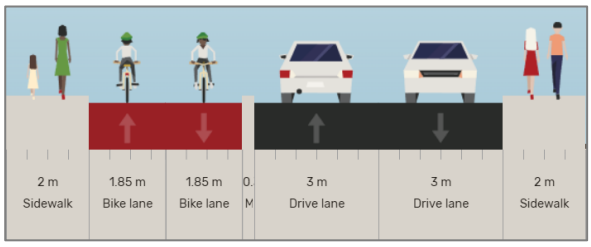
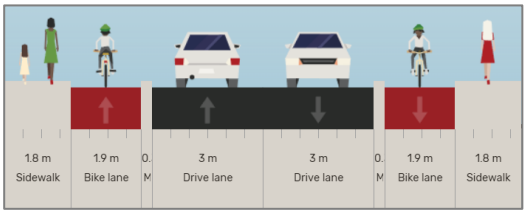
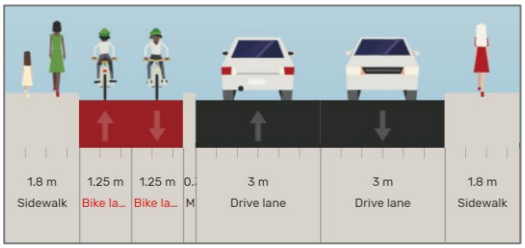
Cross Section	Desirable Minimum	Absolute Minimum
Protected Cycle Lane (PCL)	 	 

Figure 5-5 - Types of Protected Cycle Lanes

5.3.4 Shared Active Travel Facilities

While providing segregation for traffic, shared active travel facilities allow for the mixing of pedestrians and cyclists, reducing the overall quality of service for both active travel modes. According to the CDM, shared active travel facilities are considered appropriate if the density of pedestrians is less than 200 pedestrians/hour/m. These facilities are appropriate only at certain contexts, for example along busy inter-urban and National Roads with no high volumes of pedestrians and should be avoided at busy urban areas with high volumes pedestrians and/or cyclists.

Figure 5-6 illustrates the desirable and absolute minimum cross-section arrangements considered according to the Cycle Design Manual for less than 300 pedestrians and 300 cyclists per hour, which is 4.2m for the desirable minimum (4.0 for central width B and 0.2m for outside clearance C) assuming full height kerbs and 3.2m for the absolute minimum width (3.0m B and 0.2m C). The carriageway is considered 6.0m in the town centre areas and the remaining locations.

At some segments, a shared facility has been considered on only one side of the road due to physical constraints and reduced catchment area. As there are no existing footpaths with over 3m in width, this option can only be provided using traditional construction methods.

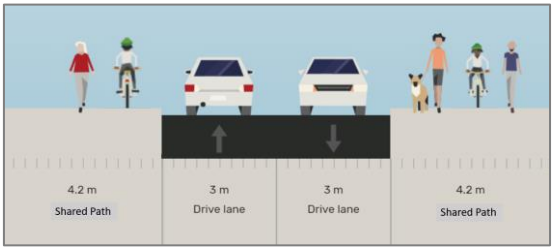
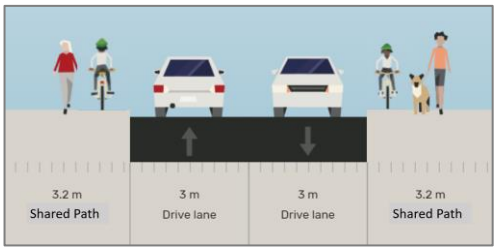
Cross Section	Desirable Minimum	Absolute Minimum
Shared Active Travel Facility		

Figure 5-6 - Types of Shared Active Travel Facilities Provision

5.3.5 Cycling in Mixed Traffic

Mixed traffic provision does not provide any separation or segregation between cyclists and traffic, and it is only suitable for roads with low volumes & low traffic speeds of traffic, such as residential streets, local roads and rural lanes. Rapid build can be provided for this cross-section type as it does not require major construction works and can mainly be accommodated within the existing road layout, where there is sufficient road width.

At proposed mixed traffic streets, measures to reduce traffic speeds, such as reduction of carriageway widths, horizontal and vertical deflections, surface treatments etc, shall be implemented to reduce vehicular speeds and increase safety for all users. This option would look into providing a carriageway with 6.0m in width at the town centre areas, as it will require vehicles to reduce the speed when travelling along the roads. At locations outside the town centre, as they serve several bus routes, the width would be increased to 6.5m, a 3.25m lane on each side. Regarding footpath widths, the desirable minimum is 2.0m according to DMURS and the absolute minimum is 1.8m.

Figure 5-7 illustrates the desirable and absolute minimum mixed traffic cross-section arrangements considered.

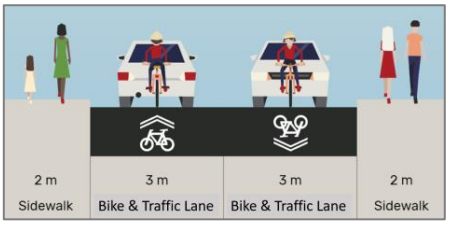
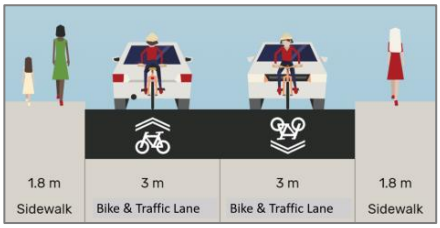
Cross Section	Desirable Minimum	Absolute Minimum
Mixed Traffic		

Figure 5-7 - Types of Mixed Traffic Provision

5.3.6 Mandatory Cycle Lanes

Mandatory Cycle Lane is not considered as a suitable option for Route F because its provision is not recommended for a range of users within 50km/h speed limit (Refer to CDM Table 2.1).

5.4 Other Design Principles Applied

Verges:

- Where space is available, verges of a minimum of 0.5m will be provided between the carriageway and cycle track (Source: CDM).

Vehicle Lanes:

- Vehicle lanes shall be 3.0m wide within the town centre (source: DMURS).

Land Take:

- Due to the constrained nature of some segments, land take options were considered in two instances: 1) footpaths and cycle tracks were widened to the desirable minimum width or 2) footpaths and cycle tracks were kept to the absolute minimum widths in order to reduce the land take area required.

Junctions and Driveways:

- Raised Continuous Cycle Tracks: Footpaths and cycle tracks will be continuous across side streets and driveways, as detailed in Figure 5-8 and Figure 5-9. Additional signage will be provided to warn motorists of the presence of two-way cycle flows and cyclists of the presence of oncoming vehicles. (Source: CDM)

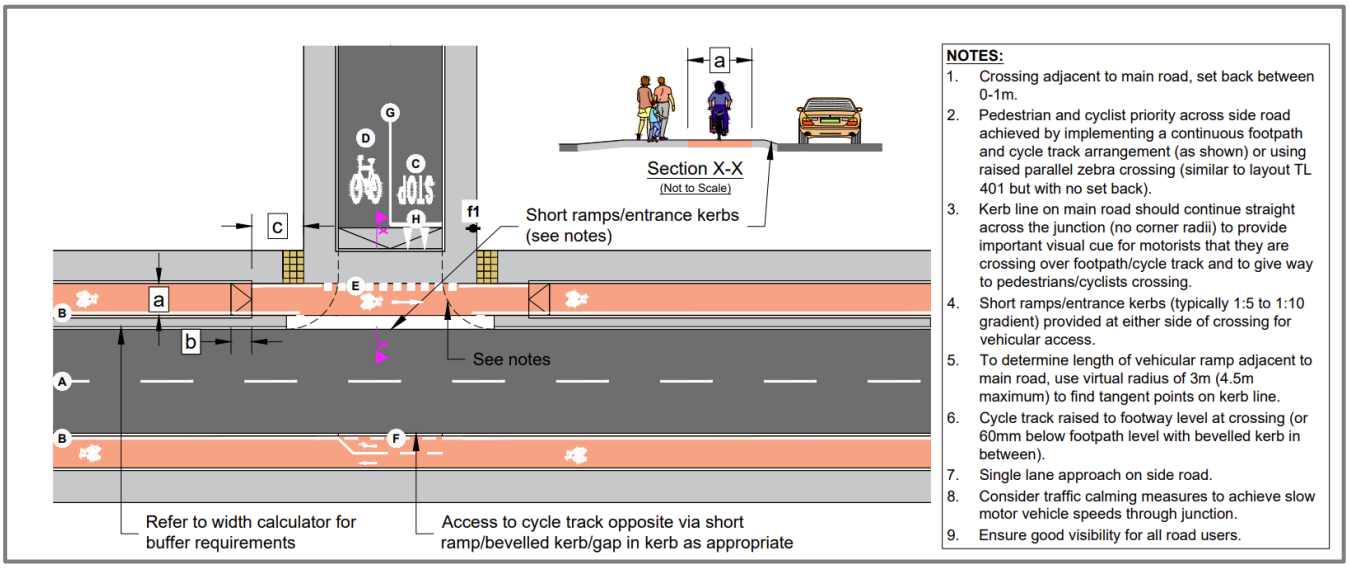


Figure 5-8 - Example of One-Way Cycle Track Priority Junction Treatment

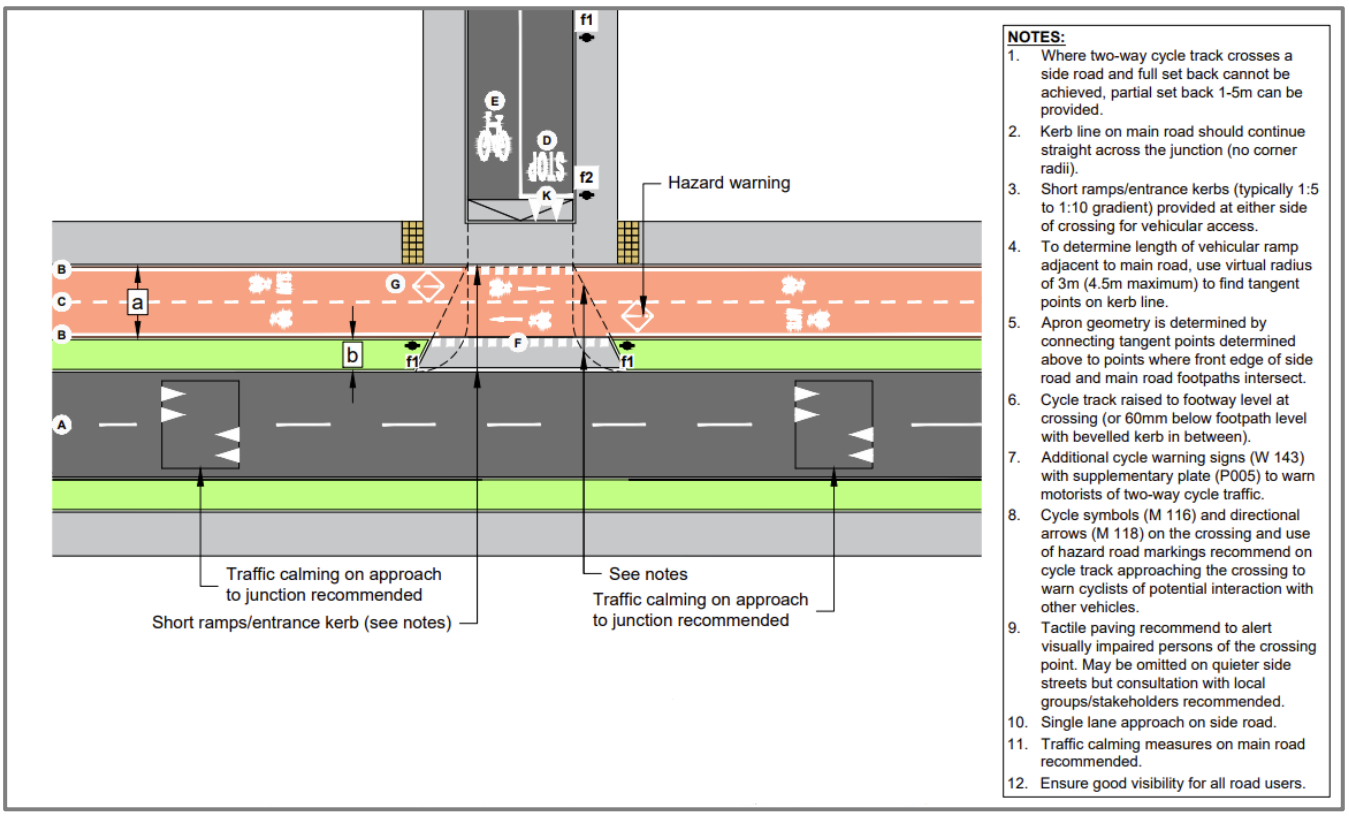


Figure 5-9 - Example of Two-Way Cycle Track Priority Junction Treatment

Crossings

- The positioning of crossings shall be based on the review of the corridors, the locations of key destination points, desirable pedestrian and cyclist lines, intersections and connections to public transport based on the guidelines stated in the Cycle Design Manual.
- Each crossing location will be reviewed to determine the most appropriate crossing type according to Table 4.25 of the CDM. It is assumed that most crossings with either be signal-controlled crossings or uncontrolled crossings as these are usable by both pedestrians and cyclists. In specific instances where context, speeds and volumes are appropriate, zebra crossings may also be considered. Figure 5-10 shows the details for two alternative toucan crossing configurations.

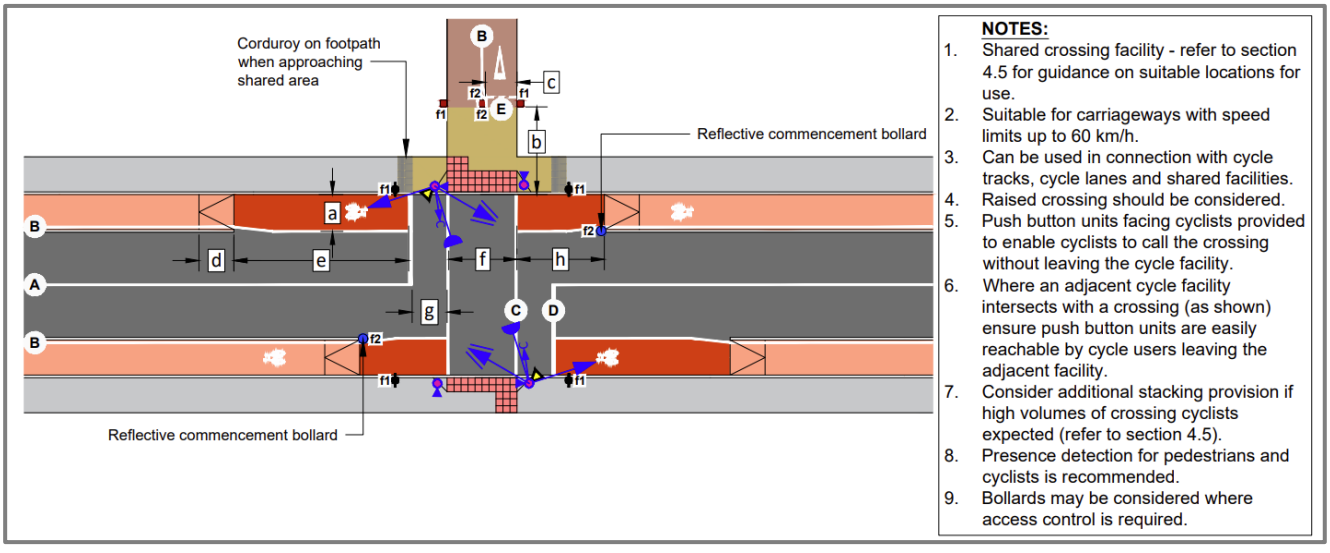


Figure 5-10 - Example of Toucan Crossing Design

Bus Stops

- Existing bus stops are assumed to remain in the same general location as existing and only be moved slightly, if needed, to accommodate the proposed bus stops layouts.
- The preference will be for bus stops to be designed as Islands Bus Stops, as shown in Figure 5-11, where the cycle track is around the rear of the bus stop and adjacent to the footpath, therefore, reducing conflicts between cyclists and busses.
- Where there is insufficient space, a shared bus stop landing zone shall be considered, shown in Figure 5-12. This option also removes the conflicts between cyclists and buses as it brings the cycle facility to the rear of the bus stop, however, increases conflicts between cyclists and pedestrians boarding and alighting the bus. To reduce the risks, the cycle facility shall be narrowed to encourage single file and shall bend from the road to create a boarding/alighting zone for bus passengers.

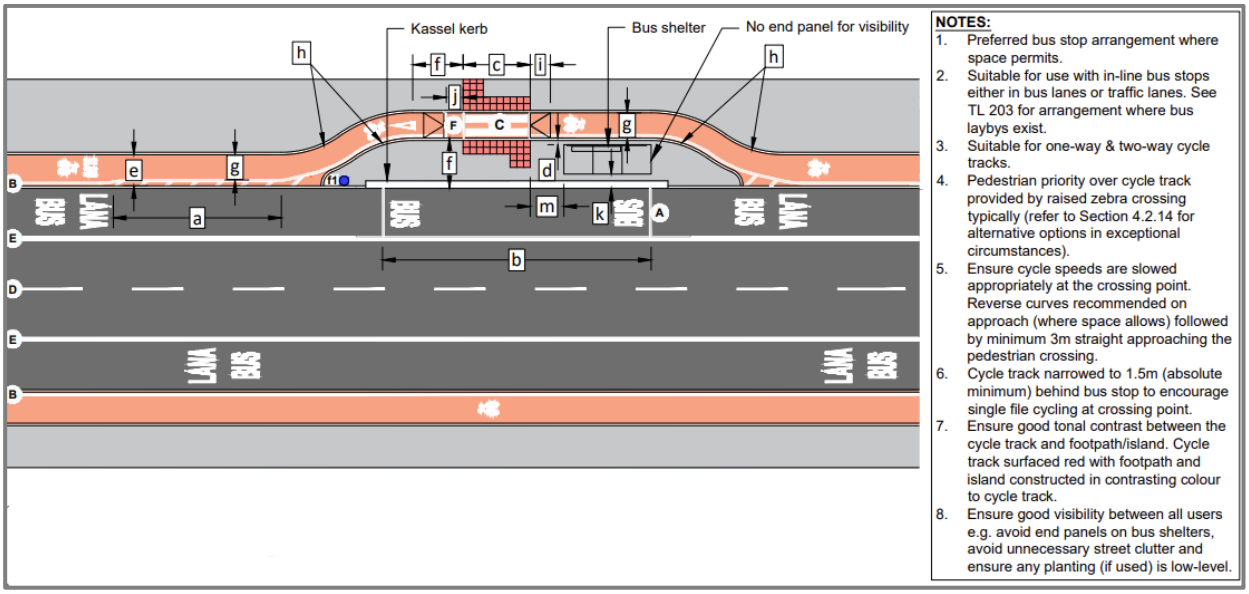


Figure 5-11 - Examples of Island Bus Stop (Source: CDM)

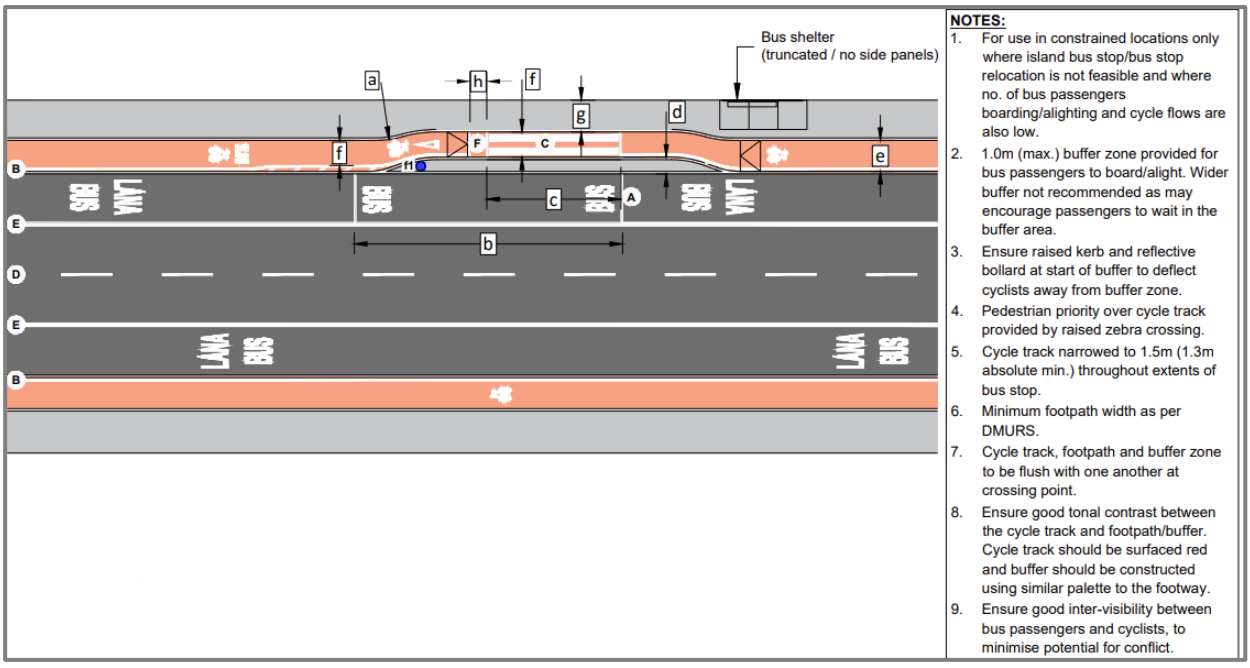


Figure 5-12 – Example of Shared Bus Stop Landing Zone (Source: CDM)

6. Stage 1 Detailed Option Assessment Appraisal

The appraisal process comprises of an initial identification process, Stage 1a, followed by a detailed option assessment, Stage 1b, for different cross section options for each corridor segment, with the goal of determining the general arrangement (one-way cycle track, two-way cycle track, shared active travel facility, mixed traffic, etc.) of each segment.

The following outlines the principles applied to the development of the cross-section options for each corridor segment:

- The key objective is to provide where possible high quality segregated cycle provision with the desirable minimum width, however, where the desirable width cannot be applied, the width will be reduced to the absolute minimum width as outlined within the Cycle Design Manual.
- Due to reduced available width within some segments, and the need to tie into existing infrastructure such as existing cycle lanes a “Do Nothing” proposal may be put forward in various segments.
- Following a review of the existing road space rapid build options were considered.
- Land acquisition was considered only at locations where there was no available width to provide a suitable level of active travel facilities.
- Due to reduced available width within some segments, the proposal to locate a two-way cycle track on one side of the road will be put forward in order to maximise the available space.

6.1 Link Types Appraisal

The initial stage for the assessment for the link types is an identification process based a comparison between the cross-section options shown in Section 5.3 and on the Cross Section Width analysis described in Section 3.2.2.

Based on the typical width for each corridor, the Stage 1a Option Identification will look at cross section options that fit within the existing road corridor. In the case where the standard segregated cycle track provision does not fit within the existing road corridor and the existing facilities do not provide the necessary level of safety for pedestrians and cyclists, this stage will also look at options that require land acquisition in order to provide adequate cyclist provisions.

The second stage is a Detailed Option Assessment, Stage 1b, comprising of a Multi Criteria Assessment (MCA) that assess all the options for each segment and compare them against one another in a performance matrix. The performance matrix compares potential options outlining if the option is advantageous, neutral or disadvantageous compared to the remaining options. The goal of the MCA is to make recommendations on the preferred end-to-end cross section option for each segment.

6.1.1 Segment F1: Cornamaddy Roundabout to Moydrum Road Junction

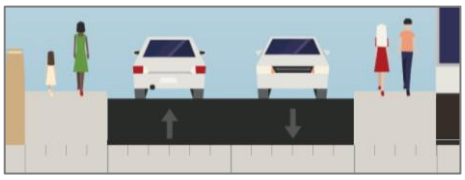
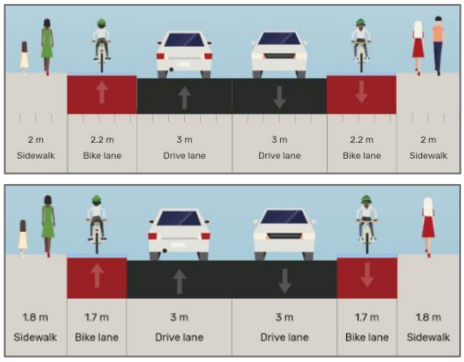
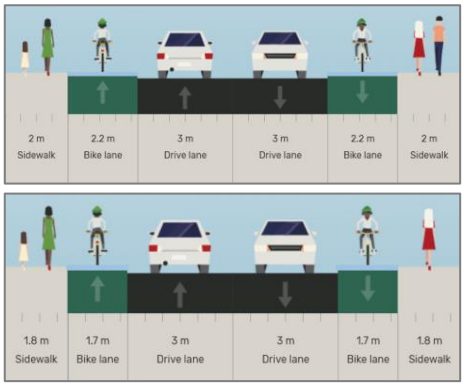
Based on the width analysis, as shown in Figure 3-1, Segment F1 has a typical cross-sectional width of 14m, with maximum width of 12.6m and minimum of 16.0m. The footpath on the western side is on average 2.0m wide and the footpath on the eastern side has sections less than 2.2m wide. There is an existing cycleway facility in form of One-Way Cycle Lane (approx. 1m wide). The options for this segment do not need to consider land acquisition to provide the necessary level of segregation between cyclists and pedestrians.

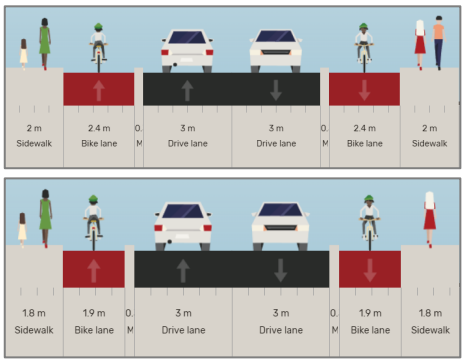
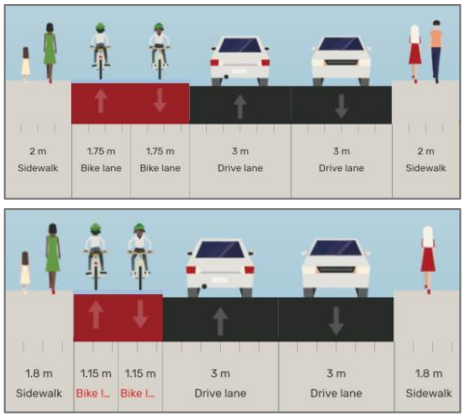
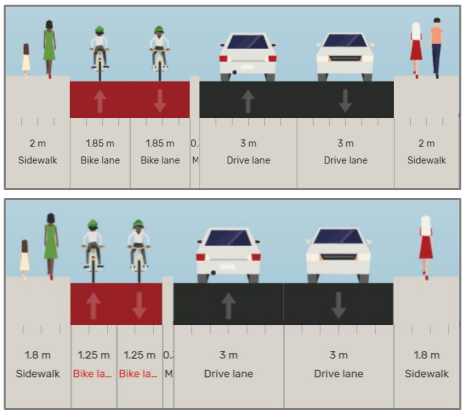
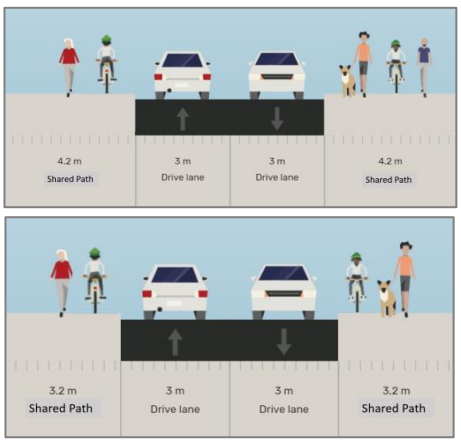
The descriptions for each option for this segment are discussed in detail in Table 6-1. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-2.

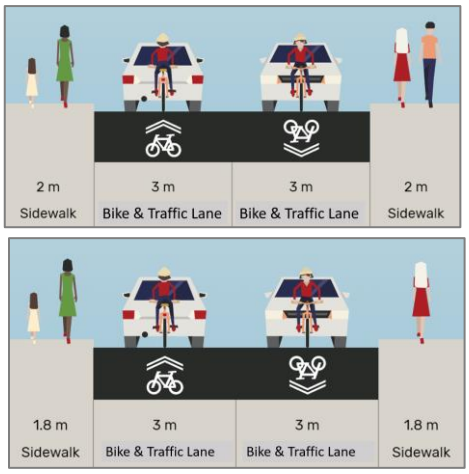
Refer to Section 3.2.1.1 for further details/information on the Segment F1.

6.1.1.1 Stage 1a Option Identification

Table 6-1 - Segment F1 Options

Option Description	Reference
Option 1: Do Nothing This option would retain the existing footpath on both sides and would not provide cycle facilities.	
Option 2: Standard One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpaths. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 3: Stepped One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	

Option Description	Reference
Option 4: Protected One-way cycle lane (Desirable Min. - 14.8m, Absolute Min. - 13.4m) This typical cross-section option would require a one-way cycle lane with either a desirable minimum width of 2.4m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.9m wide along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment. The proposed cycle lane will be segregated from the live traffic by either bolt down kerbs or bollards.	
Option 5: Standard Two-way cycle track (Desirable Min. – 13.5m, Absolute Min. – 11.9m) This typical cross-section option would require a two-way cycle track with a desirable minimum width of 3.5m wide (both lanes, 1.75m per lane) along with 2.0m wide footpath. The cycle lanes can be reduced to an absolute minimum width of 2.3m (both lanes, 1.15m wide per lane) along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 6: Protected Two-way cycle lane (Desirable Min. – 13.7m, Absolute Min. – 12.1m) This typical cross-section option would require a two-way cycle lane with a desirable minimum width of 3.7m (both lanes, 1.85m per lane) along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 2.5m (both lanes 1.25m per lane) along with 1.8m of footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the cross section needed is sufficiently available on all the extent of the segment, land acquisition would not be required.	
Option 7: Shared Active Travel Facility (Desirable Min. – 14.4m, Absolute Min. – 12.4m) This option would widen the existing footpath by a total desired min. width of 4.2m wide or absolute min. width of 3.2m wide on each side to implement a shared path facility. The new carriageway would be reduced to 6.0m. This option does not require land acquisition.	

Option Description	Reference
Option 8: Cycling in Mixed Traffic (Desirable Min. – 10.0m, Absolute Min. – 9.8m) This option would retain the cyclists on the road and would widen the footpath on each side to a minimum of 2.0m (1.8m absolute min.). Appropriate road markings and signage would be provided to indicate the presence of cyclists on the road and the speed limit would have to be reduced to 30km/h. No land acquisition is required, and construction can be completed using rapid build methods.	

6.1.1.2 Stage 1b Detailed Option Assessment

Following the MCA assessment as shown in Table 6-2 (overleaf), the preferred option for Route F Segment F1 is Option 2 as a Standard One-Way Cycle Track with rapid build construction methods, as this option provides a blend of benefits in comparison to the other options, primarily it makes good use of the wide width available along the segment. Also, compared to stepped and protected cycle track/lane (Options 3&4), this is comparatively cheaper to construct and will require no land acquisition.

This option scores well on safety impacts by segregating cyclists from pedestrians and vehicles. This option also performs well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would have minimal impacts on traffic as well.

Table 6-2 - Segment F1 MCA

Criteria	Sub-Criteria	Indicator to be Measured	Op. 1 Do-Nothing	Op. 2 Standard One-way	Op. 3 Stepped One-way	Op. 4 Protected One-way	Op. 5 Standard Two-way	Op. 6 Protected Two-way	Op. 7 Shared A.T. Facility	Op. 8 Cycling in Mixed Traffic
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area								
		Construction and Maintenance								
		Programme Impacts								
	Construction Impacts	Rapid Build Achievability & Construction Impacts								
	Connectivity with Public Transport Facilities	Connections to Existing & Proposed Public Transport								
Accessibility Impacts	Access to Key Services	Access to Key Services								
		Impacts on Loading and Parking Bays								
	Coherence	Route Consistency and Continuity								
	Directness	Directness along route and through junctions and maintenance of cyclists' progression								
	Comfort	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width								
	Attractiveness	Attractiveness of the Route								
Social Impacts	Social Inclusion for Groups with Deprived Needs	Opportunities for Social, Community and Recreational Activity Participation								
	Health Impacts	Impact on Modal Shift/Activity Levels (i.e., Cars to Cyclists)								
	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities								
	Gender Impacts	How the Proposal may have Gender Specific Impacts								
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI								
		Impact on Green Areas								
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles								
		Segregation between Cyclists and Pedestrians								
		Safety for All Users regarding Traffic Volumes and Speeds along Route								
		Conflicts at Junctions and Side Roads between Vehicles and Cyclists								
	Traffic	Impact on Traffic Capacity due to the Proposals								
Local Environmental Impact	Air Quality	Air Quality Impact								
	Noise and Vibration	Potential Sensitive Receptors Properties								
	Soils and geology	Bedrock and Overburden								
	Biodiversity	Impact on Biodiversity along Scheme Extents								
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows								
	Landscape and Visual Quality	Landscape and Visual Assessment								
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA								

6.1.2 Segment F2: Moydrum Road Junction to Altown Garrycastle Roundabout

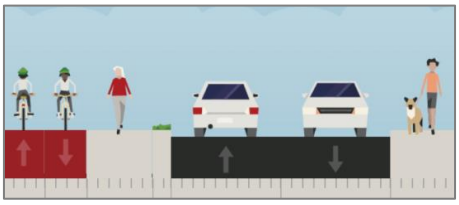
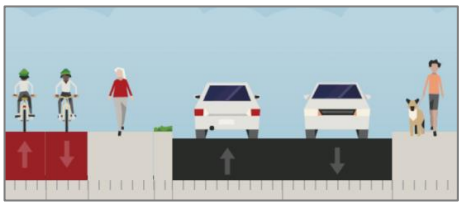
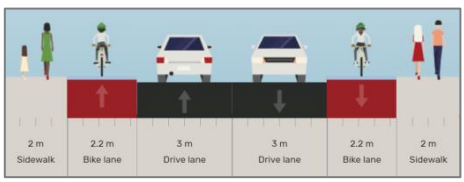
Based on the width analysis, as shown in Figure 3-1, Segment F2 has a typical cross-sectional width of 14m, with maximum width of 13.5m and minimum of 16.0m. The footpath on the western side is on average 2.0m wide and the footpath on the eastern side has sections less than 2.2m wide. There is an existing cycleway facility in form of Two-Way Cycle Track (approx. 2.5m wide) along this segment. The options for this segment do not need to consider land acquisition to provide the necessary level of segregation between cyclists and pedestrians.

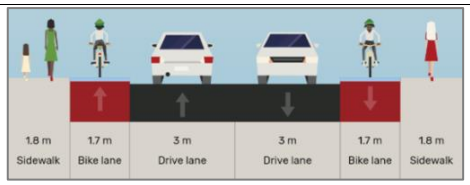
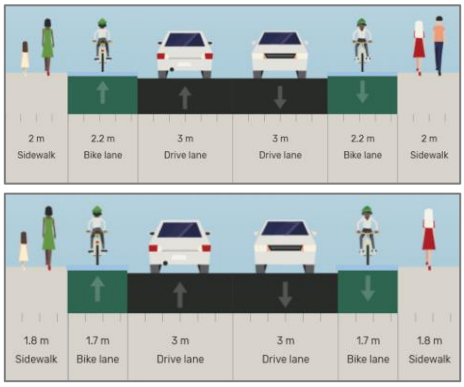
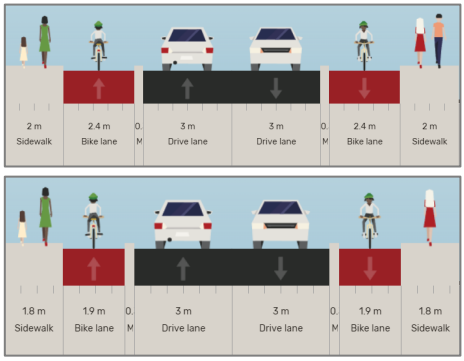
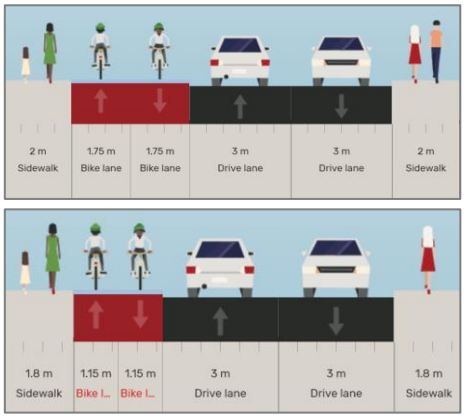
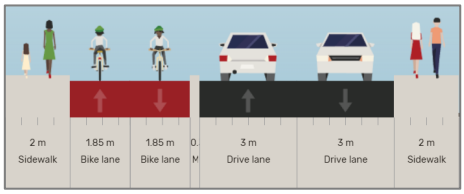
The descriptions for each option for this segment are discussed in detail in Table 6-3. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-4.

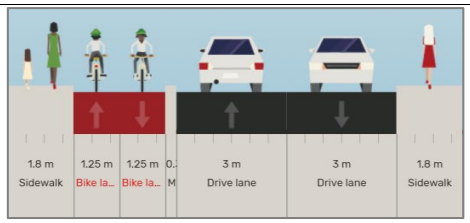
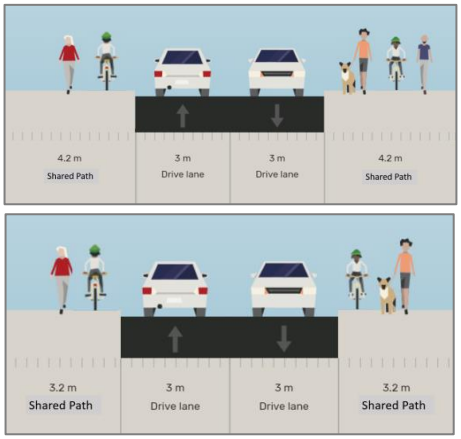
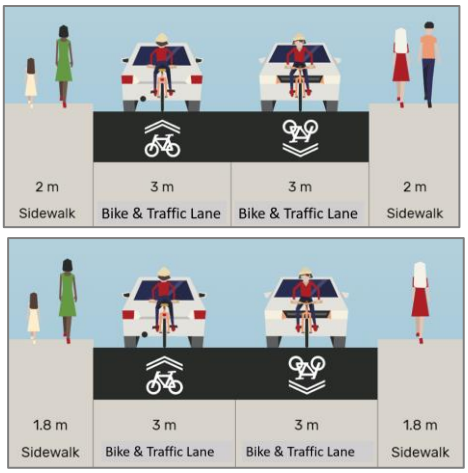
Refer to Section 3.2.1.2 for further details/information on the Segment F2.

6.1.2.1 Stage 1a Option Identification

Table 6-3 - Segment F2 Options

Option Description	Reference
Option 1: Do Nothing This option would retain the existing footpath on both sides and would not provide cycle facilities.	
Option 2: Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring (Rapid Build Option) This option would retain and improve the existing cycle infrastructure with rapid build proposals i.e., proposal to refresh existing cycleway & footpath markings, install new signage and add rapid build delineation kerbs and or bollards where viable. Further monitoring of this segment will be conducted following the implementation of the improvement measures. The information gathered over a period of time will outline if there is an increase in cyclists utilising the existing cycle infrastructure which will be used to inform the development of further options / improvements over time. This option provides a blend of benefits in comparison to the other options including reduced construction time, lower costs of construction and no additional land acquisition requirements.	
Option 3: Standard One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpaths. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the	

Option Description	Reference
new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 4: Stepped One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 5: Protected One-way cycle lane (Desirable Min. - 14.8m, Absolute Min. - 13.4m) This typical cross-section option would require a one-way cycle lane with either a desirable minimum width of 2.4m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.9m wide along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment. The proposed cycle lane will be segregated from the live traffic by either bolt down kerbs or bollards.	
Option 6: Standard Two-way cycle track (Desirable Min. – 13.5m, Absolute Min. – 11.9m) This typical cross-section option would require a two-way cycle track with a desirable minimum width of 3.5m wide (both lanes, 1.75m per lane) along with 2.0m wide footpath. The cycle lanes can be reduced to an absolute minimum width of 2.3m (both lanes, 1.15m wide per lane) along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 7: Protected Two-way cycle lane (Desirable Min. – 13.7m, Absolute Min. – 12.1m) This typical cross-section option would require a two-way cycle lane with a desirable minimum width of 3.7m (both lanes, 1.85m per lane) along with 2.0m footpath. The cycle lane can be reduced	

Option Description	Reference
to an absolute minimum width of 2.5m (both lanes 1.25m per lane) along with 1.8m of footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the cross section needed is sufficiently available on all the extent of the segment, land acquisition would not be required.	
<u>Option 8: Shared Active Travel Facility (Desirable Min. – 14.4m, Absolute Min. – 12.4m)</u> This option would widen the existing footpath by a total desired min. width of 4.2m wide or absolute min. width of 3.2m wide on each side to implement a shared path facility. The new carriageway would be reduced to 6.0m. This option does not require land acquisition.	
<u>Option 9: Cycling in Mixed Traffic (Desirable Min. – 10.0m, Absolute Min. – 9.8m)</u> This option would retain the cyclists on the road and would widen the footpath on each side to a minimum of 2.0m (1.8m absolute min.). Appropriate road markings and signage would be provided to indicate the presence of cyclists on the road and the speed limit would have to be reduced to 30km/h. No land acquisition is required, and construction can be completed using rapid build methods.	

6.1.2.2 Stage 1b Detailed Option Assessment

Following the MCA assessment as shown in Table 6-4 (overleaf), the preferred option for Route F Segment F2 is Option 2; as retaining and improving existing cycle infrastructure with rapid proposals. i.e., proposal to refresh existing cycleway & footpath markings, install new signage and add rapid build delineation kerbs and or bollards where viable/ Further monitoring of this segment will be conducted following the implementation of improvement measures. The information gathered over a period of time will outline if there is an increase in cyclists utilising the existing cycle infrastructure that will be used to inform the development of further options / improvements over time.

This option also performs well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would have minimal impacts on traffic also.

Table 6-4 - Segment F2 MCA

Criteria	Sub-Criteria	Indicator to be Measured	Op. 1 Do-Nothing	Op. 2 Rapid Build & Further Monitoring	Op. 3 Standard One-way	Op. 4 Stepped One-way	Op. 5 Protected One-way	Op. 6 Standard Two-way	Op. 7 Protected Two-way	Op. 8 Shared A.T. Facility	Op. 9 Cycling in Mixed Traffic
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area									
		Construction and Maintenance									
		Programme Impacts									
	Construction Impacts	Rapid Build Achievability & Construction Impacts									
	Connectivity with Public Transport Facilities	Connections to Existing & Proposed Public Transport									
Accessibility Impacts	Access to Key Services	Access to Key Services									
		Impacts on Loading and Parking Bays									
	Coherence	Route Consistency and Continuity									
	Directness	Directness along route and through junctions and maintenance of cyclists' progression									
	Comfort	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width									
	Attractiveness	Attractiveness of the Route									
Social Impacts	Social Inclusion for Groups with Deprived Needs	Opportunities for Social, Community and Recreational Activity Participation									
	Health Impacts	Impact on Modal Shift/Activity Levels (i.e., Cars to Cyclists)									
	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities									
	Gender Impacts	How the Proposal may have Gender Specific Impacts									
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI									
		Impact on Green Areas									
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles									
		Segregation between Cyclists and Pedestrians									
		Safety for All Users regarding Traffic Volumes and Speeds along Route									
		Conflicts at Junctions and Side Roads between Vehicles and Cyclists									
	Traffic	Impact on Traffic Capacity due to the Proposals									
Local Environmental Impact	Air Quality	Air Quality Impact									
	Noise and Vibration	Potential Sensitive Receptors Properties									
	Soils and geology	Bedrock and Overburden									
	Biodiversity	Impact on Biodiversity along Scheme Extents									
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows									
	Landscape and Visual Quality	Landscape and Visual Assessment									
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA									

6.1.3 Segment F3: Altown Garrycastle Roundabout to Garrycastle Roundabout

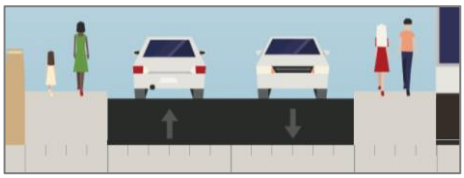
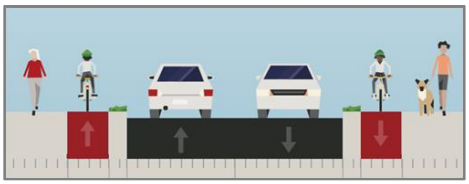
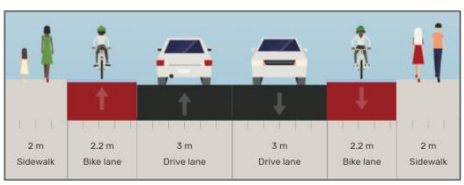
Based on the width analysis, as shown in Figure 3-1, Segment F3 has a typical cross-sectional width of 15m, with maximum width of 14.4m and minimum of 16.0m. This segment contains one vehicular lane in each direction and footpaths on both sides (approx. 1.6m-1.8m both sides) of the carriageway. There is an existing cycleway facility in form of One-Way Cycle track (approx. 1.2m-1.4 wide) located along both sides of the whole segment. The options for this segment do not need to consider land acquisition to provide the necessary level of segregation between cyclists and pedestrians.

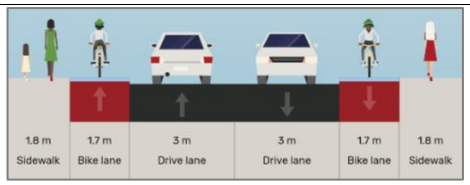
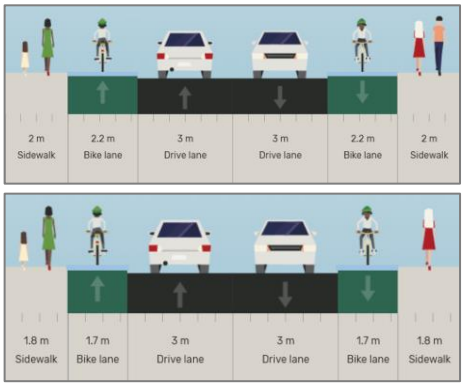
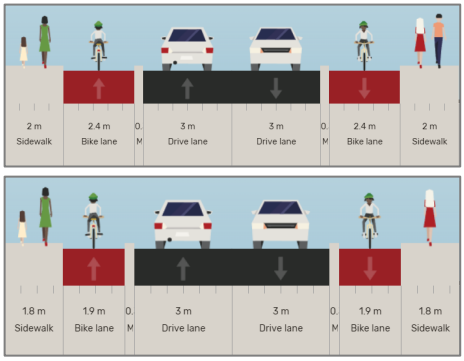
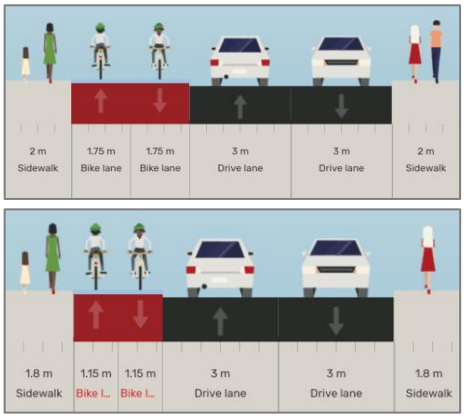
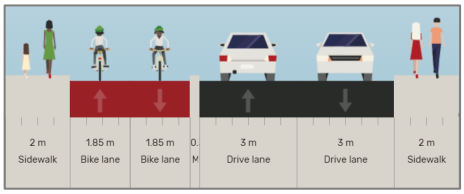
The descriptions for each option for this segment are discussed in detail in Table 6-5. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-6.

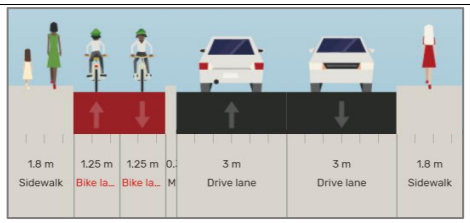
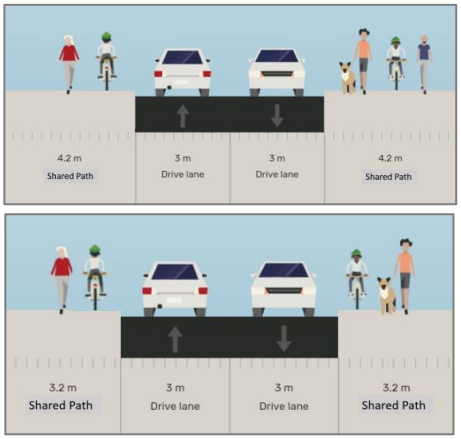
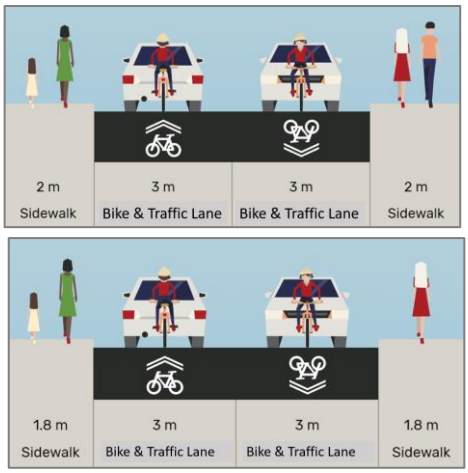
Refer to Section 3.2.1.3 for further details/information on the Segment F3.

6.1.3.1 Stage 1a Option Identification

Table 6-5 - Segment F3 Options

Option Description	Reference
Option 1: Do Nothing This option would retain the existing footpath on both sides and would not provide cycle facilities.	
Option 2: Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring (Rapid Build Option) This option would retain and improve the existing cycle infrastructure with rapid build proposals i.e., proposal to refresh existing cycleway & footpath markings, install new signage and add rapid build delineation kerbs and or bollards where viable. Further monitoring of this segment will be conducted following the implementation of the improvement measures. The information gathered over a period of time will outline if there is an increase in cyclists utilising the existing cycle infrastructure which will be used to inform the development of further options / improvements over time. This option provides a blend of benefits in comparison to the other options including reduced construction time, lower costs of construction and no additional land acquisition requirements.	
Option 3: Standard One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpaths. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the	

Option Description	Reference
new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 4: Stepped One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 5: Protected One-way cycle lane (Desirable Min. - 14.8m, Absolute Min. - 13.4m) This typical cross-section option would require a one-way cycle lane with either a desirable minimum width of 2.4m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.9m wide along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment. The proposed cycle lane will be segregated from the live traffic by either bolt down kerbs or bollards.	
Option 6: Standard Two-way cycle track (Desirable Min. – 13.5m, Absolute Min. – 11.9m) This typical cross-section option would require a two-way cycle track with a desirable minimum width of 3.5m wide (both lanes, 1.75m per lane) along with 2.0m wide footpath. The cycle lanes can be reduced to an absolute minimum width of 2.3m (both lanes, 1.15m wide per lane) along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 7: Protected Two-way cycle lane (Desirable Min. – 13.7m, Absolute Min. – 12.1m) This typical cross-section option would require a two-way cycle lane with a desirable minimum width of 3.7m (both lanes, 1.85m per lane) along with 2.0m footpath. The cycle lane can be reduced	

Option Description	Reference
to an absolute minimum width of 2.5m (both lanes 1.25m per lane) along with 1.8m of footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the cross section needed is sufficiently available on all the extent of the segment, land acquisition would not be required.	
<u>Option 8: Shared Active Travel Facility (Desirable Min. – 14.4m, Absolute Min. – 12.4m)</u> This option would widen the existing footpath by a total desired min. width of 4.2m wide or absolute min. width of 3.2m wide on each side to implement a shared path facility. The new carriageway would be reduced to 6.0m. This option does not require land acquisition.	
<u>Option 9: Cycling in Mixed Traffic (Desirable Min. – 10.0m, Absolute Min. – 9.8m)</u> This option would retain the cyclists on the road and would widen the footpath on each side to a minimum of 2.0m (1.8m absolute min.). Appropriate road markings and signage would be provided to indicate the presence of cyclists on the road and the speed limit would have to be reduced to 30km/h. No land acquisition is required, and construction can be completed using rapid build methods.	

6.1.3.2 Stage 1b Detailed Option Assessment

Following the MCA assessment as shown in Table 6-6 (overleaf), the preferred option for Route F Segment F3 is Option 2 as retaining and improving existing cycle infrastructure with rapid proposals i.e., proposal to refresh existing cycleway & footpath markings, install new signage and add rapid build delineation kerbs and or bollards where viable/ Further monitoring of this segment will be conducted following the implementation of improvement measures. The information gathered over a period of time will outline if there is an increase in cyclists utilising the existing cycle infrastructure that will be used to inform the development of further options / improvements over time.

This option also performs well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would have minimal impacts on traffic as well.

Table 6-6 - Segment F3 MCA

Criteria	Sub-Criteria	Indicator to be Measured	Op. 1 Do-Nothing	Op. 2 Rapid Build & Further Monitoring	Op. 3 Standard One-way	Op. 4 Stepped One-way	Op. 5 Protected One-way	Op. 6 Standard Two-way	Op. 7 Protected Two-way	Op. 8 Shared A.T. Facility	Op. 9 Cycling in Mixed Traffic
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area									
		Construction and Maintenance									
		Programme Impacts									
	Construction Impacts	Rapid Build Achievability & Construction Impacts									
	Connectivity with Public Transport Facilities	Connections to Existing & Proposed Public Transport									
Accessibility Impacts	Access to Key Services	Access to Key Services									
		Impacts on Loading and Parking Bays									
	Coherence	Route Consistency and Continuity									
	Directness	Directness along route and through junctions and maintenance of cyclists' progression									
	Comfort	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width									
	Attractiveness	Attractiveness of the Route									
Social Impacts	Social Inclusion for Groups with Deprived Needs	Opportunities for Social, Community and Recreational Activity Participation									
	Health Impacts	Impact on Modal Shift/Activity Levels (i.e., Cars to Cyclists)									
	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities									
	Gender Impacts	How the Proposal may have Gender Specific Impacts									
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI									
		Impact on Green Areas									
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles									
		Segregation between Cyclists and Pedestrians									
		Safety for All Users regarding Traffic Volumes and Speeds along Route									
		Conflicts at Junctions and Side Roads between Vehicles and Cyclists									
	Traffic	Impact on Traffic Capacity due to the Proposals									
Local Environmental Impact	Air Quality	Air Quality Impact									
	Noise and Vibration	Potential Sensitive Receptors Properties									
	Soils and geology	Bedrock and Overburden									
	Biodiversity	Impact on Biodiversity along Scheme Extents									
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows									
	Landscape and Visual Quality	Landscape and Visual Assessment									
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA									

6.1.4 Segment F4: Garrycastle Roundabout to Wash House Turn Roundabout

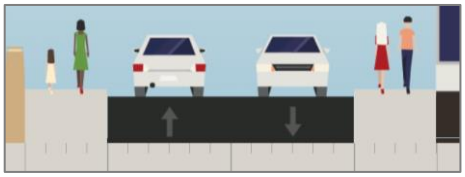
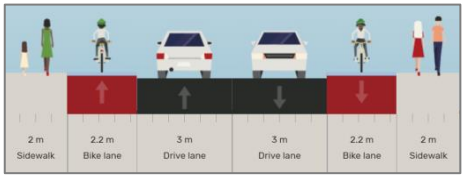
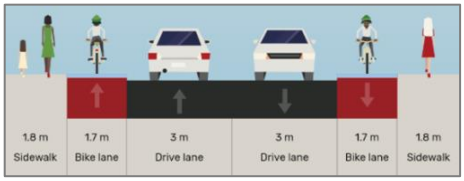
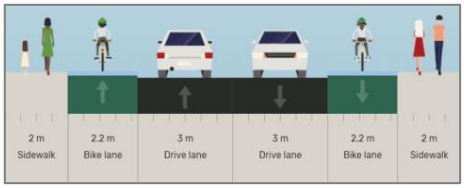
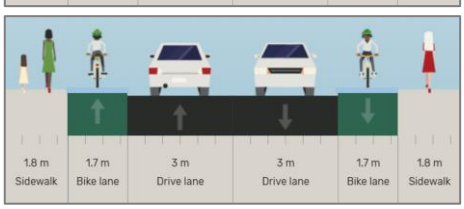
Based on the width analysis, as shown in Figure 3-1, Segment F4 has a typical cross-sectional width of 14m, with maximum width of 16.0m and minimum of 12.6m. On the western side the footpath is approximately 1.4m-1.7m wide and on the remaining eastern side is approximately 1.7m-2.8m wide. There is an existing cycleway facility in form of One-Way Cycle Lane (approx. 1.6m-1.8m wide) that starts from the Garrycastle Roundabout for 30m but eastern link of the one-way cycle track merges into the carriageway while western link continues till the end of this segment. The options for this segment do not need to consider land acquisition to provide the necessary level of segregation between cyclists and pedestrians.

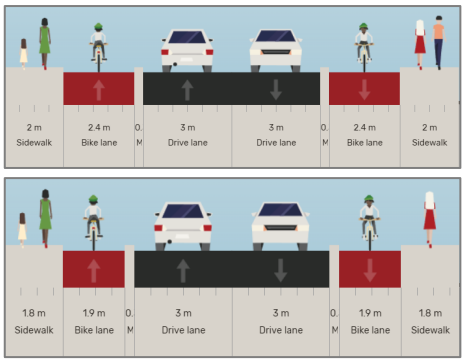
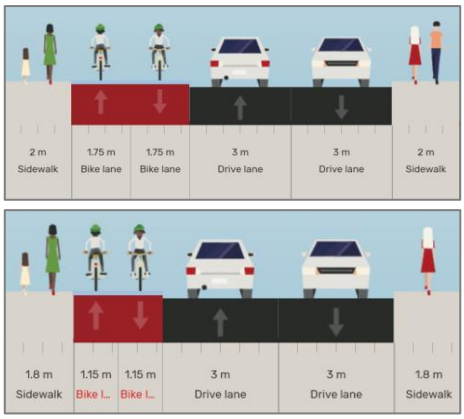
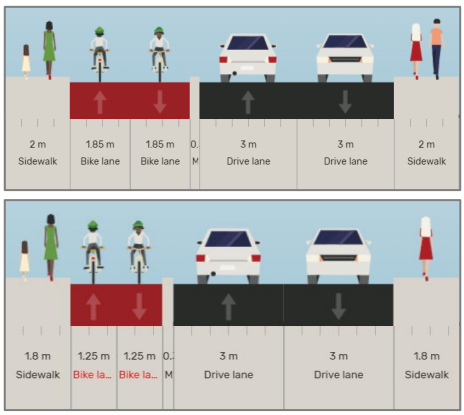
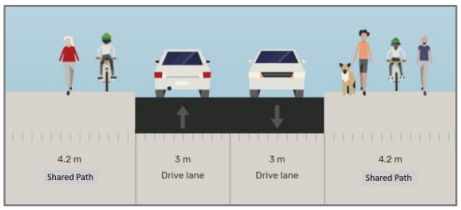
The descriptions for each option for this segment are discussed in detail in Table 6-7. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-8.

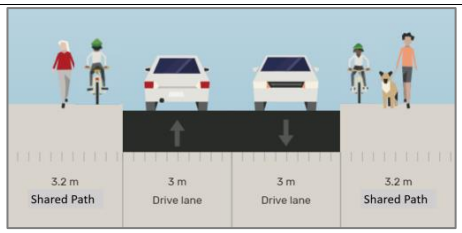
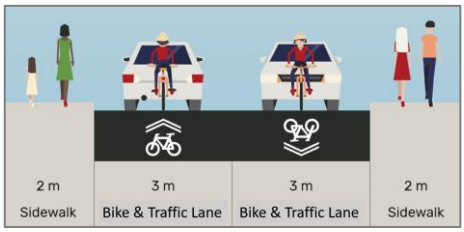
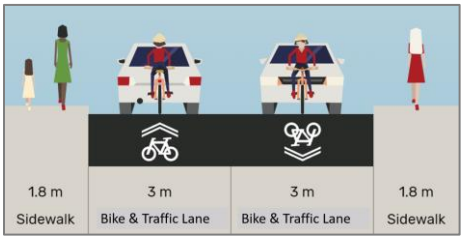
Refer to Section 3.2.1.4 for further details/information on the Segment F4.

6.1.4.1 Stage 1a Option Identification

Table 6-7 - Segment F4 Options

Option Description	Reference
Option 1: Do Nothing This option would retain the existing footpath on both sides and would not provide cycle facilities.	
Option 2: Standard One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpaths. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As segment F3 varies in width in order to implement this option, land acquisition is required in parts, as the minimum cross section needed is not sufficiently available within the road corridor.	 
Option 3: Stepped One-way cycle track (Desirable Min. - 14.4m, Absolute Min. - 13.0m) This typical cross-section option would require a one-way cycle track with a desirable minimum width of 2.2m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.7m wide and 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane).	 

Option Description	Reference
As segment F3 varies in width in order to implement this option, land acquisition is required in parts, as the minimum cross section needed is not sufficiently available within the road corridor.	
Option 4: Protected One-way cycle lane (Desirable Min. - 14.8m, Absolute Min. - 13.4m) This typical cross-section option would require a one-way cycle lane with either a desirable minimum width of 2.4m wide along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 1.9m wide along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m in width (3m per lane). As segment F3 varies in width in order to implement this option, land acquisition is required in parts, as the minimum cross section needed is not sufficiently available within the road corridor. The proposed cycle lane will be segregated from the live traffic by either bolt down kerbs or bollards.	
Option 5: Standard Two-way cycle track (Desirable Min. – 13.5m, Absolute Min. – 11.9m) This typical cross-section option would require a two-way cycle track with a desirable minimum width of 3.5m wide (both lanes, 1.75m per lane) along with 2.0m wide footpath. The cycle lanes can be reduced to an absolute minimum width of 2.3m (both lanes, 1.15m wide per lane) along with 1.8m wide footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the existing cross-sectional width is sufficient for this option, land acquisition would not be required in this segment.	
Option 6: Protected Two-way cycle lane (Desirable Min. – 13.7m, Absolute Min. – 12.1m) This typical cross-section option would require a two-way cycle lane with a desirable minimum width of 3.7m (both lanes, 1.85m per lane) along with 2.0m footpath. The cycle lane can be reduced to an absolute minimum width of 2.5m (both lanes 1.25m per lane) along with 1.8m of footpaths on both sides of the new carriageway. The new carriageway would be reduced to 6.0m (3m per lane). As the cross section needed is sufficiently available on all the extent of the segment, land acquisition would not be required.	
Option 7: Shared Active Travel Facility (Desirable Min. – 14.4m, Absolute Min. – 12.4m) This option would widen the existing footpath by a total desired min. width of 4.2m wide or absolute min. width of 3.2m wide on each side to implement a shared path facility. The new	

Option Description	Reference
carriageway would be reduced to 6.0m. This option does not require land acquisition.	
<u>Option 8: Cycling in Mixed Traffic (Desirable Min. – 10.0m, Absolute Min. – 9.8m)</u> This option would retain the cyclists on the road and would widen the footpath on each side to a minimum of 2.0m (1.8m absolute min.). Appropriate road markings and signage would be provided to indicate the presence of cyclists on the road and the speed limit would have to be reduced to 30km/h. No land acquisition is required, and construction can be completed using rapid build methods.	 

6.1.4.2 Stage 1b Detailed Option Assessment

Following the MCA assessment as shown in Table 6-8 (overleaf), the preferred option for Route F Segment F4 is Option 2 as a Standard One-Way Cycle Track with rapid build construction methods, as this option provides a blend of benefits in comparison to the other options, primarily it makes good use of the wide width available along the segment. Also, compared to stepped and protected cycle track/lane (Options 3&4), this is comparatively cheaper to construct and will require no land acquisition.

This option scores well on safety impacts by segregating cyclists from pedestrians and vehicles. This option also performs well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would have minimal impacts on traffic as well.

Table 6-8 - Segment F4 MCA

Criteria	Sub-Criteria	Indicator to be Measured	Op. 1 Do-Nothing	Op. 2 Standard One-way	Op. 3 Stepped One-way	Op. 4 Protected One-way	Op. 5 Standard Two-way	Op. 6 Protected Two-way	Op. 7 Shared A.T. Facility	Op. 8 Cycling in Mixed Traffic
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area								
		Construction and Maintenance								
		Programme Impacts								
	Construction Impacts	Rapid Build Achievability & Construction Impacts								
	Connectivity with Public Transport Facilities	Connections to Existing & Proposed Public Transport								
Accessibility Impacts	Access to Key Services	Access to Key Services								
		Impacts on Loading and Parking Bays								
	Coherence	Route Consistency and Continuity								
	Directness	Directness along route and through junctions and maintenance of cyclists' progression								
	Comfort	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width								
	Attractiveness	Attractiveness of the Route								
Social Impacts	Social Inclusion for Groups with Deprived Needs	Opportunities for Social, Community and Recreational Activity Participation								
	Health Impacts	Impact on Modal Shift/Activity Levels (i.e., Cars to Cyclists)								
	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities								
	Gender Impacts	How the Proposal may have Gender Specific Impacts								
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI								
		Impact on Green Areas								
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles								
		Segregation between Cyclists and Pedestrians								
		Safety for All Users regarding Traffic Volumes and Speeds along Route								
		Conflicts at Junctions and Side Roads between Vehicles and Cyclists								
	Traffic	Impact on Traffic Capacity due to the Proposals								
Local Environmental Impact	Air Quality	Air Quality Impact								
	Noise and Vibration	Potential Sensitive Receptors Properties								
	Soils and geology	Bedrock and Overburden								
	Biodiversity	Impact on Biodiversity along Scheme Extents								
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows								
	Landscape and Visual Quality	Landscape and Visual Assessment								
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA								

6.2 Junctions Appraisal

As mentioned previously, the junctions will be assessed separately from the link type assessment as they require individual bespoke options.

6.2.1 Junction F1: Bushfield-Garrycastle Roundabout

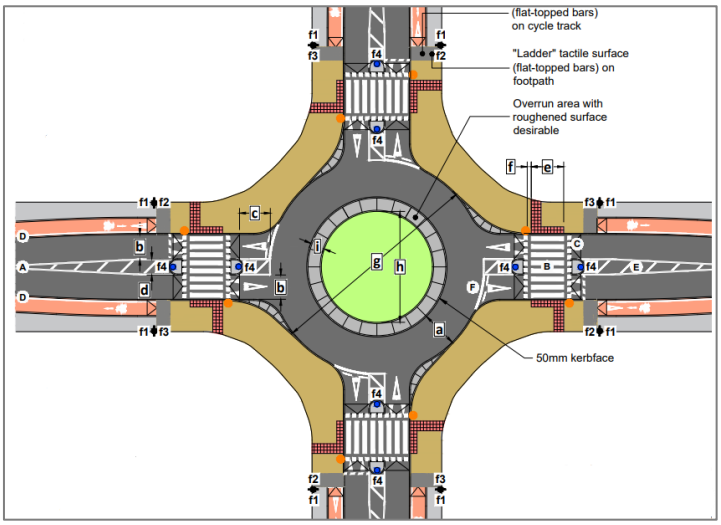
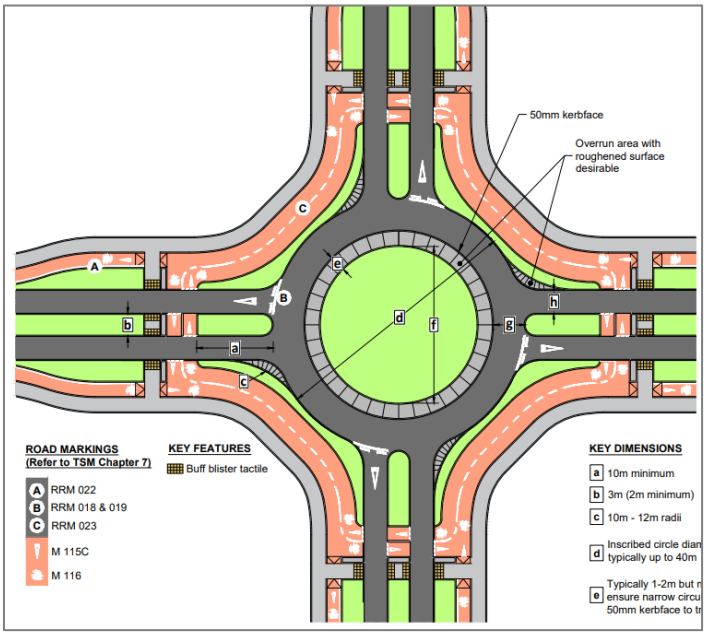
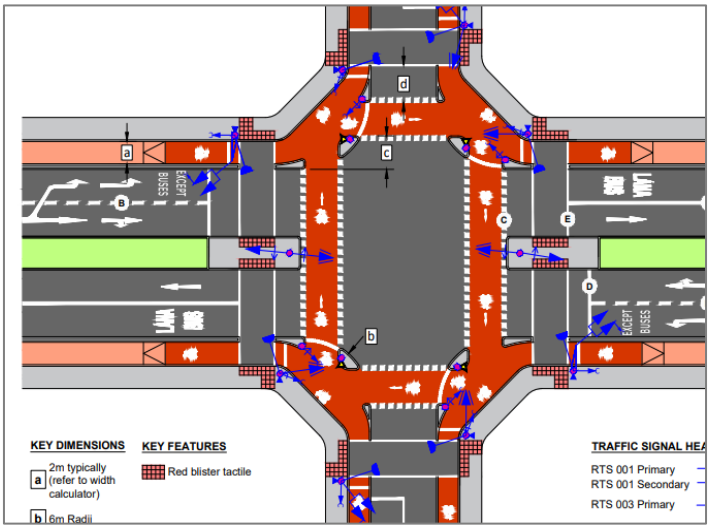
Based on the location and existing layout, as shown in Figure 3-1, Bushfield-Garrycastle Roundabout is located at the R916-Garrycastle Road intersection, with both cycle and pedestrian facilities but substandard crossing facilities as per CDM. The roundabout has uncontrolled crossings on all the arms. No land acquisition will be required to provide the necessary level of segregation between cyclists and pedestrians. Rapid build options are also considered through the local widening of the path and reduction of the carriageway to provide for additional space.

The descriptions for each option for this junction are discussed in detail in Table 6-9. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-10.

6.2.1.1 Stage 1a Option Identification

Table 6-9 - Junction F1 Options

Option	Reference
Option 1: Do Nothing This option would retain the existing 4-arm roundabout with dedicated spaces for cyclists & pedestrians but substandard crossing points for cyclists & pedestrians on each arm.	
Option 2: Retaining Existing Roundabout while Proposing Zebra Crossings on all the arms (Rapid Build) This option proposes to upgrade the existing roundabout with new zebra crossing facilities on all the arms while retaining all other highway parameters as a do-minimum option, to improve pedestrian and cyclist safety while crossing. This option requires no land acquisition, this layout is desirable due to the safe crossing for both pedestrians and cyclists as well as minimising costs and programme impacts.	

Option	Reference
Option 3: Segregated Roundabout with Shared Active Travel Facilities (Traditional Build) This option proposes to upgrade the existing roundabout into a segregated roundabout with shared active travel facilities based on the CDM standards. This option would reduce the entry lanes and the circulatory lane widths to a minimum in order to implement the appropriate active travel facilities, including raised toucan crossings on all arms and shared areas between pedestrians and cyclists through the roundabout. This option requires less space compared to other options and avoid further landtake requirements. However, this layout is less desirable due to the lack of segregation between pedestrians and cyclists.	
Option 4: Protected Roundabout without Cycle Priority (Traditional Build) This option proposes to upgrade the existing roundabout into a protected roundabout with no cycle priority based on the CDM standards. This option would reduce the existing entry lanes and the circulatory lane widths to a minimum in order to implement the appropriate active travel facilities, including designated crossing points for both cyclists and pedestrians on all arms, and segregated cycle lanes through the roundabout. This option will require land acquisition to facilitate the additional provisions.	
Option 5: Protected Signal Controlled Junction This option provides a protected junction layout where all movements take place under signalised control. Pedestrians and cyclists are provided with different crossing points, with more controlled priority given to pedestrians over the cycle track. Cycle crossings are typically set back <5m from junction.	

6.2.1.2 Stage 1b Detailed Option Assessment

The preferred option for Route F Junction F1 is Option 2; Retaining the existing roundabout layout while proposing zebra crossings on all arms through rapid build construction methods, this option provides a blend of benefits in comparison to the other options, primarily on safety impacts as priority crossing for both cyclists & pedestrians crossing as well as performing well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would also avoid any additional land take requirements and minimising costs and programme impacts.

The exact layout of the junction will be determined in Phase 3 Preliminary Design; taking cognisance of the preferred links that join this junction.

Table 6-10 – Junction F1: Castlemaine Street Roundabout MCA

Criteria	Sub-Criteria	Indicator to be Measured	Option 1 Do Nothing	Option 2 Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)	Option 3 Segregated Rbt w/ Shared AT Facilities (Traditional Build)	Option 4 Protected Rbt without Cycle Prio. (Traditional Build)	Option 5 Protected Signalised Junction
Transport User benefits & Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area					
		Construction and Maintenance					
	Construction Impacts	Rapid Build Achievability & Construction Impacts					
Accessibility Impacts	Coherence & Directness	Consistency, Continuity & Directness through junctions & maintenance of cyclists' progression					
	Comfort & Attractiveness	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width & its Attractiveness					
Social Impacts	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities					
	Gender Impacts	How the Proposal may have Gender Specific Impacts					
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI					
		Impact on Green Areas					
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles					
		Segregation between Cyclists and Pedestrians					
		Safety for All Users regarding Traffic Volumes and Speeds along Route					
	Traffic	Impact on Traffic Capacity due to the Proposals					
Local Environmental Impact	Air Quality	Air Quality Impact					
	Noise and Vibration	Potential Sensitive Receptors Properties					
	Soils and geology	Bedrock and Overburden					
	Biodiversity	Impact on Biodiversity along Scheme Extents					
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows					
	Landscape and Visual Quality	Landscape and Visual Assessment					
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA					

6.2.2 Junction F2: Garrycastle Roundabout

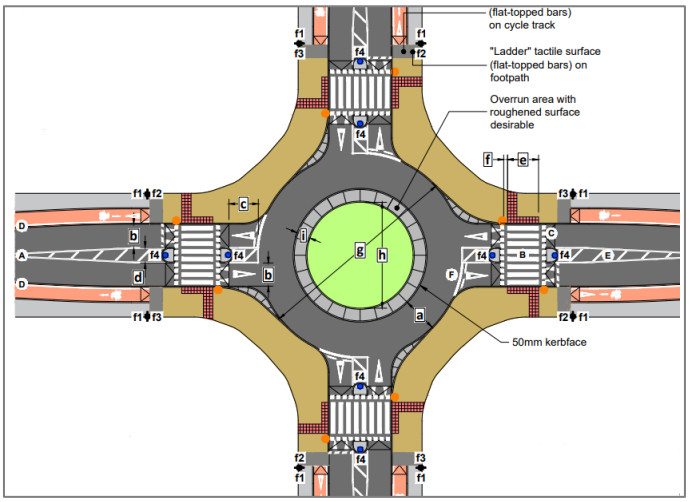
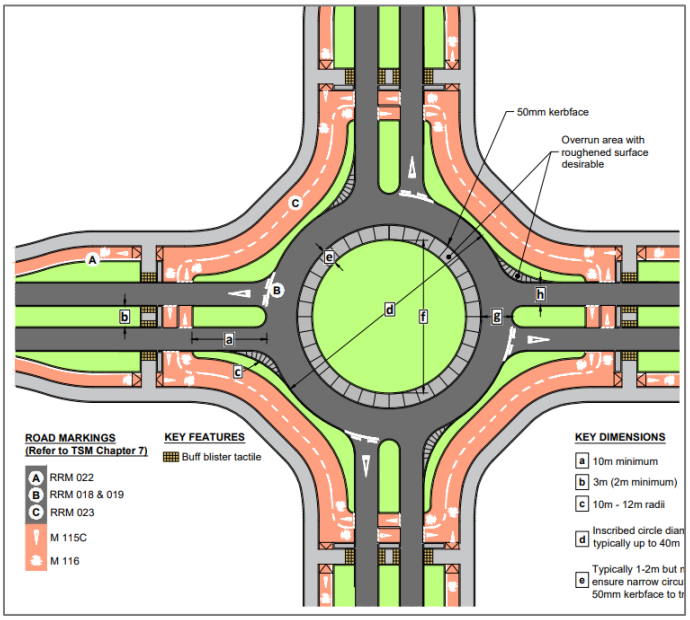
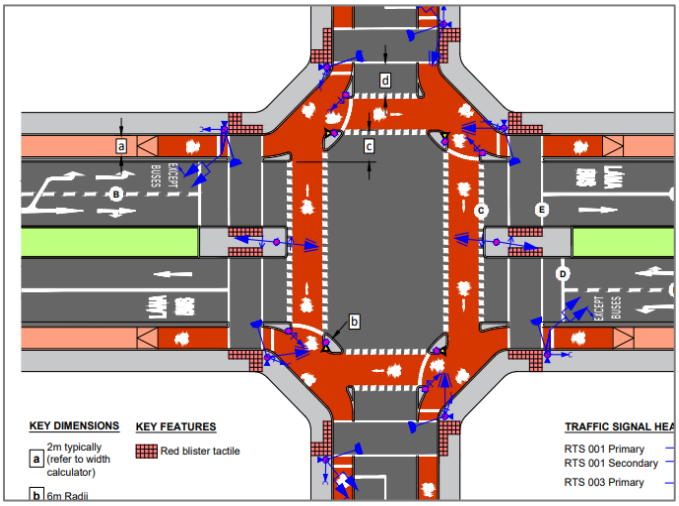
Based on the location and existing layout, as shown in Figure 3-1, Garrycastle Roundabout is located at the Garrycastle Road - University Road intersection, with both cycle and pedestrian facilities but substandard crossing facilities as per CDM. The roundabout has uncontrolled crossings on all the arms. No land acquisition will be required to provide the necessary level of segregation between cyclists and pedestrians. Rapid build options are also considered through the local widening of the path and reduction of the carriageway to provide for additional space.

The descriptions for each option for this junction are discussed in detail in Table 6-11. A Multi-Criteria Analysis is undertaken between the options considered, as shown in Table 6-12.

6.2.2.1 Stage 1a Option Identification

Table 6-11 - Junction F2 Options

Option	Reference
Option 1: Do Nothing This option would retain the existing 4-arm roundabout with dedicated spaces for cyclists & pedestrians but, substandard crossing points for cyclists & pedestrians on each arm.	
Option 2: Retaining Existing Roundabout while Proposing Zebra Crossings on all the arms (Rapid Build) This option proposes to upgrade the existing roundabout with new zebra crossing facilities on all the arms while retaining all other highway parameters as a do-minimum option, to improve pedestrian and cyclist safety while crossing. This option requires no landtake. This layout is desirable due to the safe crossing for both pedestrians and cyclists as well as minimising costs and programme impacts.	

Option	Reference
Option 3: Segregated Roundabout with Shared Active Travel Facilities (Traditional Build) This option proposes to upgrade the existing roundabout into a segregated roundabout with shared active travel facilities based on the CDM standards. This option would reduce the entry lanes and the circulatory lane widths to a minimum in order to implement the appropriate active travel facilities, including raised toucan crossings on all arms and shared areas between pedestrians and cyclists through the roundabout. This option requires less space compared to other options and avoid further landtake requirements. However, this layout is less desirable due to the lack of segregation between pedestrians and cyclists.	
Option 4: Protected Roundabout without Cycle Priority (Traditional Build) This option proposes to upgrade the existing roundabout into a protected roundabout with no cycle priority based on the CDM standards. This option would reduce the existing entry lanes and the circulatory lane widths to a minimum in order to implement the appropriate active travel facilities, including designated crossing points for both cyclists and pedestrians on all arms, and segregated cycle lanes through the roundabout. This option will require landtake to facilitate the additional provisions.	
Option 5: Protected Signal Controlled Junction This option provides a protected junction layout where all movements take place under signalised control. Pedestrians and cyclists are provided with different crossing points, with more controlled priority given to pedestrians over the cycle track. Cycle crossings are typically set back <5m from junction.	

6.2.2.2 Stage 1b Detailed Option Assessment

The preferred option for Route F Junction F2 is Option 2; a Retaining Existing Roundabout while Proposing Zebra Crossings on all the arms through rapid build construction methods, this option provides a blend of benefits in comparison to the other options, primarily on safety impacts as priority crossing for both cyclists & pedestrians crossing as well as performing well in terms of directness, coherence, comfort, attractiveness and on social impacts. This option would also avoid any additional land take requirements and minimising costs and programme impacts.

The exact layout of the junction will be determined in Phase 3 Preliminary Design; taking cognisance of the preferred links that join this junction.

Table 6-12 – Junction F2: TUS Roundabout MCA

Criteria	Sub-Criteria	Indicator to be Measured	Option 1 Do Nothing	Option 2 Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)	Option 3 Segregated Rbt w/ Shared AT Facilities (Traditional Build)	Option 4 Protected Rbt without Cycle Prio. (Traditional Build)	Option 5 Protected Signalised Junction
Transport User benefits & Other Economic Impacts	Cost and Programme Impacts	Land Acquisition Area					
		Construction and Maintenance					
	Construction Impacts	Rapid Build Achievability & Construction Impacts					
Accessibility Impacts	Coherence & Directness	Consistency, Continuity & Directness through junctions & maintenance of cyclists' progression					
	Comfort & Attractiveness	Provision of Comfort for Pedestrians and Cyclists through Assessment of Width & its Attractiveness					
Social Impacts	Accessibility for Users with Different Mobility Needs	Accessibility to Serve Users of all Ages & Abilities					
	Gender Impacts	How the Proposal may have Gender Specific Impacts					
Land Use Impact	Integration with town environs	Integrates with the Land Use Objectives & NIFTI					
		Impact on Green Areas					
Safety Impact	Safety Impact	Segregation between Cyclists and Vehicles					
		Segregation between Cyclists and Pedestrians					
		Safety for All Users regarding Traffic Volumes and Speeds along Route					
	Traffic	Impact on Traffic Capacity due to the Proposals					
Local Environmental Impact	Air Quality	Air Quality Impact					
	Noise and Vibration	Potential Sensitive Receptors Properties					
	Soils and geology	Bedrock and Overburden					
	Biodiversity	Impact on Biodiversity along Scheme Extents					
	Water Resources	Groundwater Quality / Resources / Levels, Surface Water Quality and Flows					
	Landscape and Visual Quality	Landscape and Visual Assessment					
	Cultural and Heritage	Impact at National Monuments, NIAH Features and ACA					

7. Summary of Emerging Preferred Options and Appraisal

7.1 Summary of Emerging Preferred Options

Table 7-1 – Route F Corridor Preferred Option

Location	Proposal
Segment F1	Standard One-way Cycle Track (traditional build, 13.0m cross section) 1.7m standard one-way cycle track on both sides of the road 1.8m footpaths on both sides of the road 6.0m carriageway
Segment F2	Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring 2.3m standard two-way cycle track 1.8m footpaths on both sides of the road
Segment F3	Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring 1.4m standard one-way cycle track 1.6m footpaths on both sides of the road
Segment F4	Standard One-way Cycle Track (traditional build, 13.0m cross section) 1.7m standard one-way cycle track on both sides of the road 1.8m footpaths on both sides of the road 6.0m carriageway
Junction F1	Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)
Junction F2	Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)

7.2 Statutory Process

The Athlone Active Travel Schemes Bundle is divided into Six Routes. Each Route will go through an individual Part 8 planning process which will be in accordance with the Planning and Development Regulations.

7.3 Feasibility Working Costs

Details of the Option Comparison Costs for all options considered are included in Appendix E. These have been undertaken in line with the NTA Cost Management Guidelines.

7.4 Indicative Procurement Strategy

The procurement strategy for this Project is subject to change at this Phase, however it is envisaged that a Contractor shall be appointed from either a pre-existing Framework or appointed via a two-stage process in line with the Capital Works Management Framework. The form of Contract is envisaged at this Phase to be either *PW-CF3 Civil Engineering Works design by the Employer* or *PW-CF5 – Minor Building & Civil Engineering Works designed by the Employer* (dependant on the estimated construction value at the time of Tender).

Details on the Procurement Strategy shall be reviewed and updated as the project progresses.

7.5 Conclusions and Recommendations

Considering all of the criteria set out in the Transport Appraisal Framework, including Transport User and Economic Benefits, Safety, Accessibility, Social Impacts, Land Use and Local Environmental Impacts, the Athlone Active Travel Schemes Bundle Route F, Cornamaddy Roundabout to Wash House Turn Roundabout along R916 is an important project for Athlone Town and County Westmeath, and this scheme fully aligns with national, regional and local policies, as outlined in Chapter 2 of this report.

It is recommended that the Emerging Preferred Options as outlined in Section 6.1 for the link types and Section 6.2 for the junctions are progressed to Phase 3 Preliminary Design. These options are considered to best align with the objectives as set out in Section 1.3, when assessed as part of the multi-criteria analysis. The options proposed will improve safety for all road users by providing facilities which will be designed in accordance with current design standards and best practice. They will provide quality infrastructure for all active travel users including those with mobility or visual impairments.

The project will provide increased opportunity for the residents, school/university goers and leisure cyclists/walkers of Athlone town and its surrounds. The project intends to encourage modal shift from the private vehicle to healthier and more sustainable modes of travel, such as walking and cycling; and will also improve permeability to the existing public transport facilitates.

APPENDICES

Appendix A. Environmental Constraints Study

AtkinsRéalis

Environmental Constraints Report

Westmeath County Council

February 2025
0086381DG0058

ATHLONE TRAVEL BUNDLE ACTIVE SCHEMES

AtkinsRéalis - Baseline / Référence

Notice

This document and its contents have been prepared and are intended solely as information for Westmeath County Council and use in relation to the Athlone Active Travel Schemes Bundle.

WS Atkins Ireland Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 27 pages including the cover.

Document history

Document title: Environmental Constraints Report

Document reference: 0086381DG0058

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
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Client signoff

Client	Westmeath County Council
Project	ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE
Job number	0086381DG0058
Client signature/date	

Contents

Tables

Figures

1. Introduction

1.1 Background

Westmeath County Council (The Client/WCC) as the Contracting Authority and National Transport Authority (NTA), appointed AtkinsRéalis (the Consultant) to provide Engineering-led Multi-disciplinary Consultancy and Design services for the concept development & option selection, preliminary design and statutory processes of active travel provisions and associated works on the Athlone Active Travel Schemes Bundle.

The Project is located in Athlone town, County Westmeath. The scheme extents and routes are highlighted on the map below as shown in Figure 1-1. Figure 1-1, outlines 6 separate routes, Route F has been identified as the subject of this Environmental Constraints Report.

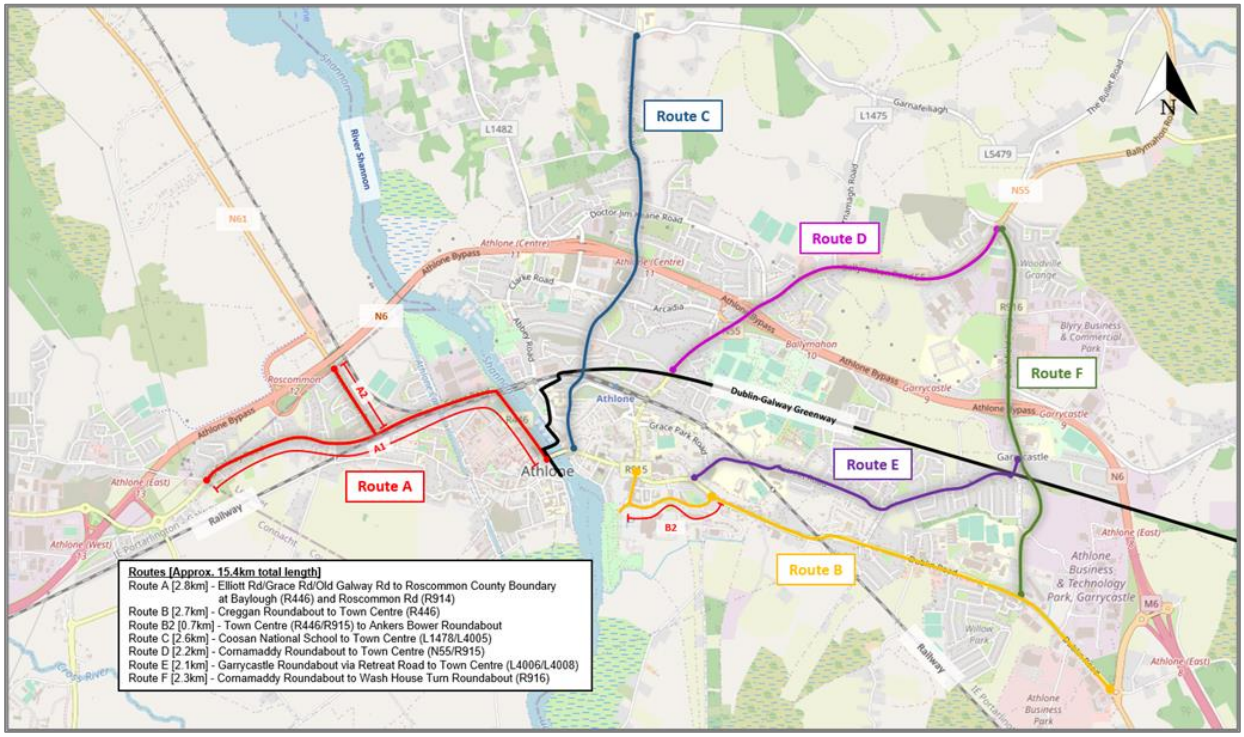

Figure 1-1 - Site Location

The project is located in Athlone, a town on the border of counties Roscommon and Westmeath. It is situated on the southern coast of Lough Ree. In total there is approximately 15.4 km of active travel planned for Athlone. The 16km identified has been divided into 6 separate sub routes, these routes are as follows:

- Route A [2.8 km] - Elliott Rd/Grace Rd/Old Galway Rd to Roscommon County Boundary at Baylough (R446) and Roscommon Rd (T914).
  - Route A1 [2.3 km] - Tesco Express in Boylagh to Luan Gallery and St. Peter and Paul church (R446).
  - Route A2 [0.5 km] - Junction of the Old Galway Road (R446) and Roscommon Road (R914) to the Roscommon County boundary (R914).
- Route B [2.7 km] - Creggan Roundabout to Town Centre (R446).

- Route B2 [0.7km] - Town Centre (R446/R915) to Ankers Bower Roundabout. (Subject to approval and funding)
- Route C [2.6km] - Coosan National School to Town Centre (L1478/L4005).
- Route D [2.2km] - Cornamaddy Roundabout to Town Centre (N55/R915).
- Route E [2.1km] - Garrycastle Roundabout via Retreat Road to Town Centre (L4006/L4008).
- **Route F [2.3km] - Cornamaddy Roundabout to Wash House Turn Roundabout (R916).**

As previously mentioned, this environmental constraints report is being prepared for Route F only.

1.2 Purpose of this Report

This report is being prepared to accompany the Feasibility and Options Selection Report for the proposed Athlone Active Scheme Travel Bundle (Route F). The purpose of this report is to determine the identified environmental constraints within the site boundary and vicinity of Route F and to set out any further studies / investigations which may be required as the project progresses.

1.3 Report Format

This constraints report identifies the key environmental constraints within the study area and its vicinity, as follows:

- Humans;
- Topography;
- Land, Soils and Geology;
- Hydrology and Hydrogeology (including Flood Risk);
- Biodiversity;
- Archaeology, Architecture and Cultural Heritage;
- Air and Climate;
- Noise and Vibration;
- Licenced Facilities;
- Radon; and,
- Landscape & Visual

2. Existing Environment

2.1 Humans

The study area for Route F is along the existing R916 road network and associated footpaths/grass verges within an urban setting. The proposed route passes through a mix of residential, commercial and industrial zoned lands (Westmeath County Council, 2020).

Some sensitive receptors in the area include Cornamaddy National School, Athlone Training Centre, Technological University of the Shannon: Midlands and Glen Abhainn Student Village.

Construction of Route F may result in a temporary increase in noise and vibration in the area as well as an increase of dust and light pollution. Traffic along the R916 ranges between light to heavy at peak traffic hours (Google maps, 2025). Construction may temporarily increase traffic within the area.

2.2 Topography

The general topography of the study area consists of urban streets bounded with properties on either side.

The lands made available for the works have been identified within the existing street reserve boundaries and adjacent road verges.

Based on a review of OSI mapping, the constraints study area for Route F appears to be generally flat in nature with levels between 47-52mAOD and a highpoint of 58mAOD reported in the South of the route.

2.3 Land, Soils and Geology

2.3.1 Land Use

The study area is along the existing road network and / or associated footpaths / grassed verges within an urban setting.
As identified within the Athlone Town Development Plan 2014 – 2020[1], land use zonings within the vicinity of Route F are as follows:

- Existing residential,
- Proposed Residential,
- Mixed Use,
- Innovation Technology,
- Enterprise & Employment,
- Open Space,
- Education, Community & Institutional.

Refer to Figure 2-1 below for details.

[1] It should be noted that the Athlone Joint Urban Area Plan (Westmeath County Council and Roscommon County Council) is currently undergoing Pre-Draft Public Consultation. The land-use zonings of the lands within the vicinity of Route F will need to be reviewed once this Urban Area Plan is implemented.

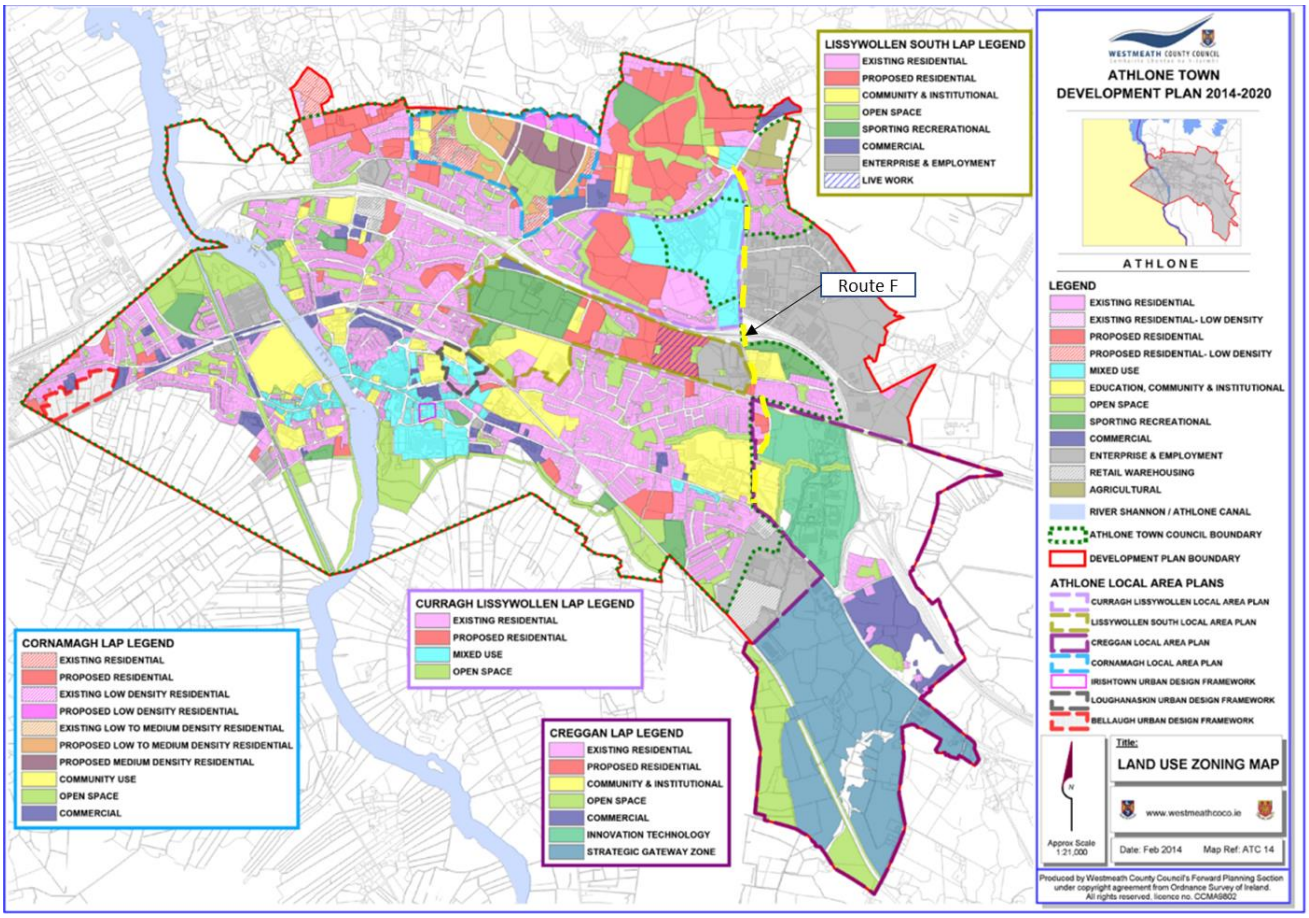

Figure 2-1 - Land Use Zonings within the vicinity (WCC, 2014)

2.3.2 Teagasc Soils

According to GSI (2025) the soil type in the vicinity of both routes is predominantly classified as ‘made ground’ with portions of ‘Shallow well drained mineral’ and small areas of ‘Shallow poorly drained mineral’ under Route F in Figure 2-2.

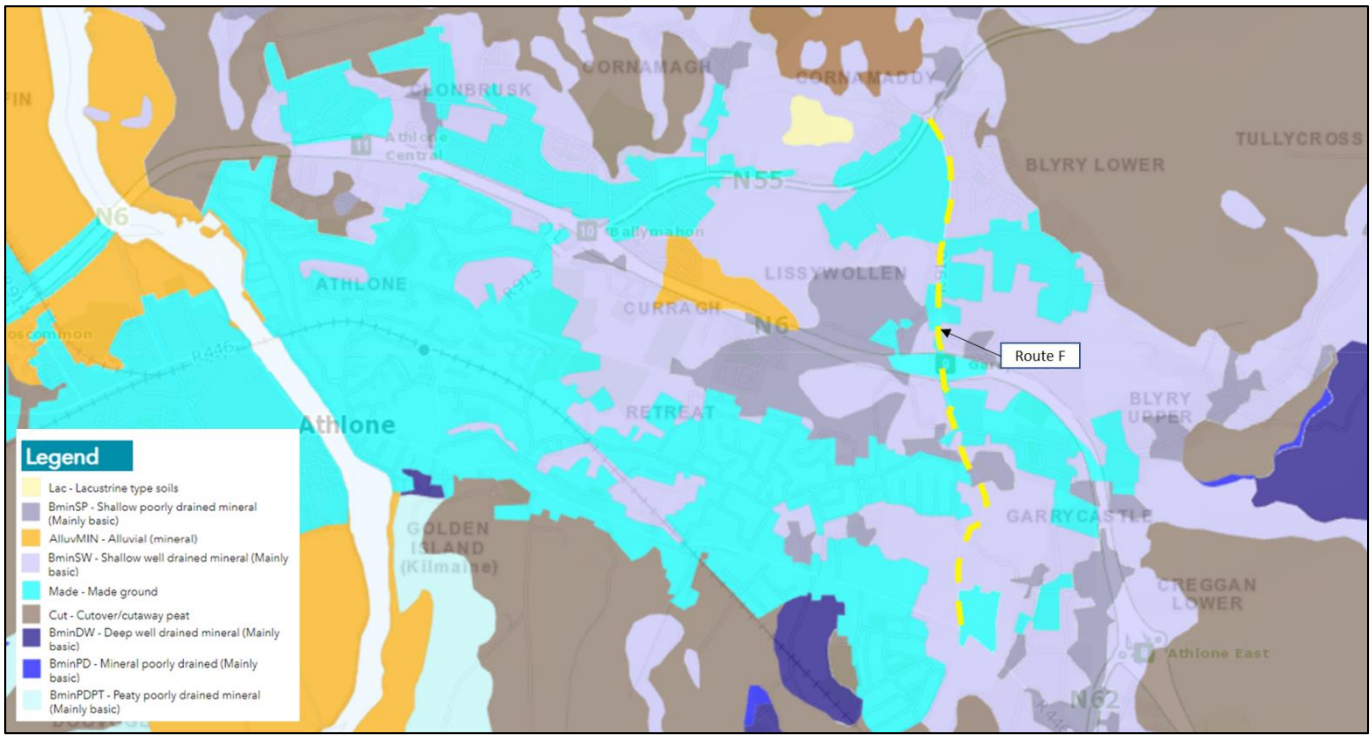

Figure 2-2– Teagasc Soils within the vicinity of Route F (GSI, 2025)

2.3.3 Quaternary Sediments

A review of GSI (2025) indicates that the quaternary sediments underlaying Route F is predominantly classified as ‘gravels derived from limestones’ with portions of ‘Alluvium’ and ‘Eskers comprised of gravels of basic reaction’ (refer to Figure 2-3).

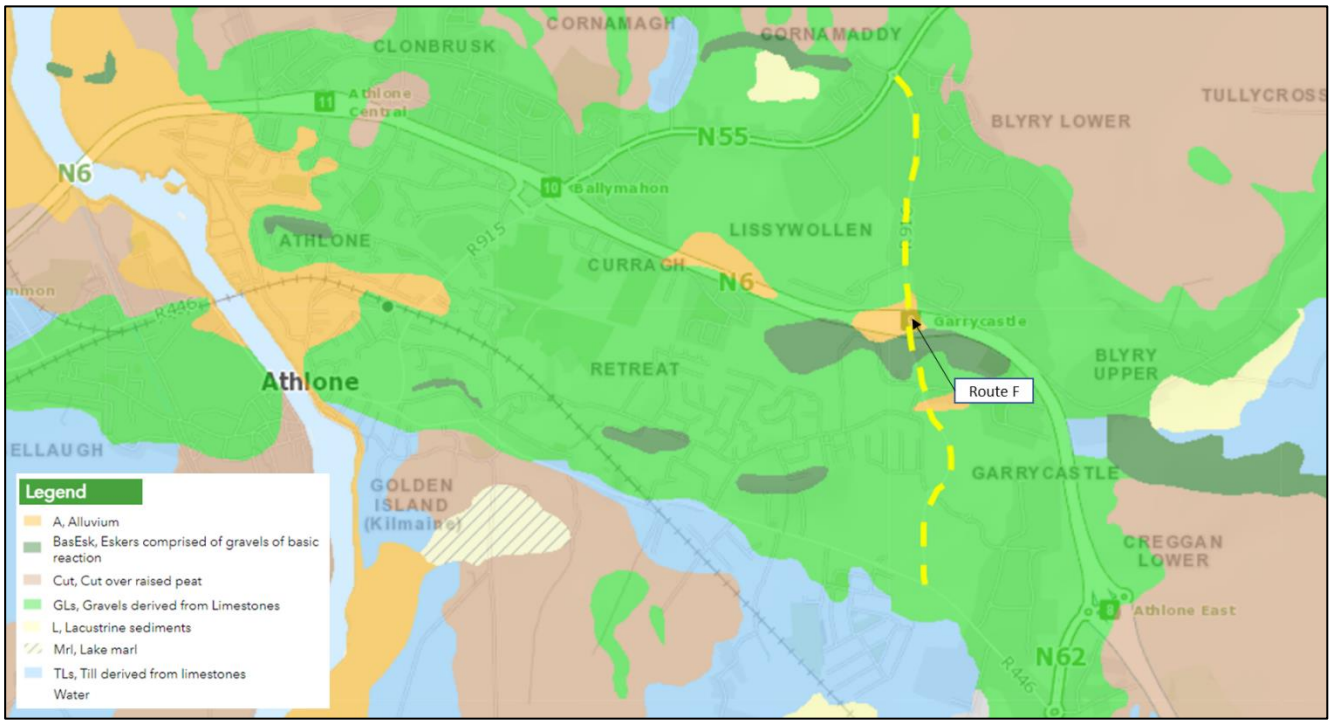

Figure 2-3– Quaternary Sediments within the vicinity of Route F (GSI, 2025)

2.3.4 Bedrock Geology

The GSI (2025) database indicates that the Bedrock Geology within the vicinity of Route F comprises Waulsortian mudbank; Pale-grey massive limestone as shown in Figure 2-4.

Figure 2-4 – Bedrock Geology within the vicinity of Route F (GSI, 2025)

2.3.5 Geological Heritage Areas

A review of GSI (2025) indicates that there are 3no. Geological Heritage Areas (GHA) within the vicinity of Route F as follows (as shown on Figure 2-5):

- River Shannon Callows GHA is located ca. 2.8km West of route F and is described in GSI as '*The site has extensive areas of callow, or seasonally flooded, semi-natural, lowland wet grassland, along both sides of the river.'*
- Loughandonning Mushroom Rock GHA is located ca. 1km West of Route F and is described in GSI as *'An isolated, highly sculpted, limestone mushroom rock, situated within a pasture field.'*
- Tullin Mushroom Rock GHA is located ca. 2km Northwest of Route F. It is described in GSI as '*An isolated, single, undercut limestone mushroom rock, situated in woodland.'*

Figure 2-5 – Geological Heritage Areas within the vicinity of Route F (GSI, 2025)

2.3.6 Landslide Susceptibility

A review of GSI (2025) indicates that landslide susceptibility within the vicinity of Route F is 'Low', 'Low inferred' and 'Made' land. There have been no landslide events reported by GSI (2025) within the town of Athlone, with the closest event being reported ca. 4.2km from route F in 2003. Therefore, no issues are identified with regards to landslide potential.

2.4 Water

2.4.1 Hydrology

2.4.1.1 Surface Water Features

The EPA (2025) has identified 3no. rivers within the vicinity of Route F, Kippinstown (IE_SH_26S021660), Garrynafela (IE_SH_26S021660) and an unnamed river (SHANNON (Upper)_120), however, the route and the watercourses do not intercept at any point.

The Water Framework Directive (WFD) status of the EPA reported watercourses are 'Poor' for the 2016-2021 monitoring period, making them 'At risk' of failing to achieve relevant WFD objectives by 2027.

The study area is located within the Shannon catchment. Route F is located within Shannon Upper sub catchment.

Figure 2-6 – River Crossing / Quality within the vicinity of Route F (EPA, 2025)

2.4.1.2 Flooding

2.4.1.2.1 CFRAM Predictive Flood Maps

Figure 2-7 below displays the fluvial CFRAM predictive flood map of the study area for Route F. Areas predicted to be inundated during various theoretical or 'design' flood events with an estimated probability of occurrence (i.e. low, medium, high) for present day scenario are shown. No portions of Route F are located within areas of Low, Medium or High flood occurrences.

Figure 2-7 – CFRAM Predictive Flood Map (Present Day) within the vicinity of Route F (OPW, 2025)

2.4.1.2.2 Historic Flooding

The OPW has reported no recurrent flooding events within the vicinity of Route F.

2.4.2 Hydrogeology

2.4.2.1 Karst Features

There are no reported karst features within the town of Athlone (GSI, 2025) with the closest karst feature; a Spring (GSI ID: 2023NWK003) which is reported to within a 20m locational accuracy, located ca. 3.1km East of Route F.

2.4.2.2 Wells and Springs

There are no GSI reported wells or springs within the town of Athlone (GSI, 2025). The closest well is one borehole (GSI ID: 2023NWW102) reported to 1km locational accuracy, located ca. 1.2km North of Route F.

2.4.2.3 Drinking Water Protection Areas

There are no Ground Water Drinking Water Source Protection Areas within 5km of the route. Killeglan Public Water Supply Tobermore Spring is the closest drinking water protection area and is located ca. 12km west of Route F. There are no Group Water Schemes located within 10km of the route.

2.4.2.4 Aquifers

The GSI (2025) indicates that the town of Athlone, including the study areas for Route F is underlain by a locally important aquifer and the bedrock which is moderately productive only in local zones as well as a Locally important gravel aquifer.

2.4.2.5 Groundwater Vulnerability

The GSI (2025) has classified the groundwater vulnerability beneath Route F as ‘High’. High groundwater vulnerability indicates that groundwater is potentially shallow and vulnerable to contamination. Refer to Figure 2-8.

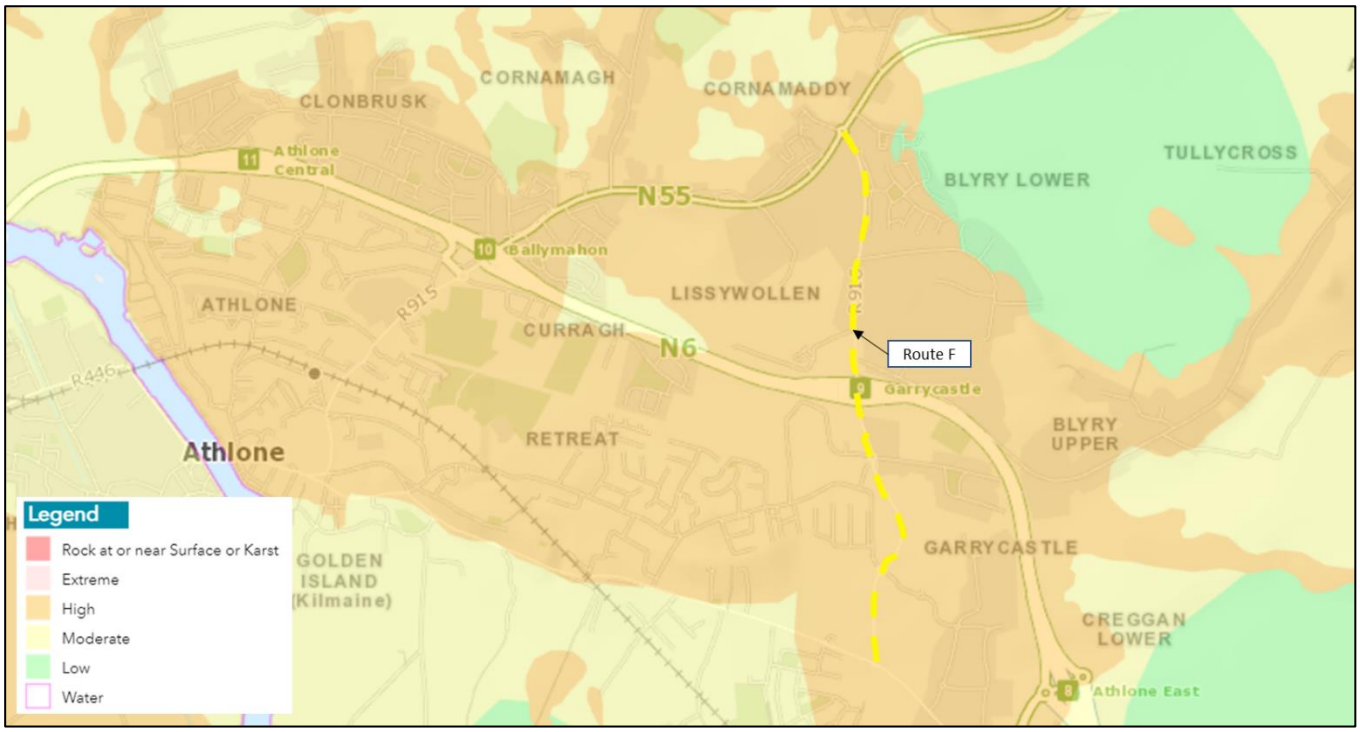

Figure 2-8 – Groundwater Vulnerability within the vicinity of Route F (GSI, 2025)

2.4.2.6 Ground Water Quality

As indicated by the EPA (2025) and as can be seen on Figure 2-9, there are 2no. ground waterbodies (GWB) within the study area for Route F, Athlone Gravels GWB and Inny GWB.

These GWBs are reported by EPA (2025) as having 'Good' WFD status for the 2021-2027 monitoring period and are 'Not at Risk' of failing to achieve relevant WFD objectives by 2027.

Figure 2-9 – GWB Quality within the vicinity of Route F (EPA, 2025)

2.5 Biodiversity

2.5.1 General Overview

2.5.1.1 Cycle Way Routes

The cycle way routes are entirely located within hardstanding areas and adjacent areas. Route F travels from North to South along the R916 ending at the junction with R446. This route is on the outskirts of town on the East.

The location of the cycle way routes is on the outskirts of Athlone town traveling predominantly on hardstanding surfaces (roads, pathways) and also includes roadside grass verges. The surface water drainage network from the project site is via roadway drainage infrastructure and for the purposes of this assessment it is assumed to outfall to the River Shannon.

2.5.2 European Sites

There are 13 no. European sites within the Zone of Influence (ZoI) of the proposed project as detailed in Table 2-1 below. Figures 2-10 and 2-11 below illustrate the locations of Europeans sites within the ZoI of the proposed project.

The proposed project does not lie within nor is it adjacent to any SAC/SPA site extents and there is no direct connectivity to any European sites.

There is potential indirect connectivity to the River Shannon Callows SAC/SPA via the River Shannon as the river receives surface water drainage from the project site via the road drainage network. The lower stretches of the River Shannon are within the SAC/SPA site extents.

Lough Ree SAC, Lough Ree SPA and Lough Funshinagh, are upstream of the project site and therefore there is no indirect hydrological connectivity to these European sites from the project site.

There are several SACs/SPAs located in the wider environs of Athlone Town. There is no direct or indirect connectivity to these European sites.

Table 2-1 - European site within the ZoI of the proposed project

European Site (Site Code)	**Distance from Study Area**	**Qualifying Interests (from NPWS Conservation Objectives documentation)**
Crosswood Bog SAC (002337)	C. 1.1km East	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]
Lough Ree (000440) SAC	C. 1.7km Northwest	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Alkaline fens [7230] Limestone pavements [8240] Bog woodland [91D0]

		Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] *Lutra lutra* (Otter) [1355]
Lough Ree (004064) SPA	C. 1.7km Northwest	Little Grebe (*Tachybaptus ruficollis*) [A004] Whooper Swan (*Cygnus cygnus*) [A038] Wigeon (*Anas penelope*) [A050] Teal (*Anas crecca*) [A052] Mallard (*Anas platyrhynchos*) [A053] Shoveler (*Anas clypeata*) [A056] Tufted Duck (*Aythya fuligula*) [A061] Common Scoter (*Melanitta nigra*) [A065] Goldeneye (*Bucephala clangula*) [A067] Coot (*Fulica atra*) [A125] Golden Plover (*Pluvialis apricaria*) [A140] Lapwing (*Vanellus vanellus*) [A142] Common Tern (*Sterna hirundo*) [A193] Wetland and Waterbirds [A999]
River Shannon Callows SAC (000216)	C. 2.3km South	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*) [6510] Alkaline fens [7230] Limestone pavements [8240]* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]* *Lutra lutra* (Otter) [1355]
Middle Shannon Callows SPA (004096)	C. 2.3km South	Whooper Swan (*Cygnus cygnus*) [A038] Wigeon (*Anas penelope*) [A050] Corncrake (*Crex crex*) [A122] Golden Plover (*Pluvialis apricaria*) [A140] Lapwing (*Vanellus vanellus*) [A142] Black-tailed Godwit (*Limosa limosa*) [A156] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Wetland and Waterbirds [A999]
Carn Park Bog SAC (002336)	C. 3.9km East	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]
Mongan Bog (000580) SAC	C. 9.8km South	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]
Mongan Bog (004017) SPA	C. 9.8km South	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

Pilgirm's Road Esker (001776)	C. 10km South	Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
Fin Lough SAC (Offaly) (000576)	C. 10.2km South	Alkaline fens [7230] *Vertigo geyeri* (Geyer's Whorl Snail) [1013]
Castlesampson Esker (001625)	C. 11.5km West	Turloughs [3180] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
Lough Funshinagh (000611) SAC	C. 11.5km Northwest	Turloughs [3180] Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]
Ballynamona Bog and Corkhip Lough SAC (002339)	C. 11.8km West	Turloughs [3180] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]

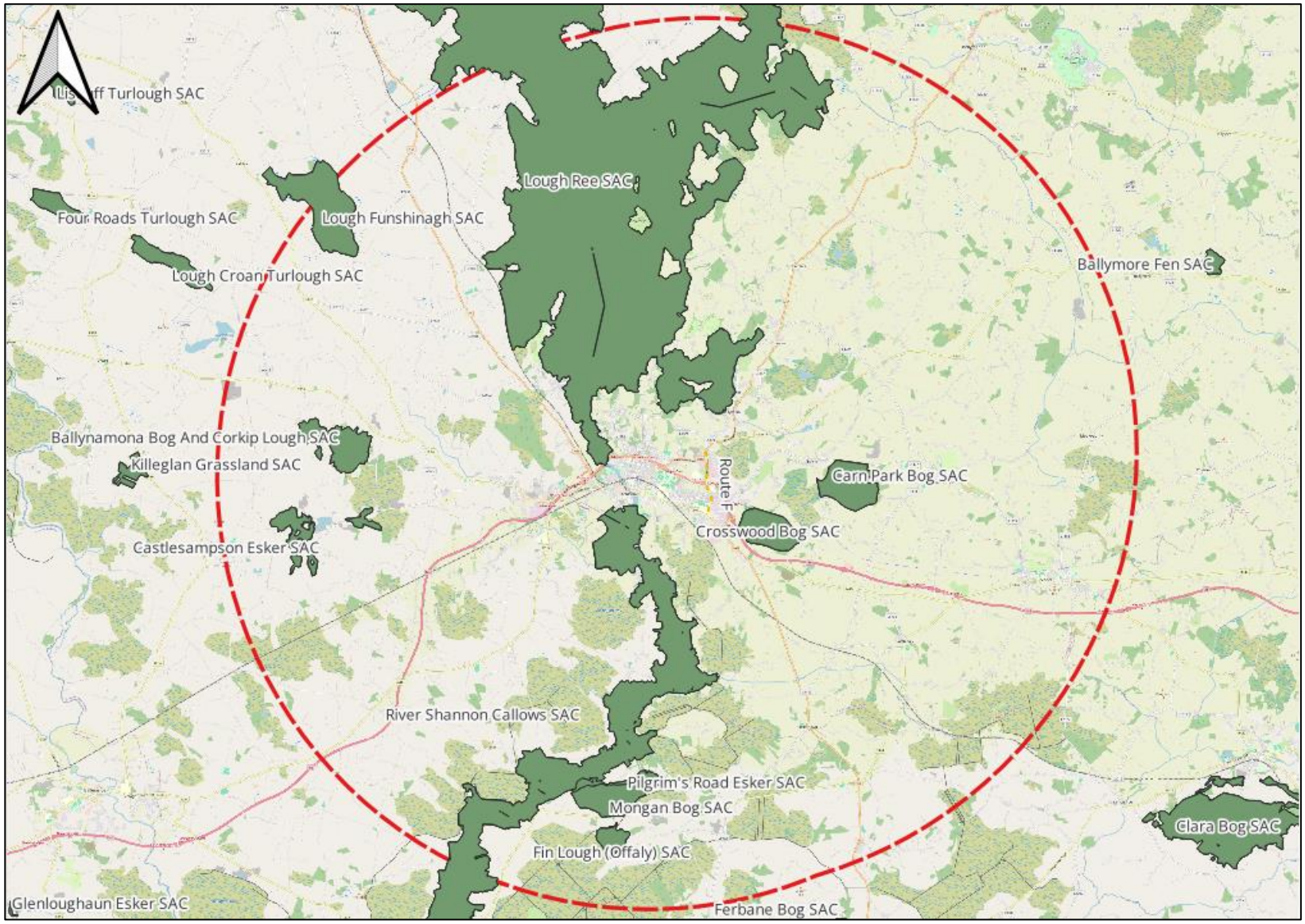

Figure 2-10 - SACs within the Zone of influence of the proposed project

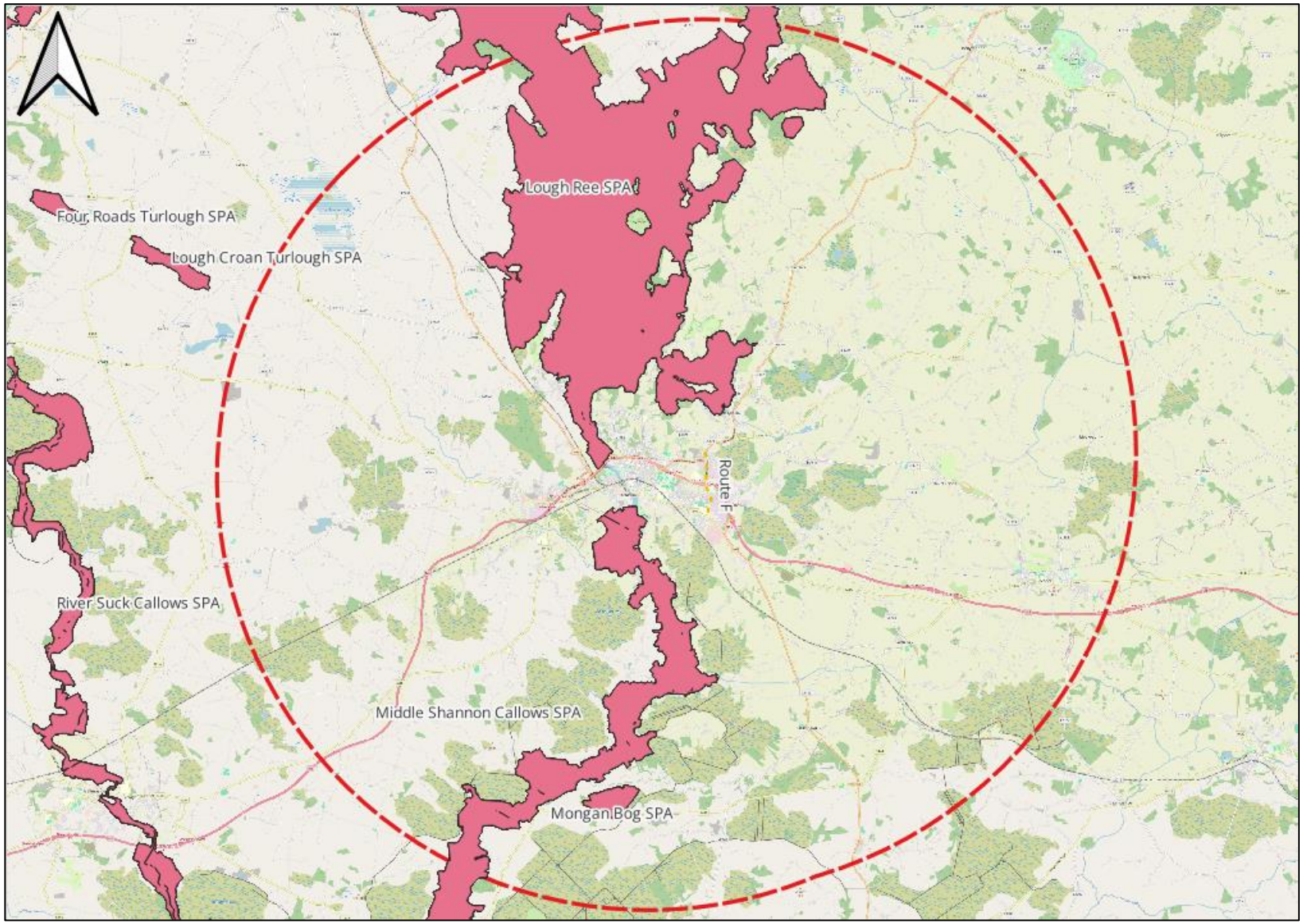

Figure 2-11- SPAs within the zone of influence of the proposed project

2.5.3 National Designated Conservation Sites

The proposed project site is not within, nor does it cross any Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs).

There is 1 no. NHA and 4 no. pNHA within 5km of the project site; Carrickynaghtan Bog NHA (001623), River Shannon Callows pNHA (000216), Crosswood Bog (000678) and Carn Park Bog (000676), Lough Ree (000440).

River Shannon Callows pNHA is designated for the same conservation interest as the SAC and SPA. There is potential indirect connectivity to the pNHA via the project site's road drainage network which outfalls into the River Shannon.

Carrickynaghtan Bog NHA is situated approximately 4km south of Athlone on the west of the River Shannon, mainly in the townlands of Cloonown and Carrickynaghtan in Co. Roscommon. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is mostly bounded by reclaimed grassland and tracks[2]. There is no direct or indirect connectivity to Carrickynaghtan Bog NHA from the project site.

Crosswood Bog is a pNHA designated for the same conservation interest as the SAC. There is no direct or indirect connectivity to the pNHA.

Carn Park Bog is a pNHA designated for the same conservation interest as the SAC. Carn Park Bog is situated 8 km east of Athlone. The site comprises a raised bog that includes both areas of high bog and cutover bog. There is no direct or indirect connectivity to the pNHA from the project site.

Lough Ree is a pNHA designated for the same conservation interest as the SAC. Situated on the River Shannon between Lanesborough and Athlone, Lough Ree is the third largest lake in the Republic of Ireland. It lies in an ice-deepened depression in Carboniferous Limestone. There is no direct or indirect connectivity to Lough Ree from the project site

Figure 2-12 below illustrates NHAs and pNHAs around the project site.

[2] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY001623.pdf

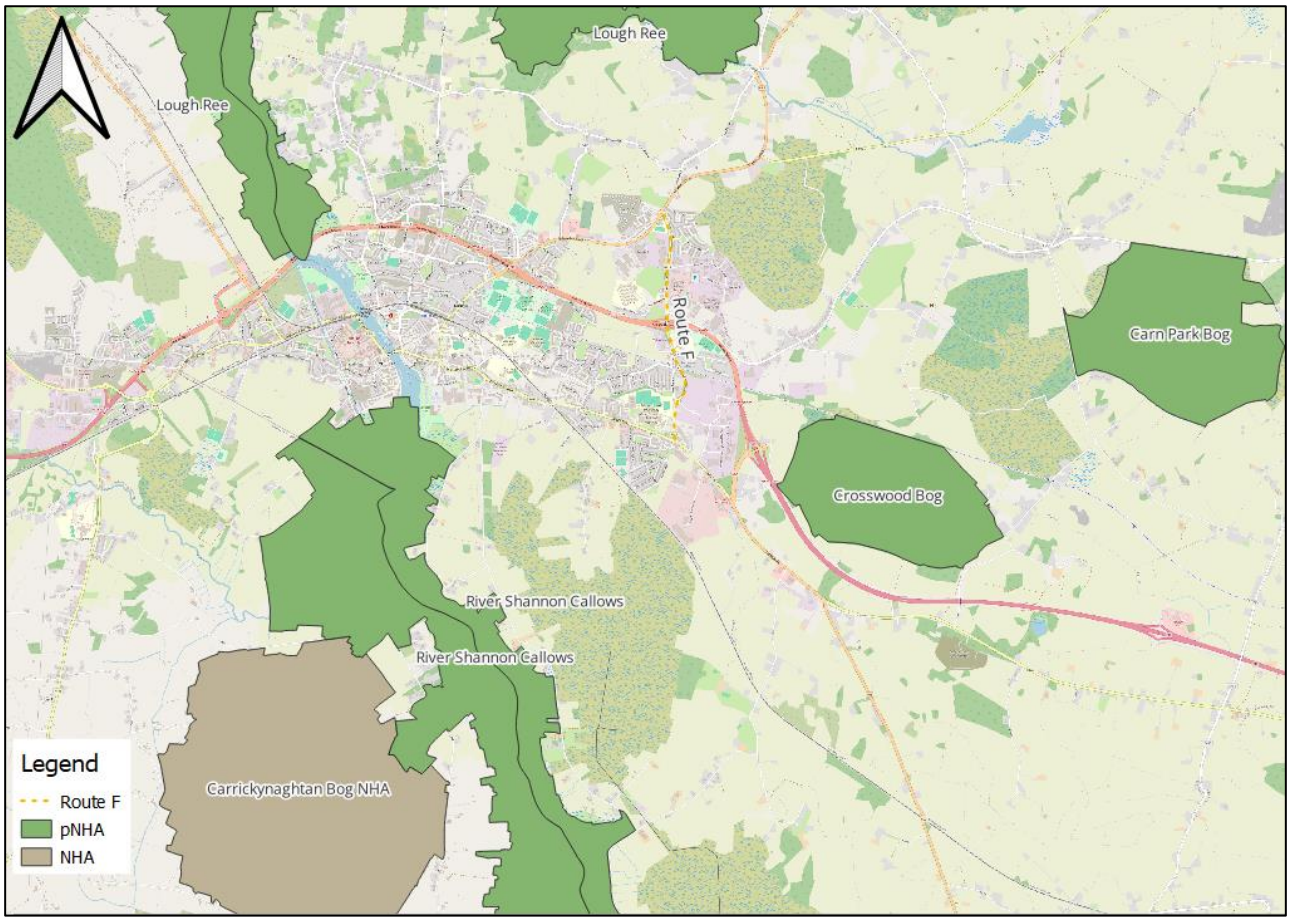

Figure 2-12 - NHAs and pNHAS within 5km of the project site

2.5.4 Nature Reserves / Ramsar Sites

There are no Nature Reserves or Ramsar Sites within or near the proposed project site. The nearest Nature Reserve and Ramsar Site is Mongan Bog Nature Reserve / Mongan Bog Ramsar Site located c. 10km south of Athlone town.

2.5.5 Watercourses

The entire project site lies within the Shannon Upper (SC_100) subcatchment. There is 1 no. EPA identified watercourse within 200m of the Southern section of Route F. The proposed project will not result in direct impacts to the River nor the protected species within. There is potential indirect connectivity to the river via the road drainage network within the project site.

The location of watercourses in relation to the proposed project are illustrated in Figure 2-6 above.

2.5.6 Woodlands

A review of the *National Survey of Native Woodlands* (NSNW)[3], *Ancient and Long-Established Woodland Inventory* (ALEWI, 2010)[4], National Parks and Wildlife Service (NPWS) datasets and National Biodiversity Data

[3] https://www.npws.ie/maps-and-data/habitat-and-species-data

[4] https://data.gov.ie/en_GB/dataset/ancient-and-long-established-woodland-inventory-2010?package_type=dataset

Centre (NBDC) datasets identify no areas of NSNW or ALEWI woodlands within the project site. A review of aerial imagery did not identify any woodlands within the proposed project site.

2.5.7 Wetlands

A review of Wetland Survey Ireland (WSI) datasets[5] identify 1 no. wetland sites 0.26km from the proposed project site; Tullycross Cutover (Site code; WMI_WM79). WSI detail this site as 'formerly a raised bog of County value with a very wet central area of interconnecting pools. It is now mostly industrial cutaway and cutover bog, and most of its biodiversity value has been lost.' The Tullycross Cutover is not close to any section of Route F, as such the proposed project will have no likely interaction with this waterbody.

2.5.8 Bird Sites

There are no Irish Wetland Bird Survey (I-WeBS) count sites within the red line boundary of the proposed project site. The nearest I-WeBS site; Lough Ree, which is located along Lough Ree c. 1.7km from the proposed project site.

2.5.9 Treelines and Hedgerows

Route F is along roadways which are predominantly free of hedgerows and roadside landscape trees, however, there are occasional hedgerows and trees in some areas typically found in private residences. There is the potential for the project in certain areas to result in the loss of roadside landscape features such as grass verges, landscape feature trees and boundary hedges.

2.5.10 Species - Documented and Site Survey Evidence

This section of the report details species that have been recorded within the study area. NBDC datasets of rare and protected species records OSI 2km grid square N04A N04F, N04K and N04Q which encompasses the project site, were examined for the period 2000-2023. A review of species records was undertaken in February 2025 within the past 10 years within a 200m radius of the proposed route. No records of protected or invasive species were recorded in the 200m radius in the past ten years.

There is historic evidence of Japanese Knotweed (*Fallopia japonica*) in the vicinity of Route F.

2.6 Archaeology and Cultural Heritage

A search of the National Monuments Service (NMS, 2025) identified Athlone as a sensitive area in terms of archaeology and cultural heritage. As shown in Figure 2-13, Route F is near a number National Inventory of Architectural Heritage (NIAH) features. A review of the Westmeath County Development Plan 2021-2027 (WCC) identifies that Route F is not within the Athlone Architectural Conservation Area (ACA) or Zone of Architectural Potential.

[5] http://www.wetlandsurveysireland.com/wetlands/map-of-irish-wetlands--/map-of-irish-wetlands---map/index.html

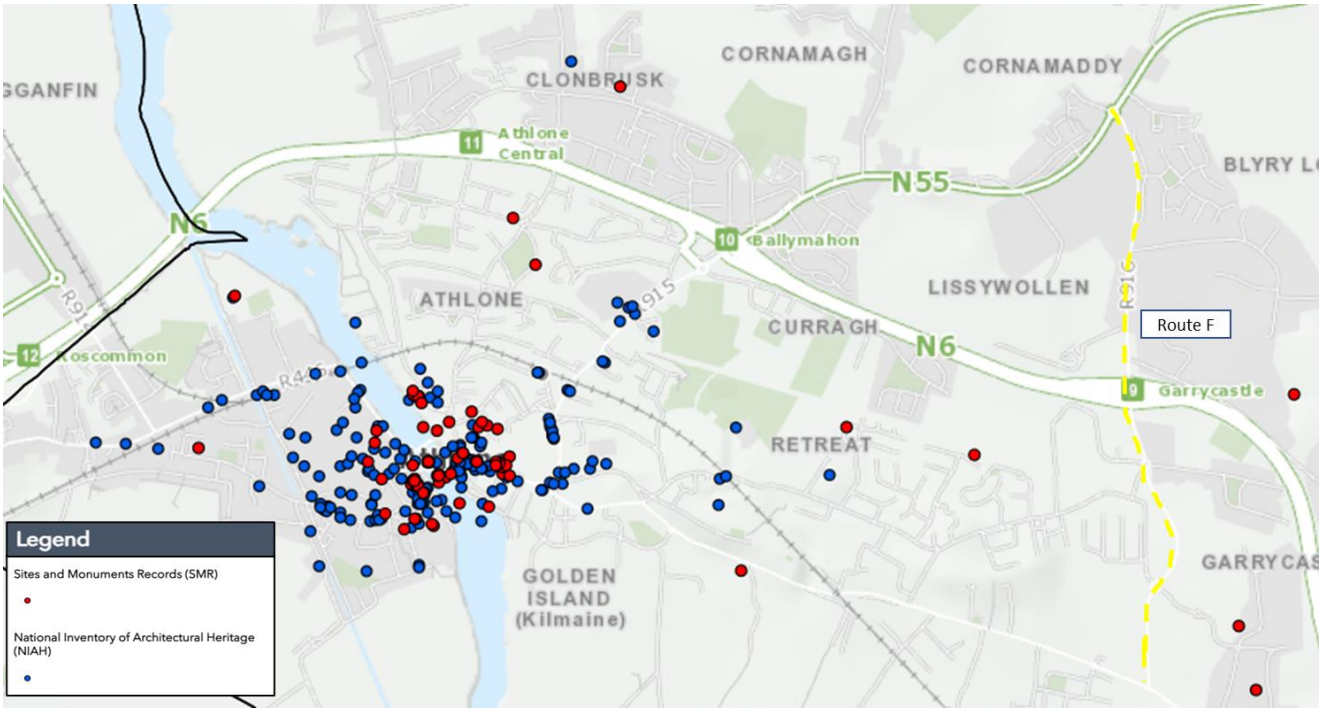

Figure 2-13 – SMRs, ZoNs and NIAHs within the vicinity of Route F (National Monuments Service, 2025)

2.7 Licenced Facilities

A review of the EPA's database (2025) indicates that there are no EPA licenced facilities within the vicinity of the route, with the closest reported EPA licenced facility being Novo Nordisk Production Ireland Limited (P0100-02) located ca. 5.7km west of Route F, as shown on Figure 2-14. Athlone Urban Wastewater Treatment Plant (D0007-01) is also ca. 1.6km West of Route F at its closest point.

All routes are more than 15km from any Seveso site.

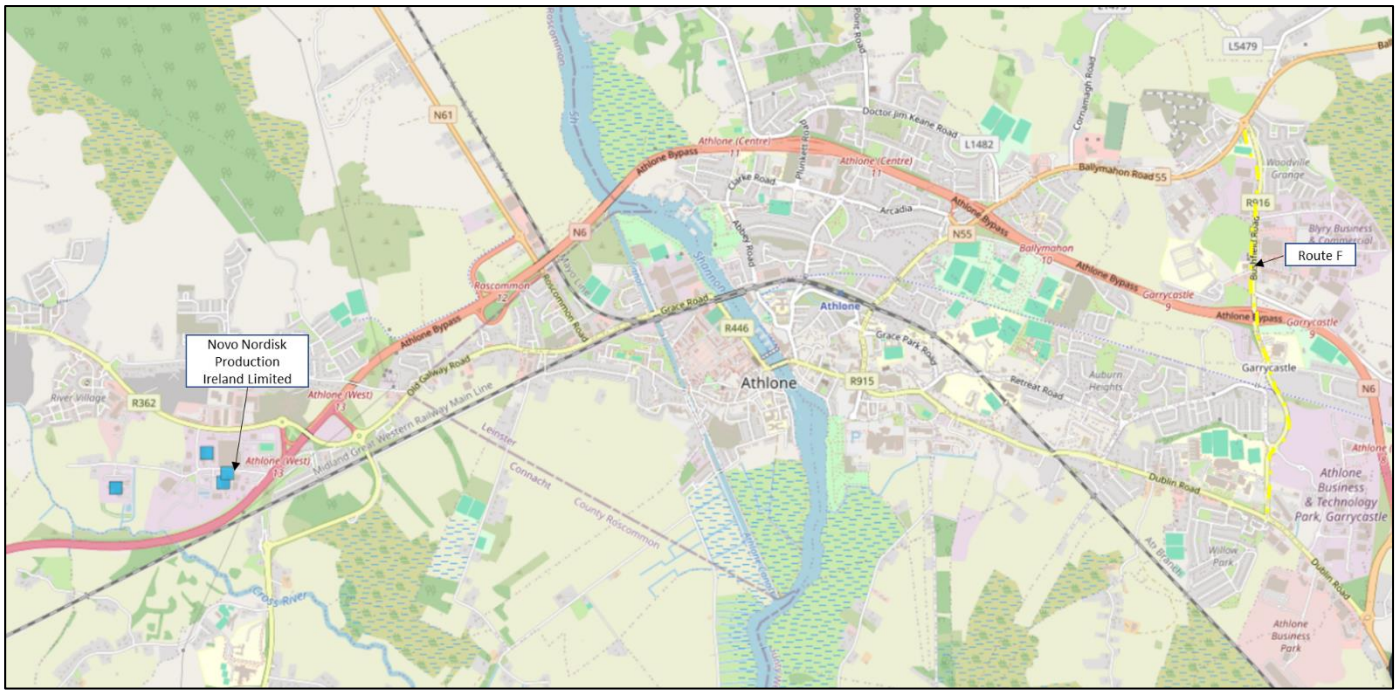

Figure 2-14 – Licenced Facilities within the vicinity of Route F (EPA, 2025)

2.8 Radon Levels

According to EPA (2025), radon levels within the vicinity of Route F are reported as 'about 1 in 10 homes in this area is likely to have high radon levels'.

2.9 Landscape and Visual

2.9.1 Views and Prospects

Route F is located entirely along existing roads within Athlone Town. It is located within the Lough Ree/Shannon Corridor Landscape Character Area according to the Westmeath County Development Plan (2021-2027) with the area noted as having '*significant conservation status, as SPA, SAC and NHA are all present therein. The Shannon and Lough Ree are important in terms of their recreational and amenity value, as well as their natural heritage importance, thus the quality of these assets must be protected*.'

There are no scenic views or scenic routes within the vicinity of the route.

2.9.2 Tree Preservation Orders

A review of the Westmeath County Development Plan 2021-2027 indicates that there are 2no. locations subjected to Tree Preservation Orders (TPO) within the town of Athlone, neither of which are within the vicinity of Route F. There are trees along the side of the road in several section of Route F.

2.10 Noise and Vibration

Based on available baseline noise mapping from TII (2025) for the southern section of Route F, this route experiences day-time (Lden) noise levels of 65-69 dB and night-time (Lnight) noise levels of 55-59dB.

No other regional potential noise sources (i.e. airports and rail routes) are identified within the vicinity of the routes.[6]

Based on the results of this review no significant vibration generating sources within vicinity of the constraints study area have been identified at this preliminary stage (GSI, 2025).

Sensitive receptors within the vicinity of Route F consist of Cornamaddy National School on the roundabout at N55, Athlone Training Centre at the roundabout off Moydrum Road, the Old Rail Trail Greenway and residential dwellings and businesses along the entirety of the route.

2.11 Air Quality

According to the EPA (2025), the current baseline air quality index in the area is *'3-Good'* for Athlone -Large Town. It is noted that the information from monitoring instruments at representative locations in the location may not reflect local incidents of air pollution.

[6] It's noted that a railway line is within the vicinity of Route F, however it is not crossed and noise levels have not been reported by TII in these areas.

Sensitive receptors within the vicinity of Route F consist of Cornamaddy National School on the roundabout at N55, Athlone Training Centre at the roundabout off Moydrum Road, the Old Rail Trail Greenway and residential dwellings and businesses along the entirety of the route.

3. Summary / Recommendations

In summary, the study area is located entirely along existing roads within Athlone town with the following constraints identified.

- Given the location, the proposed project will not result in any direct impacts to any European sites. There are 2 no. European sites with indirect hydrological connectivity from the proposed project; the River Shannon Callows SAC and Middle Shannon Callows SPA.
- The River Shannon Callows pNHA covers the same geographical area as the aforementioned SAC/SPA and the pNHA has the same indirect hydrological connectivity.
- Once the preliminary design has been completed, the proposed project will be subject to the Appropriate Assessment process to determine if the project will result in likely significant effects to any European sites.
- As detailed above, there will not be any likely interaction with the 3no. watercourses near Route F and as such significant water quality impacts are not anticipated.
- There will likely be some loss of landscape features like roadside trees and/or hedgerows as a result of the proposed project. There will likely be a loss of roadside grass verges as a result of the proposed project.
- As detailed above, the proposed project is almost entirely located within hardstanding areas including roadways and pathways. The proposed project will not result in the loss of any significant areas of semi natural habitats which could provide refuge or foraging sites for protected species. Trees and hedgerows will be required to be surveyed to assess the capability of supporting bat roosts and nesting birds.
- No invasive species have been recorded within the proposed project site, however, as there are invasive species within the area an invasive species survey will be required.
- As Route F does not pass through any NIAH features an appropriately qualified archaeologist / cultural heritage specialist will not be required as the project progresses.
- There are 3no. Geological Heritage Areas (GHAs) within the vicinity of the route. The River Shannon Callows GHA is located ca. 2.8km West of Route F, Loughandonning Mushroom Rock GHA is located ca. 1km West Route F and Tullin Mushroom Rock is located ca. 2km Northwest of Route F. As there are hydrological and hydrogeological connections to River Shannon Callows, mitigation measures will be implemented during construction to minimise / avoid impacts on the area.
- In a review of aerial imagery (Google Maps, 2025), there are a number of trees located along Route F. It is recommended that an Arboricultural Survey is undertaken along Route F as the project progresses.
- Given the urban nature of Route F, there are numerous sensitive receptors of Air Quality and Noise and Vibration nuisance during the construction works. Mitigation / protection measures will be implemented during construction to minimise / avoid impacts on sensitive receptors.

AtkinsRéalis

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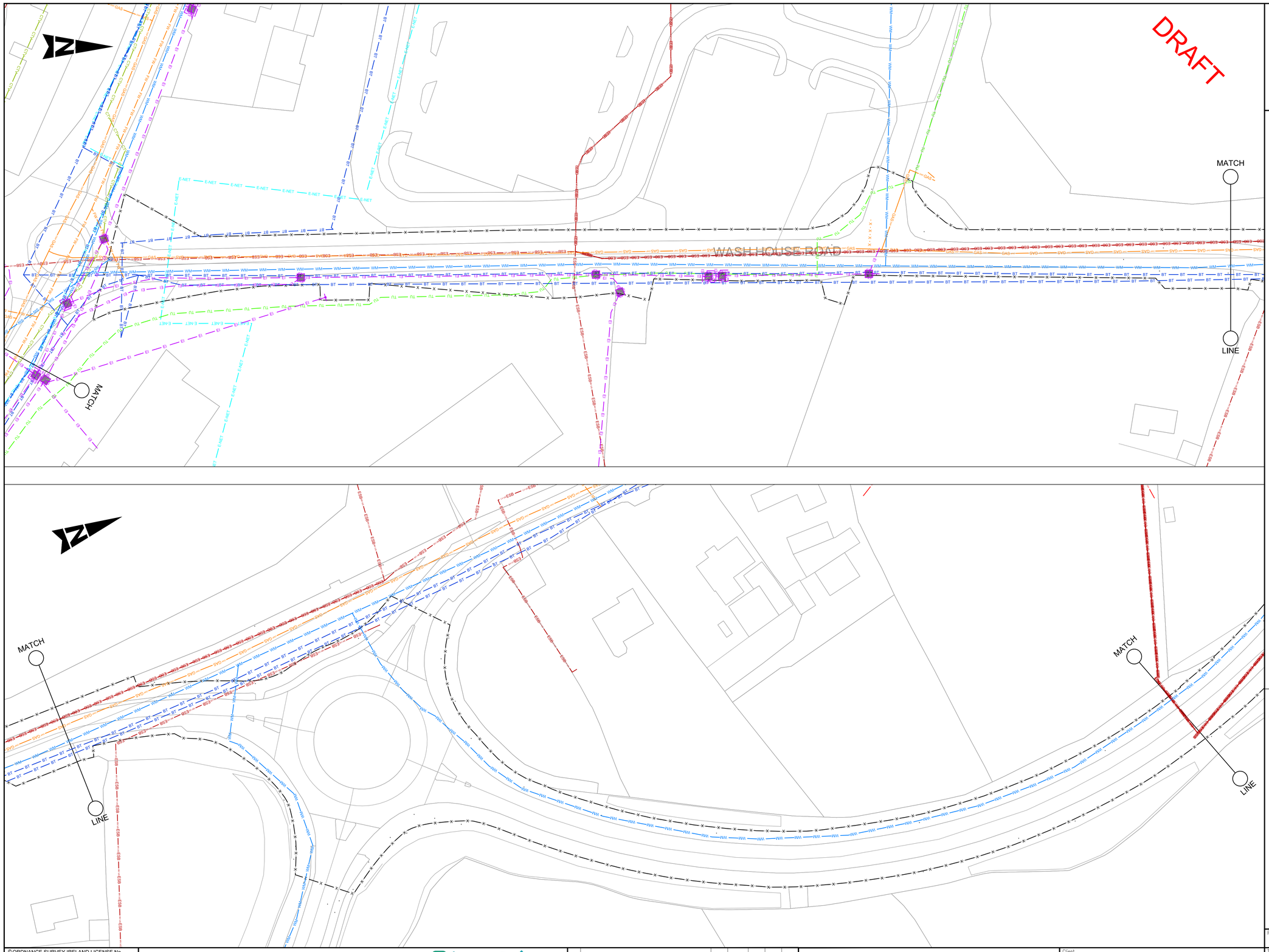
AtkinsRéalis - Baseline / Référence

Appendix B. Utility Maps



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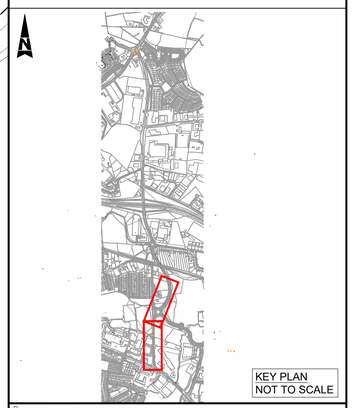

Purpose: FOR INFORMATION

ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Risk Level		
	X	Atkins Base Line - Low Risk
		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

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WESTMEATH COUNTY COUNCIL Comhairle Chontae na hIarmhí

TIONSCADAIL NA FIONNACHTAÍ PATHFINDER PROGRAMME Transforming how we travel

Rialtas na hÉireann Government of Ireland

Tionscadal Éireann Project Ireland 2040

Rev	Description	By	Date	Chk'd	Rev'd	Auth

P01	ISSUED FOR INFORMATION	DG	29.05.24	DP	AB	ST

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Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Title: ROUTE F EXISTING UTILITIES SHEET 1 OF 4

Original Scale	Drawn	Checked	Reviewed	Authorised
1:500 @ A1 1:1000 @ A3	DG Date 29.05.24	DP Date 29.05.24	AB Date 29.05.24	ST Date 29.05.24

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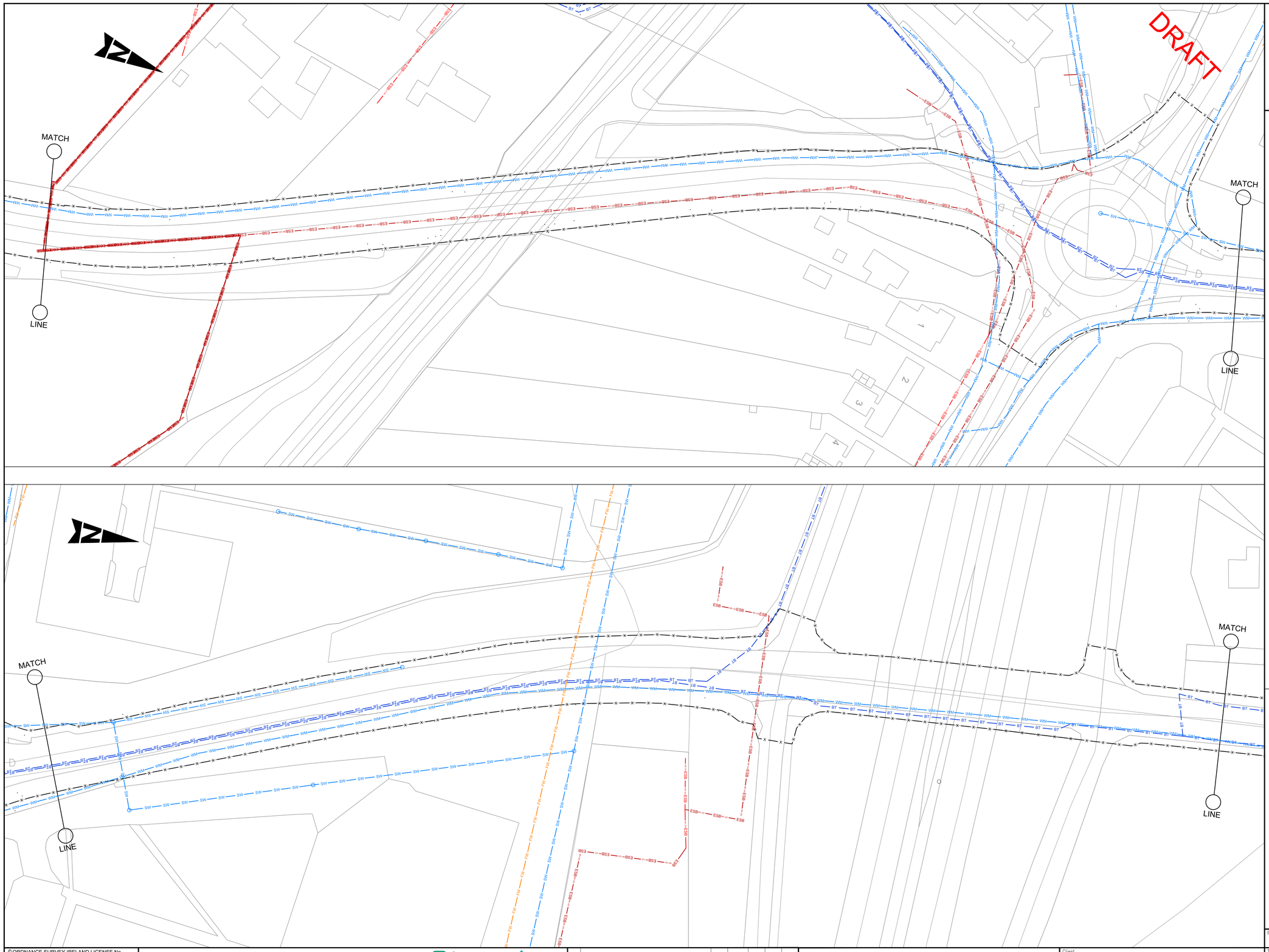

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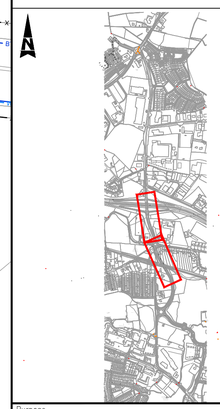

KEY PLAN
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Fax (+353) 091 779 830

Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

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		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

NTA Údarás Náisiúnta Iompair National Transport Authority

WESTMEATH COUNTY COUNCIL Comhairle Chontae na hIarmhí

TIONSCADAIL NA FIONNACHTAÍ PATHFINDER PROGRAMME Transforming how we travel

Rialtas na hÉireann Government of Ireland | Tionscadal Éireann Project Ireland 2040

Rev	Description	By	Date	Chk'd	Rev'd	Auth

P01	ISSUED FOR INFORMATION	DG	29.05.24	DP	AB	ST

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Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Title: ROUTE F EXISTING UTILITIES SHEET 3 OF 4

Original Scale	Drawn	Checked	Reviewed	Authorised
1:500 @ A1 1:1000 @ A3	DG Date 29.05.24	DP Date 29.05.24	AB Date 29.05.24	ST Date 29.05.24

Status	Drawing Number	Rev
S2	0086381-ARK-F1-01-DR-CE-900503	P01

A1

DO NOT SCALE

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Date: May 29, 2024 - 12:03pm Plotted by: dgreen

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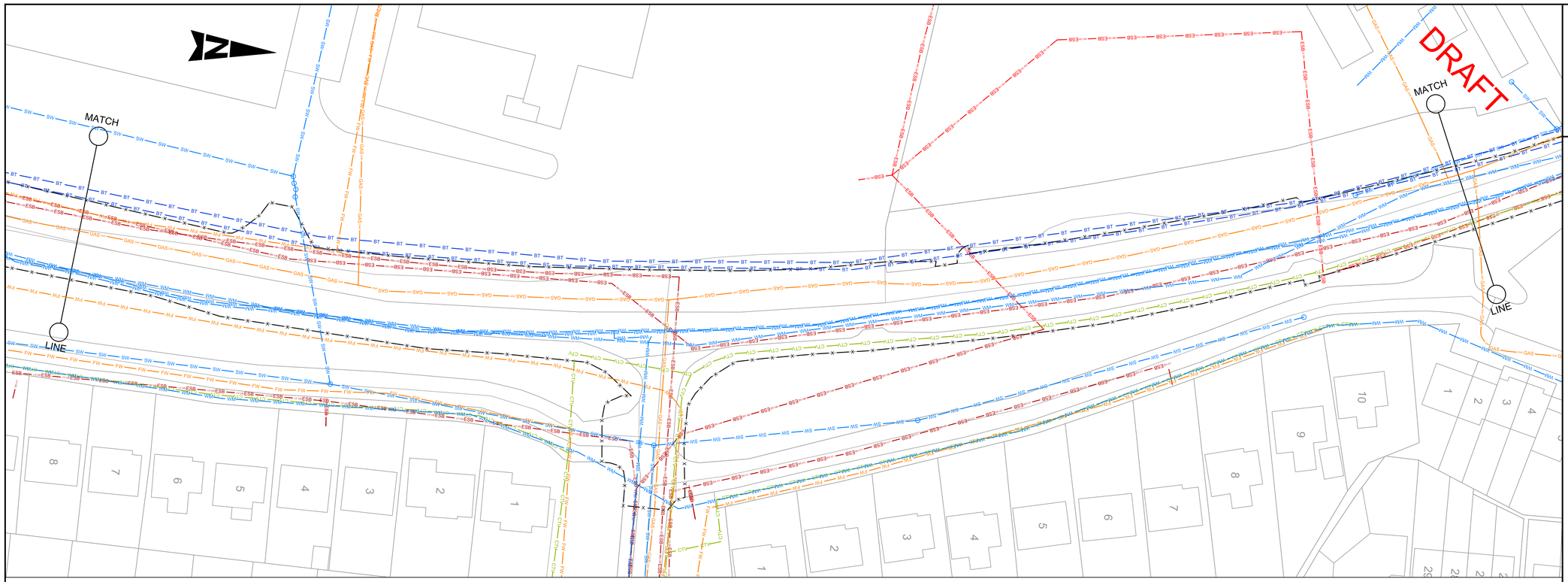
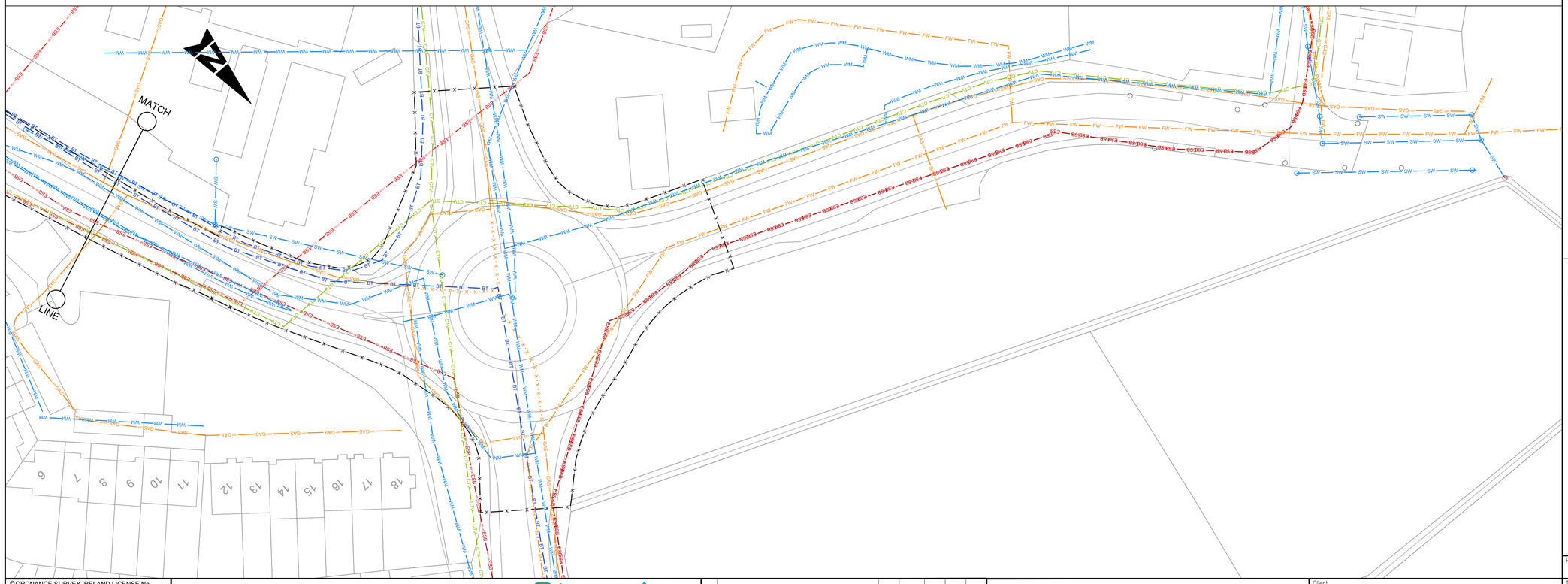




GENERAL NOTES

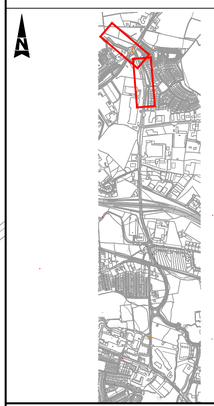
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS.
3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM.
4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR.
5. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION.

UTILITIES NOTES:

1. THE INFORMATION PROVIDED ON THIS DRAWING IS BASED ON THAT RECEIVED FROM THE RELEVANT STATUTORY AUTHORITIES.
2. LOCATION OF EXISTING SERVICES AS SHOWN IN THE 500 SERIES DRAWINGS ARE INDICATIVE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING SERVICES ON SITE PRIOR TO EXCAVATION AND IN COLLABORATION WITH THE SERVICE PROVIDER BY CAREFUL DIGGING METHODS.
3. NO SERVICES ARE TO BE DECOMMISSIONED IN ADVANCE OF NEW SERVICES BEING ESTABLISHED AND COMMISSIONED.
4. THE CONTRACTOR TO CONFIRM ALL WORKS IN ADVANCE WITH THE RELEVANT AUTHORITY OR PUBLIC/PRIVATE UNDERTAKER.
5. ALL EXISTING SERVICES MUST BE PROTECTED IN SITU BY THE CONTRACTOR DURING THE WORKS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING DUCTS DURING THE WORKS.
6. ALL MEETINGS ON SITE WITH THE SERVICE PROVIDERS SHOULD BE NOTIFIED TO THE EMPLOYER'S REPRESENTATIVE WHO WILL BE PRESENT AT THE MEETING WHEN AVAILABLE
7. THE CONTRACTOR IS ADVISED THAT ANY COSTS ASSOCIATED WITH TEMPORARY WORKS FOR DIVERSION OF SERVICES HAVE NOT BEEN MEASURED AS PART OF THE WORKS AS THESE ARE DEPENDENT ON THE CONTRACTOR'S SEQUENCING FOR THE WORKS. THE CONTRACTOR SHOULD ALLOW FOR TEMPORARY REINSTATEMENT OF EXISTING PAVEMENTS AND THE LIKE.
8. IRISH WATER GIVES THIS INFORMATION AS TO THE POSITION OF ITS UNDERGROUND NETWORK AS A GENERAL GUIDE ONLY ON THE STRICT UNDERSTANDING THAT IT IS BASED ON THE BEST AVAILABLE INFORMATION PROVIDED BY EACH LOCAL AUTHORITY IN IRELAND. IT SHOULD NOT BE RELIED UPON IN THE EVENT OF EXCAVATIONS OR OTHER WORKS BEING CARRIED OUT IN THE VICINITY OF THE NETWORK. THE ONUS IS ON THE PARTIES CARRYING OUT THE WORKS TO ENSURE THE EXACT LOCATION OF THE NETWORK IS IDENTIFIED PRIOR TO MECHANICAL WORKS BEING CARRIED OUT. SERVICE PIPES ARE NOT GENERALLY SHOWN BUT THEIR PRESENCE SHOULD BE ANTICIPATED. © IRISH WATER

LEGEND:

- SITE EXTENTS
- EXISTING BT DUCTING
- EXISTING EIR UNDERGROUND
- EXISTING DISTRIBUTION MEDIUM PRESSURE PIPELINES
- EXISTING AURORA TELELCOM
- EXISTING VIRGIN MEDIA
- EXISTING ENET
- EXISTING WATER MAIN
- EXISTING FOUL SEWER
- EXISTING SURFACE WATER SEWER
- EXISTING ESB LV UNDERGROUND
- EXISTING ESB LV OVERHEAD
- EXISTING ESB MV UNDERGROUND



KEY PLAN
NOT TO SCALE

Purpose: FOR INFORMATION

ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Risk Level		
	X	Atkins Base Line - Low Risk
		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

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Title: ROUTE F EXISTING UTILITIES SHEET 4 OF 4

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Status	Drawing Number	Rev
S2	0086381-ATK-F1-01-DR-CE-900504	P01

A1

DO NOT SCALE

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Date: May 29, 2024 - 11:57am Plotted by: dgreen

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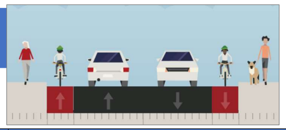
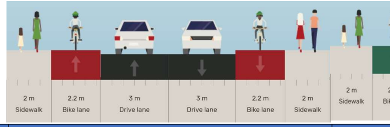
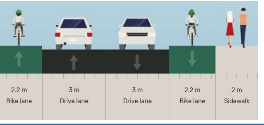
Appendix C. Multi-Criteria Analysis

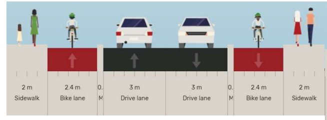
C.1 Links

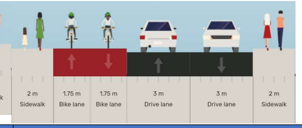
Segment F1
(Width Range from 12.6m to 16.0m)

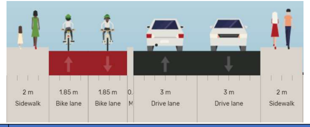


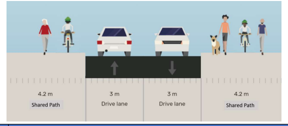






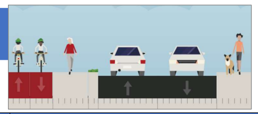


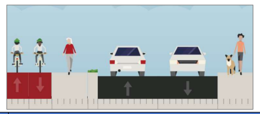


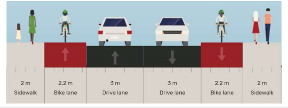


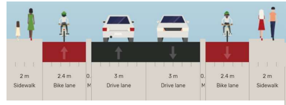
Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing One-Way Cycle Track/Lane with missing Footpath in some location. (Width Range from 12.6m to 16.0m)	Option 2 Standard One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 3 Stepped One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 4 Protected One-way Cycle Lane Desirable Minimum - 14.8m Absolute Minimum - 13.4m	Option 5 Standard Two-way cycle track Desirable Minimum - 13.5m Absolute Minimum - 11.9m	Option 6 Protected Two-way Cycle Lane Desirable Minimum - 13.7m Absolute Minimum - 12.1m	Option 7 Shared Active Travel Facility Desirable Minimum - 14.4m Absolute Minimum - 12.4m	Option 8 Cycling in Mixed Traffic Desirable Minimum - 10.0m Absolute Minimum - 9.6m
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.
		Construction and maintenance	No construction costs associated with the option, however, there are some maintenance costs to retain option.	The costs associate with this option is higher than other options (€792.0/m).	The costs associate with this option is higher than other options (€842.0/m).	The costs associate with this option is higher than other options (€864.50/m).	The costs associate with this option is lower than other options (€742.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options (€778.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options ((€779.60/m), but higher than do nothing option.	The costs associate with this option is lower (€550.00/m) than other options but higher than do nothing option
		Programme Impacts	No impact on the programme as no construction is associated with this option.	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	Although the existing cross section provides active travel infrastructure for users accessing these locations, but the footways and cycle tracks/lanes are insufficient widths along the route.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but shared path facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but mixed traffic facilities might not be as preferred as one way cycle facilities.
		Impacts on loading and parking bays	This option will have no impact on the school drop-off bays locations.	This option will have slight impact on the school drop-off bays locations as one west side of the bay might need to be shifted inside the kerb in some location.	This option will have slight impact on the school drop-off bays locations as one west side of the bay might need to be shifted inside the kerb in some location.	This option will have slight impact on the school drop-off bays locations as one west side of the bay might need to be shifted inside the kerb in some location.	This option will have no impact on the school drop-off bays locations.	This option will have no impact on the school drop-off bays locations.	This option will have no impact on the school drop-off bays locations.	This option will have no impact on the school drop-off bays locations.
	Coherence	Route consistency and continuity	Footpaths & cycle tracks/lanes are provided along the route but sub-standard to the new CDM. Also, crossings at some junctions are sub-standard as well.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide active travel facilities for the both sides of the existing carriageway along the route.	This option would continue to provide active travel facilities for the both sides of the existing carriageway along the route.	This option would continue to provide active travel facility on the both sides of the road, however the footpath will now turn to a shared space for path cyclists and pedestrians.	This option would continue to only provide active travel facility on the both side of the road, however the cyclists will have to travel along with live traffic.
	Directness	Directness along route and through junctions and maintenance of cyclists progression	Currently there are no appropriate crossing facilities at some locations and pedestrian progression is unsafe, random & unmaintained.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	The presence of shared path facilities results in cyclists needing to share the path with pedestrians. This results in cyclists progression being interrupted by pedestrians and increases the risk of conflict between cyclists and pedestrians	The lack of segregated cycle facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stationary vehicles.
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Existing footpaths and cycle tracks/lanes are present but the insufficient widths of cycle and pedestrian facilities and substandard pedestrian/cycle crossings at some locations might have an impact for some users.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on shared path.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on road.
	Attractiveness	Attractiveness of the route	Regarding pedestrian & cyclist usage, the route is attractive, however, insufficient widths of cycle and pedestrian facilities as well as substandard junction crossings at some locations might hinder the uptake in this active travel option.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved shared path facility would increase attractiveness along the segment, especially as it would enhance connectivity with the social activities.	The mixed traffic facility would not increase attractiveness along the segment considering bikes to share the route with vehicles.
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for some users.
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel provision to impact on modal shift.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area but sharing the road with vehicles might impact the model shift from cars to cyclists.
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Existing footpaths and cycle tracks/lanes are on the both sides of the road but insufficient widths. Currently there is no dedicated crossing point at many of the current junctions. Therefore, existing scenario is not accessible for all users.	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient widths. But the crossing point at many of the current junctions are substandard to CDM. Therefore, existing scenario is not accessible for all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared path might not be suitable for less experienced/disabled users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared street might not be suitable for less experienced/disabled users.
	Gender Impacts	How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing cross section doesn't align with NTA Cycle Connects which identifies the route as a "Urban Primary/Secondary" route, and also identified in the Pathfinder Programme, therefore, scores lower.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists will have to travel along with live traffic.
		Impact on green areas	There are small sections of green areas present along the route. No changes proposed.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	This option will not require the removal of the green areas.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Segregation exist between cyclists and vehicles but substandard to CDM.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	In accordance with CDM and due to high volume of traffiv (13938 AADT), this option would require a 20 or 30kph speed limit (CDM Table 2.1) and that the score applied is based on that.
		Segregation between cyclists and pedestrians	Segregation exist between cyclists and pedestrians but substandard to CDM.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	No segregation between pedestrians and cyclists on the shared path.	Pedestrians and cyclists would be segregated in this option.
		Safety for all users regarding traffic volumes and speeds along route	Due to the existing two-way high traffic (13938 AADT) along the segment, the unavailability/insufficient widths of the cycle lanes on roads and vehicles may create conflicts at some locations and also is not in compliance with CDM (Table 2.1).	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	There is a high volume of traffic (13938 AADT) along the segment, therefore, measures would have to be implemented to reduce vehicular speeds (compliant with CDM Table 2.1) to improve safety for all road users.
		Conflicts at junctions and side roads between vehicles and cyclists	Currently there is segregation available between cyclists and vehicles but, appropriate signage will be required to indicate motorists of the presence of cyclists. Also, there is a potential for conflicts at junctions.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	Cyclists and vehicles sharing the road increase the vulnerability of cyclists. However, appropriate signage would be require to indicate the presence of cyclists on the road to improve safety.
	Traffic	Impact on traffic capacity due to the proposals	No impact on the traffic capacity.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	This option might impact traffic capacity due to traffic calming measures implemented.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for increasing local air quality. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for reducing local noise and vibration levels. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	Unlikely to have an impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	Unlikely to have an impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	Unlikely to have an impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

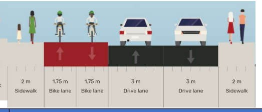
Segment F2
(Width Range from 12.6m to 16.0m)

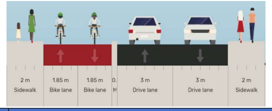


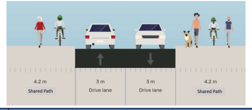






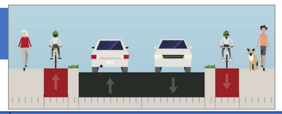


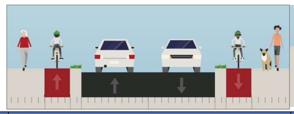


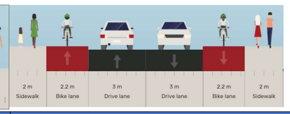


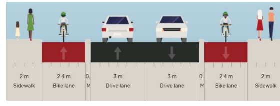
Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Two-Way Cycle Track/Lane (Width Range from 12.6m to 16.0m)	Option 2 Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring (Rapid Build Option)	Option 3 Standard One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 4 Stepped One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 5 Protected One-way Cycle Lane Desirable Minimum - 14.8m Absolute Minimum - 13.4m	Option 6 Standard Two-way cycle track Desirable Minimum - 13.5m Absolute Minimum - 11.9m	Option 7 Protected Two-way Cycle Lane Desirable Minimum - 13.7m Absolute Minimum - 12.1m	Option 8 Shared Active Travel Facility Desirable Minimum - 14.4m Absolute Minimum - 12.4m	Option 9 Cycling in Mixed Traffic Desirable Minimum - 10.0m Absolute Minimum - 9.6m
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.
		Construction and maintenance	No construction costs associated with the option, however, there are some maintenance costs to retain option.	The costs associated with this option will be lower than other options as existing road markings/signs and rapid build delineation kerbs will be proposed in existing scenario with minimum construction.	The costs associate with this option is higher than other options (€792.0/m).	The costs associate with this option is higher than other options (€842.0/m).	The costs associate with this option is higher than other options (€864.50/m).	The costs associate with this option is lower than other options (€742.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options (€778.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options ((€779.60/m), but higher than do nothing option.	The costs associate with this option is lower (€550.00/m) than other options but higher than do nothing option
		Programme Impacts	No impact on the programme as no construction is associated with this option.	No impact on the programme as no construction is associated with this option.	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	This option can be constructed using Rapid Build methods without any additional land acquisition.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	The existing cross section does provide active travel infrastructure for users accessing these locations	The existing cross section does provide active travel infrastructure for users accessing these locations	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but shared path facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but mixed traffic facilities might not be as preferred as one way cycle facilities.
		Impacts on loading and parking bays	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.
	Coherence	Route consistency and continuity	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.
	Directness	Directness along route and through junctions and maintenance of cyclists progression	Cyclists would be accommodated at the existing two-way cycle facility which will be segregated, direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the existing two-way cycle facility which will be segregated, direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	The presence of shared path facilities results in cyclists needing to share the path with pedestrians. This results in cyclists progression being interrupted by pedestrians and increases the risk of conflict between cyclists and pedestrians	The lack of segregated cycle facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stationary vehicles.
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	The existing footpath had been designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The existing footpath had been designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on shared path.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on road.
	Attractiveness	Attractiveness of the route	Regarding pedestrian & cyclist usage, the existing route is attractive with sufficient widths of cycle and pedestrian facilities, however, substandard junction crossings at some locations might hinder the uptake in this active travel option.	Regarding pedestrian & cyclist usage, the existing route is attractive with sufficient widths of cycle and pedestrian facilities, however, substandard junction crossings at some locations might hinder the uptake in this active travel option.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved shared path facility would increase attractiveness along the segment, especially as it would enhance connectivity with the social activities.	The mixed traffic facility would not increase attractiveness along the segment considering bikes to share the route with vehicles.
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for some users.
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangement does provide sufficient levels of active travel provision to impact on modal shift.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area but sharing the road with vehicles might impact the model shift from cars to cyclists.
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient widths. But the crossing point at many of the current junctions. Are substandard to CDM. Therefore, existing scenario is not accessible for all users.	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient widths. But the crossing point at many of the current junctions are substandard to CDM. Therefore, existing scenario is not accessible for all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared path might not be suitable for less experienced/disabled users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared street might not be suitable for less experienced/disabled users.
	Gender Impacts	How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists and pedestrians will not have vertical segregation as well as substandard crossings, therefore, scores lower.	The existing cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists and pedestrians will not have vertical segregation as well as substandard crossings, therefore, scores lower.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists will have to travel along with live traffic.
		Impact on green areas	There is green area (verge) present along the route. No changes proposed.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	In accordance with CDM and due to high volume of traffiv (13938 AADT), this option would require a 20 or 30kph speed limit (CDM Table 2.1) and that the score applied is based on that.
		Segregation between cyclists and pedestrians	Segregation exist between cyclists and pedestrians but substandard to CDM.	Segregation exist between cyclists and pedestrians which is substandard to CDM but delineation kerb could improve existing situation.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	No segregation between pedestrians and cyclists on the shared path.	Pedestrians and cyclists would be segregated in this option.
		Safety for all users regarding traffic volumes and speeds along route	As per the existing two-way high traffic (13938 AADT) along the segment, the widths of the cycle lanes on roads are standard but vehicles may create conflicts at some locations as some of the crossings are not in compliance with CDM Table 2.1.	As per the existing two-way high traffic flow (peak hour AADT) along the segment, the widths of the cycle lanes on roads are standard but vehicles may create conflicts at some locations as some of the crossings are not in compliance with CDM Table 2.1.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	There is a high volume of traffic (13938 AADT) along the segment, therefore, measures would have to be implemented to reduce vehicular speeds (compliant with CDM Table 2.1) to improve safety for all road users.
		Conflicts at junctions and side roads between vehicles and cyclists	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	Cyclists and vehicles sharing the road increase the vulnerability of cyclists. However, appropriate signage would be require to indicate the presence of cyclists on the road to improve safety.
	Traffic	Impact on traffic capacity due to the proposals	No impact on the traffic capacity.	No impact on the traffic capacity.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	Slight impact on traffic capacity will be expected due to the removal of right-turn lanes near junctions while implementing this option.	This option might impact traffic capacity due to traffic calming measures implemented.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for increasing local air quality. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for reducing local noise and vibration levels. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	Unlikely to have an impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	Unlikely to have an impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	Unlikely to have an impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

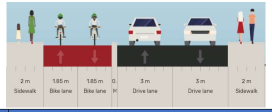
Segment F3
(Width Range from 14.4m to 16.0m)

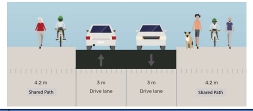












Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Two-Way Cycle Track/Lane (Width Range from 14.4m to 16.0m)	Option 2 Retaining Existing Infrastructure with Rapid Build Proposals & Further Monitoring (Rapid Build Option)	Option 3 Standard One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 4 Stepped One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 5 Protected One-way Cycle Lane Desirable Minimum - 14.8m Absolute Minimum - 13.4m	Option 6 Standard Two-way cycle track Desirable Minimum - 13.5m Absolute Minimum - 11.9m	Option 7 Protected Two-way Cycle Lane Desirable Minimum - 13.7m Absolute Minimum - 12.1m	Option 8 Shared Active Travel Facility Desirable Minimum - 14.4m Absolute Minimum - 12.4m	Option 9 Cycling in Mixed Traffic Desirable Minimum - 10.0m Absolute Minimum - 9.6m
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.
		Construction and maintenance	No construction costs associated with the option, however, there are some maintenance costs to retain option.	The costs associated with this option will be lower than other options as existing road markings/signs and rapid build delineation kerbs will be proposed in existing scenario with minimum construction.	The costs associate with this option is higher than other options (€792.0/m).	The costs associate with this option is higher than other options (€842.0/m).	The costs associate with this option is higher than other options (€864.50/m).	The costs associate with this option is lower than other options (€742.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options (€778.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options ((€779.60/m), but higher than do nothing option.	The costs associate with this option is lower (€550.00/m) than other options but higher than do nothing option
		Programme Impacts	No impact on the programme as no construction is associated with this option.	No impact on the programme as no construction is associated with this option.	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	This option can be constructed using Rapid Build methods without any additional land acquisition.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	The existing cross section does provide active travel infrastructure for users accessing these locations, but the footways and cycle tracks are insufficient widths along the route.	The existing cross section does provide active travel infrastructure for users accessing these locations, but the footways and cycle tracks are insufficient widths along the route.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but shared path facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but mixed traffic facilities might not be as preferred as one way cycle facilities.
		Impacts on loading and parking bays	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.
	Coherence	Route consistency and continuity	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.
	Directness	Directness along route and through junctions and maintenance of cyclists progression	Cyclists would be accommodated at the existing two-way cycle facility which will be segregated, direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the existing two-way cycle facility which will be segregated, direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	The presence of shared path facilities results in cyclists needing to share the path with pedestrians. This results in cyclists progression being interrupted by pedestrians and increases the risk of conflict between cyclists and pedestrians	The lack of segregated cycle facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stationary vehicles.
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Existing footpaths and cycle tracks/lanes are present but the insufficient widths of cycle and pedestrian facilities.	Existing footpaths and cycle tracks/lanes are present but the insufficient widths of cycle and pedestrian facilities.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on shared path.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on road.
	Attractiveness	Attractiveness of the route	Regarding pedestrian & cyclist usage, the existing route is attractive with sufficient widths of cycle and pedestrian facilities, however, insufficient widths of footpaths and cycle tracks might hinder the uptake in this active travel option.	Regarding pedestrian & cyclist usage, the existing route is attractive with sufficient widths of cycle and pedestrian facilities, however, insufficient widths of footpaths and cycle tracks might hinder the uptake in this active travel option.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved shared path facility would increase attractiveness along the segment, especially as it would enhance connectivity with the social activities.	The mixed traffic facility would not increase attractiveness along the segment considering bikes to share the route with vehicles.
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for some users.
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangement does provide sufficient levels of active travel provision to impact on modal shift.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area but sharing the road with vehicles might impact the model shift from cars to cyclists.
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Existing footpaths and cycle tracks/lanes are on the both sides of the road but insufficient widths. Also, existing scenario is not accessible for all users.	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient widths. But the crossing point at many of the current junctions are substandard to CDM. Therefore, existing scenario is not accessible for all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared path might not be suitable for less experienced/disabled users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared street might not be suitable for less experienced/disabled users.
	Gender Impacts	How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists and pedestrians will not have vertical segregation as well as insufficient footpath/cycle track widths, therefore, scores lower.	The existing cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists and pedestrians will not have vertical segregation as well as insufficient footpath/cycle track widths, therefore, scores lower.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists will have to travel along with live traffic.
		Impact on green areas	There is green area (verge) present along the route. No changes proposed.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.	No impact on the green area (verge) present along the route.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	In accordance with CDM and due to high volume of traffiv (13938 AADT), this option would require a 20 or 30kph speed limit (CDM Table 2.1) and that the score applied is based on that.
		Segregation between cyclists and pedestrians	Segregation exist between cyclists and pedestrians but substandard to CDM.	Segregation exist between cyclists and pedestrians which is substandard to CDM but delineation kerb could improve existing situation.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	No segregation between pedestrians and cyclists on the shared path.	Pedestrians and cyclists would be segregated in this option.
		Safety for all users regarding traffic volumes and speeds along route	As per the existing two-way high traffic (13938 AADT) along the segment, the widths of the cycle tracks are substandard in widths but vehicles may not create conflicts in this segment as currently no crossing point is located in this segment.	As per the existing two-way high traffic flow (peak hour AADT) along the segment, the widths of the cycle tracks are substandard in widths but vehicles may not create conflicts in this segment as currently no crossing point is located in this segment.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	There is a high volume of traffic (13938 AADT) along the segment, therefore, measures would have to be implemented to reduce vehicular speeds (compliant with CDM Table 2.1) to improve safety for all road users.
		Conflicts at junctions and side roads between vehicles and cyclists	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	Cyclists and vehicles sharing the road increase the vulnerability of cyclists. However, appropriate signage would be require to indicate the presence of cyclists on the road to improve safety.
	Traffic	Impact on traffic capacity due to the proposals	No impact on the traffic capacity.	No impact on the traffic capacity.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	This option might impact traffic capacity due to traffic calming measures implemented.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for increasing local air quality. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for reducing local noise and vibration levels. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	Unlikely to have an impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	Unlikely to have an impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	Unlikely to have an impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

Segment F4
(Width Range from 12.6m to 16.0m)

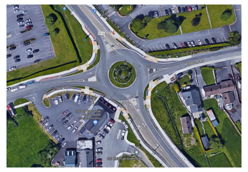
Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing One-Way Cycle Track with no Footpath on East Side in the middle (Width Range from 12.6m to 16.0m)	Option 2 Standard One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m	Option 3 Stepped One-way cycle track Desirable Minimum - 14.4m Absolute Minimum - 13.0m
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	This option would require minimum 1.1m2 of area per metre cross section of land acquisition in some segments.	This option would require minimum 1.1m2 of area per metre cross section of land acquisition in some segments.
		Construction and maintenance	No construction costs associated with the option, however, there are some maintenance costs to retain option.	The costs associate with this option is higher than other options (€792.0/m).	The costs associate with this option is higher than other options (€842.0/m).
		Programme Impacts	No impact on the programme as no construction is associated with this option.	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	Although the existing cross section provides active travel infrastructure for users accessing these locations, but the footways and cycle tracks/lanes are unavailable/insufficient widths along the route.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.
		Impacts on loading and parking bays	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.
	Coherence	Route consistency and continuity	Footpaths & cycle tracks/lanes are provided but absent in the middle along the route as well as sub-standard to the new CDM. Also, crossings at some junctions are sub-standard as well.	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide an active travel facility for both sides of the carriageway.
	Directness	Directness along route and through junctions and maintenance of cyclists progression	Currently there are no appropriate crossing facility at university access junction and pedestrian progression is unsafe, random & unmaintained.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Existing footpaths and cycle tracks/lanes are unavailable in the middle as well as insufficient widths of cycle and pedestrian facilities and substandard pedestrian/cycle crossings at university access junction might have an impact for some users.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.
	Attractiveness	Attractiveness of the route	Regarding pedestrian & cyclist usage, the route is unattractive, Also, insufficient widths of cycle and pedestrian facilities as well as substandard junction crossings at university access junction might hinder the uptake in this active travel option.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to social, community and recreational activity, however, it does not provide suitable opportunities for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel provision to impact on modal shift.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Existing footpaths and cycle tracks/lanes are unavailable in the middle as well as insufficient widths. Currently there is dedicated crossing point at university access junction but not suitable for both cyclists and pedestrians. Therefore, existing scenario is not accessible for all users.	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient widths. But the crossing point at many of the current junctions are substandard to CDM. Therefore, existing scenario is not accessible for all users.	The cycle track and footpaths would be accessible to all users.
	Gender Impacts	How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing cross section doesn't align with NTA Cycle Connects which identifies the route as a "Urban Primary/Secondary" route, and also identified in the Pathfinder Programme, therefore, scores lower.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.
		Impact on green areas	There are small sections of green areas present along the route. No changes proposed.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Segregation exist between cyclists and vehicles but substandard to CDM.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.
		Segregation between cyclists and pedestrians	Segregation exist between cyclists and pedestrians but substandard to CDM.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.
		Safety for all users regarding traffic volumes and speeds along route	Due to the existing two-way high traffic flow (13938 AADT) along the segment, the unavailability/insufficient widths of the cycle lanes on roads and vehicles may create conflicts at some locations and also is not in compliance with CDM (Table 2.1).	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.
		Conflicts at junctions and side roads between vehicles and cyclists	Currently there is segregation available between cyclists and vehicles but, appropriate signage will be required to indicate motorists of the presence of cyclists. Also, there is a potential for conflicts at junctions.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.
	Traffic	Impact on traffic capacity due to the proposals	No impact on the traffic capacity.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	Unlikely to have an impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	Unlikely to have an impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	Unlikely to have an impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

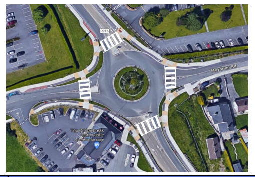
Indicator to be measured	Option 4 Protected One-way Cycle Lane Desirable Minimum - 14.8m Absolute Minimum - 13.4m	Option 5 Standard Two-way cycle track Desirable Minimum - 13.5m Absolute Minimum - 11.9m	Option 6 Protected Two-way Cycle Lane Desirable Minimum - 13.7m Absolute Minimum - 12.1m
Land acquisition area	This option would require minimum 1.1m2 of area per metre cross section of land acquisition in some segments.	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.
Construction and maintenance	The costs associate with this option is higher than other options (€864.50/m).	The costs associate with this option is lower than other options (€742.50/m), but higher than do nothing option.	The costs associate with this option is lower than other options (€778.50/m), but higher than do nothing option.
Programme Impacts	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options	The impact on the programme timeframe will be higher than other options
Rapid build achievability and construction impacts, including construction requirements and drainage impact	This option cannot be constructed using Rapid Build methods as additional land area will be required. Drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods also drainage along the route needs to be readjusted as per the new kerb line.
Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	Improvements to facilities will facilitate community and recreational participation on along the segment, specially for the active travel users.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but two way cycle facilities might not be as preferred as one way cycle facilities.
Impacts on loading and parking bays	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.
Route consistency and continuity	This option would continue to provide an active travel facility for both sides of the carriageway.	This option would continue to provide active travel facilities for the both sides of the existing carriageway along the route.	This option would continue to provide active travel facilities for the both sides of the existing carriageway along the route.
Directness along route and through junctions and maintenance of cyclists progression	Cyclists would be accommodated at the one-way cycle facility which will be segregated, direct and will have less deterrence along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.	Cyclists would be accommodated at the two-way cycle facility which will be segregated and direct but two way cycle facilities might have more deterrence compared to one way facilities along the route.
Provision of comfort for pedestrians and cyclists through assessment of width	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.
Attractiveness of the route	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.	The improved facility would increase attractiveness along the segment, enhancing connectivity with the social activities.
Opportunities for social, community and recreational activity participation	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for all users.
Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.
Qualitative assessment of accessibility of the options to serve users of all ages and abilities	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.	The cycle track and footpaths would be accessible to all users.
How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.	No gender specific impacts along this segment.
How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.
Impact on green areas	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.	There are small sections of green areas present that will be impacted/reduced while implementing this option.
Segregation between cyclists and vehicles	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.	Cyclists would be segregated from vehicular traffic.
Segregation between cyclists and pedestrians	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.	Pedestrians and cyclists would be segregated in this option.
Safety for all users regarding traffic volumes and speeds along route	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.	Based on the traffic volumes of the segment, this option is appropriate.
Conflicts at junctions and side roads between vehicles and cyclists	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers existing side roads and junctions might not be expecting two-way contra-flow cyclists which can cause conflicts.
Impact on traffic capacity due to the proposals	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.
Air Quality Impact	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
Potential Sensitive receptors including residential, commercial, education, healthcare properties	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
Impact on Biodiversity along scheme extents	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
Landscape and visual assessment	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

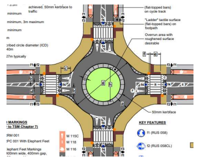
Indicator to be measured	Option 7 Shared Active Travel Facility Desirable Minimum - 14.4m Absolute Minimum - 12.4m	Option 8 Cycling in Mixed Traffic Desirable Minimum - 10.0m Absolute Minimum - 9.6m
Land acquisition area	This option fits within the existing road boundary and does not require land acquisition.	This option fits within the existing road boundary and does not require land acquisition.
Construction and maintenance	The costs associate with this option is lower than other options ((€779.60/m), but higher than do nothing option.	The costs associate with this option is lower (€550.00/m) than other options but higher than do nothing option
Programme Impacts	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option	The impact on the programme timeframe will be slightly lower than other options, however will still hold a slight disadvantage over the do-nothing option
Rapid build achievability and construction impacts, including construction requirements and drainage impact	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.	This option cannot be constructed using Rapid Build methods but no additional kerb will be required for cycle track also drainage along the route needs to be readjusted as per the new kerb line.
Connections to existing and proposed public transport	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.	There are no changes in existing bus routes as well as no known proposals for a bus route along the segment.
Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	Improvements to facilities will facilitate community and recreational participation on along the segment, but shared path facilities might not be as preferred as one way cycle facilities.	Improvements to facilities will facilitate community and recreational participation on along the segment, but mixed traffic facilities might not be as preferred as one way cycle facilities.
Impacts on loading and parking bays	There are no on-street car parking present on the location.	There are no on-street car parking present on the location.
Route consistency and continuity	This option would continue to provide active travel facility on the both sides of the road, however the footpath will now turn to a shared space for path cyclists and pedestrians.	This option would continue to only provide active travel facility on the both side of the road, however the cyclists will have to travel along with live traffic.
Directness along route and through junctions and maintenance of cyclists progression	The presence of shared path facilities results in cyclists needing to share the path with pedestrians. This results in cyclists progression being interrupted by pedestrians and increases the risk of conflict between cyclists and pedestrians	The lack of segregated cycle facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stationary vehicles.
Provision of comfort for pedestrians and cyclists through assessment of width	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on shared path.	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on road.
Attractiveness of the route	The improved shared path facility would increase attractiveness along the segment, especially as it would enhance connectivity with the social activities.	The mixed traffic facility would not increase attractiveness along the segment considering bikes to share the route with vehicles.
Opportunities for social, community and recreational activity participation	Improvements to facilities will facilitate community and recreational participation along the road for all users.	Improvements to facilities will facilitate community and recreational participation along the road for some users.
Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key service.	The improved facility has the potential to impact on the modal shift in the area but sharing the road with vehicles might impact the model shift from cars to cyclists.
Qualitative assessment of accessibility of the options to serve users of all ages and abilities	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared path might not be suitable for less experienced/disabled users.	The footpaths would be adequate to accommodate the levels of pedestrians along the segment, however, the shared street might not be suitable for less experienced/disabled users.
How the proposal may have gender specific impacts	No gender specific impacts along this segment.	No gender specific impacts along this segment.
How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher.	The proposed cross section is acceptable according to the town development plan. Regarding NIFTI, any improvement to active travel facilities in the Modal Hierarchy will score higher, however cyclists will have to travel along with live traffic.
Impact on green areas	There are small sections of green areas present that will be impacted/reduced while implementing this option.	This option will not require the removal of the green areas.
Segregation between cyclists and vehicles	Cyclists would be segregated from vehicular traffic.	In accordance with CDM and due to high volume of traffiv (13938 AADT), this option would require a 20 or 30kph speed limit (CDM Table 2.1) and that the score applied is based on that.
Segregation between cyclists and pedestrians	No segregation between pedestrians and cyclists on the shared path.	Pedestrians and cyclists would be segregated in this option.
Safety for all users regarding traffic volumes and speeds along route	Based on the traffic volumes of the segment, this option is appropriate.	There is a high volume of traffic (13938 AADT) along the segment, therefore, measures would have to be implemented to reduce vehicular speeds (compliant with CDM Table 2.1) to improve safety for all road users.
Conflicts at junctions and side roads between vehicles and cyclists	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities.	Cyclists and vehicles sharing the road increase the vulnerability of cyclists. However, appropriate signage would be require to indicate the presence of cyclists on the road to improve safety.
Impact on traffic capacity due to the proposals	No impact on traffic capacity will be expected with the implementation of this option other than slower speeds as a result of a narrower carriageway and tighter junctions.	This option might impact traffic capacity due to traffic calming measures implemented.
Air Quality Impact	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for increasing local air quality. Construction impacts will be short term and not significant as mitigation measures will be implemented
Potential Sensitive receptors including residential, commercial, education, healthcare properties	All options (except do nothing option) option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may not encourage use by less confident cyclists resulting in limited modal shift from personal vehicles to cycling and therefore limiting the potential for reducing local noise and vibration levels. Construction impacts will be short term and not significant as mitigation measures will be implemented
Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
Impact on Biodiversity along scheme extents	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
Landscape and visual assessment	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

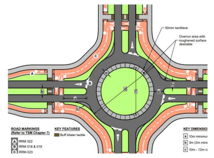
C.2 Junctions

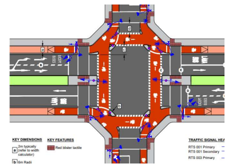
Junction 1
Bushfield-Garrycastle Roundabout





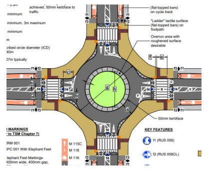


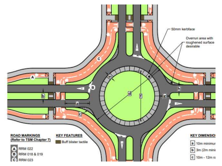


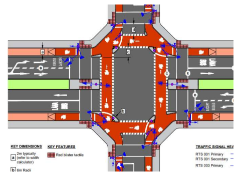


Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing 4-Arm Roundabout	Option 2 Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)	Option 3 TL703 Segregated Roundabout w/ Shared Active Travel Facilities (Traditional Build)	Option 4 TL702 Protected Roundabout without Cycle Priority (Traditional Build)	Option 5 Replace Roundabout w/ TL503 Protected Signalised Junction
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	No land acquisition required.	No land acquisition required.	land acquisition will be required.	No land acquisition required.
		Construction and maintenance	No construction costs associated, however maintenance costs are retained.	This option would have moderate costs as it is a rapid build option. Construction would involve zebra crossings on all arms and road marking installations based off of CDM standards.	This option would have a higher cost due to the remodelling of the roundabout based off of CDM standards.	This option would have a higher cost due to the remodelling of the roundabout based off of CDM standards.	This option would have a higher cost due to the full remodelling of the junction to a signalised junction based off of CDM standards. Additional costs are expected for traffic signal installations.
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Rapid build methods would be utilized for this option hence would be implemented quicker that traditional builds. No impact to existing draining is expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.
Accessibility Impacts	Coherence & Directness	Route consistency and continuity	Lack of dedicated cyclist crossing facilities may cause some indirectness and lack of continuity through the roundabout for cyclists.	Presence of existing cycling/pedestrian facilities with proper connection between links allow cyclists to progress through the roundabout with ease.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the roundabout with ease. However, lack of dedicated cyclist crossing point may cause less continuity and directness.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the roundabout with ease. However, cyclist have to give way to cars as well as desire line is worse for pedestrians and cyclists.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the junction with ease.
	Comfort & Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width	Dedicated areas available for cyclists and pedestrians but no cycle crossing facilities would cause a lack of comfort for both parties due to increased risk of conflict.	Existing footpath/cycle tracks are present along with zebra crossing to be provided as per DMURS/CDM following the minimum width guidelines on all arms.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, crossing points to be provided on all arms. However, shared area may be perceived as slightly less comfortable for pedestrians and cyclists.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, crossing points to be provided on all arms.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, providing increased comfort for all parties. Crossing points to be provided on all arms.
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Lack of crossing facilities makes this a less viable option for inexperienced users.	Presence of existing cycling/pedestrian facilities and improved crossing facilities allow improved accessibility for all parties including vulnerable users.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for most parties. However, shared area may be less accessible for less experienced cyclists.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for most parties. However, as per desire lines and vehicles priority over cyclists & pedestrians, it might not be suitable to serve users of all ages and abilities.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for all parties including vulnerable users.
	Gender Impacts	How the proposal may have gender specific impacts	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing sub-standard roundabout layout does not align with the Pathfinder Programme and the NTA CycleConnects proposals which identifies this route as an Urban Primary/Secondary Route. Although maintaining current layout with no design interventions is favourable to NIFTI, the existing active travel facilities are sub-standard which does not maintain the status quo, hence scoring lower overall.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. This option is scored higher in relations to NIFTI as rapid build options optimizes existing infrastructure rather than providing full improvements.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.
		Impact on green areas	There are sections of green area around the junction. No changes proposed that would affect the green area.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Cyclists are physically segregated from vehicles, however scores lesser due to the lack of dedicated cyclists crossing points.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.
		Segregation between cyclists and pedestrians	Cyclists and pedestrians are physically segregated. Except while crossing.	Cyclists and pedestrians are physically segregated. Except while crossing.	Cyclists and pedestrians would be sharing the area when going through the junction which may cause some conflict.	Cyclists and pedestrians are physically segregated.	Cyclists and pedestrians are physically segregated.
		Safety for all users regarding traffic volumes and speeds along route	Existing roundabout layout encourages higher travel speed due to larger radii and wide carriageways, increasing risk of collisions. Traffic volumes remain unchanged.	Proposed roundabout includes zebra crossings to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed roundabout includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed roundabout includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed junction includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed, traffic capacity remains unaffected.	No changes proposed, traffic capacity remains unaffected.	Traffic capacity is reduced due to the reduction of entry lanes at two of the roundabout arms.	Traffic capacity is reduced due to the reduction of entry lanes at two of the roundabout arms.	Traffic queues are expected due to proposed traffic signals.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality due to lack of active travel opportunities.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution due to lack of active travel opportunities.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	No impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

Junction 2
Garrycastle Roundabout

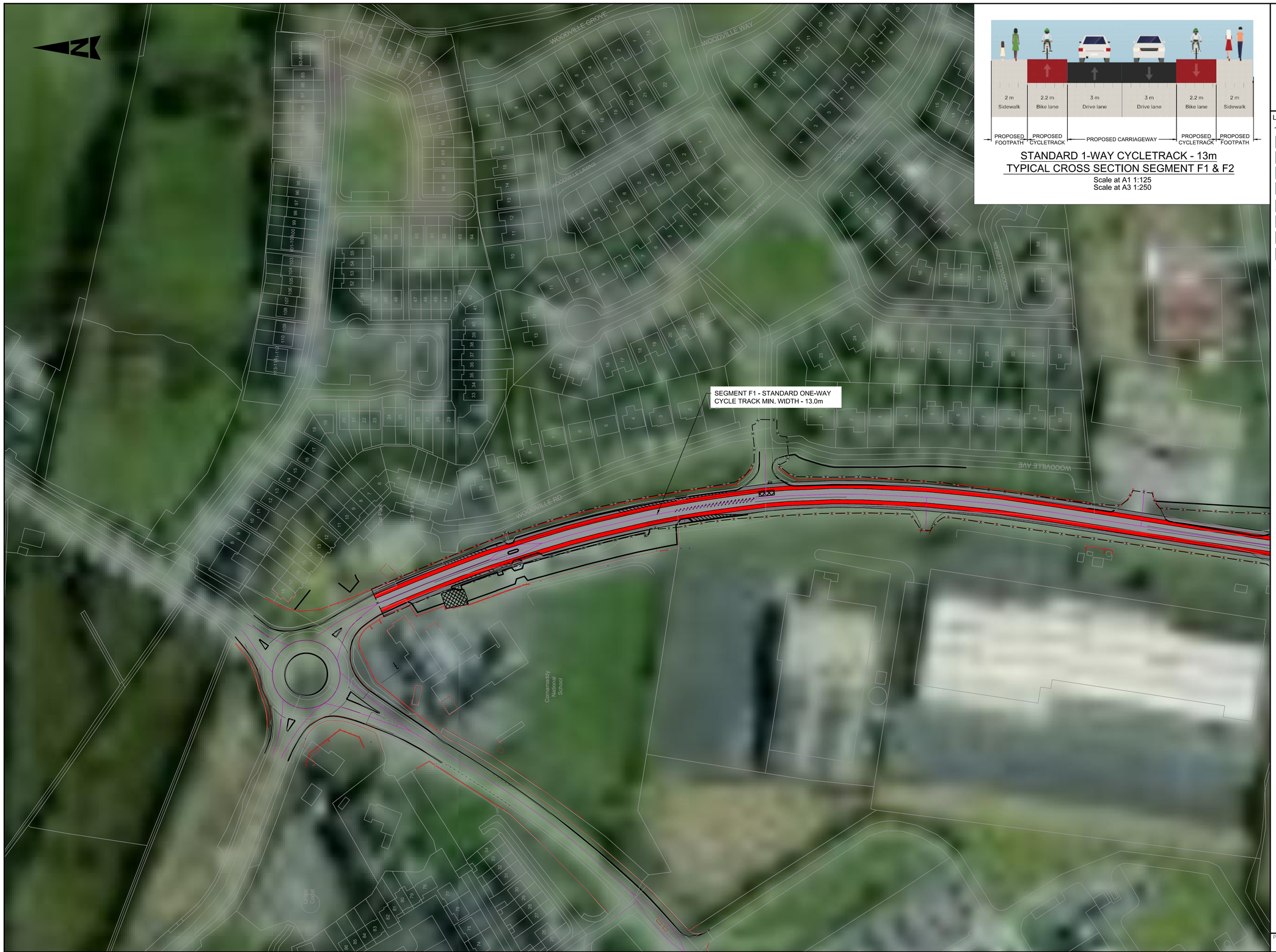






Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing 4-Arm Roundabout	Option 2 Retaining Existing Roundabout while Proposing Zebra Crossings (Rapid Build)	Option 3 TL703 Segregated Roundabout w/ Shared Active Travel Facilities (Traditional Build)	Option 4 TL702 Protected Roundabout without Cycle Priority (Traditional Build)	Option 5 Replace Roundabout w/ TL503 Protected Signalised Junction
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	No land acquisition required.	No land acquisition required.	land acquisition will be required.	No land acquisition required.
		Construction and maintenance	No construction costs associated, however maintenance costs are retained.	This option would have moderate costs as it is a rapid build option. Construction would involve zebra crossings on all arms and road marking installations based off of CDM standards.	This option would have a higher cost due to the remodelling of the roundabout based off of CDM standards.	This option would have a higher cost due to the remodelling of the roundabout based off of CDM standards.	This option would have a higher cost due to the full remodelling of the junction to a signalised junction based off of CDM standards. Additional costs are expected for traffic signal installations.
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Rapid build methods would be utilized for this option hence would be implemented quicker that traditional builds. No impact to existing draining is expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.	Rapid build methods not achievable, construction time and drainage impacts are expected.
Accessibility Impacts	Coherence & Directness	Route consistency and continuity	Lack of dedicated cyclist crossing facilities may cause some indirectness and lack of continuity through the roundabout for cyclists.	Presence of existing cycling/pedestrian facilities with proper connection between links allow cyclists to progress through the roundabout with ease.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the roundabout with ease. However, lack of dedicated cyclist crossing point may cause less continuity and directness.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the roundabout with ease. However, cyclist have to give way to cars as well as desire line is worse for pedestrians and cyclists.	Provision of standard cycle facilities with proper connection between links allow cyclists to progress through the junction with ease.
	Comfort & Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width	Dedicated areas available for cyclists and pedestrians but no cycle crossing facilities would cause a lack of comfort for both parties due to increased risk of conflict.	Existing footpath/cycle tracks are present along with zebra crossing to be provided as per DMURS/CDM following the minimum width guidelines on all arms.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, crossing points to be provided on all arms. However, shared area may be perceived as slightly less comfortable for pedestrians and cyclists.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, crossing points to be provided on all arms.	Standard footpath/cycle tracks would be designed as per DMURS/CDM following the minimum width guidelines, providing increased comfort for all parties. Crossing points to be provided on all arms.
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Lack of crossing facilities makes this a less viable option for inexperienced users.	Presence of existing cycling/pedestrian facilities and improved crossing facilities allow improved accessibility for all parties including vulnerable users.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for most parties. However, shared area may be less accessible for less experienced cyclists.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for most parties. However, as per desire lines and vehicles priority over cyclists & pedestrians, it might not be suitable to serve users of all ages and abilities.	Provision of standard cycling facilities and improved pedestrian facilities allow improved accessibility for all parties including vulnerable users.
	Gender Impacts	How the proposal may have gender specific impacts	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.	No specific gender impacts expected.
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	The existing sub-standard roundabout layout does not align with the Pathfinder Programme and the NTA CycleConnects proposals which identifies this route as an Urban Primary/Secondary Route. Although maintaining current layout with no design interventions is favourable to NIFTI, the existing active travel facilities are sub-standard which does not maintain the status quo, hence scoring lower overall.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. This option is scored higher in relations to NIFTI as rapid build options optimizes existing infrastructure rather than providing full improvements.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.	The proposed layout provides improved active travel facilities which aligns with the Pathfinder Programme, NTA CyclyConnects proposals, and the Modal Hierarchy of NIFTI. Scored lower compared to Option 2 due to the requirements for full improvement.
		Impact on green areas	There are sections of green area around the junction. No changes proposed that would affect the green area.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.	Small sections of the green area may be impacted for this option.
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Cyclists are physically segregated from vehicles, however scores lesser due to the lack of dedicated cyclists crossing points.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.	Cyclists and vehicles would be physically segregated.
		Segregation between cyclists and pedestrians	Cyclists and pedestrians are physically segregated. Except while crossing.	Cyclists and pedestrians are physically segregated. Except while crossing.	Cyclists and pedestrians would be sharing the area when going through the junction which may cause some conflict.	Cyclists and pedestrians are physically segregated.	Cyclists and pedestrians are physically segregated.
		Safety for all users regarding traffic volumes and speeds along route	Existing roundabout layout encourages higher travel speed due to larger radii and wide carriageways, increasing risk of collisions. Traffic volumes remain unchanged.	Proposed roundabout includes zebra crossings to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed roundabout includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed roundabout includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.	Proposed junction includes tightened radii and decreased carriageway widths to discourage high travel speeds. Traffic volumes remain unchanged.
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed, traffic capacity remains unaffected.	No changes proposed, traffic capacity remains unaffected.	Traffic capacity is reduced due to the reduction of entry lanes at two of the roundabout arms.	Traffic capacity is reduced due to the reduction of entry lanes at two of the roundabout arms.	Traffic queues are expected due to proposed traffic signals.
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality due to lack of active travel opportunities.	Existing footpaths and cycle tracks/lanes are on the both sides of the road with sufficient in widths. But the crossing point at many of the current junctions are substandard to CDM. Therefore, existing scenario is not accessible for all users.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local air quality during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution due to lack of active travel opportunities.	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in better local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No impact on soils and geology.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.
	Biodiversity	Impact on Biodiversity along scheme extents	Unlikely to have an impact on ecology.	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance	This option will not have an impact on any ecological features of importance. Land acquisition area has no features of ecological significance
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No impact on water.	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options	There are no surface water features, wells / springs or drinking water protection areas within the vicinity of this option. Bedrock aquifers beneath all options are identified as locally important which are moderately productive only in local zones. Groundwater within vicinity of all options is identified as shallow which is similar for all options
	Landscape and Visual Quality	Landscape and visual assessment	No impact on public spaces and visuals.	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design	At this stage of the desktop analysis and according to available relevant resources it is considered unlikely that any option will have an impact. A landscape architect will be required to undertake surveys and input into the design
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification	At this stage of the desktop analysis and according to available relevant resources there are no major architectural / archaeological features, zones of notification

Appendix D. Emerging Preferred Option Drawings



STANDARD 1-WAY CYCLETRACK - 13m
TYPICAL CROSS SECTION SEGMENT F1 & F2

Scale at A1 1:125
Scale at A3 1:250

GENERAL NOTES

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4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR.
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LEGEND:

- EXTENT OF WORKS
- PROPOSED CARRIAGEWAY
- PROPOSED FOOTPATH
- PROPOSED RAISED CYCLE TRACK
- PROPOSED AT-GRADE CYCLE LANE
- PROPOSED SHARED AREA
- PROPOSED RAISED TABLE
- PROPOSED TACTILE PAVING (LADDER/ TRAMLINE)
- EXISTING GRASS VERGE
- PROPOSED ROAD CENTRELINE

DRAFT

A1

DO NOT SCALE

0 10 100

File: 0086381-ATK-F1-01-DR-ZZ-900170-174.dwg
Date: Sep 20, 2024 - 3:33pm Plotted by: dgreen

ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Risk Level		
	X	Atkins Base Line - Low Risk
		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

NTA Údarás Náisiúnta Iompair National Transport Authority

WESTMEATH COUNTY COUNCIL Comhairle Chontae na hIarmhí

TIONSCADAIL NA FIONNACHTAÍ PATHFINDER PROGRAMME Transforming how we travel

Rialtas na hÉireann Government of Ireland

Tionscadal Éireann Project Ireland 2040

Rev	Description	By	Date	Chk'd	Rev'd	Auth

-	ISSUED FOR INFORMATION	DG	27.05.24	DP	AB	ST

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1st Floor Technology House Parkmore Technology Park, Galway
Tel (+353) 091 786 050
Fax (+353) 091 779 830

Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Purpose: FOR INFORMATION

Title: GENERAL ARRANGEMENT ROUTE F PREFERRED OPTION SHEET 1 OF 5

Original Scale	Drawn	Checked	Reviewed	Authorised
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Status	Drawing Number	Rev
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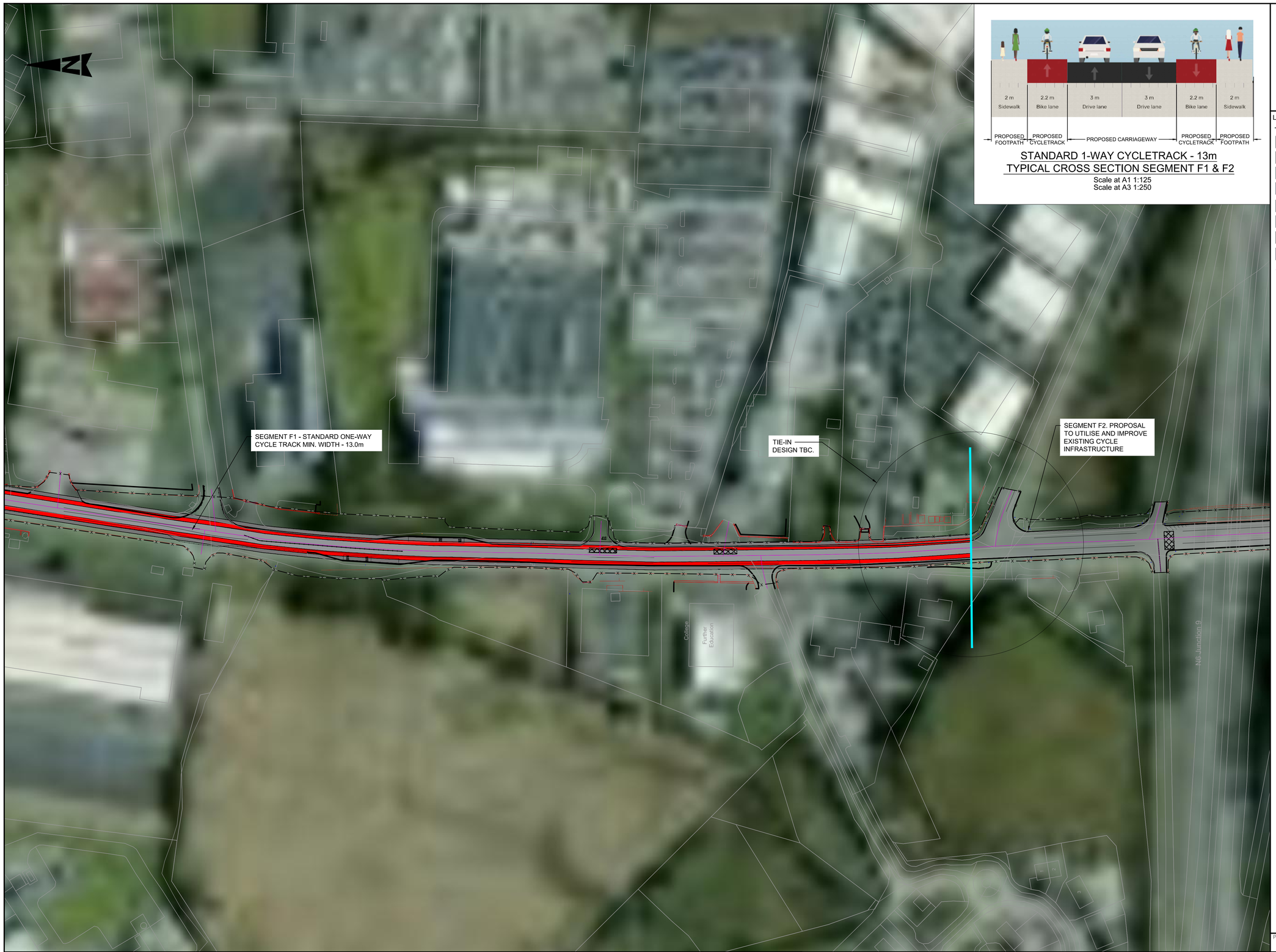

STANDARD 1-WAY CYCLETRACK - 13m
TYPICAL CROSS SECTION SEGMENT F1 & F2

Scale at A1 1:125
Scale at A3 1:250

GENERAL NOTES

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LEGEND:

- EXTENT OF WORKS
- PROPOSED CARRIAGEWAY
- PROPOSED FOOTPATH
- PROPOSED RAISED CYCLE TRACK
- PROPOSED AT-GRADE CYCLE LANE
- PROPOSED SHARED AREA
- PROPOSED RAISED TABLE
- PROPOSED TACTILE PAVING (LADDER/ TRAMLINE)
- EXISTING GRASS VERGE
- PROPOSED ROAD CENTRELINE

DRAFT

A1

0 10 100

DO NOT SCALE

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Risk Level	X	
		Atkins Base Line - Low Risk
		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

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Rialtas na hÉireann Government of Ireland

Tionscadal Éireann Project Ireland 2040

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Fax (+353) 091 779 830

Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Purpose: FOR INFORMATION

Title: GENERAL ARRANGEMENT ROUTE F PREFERRED OPTION SHEET 2 OF 5

Original Scale	Drawn	Checked	Reviewed	Authorised
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DO NOT SCALE

STANDARD 1-WAY CYCLETRACK - 13m
TYPICAL CROSS SECTION SEGMENT F1 & F2
Scale at A1 1:125
Scale at A3 1:250

SEGMENT F2. PROPOSAL TO UTILISE AND IMPROVE EXISTING CYCLE INFRASTRUCTURE

SEGMENT F1 BOUNDARY

SEGMENT F2 BOUNDARY

PROPOSAL TO UTILISE AND IMPROVE EXISTING CYCLE INFRASTRUCTURE

DRAFT

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LEGEND:

— x —	EXTENT OF WORKS
▭	PROPOSED CARRIAGEWAY
■	PROPOSED FOOTPATH
🟥	PROPOSED RAISED CYCLE TRACK
🟨	PROPOSED AT-GRADE CYCLE LANE
🟧	PROPOSED SHARED AREA
🟫	PROPOSED RAISED TABLE
▥	PROPOSED TACTILE PAVING (LADDER/ TRAMLINE)
🟩	EXISTING GRASS VERGE
- - - -	PROPOSED ROAD CENTRELINE

Purpose
FOR INFORMATION

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ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Risk Level		
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		Atkins Sensitive - Medium Risk
		Atkins Private - High Risk
		Client Critical - Already Marked

NTA
Údarás Náisiúnta Iompair
National Transport Authority

WESTMEATH COUNTY COUNCIL
Comhairle Chontae na hIarmhí

TIONSCADAIL NA FIONNACHTAÍ
PATHFINDER PROGRAMME
Transforming how we travel

Rialtas na hÉireann
Government of Ireland

Tionscadal Éireann
Project Ireland
2040

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Fax (+353) 091 779 830

Client
WESTMEATH COUNTY COUNCIL

Project
ATHLONE
ACTIVE TRAVEL SCHEMES
BUNDLE

Title
GENERAL ARRANGEMENT
ROUTE F PREFERRED OPTION
SHEET 3 OF 5

Original Scale	Drawn	Checked	Reviewed	Authorised
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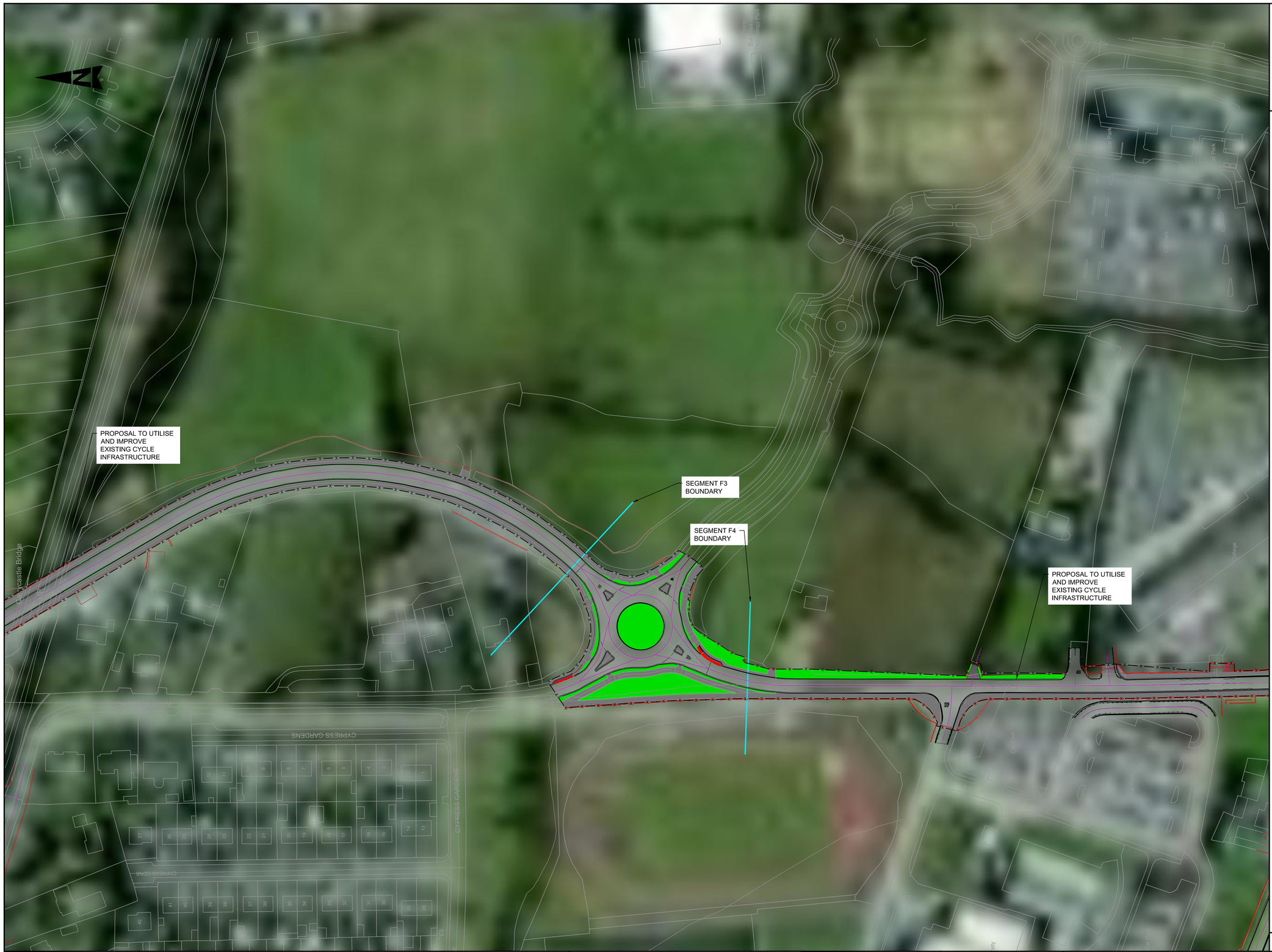

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DRAFT

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WESTMEATH COUNTY COUNCIL Comhairle Chontae na hIarmhí

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Tionscadal Éireann Project Ireland 2040

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Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Purpose: FOR INFORMATION

Title: GENERAL ARRANGEMENT ROUTE F PREFERRED OPTION SHEET 4 OF 5

Original Scale	Drawn	Checked	Reviewed	Authorised
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Status	Drawing Number	Rev
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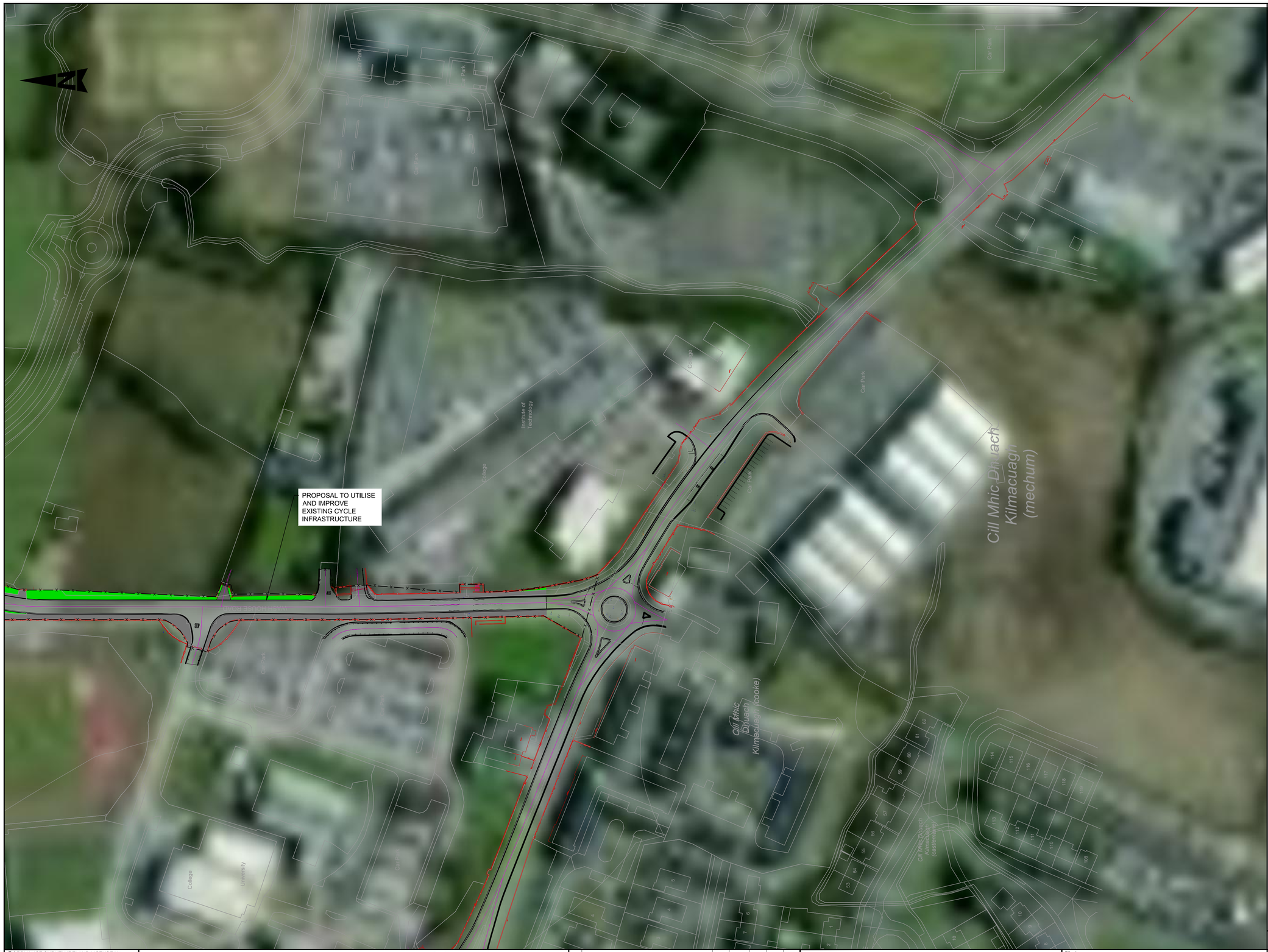

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- PROPOSED SHARED AREA
- PROPOSED RAISED TABLE
- PROPOSED TACTILE PAVING (LADDER/ TRAMLINE)
- EXISTING GRASS VERGE
- PROPOSED ROAD CENTRELINE

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DO NOT SCALE

File: 0086381-ATK-F1-01-DR-ZZ-900170-174.dwg
Date: Sep 20, 2024 - 3:34pm Plotted by: dgreen

ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Risk Level		
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		Atkins Private - High Risk
		Client Critical - Already Marked

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Fax (+353) 091 779 830

Client: WESTMEATH COUNTY COUNCIL

Project: ATHLONE ACTIVE TRAVEL SCHEMES BUNDLE

Purpose: FOR INFORMATION

Title: GENERAL ARRANGEMENT ROUTE F PREFERRED OPTION SHEET 5 OF 5

Original Scale	Drawn	Checked	Reviewed	Authorised
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Status	Drawing Number	Rev
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Appendix E. Feasibility Working Costs

E.1 Links

Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**				**NTA Project Phase 2**		
Project Title:	Athlone Active Travel Scheme - Route F (Segment F1)						
Project / Contract Code:	0086381	Prepared By (Individual / Organisation):	Jason Tong / AtkinsRealis				
Approving Authority:	NTA	Date Estimate Prepared:	24/07/2024				
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2024				

Route Option Number / Reference:	2	3	4	5	6	7	8
Project Information							
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Location:	R916 Woodville Road	R916 Woodville Road	R916 Woodville Road	R916 Woodville Road	R916 Woodville Road	R916 Woodville Road	R916 Woodville Road
Total Mainline Length (m):	925	925	925	925	925	925	925
Other Relevant Project Information:	Standard One-Way Cycle Track	Stepped One-Way Cycle Track	Protected One-Way Cycle Lane	Standard Two-Way Cycle Track	Protected Two-Way Cycle Lane	Shared Active Travel Facility	Cycling in Mixed Traffic
Project Costs							
Option Construction Costs							
	€	€	€	€	€	€	€
Site Clearance	€ 47,372.10	€ 51,997.10	€ 53,939.00	€ 37,181.00	€ 49,985.22	€ 40,693.60	€ 16,485.00
Fencing	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 125,704.17	€ 134,954.17	€ 138,839.00	€ 74,363.75	€ 130,930.42	€ 112,347.17	€ 32,970.00
Earthworks	€ 192,400.00	€ 229,400.00	€ 236,800.00	€ 83,250.00	€ 216,450.00	€ 192,400.00	€ -
Pavements	€ 133,200.00	€ 133,200.00	€ 133,200.00	€ 133,200.00	€ 133,200.00	€ 133,200.00	€ 133,200.00
Kerbing & Footways	€ 532,850.00	€ 588,350.00	€ 619,800.00	€ 517,587.50	€ 561,062.50	€ 399,280.00	€ 186,900.00
Traffic Signs & Road Marking	€ 47,372.10	€ 51,997.10	€ 53,939.60	€ 37,181.88	€ 49,985.22	€ 40,693.60	€ 16,485.00
Road Lighting	€ 58,032.00	€ 58,032.00	€ 58,032.00	€ 9,600.00	€ 58,032.00	€ 58,032.00	€ 9,600.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 9,474.42	€ 10,399.42	€ 10,787.92	€ 7,436.38	€ 9,997.04	€ 8,138.72	€ 3,297.00
Other Project Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Preliminaries including Site Compounds (excluding traffic management)	€ 142,116.30	€ 155,991.30	€ 161,818.80	€ 111,545.63	€ 149,955.67	€ 122,080.80	€ 49,455.00
Sub-Total A - Construction Costs	**€ 1,288,521.09**	**€ 1,414,321.09**	**€ 1,467,156.31**	**€ 1,011,346.13**	**€ 1,359,598.09**	**€ 1,106,865.89**	**€ 448,392.00**
Option Add-On Costs							
	€	€	€	€	€	€	€
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23
Traffic Management Related Costs	€ 77,311.27	€ 84,859.27	€ 88,029.38	€ 60,680.77	€ 81,575.89	€ 66,411.95	€ 26,903.52
Land and Property Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 229,644.50**	**€ 237,192.50**	**€ 240,362.61**	**€ 213,014.00**	**€ 233,909.12**	**€ 218,745.18**	**€ 179,236.75**
Total Inflation Allowance	€ 151,816.56	€ 165,151.36	€ 170,751.89	€ 122,436.01	€ 159,350.72	€ 132,561.11	€ 62,762.88
Total Contingency Allowance	€ 734,792.14	€ 799,332.57	€ 826,439.16	€ 592,590.30	€ 771,257.49	€ 641,595.76	€ 303,772.32
Per Cent Art Scheme	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total - Adjustments	**€ 886,608.70**	**€ 964,483.93**	**€ 997,191.05**	**€ 715,026.31**	**€ 930,608.21**	**€ 774,156.86**	**€ 366,535.19**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 2,404,774.28**	**€ 2,615,997.51**	**€ 2,704,709.98**	**€ 1,939,386.43**	**€ 2,524,115.41**	**€ 2,099,767.93**	**€ 994,163.94**
Total Rate Per Km (excluding VAT)	**€ 2,599,755.98**	**€ 2,828,105.42**	**€ 2,924,010.78**	**€ 2,096,633.98**	**€ 2,728,773.41**	**€ 2,270,019.39**	**€ 1,074,771.83**

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
Costs are considered to include allowances for overheads and profit.
Costs are reflective of costs at the base date stated above.
VAT is not applicable to all land and property therefore it is not appropriate to apply a uniform percentage. The value associated with VAT on land and property is to be determined on an individual basis and included as a lump sum.

Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**		**NTA Project Phase 2**

Project Title:	Athlone Active Travel Scheme - Route F (Segment F2)		
Project / Contract Code:	0086381	Prepared By (Individual / Organisation):	Jason Tong / AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	24/07/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2024

Route Option Number / Reference:	2	3	4	5	6	7	8	9
Project Information								
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Location:	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages	R916 Garrycastle Cottages
Total Mainline Length (m):	367	367	367	367	367	367	367	367
Other Relevant Project Information:	Retaining Existing Infrastructure with Rapid Buid Proposals & Further Monitoring	Standard One-Way Cycle Track	Stepped One-Way Cycle Track	Protected One-Way Cycle Lane	Standard Two-Way Cycle Track	Protected Two-Way Cycle Lane	Shared Active Travel Facility	Cycling in Mixed Traffic
Project Costs								
Option Construction Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Site Clearance	€ 274.00	€ 19,569.61	€ 21,404.61	€ 22,175.31	€ 15,890.73	€ 20,606.38	€ 16,919.87	€ 4,017.40
Fencing	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 548.00	€ 60,993.31	€ 64,663.31	€ 66,204.71	€ 53,635.56	€ 63,066.86	€ 55,693.83	€ 8,034.80
Earthworks	€ -	€ 76,336.00	€ 91,016.00	€ 93,952.00	€ 33,030.00	€ 85,878.00	€ 76,336.00	€ -
Pavements	€ -	€ 52,848.00	€ 52,848.00	€ 52,848.00	€ 52,848.00	€ 52,848.00	€ 52,848.00	€ 52,848.00
Kerbing & Footways	€ 680.00	€ 211,338.00	€ 233,358.00	€ 245,836.00	€ 205,282.50	€ 222,531.50	€ 158,343.20	€ 22,700.00
Traffic Signs & Road Marking	€ 274.00	€ 19,569.61	€ 21,404.61	€ 22,175.31	€ 15,890.73	€ 20,606.38	€ 16,919.87	€ 4,017.40
Road Lighting	€ 4,800.00	€ 29,016.00	€ 29,016.00	€ 29,016.00	€ 4,800.00	€ 29,016.00	€ 29,016.00	€ 4,800.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 54.80	€ 3,913.92	€ 4,280.92	€ 4,435.06	€ 3,178.15	€ 4,121.28	€ 3,383.97	€ 803.48
Other Project Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Preliminaries including Site Compounds (excluding traffic management)	€ 822.00	€ 58,708.82	€ 64,213.82	€ 66,525.92	€ 47,672.19	€ 61,819.14	€ 50,759.60	€ 12,052.20
Sub-Total A - Construction Costs	**€ 7,452.80**	**€ 532,293.26**	**€ 582,205.26**	**€ 603,168.30**	**€ 432,227.86**	**€ 560,493.54**	**€ 460,220.33**	**€ 109,273.28**
Option Add-On Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23
Traffic Management Related Costs	€ 447.17	€ 31,937.60	€ 34,932.32	€ 36,190.10	€ 25,933.67	€ 33,629.61	€ 27,613.22	€ 6,556.40
Land and Property Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 152,780.40**	**€ 184,270.83**	**€ 187,265.55**	**€ 188,523.33**	**€ 178,266.90**	**€ 185,962.84**	**€ 179,946.45**	**€ 158,889.63**
Total Inflation Allowance	€ 16,023.32	€ 71,656.41	€ 76,947.08	€ 79,169.16	€ 61,049.48	€ 74,645.64	€ 64,016.68	€ 26,816.29
Total Contingency Allowance	€ 77,552.87	€ 346,817.02	€ 372,423.87	€ 383,178.75	€ 295,479.46	€ 361,284.89	€ 309,840.72	€ 129,790.85
Per Cent Art Scheme	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total - Adjustments	**€ 93,576.19**	**€ 418,473.42**	**€ 449,370.95**	**€ 462,347.91**	**€ 356,528.94**	**€ 435,930.53**	**€ 373,857.40**	**€ 156,607.14**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 253,809.39**	**€ 1,135,037.51**	**€ 1,218,841.75**	**€ 1,254,039.53**	**€ 967,023.70**	**€ 1,182,386.90**	**€ 1,014,024.18**	**€ 424,770.04**
Total Rate Per Km (excluding VAT)	**€ 691,578.71**	**€ 3,092,745.25**	**€ 3,321,094.69**	**€ 3,417,001.45**	**€ 2,634,941.95**	**€ 3,221,762.68**	**€ 2,763,008.66**	**€ 1,157,411.57**

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
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Costs are reflective of costs at the base date stated above.
VAT is not applicable to all land and property therefore it is not appropriate to apply a uniform percentage. The value associated with VAT on land and property is to be determined on an individual basis and included as a lump sum.

Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**		**NTA Project Phase 2**

Project Title:	Athlone Active Travel Scheme - Route F (Segment F3)		
Project / Contract Code:	0086381	Prepared By (Individual / Organisation):	Jason Tong / AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	24/07/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2024

Route Option Number / Reference:	2	3	4	5	6	7	8	9
Project Information								
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Location:	R916	R916	R916	R916	R916	R916	R916	R916
Total Mainline Length (m):	522	522	522	522	522	522	522	522
Other Relevant Project Information:	Retaining Existing Infrastructure with Rapid Buid Proposals & Further Monitoring	Standard One-Way Cycle Track	Stepped One-Way Cycle Track	Protected One-Way Cycle Lane	Standard Two-Way Cycle Track	Protected Two-Way Cycle Lane	Shared Active Travel Facility	Cycling in Mixed Traffic
Project Costs								
Option Construction Costs								
	€	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Site Clearance	€ 282.50	€ 28,848.96	€ 31,458.96	€ 32,555.16	€ 24,127.71	€ 30,323.61	€ 25,080.12	€ 5,606.90
Fencing	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 565.00	€ 121,439.04	€ 126,659.04	€ 128,851.44	€ 111,996.54	€ 124,388.34	€ 113,901.36	€ 11,213.80
Earthworks	€ -	€ 108,576.00	€ 129,456.00	€ 133,632.00	€ 46,980.00	€ 122,148.00	€ 108,576.00	€ -
Pavements	€ -	€ 75,168.00	€ 75,168.00	€ 75,168.00	€ 75,168.00	€ 75,168.00	€ 75,168.00	€ 75,168.00
Kerbing & Footways	€ 850.00	€ 300,478.00	€ 331,798.00	€ 349,546.00	€ 291,865.00	€ 316,399.00	€ 225,101.20	€ 32,170.00
Traffic Signs & Road Marking	€ 282.50	€ 28,848.96	€ 31,458.96	€ 32,555.16	€ 24,127.71	€ 30,323.61	€ 25,080.12	€ 5,606.90
Road Lighting	€ 4,800.00	€ 29,016.00	€ 29,016.00	€ 29,016.00	€ 4,800.00	€ 29,016.00	€ 29,016.00	€ 4,800.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 56.50	€ 5,769.79	€ 6,291.79	€ 6,511.03	€ 4,825.54	€ 6,064.72	€ 5,016.02	€ 1,121.38
Other Project Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Preliminaries including Site Compounds (excluding traffic management)	€ 847.50	€ 86,546.87	€ 94,376.87	€ 97,665.47	€ 72,383.12	€ 90,970.82	€ 75,240.35	€ 16,820.70
Sub-Total A - Construction Costs	**€ 7,684.00**	**€ 784,691.61**	**€ 855,683.61**	**€ 885,500.25**	**€ 656,273.61**	**€ 824,802.09**	**€ 682,179.16**	**€ 152,507.68**
Option Add-On Costs								
	€	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23
Traffic Management Related Costs	€ 461.04	€ 47,081.50	€ 51,341.02	€ 53,130.02	€ 39,376.42	€ 49,488.13	€ 40,930.75	€ 9,150.46
Land and Property Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 152,794.27**	**€ 199,414.73**	**€ 203,674.25**	**€ 205,463.25**	**€ 191,709.65**	**€ 201,821.36**	**€ 193,263.98**	**€ 161,483.69**
Total Inflation Allowance	€ 16,047.83	€ 98,410.63	€ 105,935.79	€ 109,096.35	€ 84,798.33	€ 102,662.34	€ 87,544.31	€ 31,399.14
Total Contingency Allowance	€ 77,671.48	€ 476,307.47	€ 512,729.20	€ 528,026.33	€ 410,423.90	€ 496,885.75	€ 423,714.48	€ 151,971.82
Per Cent Art Scheme	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total - Adjustments	**€ 93,719.31**	**€ 574,718.10**	**€ 618,664.99**	**€ 637,122.68**	**€ 495,222.22**	**€ 599,548.09**	**€ 511,258.80**	**€ 183,370.96**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 254,197.58**	**€ 1,558,824.44**	**€ 1,678,022.85**	**€ 1,728,086.18**	**€ 1,343,205.48**	**€ 1,626,171.54**	**€ 1,386,701.94**	**€ 497,362.33**
Total Rate Per Km (excluding VAT)	**€ 486,968.54**	**€ 2,986,253.72**	**€ 3,214,603.16**	**€ 3,310,509.92**	**€ 2,573,190.58**	**€ 3,115,271.15**	**€ 2,656,517.12**	**€ 952,801.40**

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
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Costs are reflective of costs at the base date stated above.
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Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**				**NTA Project Phase 2**		
Project Title:	Athlone Active Travel Scheme - Route F (Segment F4)						
Project / Contract Code:	0086381	Prepared By (Individual / Organisation):	Jason Tong / AtkinsRealis				
Approving Authority:	NTA	Date Estimate Prepared:	24/07/2024				
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2024				

Route Option Number / Reference:	2	3	4	5	6	7	8
Project Information							
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Location:	R916	R916	R916	R916	R916	R916	R916
Total Mainline Length (m):	318	318	318	318	318	318	318
Other Relevant Project Information:	Standard One-Way Cycle Track	Stepped One-Way Cycle Track	Protected One-Way Cycle Lane	Standard Two-Way Cycle Track	Protected Two-Way Cycle Lane	Shared Active Travel Facility	Cycling in Mixed Traffic
Project Costs							
Option Construction Costs							
	€	€	€	€	€	€	€
Site Clearance	€ 18,014.59	€ 19,638.59	€ 20,306.39	€ 115,111.73	€ 18,946.94	€ 15,752.63	€ 5,824.60
Fencing	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 63,346.81	€ 66,594.81	€ 67,930.41	€ 257,541.09	€ 65,211.51	€ 58,822.89	€ 11,649.20
Earthworks	€ 66,144.00	€ 78,864.00	€ 81,408.00	€ 28,620.00	€ 74,412.00	€ 66,144.00	€ -
Pavements	€ 45,792.00	€ 45,792.00	€ 45,792.00	€ 45,792.00	€ 45,792.00	€ 45,792.00	€ 45,792.00
Kerbing & Footways	€ 182,592.00	€ 202,352.00	€ 213,164.00	€ 178,025.00	€ 192,971.00	€ 137,352.80	€ 64,340.00
Traffic Signs & Road Marking	€ 18,014.59	€ 19,638.59	€ 20,306.39	€ 115,111.73	€ 18,946.94	€ 15,752.63	€ 5,824.60
Road Lighting	€ 38,446.20	€ 38,446.20	€ 38,446.20	€ 2,022,480.00	€ 38,446.20	€ 38,446.20	€ 6,360.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 3,602.92	€ 3,927.72	€ 4,061.28	€ 23,022.35	€ 3,789.39	€ 3,150.53	€ 1,164.92
Other Project Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Preliminaries including Site Compounds (excluding traffic management)	€ 54,043.77	€ 58,915.77	€ 60,919.17	€ 345,335.19	€ 56,840.82	€ 47,257.89	€ 17,473.80
Sub-Total A - Construction Costs	**€ 489,996.88**	**€ 534,169.68**	**€ 552,333.84**	**€ 3,131,039.09**	**€ 515,356.80**	**€ 428,471.57**	**€ 158,429.12**
Option Add-On Costs							
	€	€	€	€	€	€	€
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23
Traffic Management Related Costs	€ 29,399.81	€ 32,050.18	€ 33,140.03	€ 187,862.35	€ 30,921.41	€ 25,708.29	€ 9,505.75
Land and Property Costs	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 181,733.04**	**€ 184,383.41**	**€ 185,473.26**	**€ 340,195.58**	**€ 183,254.64**	**€ 178,041.52**	**€ 161,838.98**
Total Inflation Allowance	€ 67,172.99	€ 71,855.31	€ 73,780.71	€ 347,123.47	€ 69,861.14	€ 60,651.31	€ 32,026.81
Total Contingency Allowance	€ 325,117.28	€ 347,779.70	€ 357,098.64	€ 1,680,077.58	€ 338,127.94	€ 293,552.34	€ 155,009.76
Per Cent Art Scheme	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Sub-Total - Adjustments	**€ 392,290.28**	**€ 419,635.01**	**€ 430,879.35**	**€ 2,027,201.05**	**€ 407,989.08**	**€ 354,203.65**	**€ 187,036.57**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 1,064,020.20**	**€ 1,138,188.10**	**€ 1,168,686.45**	**€ 5,498,435.71**	**€ 1,106,600.52**	**€ 960,716.74**	**€ 507,304.67**
Total Rate Per Km (excluding VAT)	**€ 3,345,975.48**	**€ 3,579,207.86**	**€ 3,675,114.63**	**€ 17,290,678.34**	**€ 3,479,875.86**	**€ 3,021,121.83**	**€ 1,595,297.69**

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
Costs are considered to include allowances for overheads and profit.
Costs are reflective of costs at the base date stated above.
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E.2 Junctions

Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**				**NTA Project Phase 2**		
Project Title:	Athlone Active Travel Scheme - Route F (Junction F1)						
Project / Contract Code:	0086381		Prepared By (Individual / Organisation):		Jason Tong / AtkinsRealis		
Approving Authority:	NTA		Date Estimate Prepared:		24/07/2024		
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:		Q3 2024		
Route Option Number / Reference:	2	3	4	5			
Project Information							
Mainline Cross-Section Type (Single/Dual):	N/A	N/A	N/A	N/A			
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A			
Location:	Bushfield/Garrycastle Roundabout	Bushfield/Garrycastle Roundabout	Bushfield/Garrycastle Roundabout	Bushfield/Garrycastle Roundabout			
Total Mainline Length (m):	N/A	N/A	N/A	N/A			
Other Relevant Project Information:	Retaining Existing Roundabout while proposing zebra crossings (Rapid Build)	Seg. Rbt. w/ Shared AT Facilities (Trad Build)	Protected Rbt. w/o Cycle Prio (Trad Build)	Protected Signalised Junction			
Project Costs							
Option Construction Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Carriageway	€ -	€ 26,244.00	€ 26,244.00	€ 34,992.00			
Traffic Island	€ -	€ -	€ -	€ 88,500.00			
Kerb	€ 960.00	€ 4,860.00	€ 4,860.00	€ 4,860.00			
Verge	€ -	€ -	€ -	€ -			
Footpath / Shared Path	€ -	€ 11,907.00	€ 11,907.00	€ 11,907.00			
Cycle Track	€ -	€ -	€ 24,097.50	€ 24,097.50			
Pedestrian Crossing	€ 120,000.00	€ 120,000.00	€ 120,000.00	€ 600,000.00			
Traffic Signals	€ -	€ -	€ -	€ 20,750.00			
Drainage	€ -	€ 10,927.00	€ 10,927.00	€ 10,927.00			
Preliminaries	€ 18,114.00	€ 26,090.00	€ 29,705.00	€ 119,405.00			
Sub-Total A - Construction Costs	**€ 139,074.00**	**€ 200,028.00**	**€ 227,740.50**	**€ 915,438.50**			
Option Add-On Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23			
Traffic Management Related Costs	€ 8,344.44	€ 12,001.68	€ 13,664.43	€ 54,926.31			
Land and Property Costs	€ -	€ -	€ -	€ -			
Sub-Total B - Add-On Costs	**€ 160,677.67**	**€ 164,334.91**	**€ 165,997.66**	**€ 207,259.54**			
Total Inflation Allowance	€ 29,975.17	€ 36,436.29	€ 39,373.82	€ 112,269.80			
Total Contingency Allowance	€ 145,079.81	€ 176,351.65	€ 190,569.27	€ 543,385.85			
Per Cent Art Scheme	€ -	€ -	€ -	€ -			
Sub-Total - Adjustments	**€ 175,054.98**	**€ 212,787.94**	**€ 229,943.09**	**€ 655,655.66**			
Total Option Comparison Cost Estimate (excluding VAT)	**€ 474,806.65**	**€ 577,150.85**	**€ 623,681.25**	**€ 1,778,353.70**			
Total Rate Per Km (excluding VAT)	**N/A**	**N/A**	**N/A**	**N/A**			

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
Costs are considered to include allowances for overheads and profit.
Costs are reflective of costs at the base date stated above.
VAT is not applicable to all land and property therefore it is not appropriate to apply a uniform percentage. The value associated with VAT on land and property is to be determined on an individual basis and included as a lump sum.

Option Comparison Cost Estimate (004_B123_OCCE)

NOTE: For Band 1 / 2 / 3 Projects the activity cost heads presented are the minimum expected for a linear road project and are to be proposed, discussed and agreed in writing with NTA prior to production of the cost estimate.

Project Band (select)	**Band 2**				**NTA Project Phase 2**		
Project Title:	Athlone Active Travel Scheme - Route F (Junction F2)						
Project / Contract Code:	0086381		Prepared By (Individual / Organisation):		Jason Tong / AtkinsRealis		
Approving Authority:	NTA		Date Estimate Prepared:		24/07/2024		
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:		Q3 2024		
Route Option Number / Reference:	2	3	4	5			
Project Information							
Mainline Cross-Section Type (Single/Dual):	N/A	N/A	N/A	N/A			
Anticipated Programme Duration (Months):	N/A	N/A	N/A	N/A			
Location:	R916/Garrycastle Roundabout	R916/Garrycastle Roundabout	R916/Garrycastle Roundabout	R916/Garrycastle Roundabout			
Total Mainline Length (m):	N/A	N/A	N/A	N/A			
Other Relevant Project Information:	Retaining Existing Roundabout while proposing zebra crossings (Rapid Build)	Seg. Rbt. w/ Shared AT Facilities (Trad Build)	Protected Rbt. w/o Cycle Prio (Trad Build)	Protected Signalised Junction			
Project Costs							
Option Construction Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Carriageway	€ -	€ 28,512.00	€ 28,512.00	€ 38,016.00			
Traffic Island	€ -	€ -	€ -	€ 88,500.00			
Kerb	€ 960.00	€ 5,280.00	€ 5,280.00	€ 5,280.00			
Verge	€ -	€ -	€ -	€ -			
Footpath / Shared Path	€ -	€ 12,936.00	€ 6,160.00	€ 6,160.00			
Cycle Track	€ -	€ -	€ 26,180.00	€ 26,180.00			
Pedestrian Crossing	€ 120,000.00	€ 120,000.00	€ 120,000.00	€ 600,000.00			
Traffic Signals	€ -	€ -	€ -	€ 20,750.00			
Drainage	€ -	€ 20,032.93	€ 20,032.93	€ 220,362.18			
Preliminaries	€ 18,144.00	€ 28,014.14	€ 30,924.74	€ 150,787.23			
Sub-Total A - Construction Costs	**€ 139,104.00**	**€ 214,775.06**	**€ 237,089.66**	**€ 1,156,035.41**			
Option Add-On Costs	**€**	**€**	**€**	**€**	**€**	**€**	**€**
Preparation and Administration Costs	€ 152,333.23	€ 152,333.23	€ 152,333.23	€ 152,333.23			
Traffic Management Related Costs	€ 8,346.24	€ 12,886.50	€ 14,225.38	€ 69,362.12			
Land and Property Costs	€ -	€ -	€ -	€ -			
Sub-Total B - Add-On Costs	**€ 160,679.47**	**€ 165,219.73**	**€ 166,558.61**	**€ 221,695.35**			
Total Inflation Allowance	€ 29,978.35	€ 37,999.48	€ 40,364.83	€ 137,773.08			
Total Contingency Allowance	€ 145,095.20	€ 183,917.48	€ 195,365.76	€ 666,821.69			
Per Cent Art Scheme	€ -	€ -	€ -	€ -			
Sub-Total - Adjustments	**€ 175,073.55**	**€ 221,916.96**	**€ 235,730.59**	**€ 804,594.76**			
Total Option Comparison Cost Estimate (excluding VAT)	**€ 474,857.02**	**€ 601,911.76**	**€ 639,378.87**	**€ 2,182,325.52**			
Total Rate Per Km (excluding VAT)	**N/A**	**N/A**	**N/A**	**N/A**			

Rev	Title	Prepared By	Checked By	Issue Date
0	Option Comparison Cost Estimate	JT	AB	24/07/2024

Note:
Costs are considered to include allowances for overheads and profit.
Costs are reflective of costs at the base date stated above.
VAT is not applicable to all land and property therefore it is not appropriate to apply a uniform percentage. The value associated with VAT on land and property is to be determined on an individual basis and included as a lump sum.

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