AtkinsRéalis

Project 2 - Feasibility and Options Selection Report

Westmeath County Council

July 2024
0086409DG0015

MULLINGAR ACTIVE TRAVEL BUNDLE

Notice

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Document history

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Client signoff

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Client signature / date	

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1. Introduction

1.1 Overview

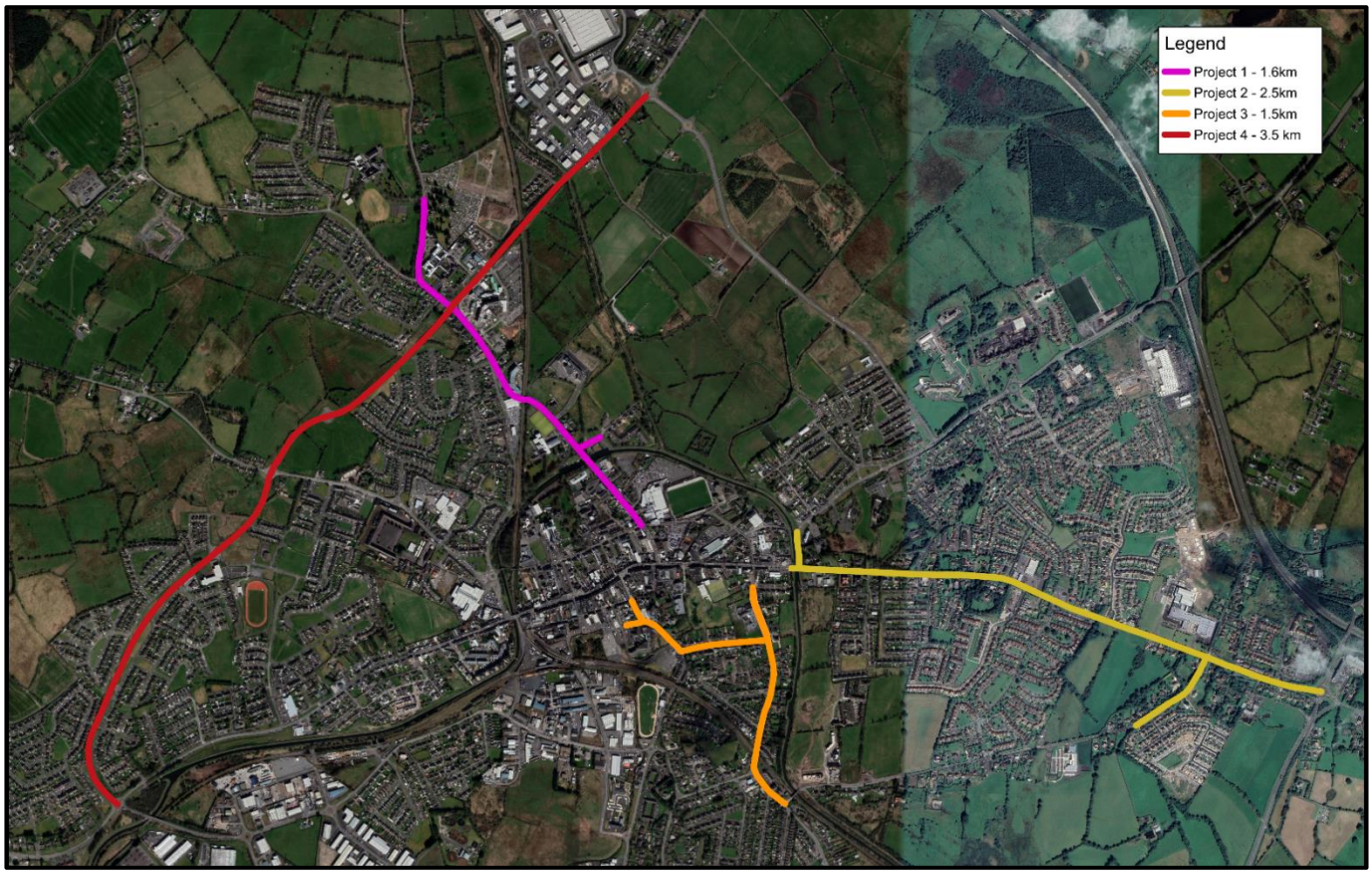
Westmeath County Council (WCC) have appointed AtkinsRéalis to provide engineering services to develop the Mullingar Active Travel Bundle, which comprises of a number of Active Travel schemes along a series of roads within the town of Mullingar, Co. Westmeath.

The overall commission includes six areas within Mullingar town which will be divided into four different projects, as outlined below and in Figure 1-1:

- Project 1: St. Finian's to Harbour Street Footpath and Cycleway
- Project 2: Dublin Road Footpath and Cycleway and National Science Park Junction Improvements
- Project 3: Sundays Well Road - Lynn Road/Auburn Road - Millmount Junction Improvements and Mount Street Lower Pedestrian Interventions
- Project 4: Grange South to Orbital C-Link Segregated Cycling Scheme.

Projects 1 and 2 are listed on the Pathfinder Programme, launched in October 2022 by the Minister for Transport, as Project 8: 'Mullingar Cycle Corridor with links to Dublin-Galway Greenway'. The pathfinder programme is a key part of the implementation of the National Sustainable Mobility Policy and is focused on reducing carbon emissions in the transport sector by promoting a shift into more sustainable modes. The programme intends to achieve ambitious goals set for the transport sector regarding climate and to provide a template at a local level to be replicated and scaled up at wider locations. These projects are to be completed by the end of 2025.

Figure 1-1 – Mullingar Active Travel Bundle Routes



Each project within the Mullingar Active Travel Bundle will be delivered independently from one another, as a stand-alone scheme complete with a full set of project appraisal and approval documentation. However, the schemes will be delivered with full consideration to provide integrated and consistent pedestrian and cycle facilities within Mullingar town. Projects 1 and 2, as they are included in the Pathfinder Programme, will be delivered first, followed by projects 3 and 4, respectively.

This report outlines the core elements of Project 2, which comprises the route along Dublin Road from the junction with Delvin Road to the west to the Marlinstown Roundabout to the east and the route along Ardmore Road from the National Science Park roundabout to the north to the junction with Ardmore Hill to the south, a total of 2.4km in length. The route along Dublin Road measures 2km in length and the route along Ardmore Road measures approximately 372m. The section along Delvin Road to the access to the Royal Canal Greenway has also been included as part of Project 2 to provide improved connectivity to the greenway. Figure 1-2 shows the extent of Project 2.

Figure 1-2 – Project 2 Extents

1.2 Purpose of the Report

The purpose of this report is to present the feasibility study for the proposed scheme, the options proposed and the assessment for the options. The report also comprises of the identification and evaluation of constraints following the methodology set out in the National Transport Authority's (NTA) 2024 Project Approval Guidelines (PAG).

1.3 Project Objectives and Expected Benefits

The overall purpose of the Mullingar Active Travel 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 accordance with the Cycle Design Manual, 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 consider 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.
- Provide sustainable travel options.
- Enhance the safety of Vulnerable Road Users.

The objectives for the scheme are based on local, regional and national policies for the introduction of active travel measures as outlined in the following section as well as the criteria set out in the Department of Transport's Transport Appraisal Framework (June 2023)' (TAF). These-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 retails, healthcare and educational facilities, employment areas, etc 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 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 Overview

This chapter outlines the review of the relevant transport policies, guidance, and studies for the development of the Mullingar Active Travel Bundle. The breakdown of the 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 Policy Level

2.2.1 Project Ireland 2040

The Project Ireland 2040 document, published in 2018, is the government's long-term strategy to build a more resilient and sustainable future, in order to provide an improved country for all. The policy vision is to provide a comprehensive social, economic and cultural infrastructure for all people with the aims to achieve ten strategic outcomes around the main themes of wellbeing, equality and opportunity, outlined in Figure 2-1.

The National Planning Framework and the National Development Plan 2021 – 2030, mentioned in the following sections, combine to form part in the Project Ireland 2040.

Figure 2-1 – Ten Strategic Outcomes of Project Ireland 2040

2.2.2 National Planning Framework

Project Ireland 2040 – National Planning Framework (NPF) provides a high-level strategic planning framework to guide development and investment. Mullingar is located in 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, representing an increase of 500,000 people.

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

- **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.

2.2.3 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 prioritisation, 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.

2.2.4 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.

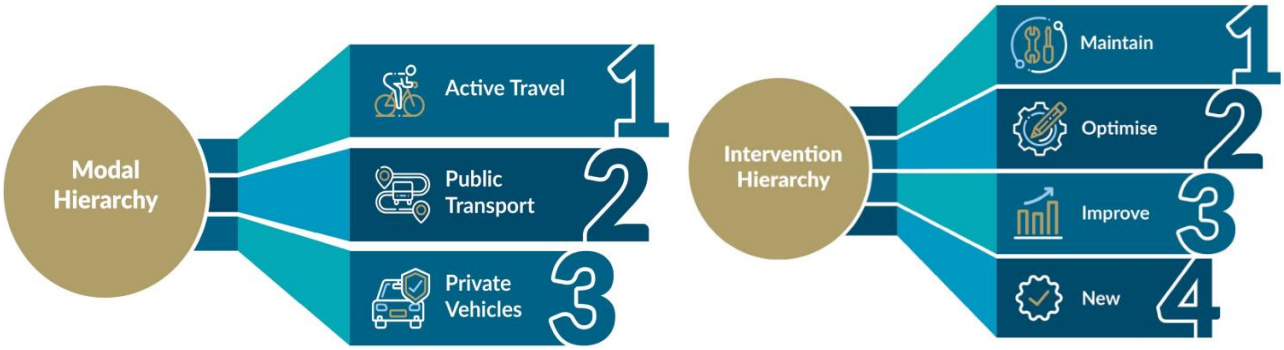
Figure 2-2 - NIFTI Four Investment Priorities *(source: gov.ie/transport)*

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:

1. Maintenance of existing infrastructures and assets
2. Optimisation of the existing network and infrastructure
3. Improvements to the existing infrastructure
4. Construction of new infrastructure.

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



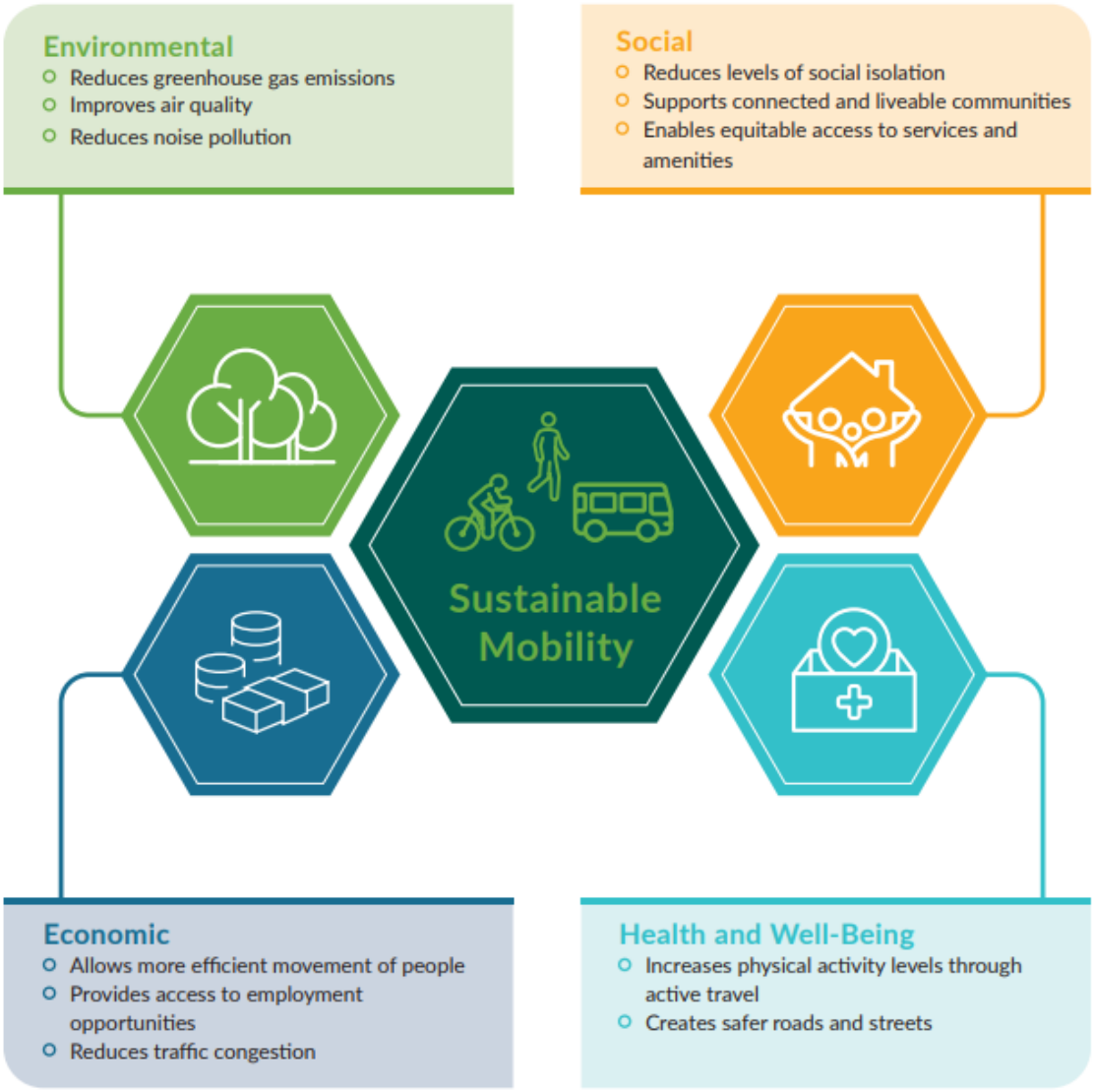
2.2.5 National Sustainable Mobility Policy

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 primarily focuses on measures to promote and facilitate active travel and public transport for all, thereby encouraging less private car usage nationally to support the Government's climate commitment.

The policy outlines a set of actions to increase active travel infrastructure provision and improve public transport capacity and services across the country. These will be supported by behavioural change and demand management measures to make sustainable 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 Mullingar Active Travel Bundle is in alignment with this plan and would contribute to the implementation of several key actions identified in the plan.

Figure 2-4 below illustrates the benefits of sustainable mobility which will be achieved by delivering the Mullingar Active Travel Bundle.

Figure 2-4 - Benefits of Sustainable Mobility



2.2.6 Climate Action Plan, 2024

The Climate Action Plan 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 Mullingar Active Travel 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.

2.2.7 Healthy Ireland Strategic Action Plan, 2021 – 2025

The vision of the 'Healthy Ireland Strategy 2019-2025' 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. Replacing these private car trips with cycling and walking will also improve local air quality and overall population health. 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.

2.2.8 NTA CycleConnects

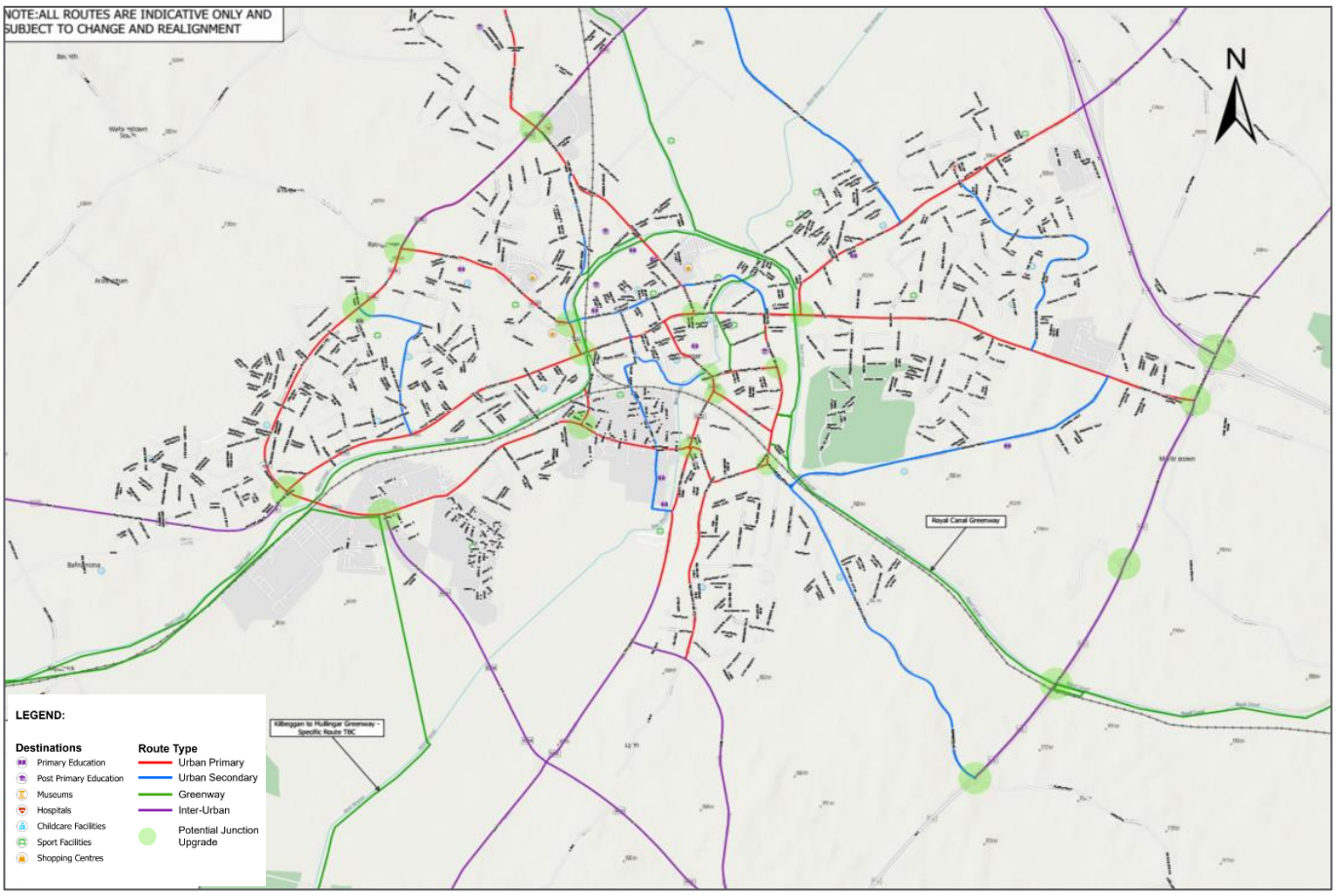
The National Transport Authority (NTA) proposed to develop new cycle networks across 22 counties, forming part of the CycleConnects: Ireland’s Cycle Network programme. This includes an urban cycle network in Mullingar and a county network in the rest of Westmeath.

The 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. These 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 Mullingar network includes existing greenways, along with proposed urban primary and secondary routes. Primary urban routes are high-quality cycle routes able to accommodate high volume of cyclists, typically located in urban areas and on major desire lines in town centres and form radial and orbital cycle routes in the major towns and cities.

The Mullingar Active Travel bundle extents form part of the following links as identified within the NTA’s “Proposed Mullingar Urban Cycle Network”, as shown in Figure 2-5. All the routes of the Mullingar Active Travel Bundle are listed in the NTA CycleConnects network, and they are Primary Urban, Secondary Urban and Inter-Urban Routes, that will provide enhance connection to several locations across town. The main junctions listed in the CycleConnects are also being proposed upgrade as part of the Mullingar Bundle to enhance safety to all road users.

Figure 2-5 – NTA CycleConnects Routes in Mullingar



2.2.9 Connecting Ireland – Rural Mobility Plan

The Connecting Ireland – Rural Mobility Plan, issued in 2021, is a major national public transport initiative developed by the National Transport Authority with the aim to increase connectivity for people living outside of major cities and towns of Ireland. The Rural Mobility Plan proposes several changes to the transport network in Mullingar both in regional and local corridors discussed below and illustrated in Figure 2-6.

Regional Corridor Proposals:

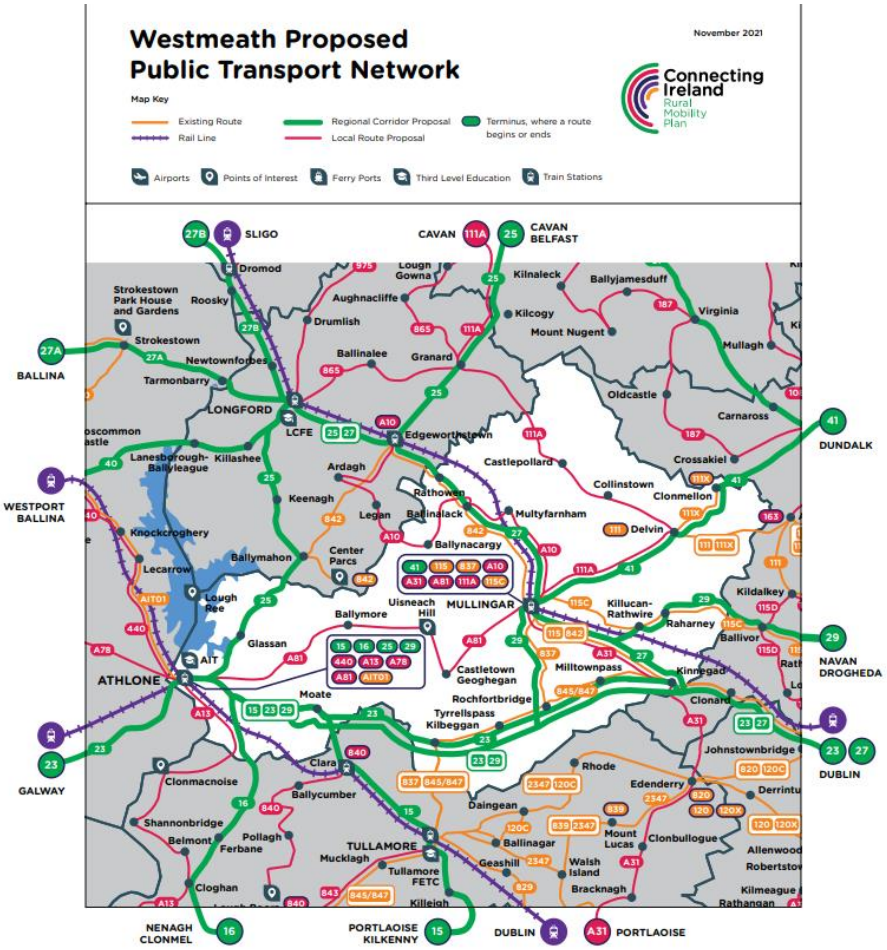
- Routes 27A and 27B, upgrades of the existing 22 and 23 routes, are proposed to connect Ballina and Sligo to Dublin, also connecting to Mullingar. The upgraded services are to provide more frequent services and better integration along the corridor. A minimum service frequency of 2 hours is proposed between Ballina and Sligo to Dublin and a minimum frequency of once an hour is expected from Longford and Dublin for both routes.
- The 29 is proposed to connect Athlone to Drogheda, which would serve Mullingar. This would be a new corridor as only parts of the corridor are currently served by the 70 and 190 routes. Better integration of these routes is proposed, and a minimum service frequency proposed at an hour interval.
- Route 41 is proposed to link Mullingar and Dundalk. This would be a new corridor making use of the existing corridor used by the 167 route. This service would also provide better integration and connectivity between the two towns with a service proposed every 2 hours.

Local Route Proposals:

- The 111A is proposed to connect Mullingar and Cavan. This is proposed to extend the existing 111A which connects Mullingar to Delvin. The minimum service frequency of 4 daily return trips on weekdays and 3 daily return trips on weekends is proposed.

- The A31 is proposed to connect Mullingar and Portlaoise, which is a new route that would also serve Portarlington, Edenderry and Kinnegad with a minimum service frequency of 3 return trips daily.

Figure 2-6 – Westmeath Proposed Public Transport Network



2.3 Regional Policy Level

2.3.1 Eastern and Midland Regional Spatial and Economic Strategy (RSES), 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 RSES includes methods for delivering 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 Regional Spatial and Economic Strategy also states that 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 Mullingar Active Travel 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 Westmeath County Council Development Plan, 2021 – 2027

The Westmeath County Development Plan, 2021-2027 states 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.

According with the 2022 census, approximately 70% of residents of Westmeath drive or are driven to work and only around 3% make use of public transport. Regarding active travel, around 7% walk and 1% cycle to work regularly. In order to promote a modal shift into more sustainable transport modes, WCC 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 Mullingar Active Travel bundle scheme:

- **CPO 10.1**: Promote and deliver a sustainable, integrated and low carbon transport system by enhancing the existing transport infrastructure such as cycling and pedestrian facilities.
- **CPO 10.2**: Continuation of the promotion of a modal shift away from private cars towards more sustainable forms of transport.
- **CPO 10.11**: Promote walking and cycling as efficient, healthy and environmentally friendly modes of transport by securing a direct, comfortable, convenient and safe network of cycle routes and footpaths.
- **CPO 10.15**: Improve the streetscape environment for pedestrians, cyclists and users with mobility needs by providing facilities that enhance safety and convenience and provide separation from vehicular traffic.

2.3.3 Westmeath Climate Change Adaptation Strategy, 2019 – 2024

The strategy forms part of the National Adaptation Framework (NAF) published in 2018 in response to the provisions of the Climate Action and Low Carbon Development Act, 2015. The document aims to make adjustments to minimise or avoid the existing and anticipated impacts from climate change and to build climate resilient communities and to protect people, ecosystems, infrastructure, buildings and business from the negative impacts of climate change.

The document sets out goals, objectives and actions which are divided in six different themes:

- Theme 1: Local Adaptation Governance and Business Operations
- Theme 2: Infrastructure and Build Environment
- Theme 3: Land use and development
- Theme 4: Drainage and Flood Management
- Theme 5: Natural Resources and Cultural Infrastructure
- Theme 6: Community Health and Wellbeing.

Several actions within the document are aligned with the proposed Mullingar Active Travel Bundle.

- Under Theme 2, Action number 6, the document states the intention to develop public realm infrastructure in the county to develop enhanced sustainable transport solutions.

- Under Theme 3 action number 8, the documents refer to sustainable transport solutions to encourage less use of cars and;
- Under Theme 6 action 7, the council outlines their intentions to further promote the use of active travel facilities such as cycling routes and walking trails.

2.3.4 Westmeath Climate Action Plan 2024 – 2029

The Westmeath Climate Action Plan 2024 – 2029 has been developed as part of Ireland's Climate Action and Low Carbon Development (Amendment) Act 2021 to create a low carbon and climate resilient county. The action plan aims to reduce emissions by 51% and increase energy efficiency from 33% to 50% by 2030. The plan aims to reach its goals by increasing climate literacy, implementing green public procurement and retrofitting public sector buildings.

The plan focusses on five themes:

- Theme 1: Governance and leadership
- Theme 2: Build environment and transport
- Theme 3: Natural environment and green infrastructure
- Theme 4: Communities: resilience and transition
- Theme 5: Sustainability and resource management.

Regarding transportation, the plan states that the primary source of the transport sector emissions come from burning fuel in combustion engines. One of the actions within Theme 2 is to continue the plans to guide the county in a sustainable modal shift and to integrate climate considerations into the design, planning and construction of new roads, bridges and active travel infrastructure.

The plan states that Mullingar has been designated as a Decarbonization Zone, and it is envisioned that the town will undergo several climate change mitigation measures to contribute to national climate action targets. Mullingar will act as a test bed to showcase that is feasible for decarbonization and climate action in a local and community level. The transport related carbon emissions in the town correspond to 27% of the total emissions. In order to reduce the emissions related to transport, the council will focus on sustainable mobility options and active travel, as well as installation of additional EV charging provisions. The proposed Mullingar Active Travel project is in line with the Westmeath Climate Action Plan actions.

2.4 Local Level Policy

2.4.1 Mullingar Local Area Plan, 2014 – 2020 (Extended)

The Mullingar Local Area Plan (MLAP) 2014 - 2020 (extended) sets out a strategy for proper planning and sustainable development of Mullingar. It builds upon the previous Mullingar Town Plan, 2008 – 2014. The plan outlines policies and objectives for the future development of the town and its environs.

Some objectives and policies from the MLAP that are relevant to the Mullingar Active Travel Bundle can be seen below:

- **Policy-EC10**: To continue to improve access to major areas of employment through sustainable transport modes.
- **Policy-AC2**: To create an environment in the Town Centre in which vehicles, cyclists and pedestrians can safely co-exist and share public space.
- **Policy-AC4**: To secure the creation of a safe walking and cycling environment in the Town Centre and to limit the impact of vehicular traffic on the Town Centre environment.

- **Policy-TM5**: To promote the development of walking and cycling in the Mullingar area. Cycling and walking are environmentally friendly, fuel-efficient and healthy modes of transport, and their development is in line with the principles of sustainability.
- **Policy-TM6**: To ensure that the safety of road users, including motorists, cyclists and pedestrians, will be a primary consideration in the design and/or improvement of roads and in the assessment of planning applications for new developments. Cyclists and pedestrians are especially vulnerable in road accidents and new design must pay particular attention to securing their safety.
- **Policy-TM12**: To further the development of an integrated cycle network in Mullingar.
- **Policy-FP13**: To provide a network of efficient, attractive and safe walking routes that are integrated with other movement networks.
- **Policy FP14**: To encourage the use of cycles through provision of dedicated cycle lanes on main routes, while also providing for attractive and safe cycling on secondary routes.
- **Objective-PS1**: To provide a network of interconnected pedestrian routes and alleyways through the Town Centre which link the town core, Cathedral, Town Park, Railway Station and primary public spaces.
- **Objective-AC3**: To provide enhanced pedestrian spaces and connectivity in the Town Centre including widened footpaths and well-designed crossings and public spaces.
- **Objective-TM10**: To develop a network of interlinked pedestrian routeways throughout the town.
- **Objective FP5**: To promote public transport provision to serve these Framework Plan areas and to give priority to pedestrians and cyclists in the design of movement networks.

2.4.2 Draft Mullingar Local Area Plan 2024 – 2030

The Draft Mullingar Local Area Plan, 2024-2030 will set out an overarching land use framework which will form the basis for deciding the appropriate locations for different types of future development of the area. Whilst the plan will be strategic in outlook and focus on key economic, social and environmental issues affecting Mullingar, it will also include tailored and site-specific objectives and actions to enable the town to fulfil its full development potential.

A Pre-Draft 'Strategic Issues Paper' has been prepared to give an overview of the main issues affecting Mullingar and sets out some of the key issues that need to be addressed by the new Plan. A few key relevant challenges discussed in the report are highlighted below:

- Mullingar has been designated a Decarbonisation Zone, meaning improving active travel in Mullingar is an important area of action for Westmeath County Council to achieve this goal.
- Shifting towards sustainable transport modes is also a key consideration within the Issues Paper, to support the economic competitiveness of Mullingar, reduce the cost of congestion and to improve the attractiveness of the town.

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 the 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 National Transport Authority (NTA) in 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.

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 their options selection process.

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;

3. 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 Active Travel Facilities by NTA
- Rapid Build SRTS Front of School Improvements Advice Note by NTA
- Roundabout Retrofit – Including Rapid Build Options by NTA
- Traffic Signs Advice Note: Zebra Pedestrian Crossings by Department of Transport
- 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) 2024 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.

3.2 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 Mullingar Active Travel 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 Route

The section of Project 2 along Dublin Road extends from the connection with the Royal Canal to the west to the Marlinstown Roundabout to the east, approximately 2km in length, along Ardmore Road, from the National Science Park roundabout to the access to Ardmore Hills, approximately 370m and along Delvin Road for approximately 130m. Project 2 has a total length of 5,534.16. As the road corridor changes in characteristics along its length, such as change in road width, the presence of turning bays, active travel facilities etc, the corridor has been divided into six segments, as shown in Figure 3-1. The following sections discuss the artificial constraints along each segment within the corridor.

Segment 06 has been included to provide additional connectivity with the Royal Canal Greenway and therefore, enhance active travel in Mullingar.

Figure 3-1 – Project 2 Route Corridor

To provide a baseline of the existing corridor, the existing road layouts were reviewed. This review included documenting key features including the general corridor width and cross section, the location and types of junctions and the location of bus stops, on-street parking and loading areas. For organisational purposes, this discussion is presented by segment as defined in Figure 3-1 above.

3.2.1.1 Segment 01: Access to Royal Canal to Dublin Road/Meadow Court Junction

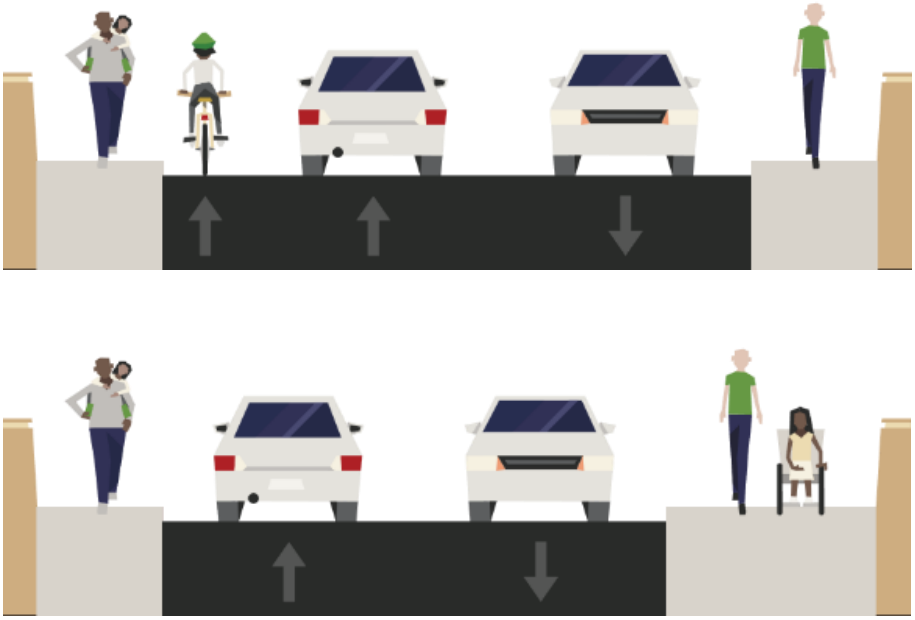
The first segment, Segment 01, includes the section of the route from the access point to the Royal Canal Way to the junction with Meadow Court, circa 778m in length. The segment has one vehicular lane in each direction, and, on the approach to the signalised junction with Delvin Road, the road widens to provide additional lanes for vehicles turning into Delvin Road. There is one section of hard shoulder which acts as informal on-street parking in this segment, located adjacent to the Prospect apartments. The parking area extends for approximately 95m and caters for around 15No. vehicles and is not a pay-and-display parking area. There are four junctions along the segment, as indicated in Figure 3-2.

There are continuous footpaths provided on both sides of the road varying in width from 1.2m to 2.6m. The segment provides a cycle lane on the northern side of the road from the junction with Delvin Road to the Bellview junction which measures approximately 1.0m wide. From the junction eastwards, the northern footpath widens to provide a shared active travel facility for approximately 60m, where a signalised crossing point is provided to allow for cyclists to cross to the south to continue on the shared active travel facility provided. There are two in-lane bus stops in this segment, located adjacent and opposite Bellview Clinic, which serve routes 115, 115C and 190.

On the eastern end of the segment, there are two protected structures, a monument on the wall and a gate/railing. The structures date from the 18th century and are listed in the National Inventory of Architectural Heritage (NIAH) website as of regional importance. The speed limit along the segment is 50km/h and the typical width between boundaries is 12m. Figure 3-2 provides an overview of the segment and Figure 3-3 shows the typical cross sections.

Figure 3-2 – Segment 01 Overview

Figure 3-3 – Segment 01 Typical Cross Sections



3.2.1.2 Segment 02: Dublin Road/Meadow Court Junction to west of Dublin Road/Gleann Petit Drive Junction

Segment 02 extends from the junction between Dublin Road and Meadow Court until west of the junction between Dublin Road and Gleann Petit Drive, approximately 380m. The segment provides one vehicular lane in each direction, however, from the Meadow Court junction to the access to the Aspire Training building, the road widens to provide several turning lanes to the residential estates, the petrol station and the Food store located along this area. There is no on-street parking along this segment.

The active travel facilities provided along the segment vary. A cycle lane, approximately 1.3m in width, is continuous along the northern side of the segment, as well as the footpath, measuring approximately 1.7m wide. On the southern

side, there is a shared active travel facility which is segregated from the road carriageway by a grass strip that measures around 2.5m and along the frontage of the Petitswood Manor residential estate, there is also a cycle lane provided, around 1.2m wide. Similar to Segment 01, there are two bus stops, which are located adjacent and opposite Petitswood Manor residential estate and are also in-lane bus stops with no bus cage and shelter serving bus routes 115, 115C, 190 and also route 842.

The speed limit along the segment is 50km/h and the typical width between boundaries in 18m. The segment has six junctions, as shown in Figure 3-4. The junction linking the Aldi Food store is a major signalised crossroads with a slip lane into Dublin Road and the remaining are minor priority junctions. Figure 3-4 provides an overview of the segment and Figure 3-5 shows the typical cross sections.

Figure 3-4 – Segment 02 Overview

Figure 3-5 – Segment 02 Typical Cross Section

3.2.1.3 Segment 03: Dublin Road/Gleann Petit Drive Junction to the National Science Park roundabout

Segment 03 extends from just east of the junction with Gleann Petit Drive to the National Science Park roundabout, a total of 418m in length. The segment also provides one vehicular lane in each direction. There are three junctions in this segment, all three of which are minor priority junctions giving access to the Gleann Petit residential estate and the National Science Park.

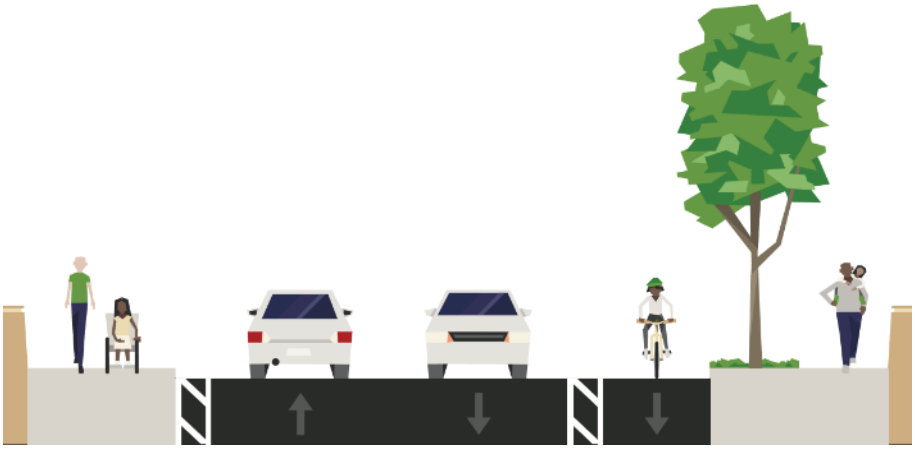
On the northern side of the road, a continuous footpath is provided which is segregated from vehicular traffic by a grass verge and measures approximately 2.5m in width. Also on the northern side, a cycle lane measuring 1.2m wide and segregated from vehicular traffic by a 0.75m painted buffer, is provided until the eastern junction of the National Science Park. On the southern side, a shared active travel facility is present along the entire extent of the segment and measures around 2.5m wide. There is also a buffer zone on the southern side to provide additional safety for

users of the shared active travel facility. There is one bus stop at the segment, to the west of the National Science Park roundabout, serving routes 115, 115C, 190 and 842. Similar to the other bus stops along the corridor, the bus stop is in-line with no cage or shelter.

The speed limit is 50km/h and the typical width between boundaries is 21.0m. Figure 3-6 provides an overview of the segment and Figure 3-7 shows the typical cross sections.

Figure 3-6 – Segment 03 Overview

Figure 3-7 – Segment 03 Typical Cross Section



3.2.1.4 Segment 04: National Science Park Roundabout to Marlinstown Roundabout

Segment 04 extends for approximately 453m from the exit of the National Science Park roundabout to the Marlinstown Roundabout. There is one vehicular lane on each direction along the segment, however, a wide median strip is located along the whole extent of the segment to provide several turning lanes allowing turning movements to residential estates and the Mullingar Park Hotel. There are four junctions along the segment, as Figure 3-8 shows. Two are major junctions, the National Science Park roundabout and the Marlinstown Roundabout with the remaining two being minor priority junctions. There is an on-street parking area adjacent to the Cuainín terrace houses that measure approximate 40m and can cater for up to 7 vehicles.

The footpaths are only continuous on the north side of the road, which measure approximately 1.7m in width. On the southern side, the footpath is only from the National Science Park roundabout to the junction with Marlinstown Lawns and measures approximately 0.75m wide. Cycle lanes are provided on both sides of the road for only approximately 100m from the National Science Park roundabout to the Marlinstown Lawns junction and measure 1.1m in width. On the approach to the National Science Park roundabout, there is a controlled crossing point with a ghost island, whereas on the Marlinstown Roundabout, there is only an uncontrolled crossing point with no tactile paving, also with a ghost island in the centre. There is one bus stop in this segment, located to the east of the National Science Park roundabout which has the provision of a bus cage and a shelter and serves bus routes 115, 115C, 190 and 842.

The speed limit along the segment is mostly 50km/h and changes to 60km/h on the approach to the Marlinstown Roundabout. The typical width of the segment is 12.5m. Figure 3-8 provides an overview of the segment and Figure 3-9 shows the typical cross sections.

Figure 3-8 – Segment 04 Overview

Figure 3-9 – Segment 04 Typical Cross Section

3.2.1.5 Segment 05: National Science Park Roundabout to Ardmore Hills

The final section of Project 2 extends north-south along Ardmore Road from the National Science Park roundabout to just north of the junction with Ardmore Hills, approximately 372m in length. The segment connects to Segment 03 and 04 to the north, at the National Science Park roundabout and to the Footpath and Cycle Path works at Ardmore Road (Phase 3) scheme to the south.

Ardmore Road is the only link north-south on the eastern side of the town. There is one vehicular lane in each direction and the footpath is only provided on the eastern side of the road, which for the most part, is segregated from vehicular traffic by a grass verge. From the roundabout to the north to the northern boundary of Ardmore Hills, the footpath is wider and measures from 2.6 to 4.4m, whereas, along Ardmore Hills, the footpath measures 1.5m.

There is one priority junction in this segment which connects to the Ardmore Hills estate. There are no cycle facilities along this segment nor are there any bus stops. There is also no on-street parking.

The speed limit is 50km/h and typical cross sectional width between boundaries in this segment 11.5m. Figure 3-10 provides an overview of the segment and Figure 3-11 shows the typical cross sections.

Figure 3-10 – Segment 05 Overview

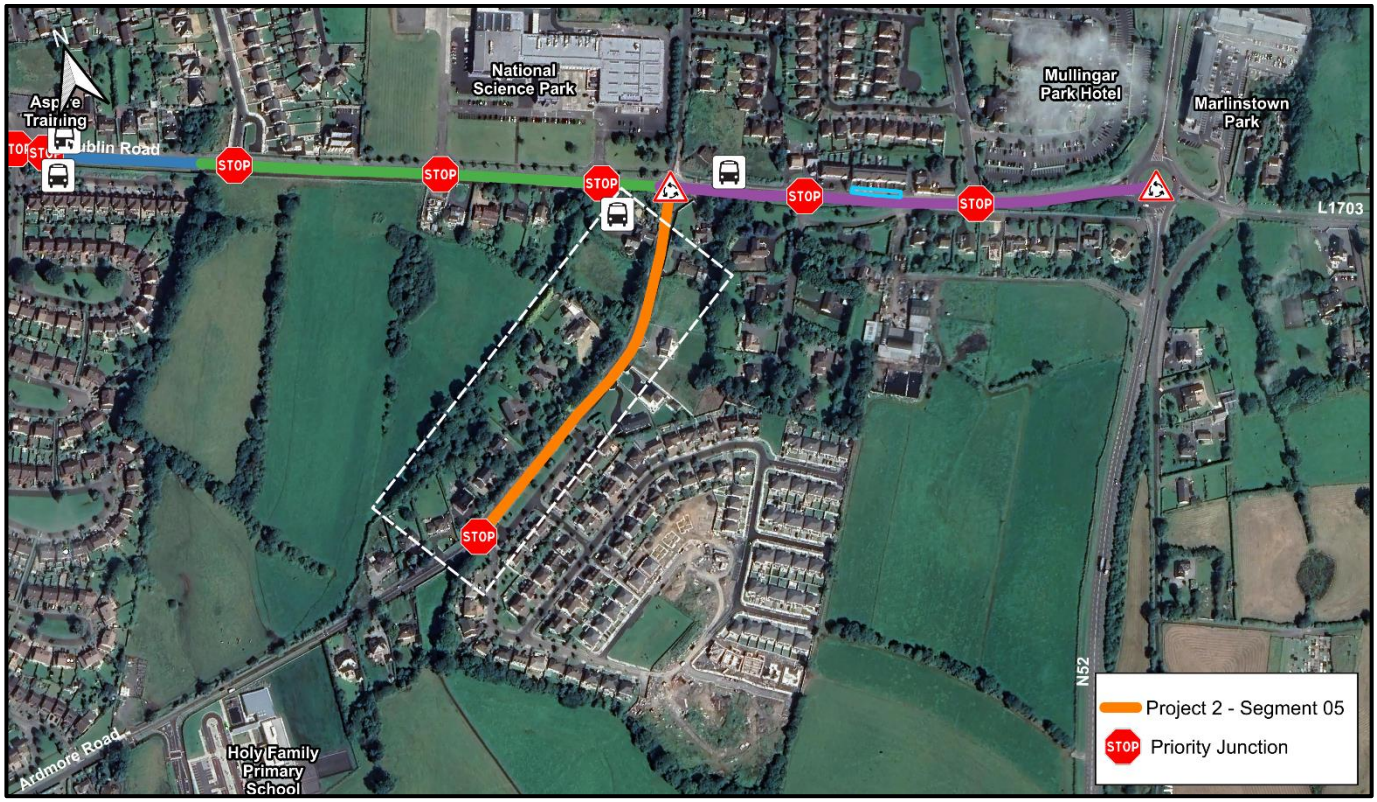


Figure 3-11 – Segment 05 Typical Cross Section

3.2.1.6 Segment 06: Delvin Road to Royal Canal Greenway

As mentioned previously, Segment 06 have been included as part of the scheme to improve connection with the Royal Canal Greenway and was not initially included in the tender scope.

The segment extends from the junction with Dublin Road at Segment 01 to the access to the greenway, at the pelican crossing, approximately 130m in length. There is one lane of traffic for vehicles travelling north and two lanes for vehicles travelling south, to accommodate both right and left turning movements at the junction with Dublin Road. There is no topographical survey along the segment, however, from visual inspection, the footpath on the eastern side is narrow and appears to be less than 1.8m. On the western side the footpath is increased in width and is able to accommodate both cyclists and pedestrians. There are three benches located adjacent the western footpath.

There are no cycle facilities, bus stops or junctions at this segment.

The speed limit if 50km/h. As there is no topographical survey available and the OSI tiles are not updated with the additional width in the footpath on the western side, the cross sectional width is only estimative and in in the order of 13.9m. Figure 3-12 provides an overview of the segment and Figure 3-13 shows the typical cross sections.

Figure 3-12 – Segment 06 Overview

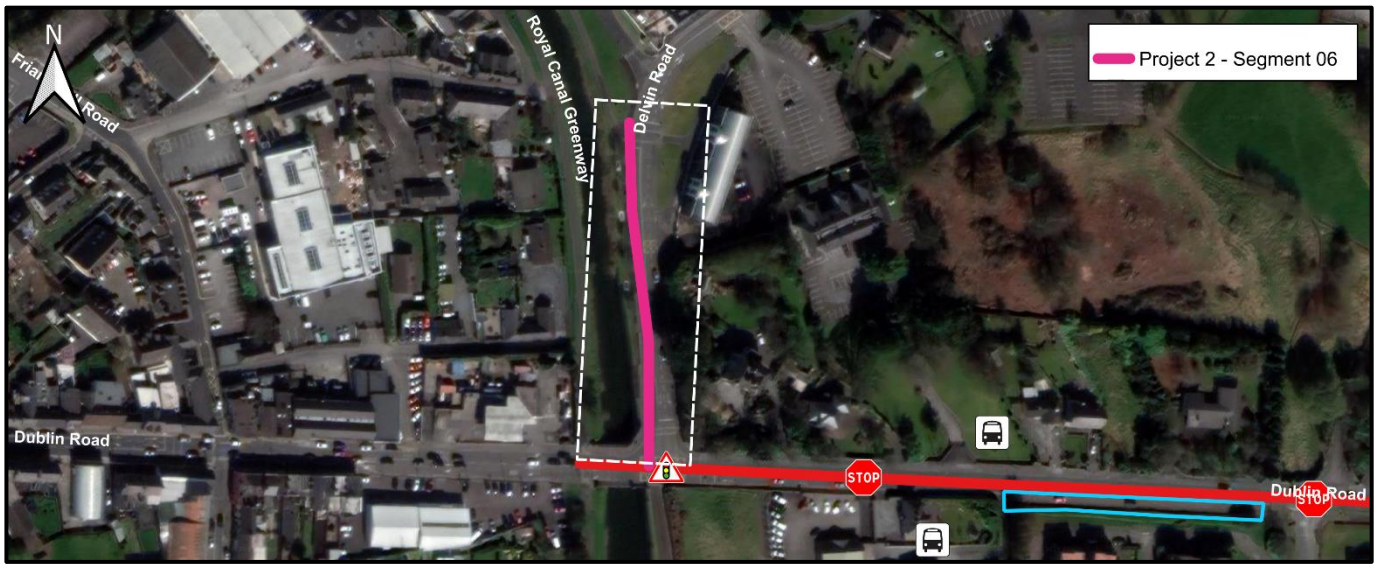
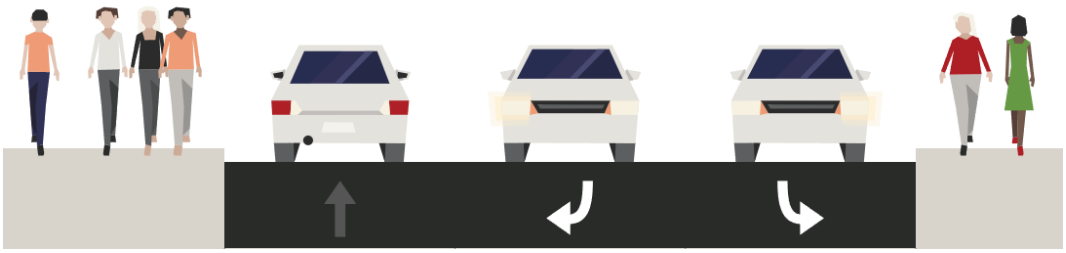


Figure 3-13 – Segment 06 Typical Cross Section



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 topographical survey data. This analysis consisted of taking cross-section measurements from boundary-to-boundary of the available road space at approximately one metre intervals along the corridor.

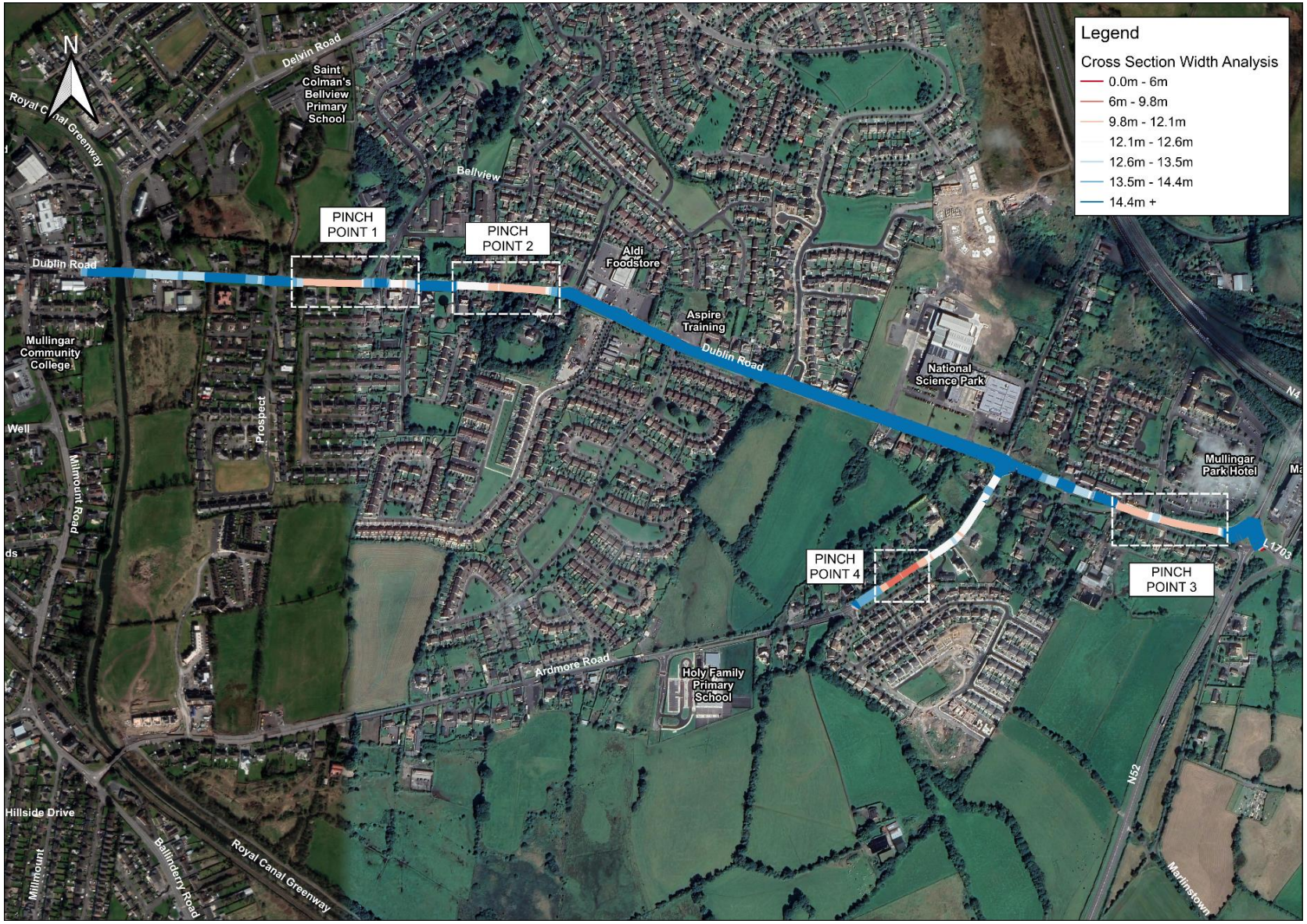
The results indicate the “typical” width of each segment of the corridor. This typical width was qualitatively determined based on engineering judgement and was taken to be the predominant width of the particular segment. In some cases, there were portions of a segment that had a significantly narrower width than the typical, which are referred to as pinch points and represent the most width-constrained areas. Figure 3-14 shows the cross-section width analysis for Project 2, comprising Dublin Road from the signalised junction with Delvin Road to Marlinstown Roundabout and Ardmore Road to the junction with Ardmore Hills.

Four pinch points were identified, as listed in Table 3-1. The first two are along Segment 01, where the minimum width is 10.2m at the pinch point 1 and 11.1m in pinch point 2. Pinch Point 3 is towards the end of Dublin Road with a minimum width of 10.9m as there is no active travel facilities on the southern side and Pinch Point 4 has a minimum width of 8.9m and runs along the frontage of Ardmore Hill in Ardmore Road. There was no analysis carried out along Segment 06 as there is no topographical survey information on this segment.

Table 3-1 - Pinch Points

Pinch Point No.	Description	Segment	Narrowest Width (m)
1	Between Prospect and Bellview	01	10.2
2	From water tower to Meadow Court	01	11.1
3	From the Mullingar Court B&B to Marlinstown Roundabout	04	10.9
4	Along Admore Hills frontage	05	8.9

Figure 3-14 – Pinch Point Areas



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 3-2 and outlined in Figure 3-15.

Table 3-2 - List of Approved Planning Applications

Planning Reference Number	Approval Status	Decision Date	Development Description
206017	Conditional	12/05/2020	The construction of a two-storey detached dwelling, a detached domestic garage, a new entrance off the public road and all ancillary site works.
206220	Conditional	27/09/2020	Construction of a high bay warehouse and manufacturing extension to the rear of the existing facility, with 20m high exhaust flue and all associated site works and services
206214	Conditional	16/11/2020	The construction of a two-storey detached dwelling, a detached domestic garage, a new entrance off the public road and all ancillary site works
206365	Conditional	02/02/2021	Permission to part demolish existing 4 bed dwelling superstructure and remove existing roof, construction of rear ground floor extension with new flat roof windows and construct new dormer roof structure over with roof windows to form new 5 bed family home, connection to utilities to existing connections within curtilage of the site.
21397	Conditional	03/06/2022	The development will consist of a new manufacturing facility, warehouse and offices and associated car parking and delivery areas and all site works and services.
2274	Conditional	31/08/2022	The proposed development will comprise the demolition of the existing domestic dwelling and construction of 10 no. 3 bed end-terrace/semi-detached houses; 9 no. 3 bed mid-terrace/townhouses; 1 no. 3 bed duplex apartment; and 4 no. 2 bed apartments. The development provides for 32 no. car parking spaces, 6 no. external bicycle parking spaces, the provision of communal open space, all associated hard and soft landscaping, boundary treatments, footpaths and all other ancillary works above and below ground.
2214	Conditional	05/09/2022	The construction of 3 no detached houses with associated site works and services connections.

Figure 3-15 – Planning Applications along Project 2

3.2.4 Pavement Condition Survey

Pavement condition can impact the overall quality of service for cyclists and comfort for drivers. To understand the existing pavement condition of the corridor, the carriageway surface was assessed using the Pavement Surface Condition Index (PSCI) rating system as defined in the Urban Flexible Roads Manual (Department of Transport, Tourism and Sport, 2013). The PSCI rating scale ranges from 10 for a pavement in excellent condition, to 1 for a pavement in failed condition. The overall PSCI rating and their corresponding primary and secondary indicators have been illustrated in the Figure 3-16 below.

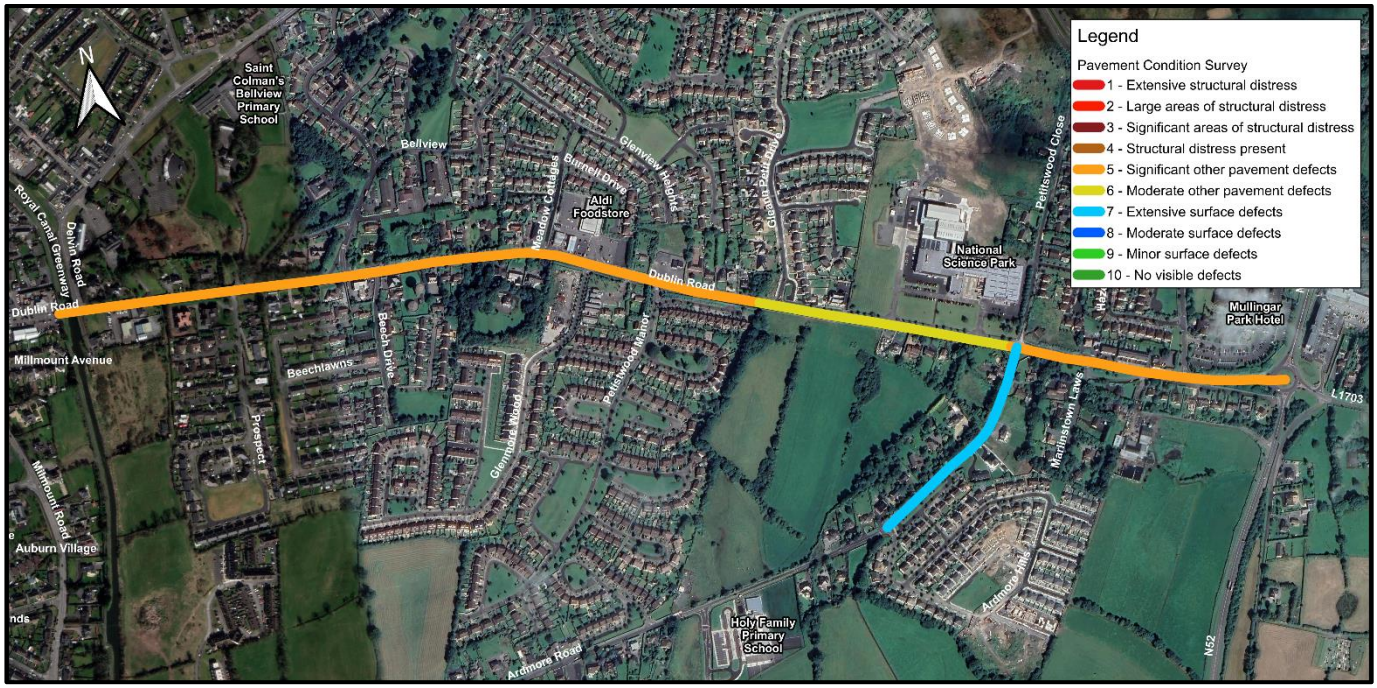
Figure 3-16 - Pavement Surface Conditions Index (PSCI)

Overall PSCI Rating	Primary Rating Indicators*	Secondary Rating Indicators*
10	No Visible Defects.	Road surface in perfect condition.
9	Minor Surface Defects[1]. Ravelling or Bleeding <10%.	Road surface in very good condition. Like new.
8	Moderate Surface Defects[1]. Ravelling or Bleeding 10% to 30%.	Little or No Other defects.
7	Extensive Surface Defects[1]. Ravelling or Bleeding > 30%.	Little or No Other defects.
6	Moderate Other Pavement Defects[2, 3, 4]. Other Cracking[2] < 20%. Sealed Cracks in Good condition. Some narrow Open Cracks[2] (≤ 12 mm). Patching in Good condition[4]. Surface Distortion[3] requiring some reduction in speed.	Surface defects[1] may be present. No structural distress[5].
5	Significant Other Pavement Defects[2, 3, 4]. Other Cracking[2] > 20%. Sealed Cracks in Fair condition. More frequent narrow Open Cracks[2] (≤ 12 mm). Patching in Fair condition[4]. Surface Distortion[3] requiring reduction in speed.	Surface defects[1] may be present. Very localised structural distress[5] (< 5 m² or a few isolated potholes) may be present.
4	Structural Distress[5] Present. Rutting, Alligator Cracking or Poor Patching for 5% to 25%. Wide Open Cracks[2] (> 12 mm) with moderate Spalling. Sealed Cracks in Poor condition. Frequent Potholes. Short lengths of Edge Breakup.	Other defects may be present.
3	Significant Areas of Structural Distress[5]. Rutting, Alligator Cracking or Poor Patching for 25% to 50%. Many Wide Cracks[2] (> 12 mm) with severe Spalling. More frequent Potholes. Continuous lengths with Edge Breakup.	Other defects may be present.
2	Large Areas of Structural Distress[5]. Rutting, Alligator Cracking or Very Poor Patching for > 50%. Severe Rutting (> 50 mm). Extensive Very Poor Patching. Many Potholes.	Pavement badly deteriorated. Very difficult to drive on.
1	Extensive Structural Distress[5]. Severe Deterioration of surface. Pavement Failure. Many large and deep Potholes. Extensive Failed Patching.	Severe Deterioration Virtually undriveable.

The pavement condition analysis was completed via visual inspection of available imagery including photos and videos taken on-site on the 21st of November 2023 and supplemented where necessary with Google Street View. A complete set of findings is provided in Appendix B.

The segments along Project 2 are rated as PSCI 5, 6 and 7, as indicated in Figure 3-17. These defects consist of cracking, ravelling, transversal cracking manhole defects, among others. Segments 1, 2 and 4 were classified as PSCI rate 5 as they show the presence of depressions, bleeding, ravelling, longitudinal and transversal cracking and reflection cracking. Segment 03 is classified as PSCI rate 6 and Segment 05 as a PSCI rate 7 which present less pavement defects as the other segments.

Figure 3-17 – Pavement Condition Index



A pavement condition survey has not been undertaken for Segment 06 as it was not initially included as part of the scheme scope and have only been later included to provide additional connection with the Royal Canal Greenway.

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 the 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

Westmeath County Council provided AtkinsReális with Automatic Traffic Counts (ATC), Junction Turning Counts (JTC), queue lengths, pedestrian counts and Origin-Destination data at several locations within the town which were carried out in May 2023. Additional ATC data and on-street parking beat data were also carried out in December 2023. To identify the baseline traffic conditions along the corridor, all of the ATCs, JTCs and pedestrian counts were used. Figure 3-18 indicates the locations of both surveys along the route corridor and Table 3-3 describes the survey types and collection times. No survey has been undertaken at Segment 06.

Figure 3-18 – Traffic Survey Location

Table 3-3 - Traffic Survey Durations and Collection Types

Count Type	Duration	Data Collected
ATC	7 days, 24 hours a day	▪ Vehicle Volumes ▪ Vehicle Speeds ▪ Vehicle Classifications
JTC	1 day, 12 hours (07:00 to 19:00)	▪ Vehicle turning volumes ▪ Cyclist turning movements
Pedestrian counts	1 day, 12 hours (07:00 to 19:00)	▪ Pedestrian volumes within the designated crossing ▪ Pedestrian volumes passing past the designated crossing but not using

3.2.6.1 Traffic Conditions

Traffic conditions along the route corridor were obtained from the Automatic Traffic Count (ATC) data carried out by IDASO in December 2023, for 24 hours a day for 7 days from Monday the 4th to Sunday the 10th. Data was obtained at the four locations indicated in Figure 3-19 and are displayed in detail in Figure 3-20. The data presented in this section is representative of the average data for the weekdays, Monday – Friday, as it represents a more robust analysis.

Traffic volumes are higher at ATC 03, located at Segment 04, as it connects to the N52 and the N4 and the lowest volume of traffic was recorded at Segment 05, with an average of over 12,000 and 5,500, respectively. Regarding HGV volumes, the lowest percentage was recorded in ATC 03, located in Segment 04, with an average of 3.5% of HGVs recorded throughout the 7-day period. The highest percentage was recorded on Segment 01, where over 5% of the total vehicles are HGVs.

Figure 3-19 – Vehicle Volumes by Classification

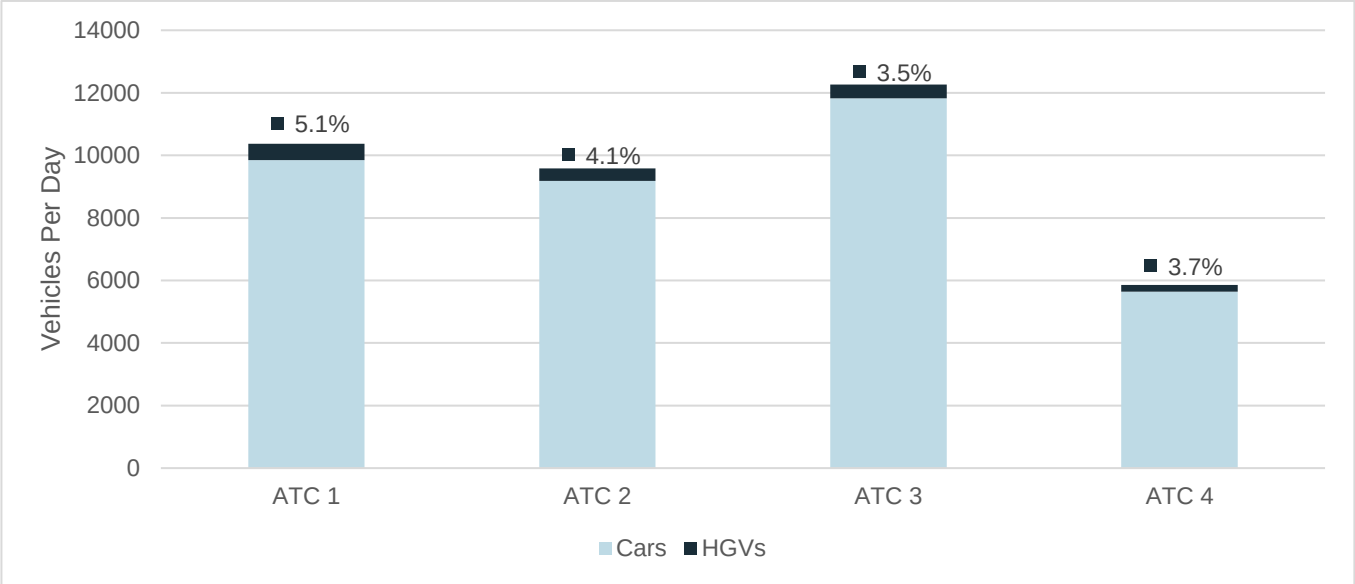


Figure 3-20 shows the traffic volumes at each ATC location along the corridor by direction. Northbound and Westbound traffic were observed to be at similar levels throughout the different segments, apart from Segment 05, where most vehicles tend to travel southwards, towards the town.

Figure 3-20 – Vehicle Volumes by Classification

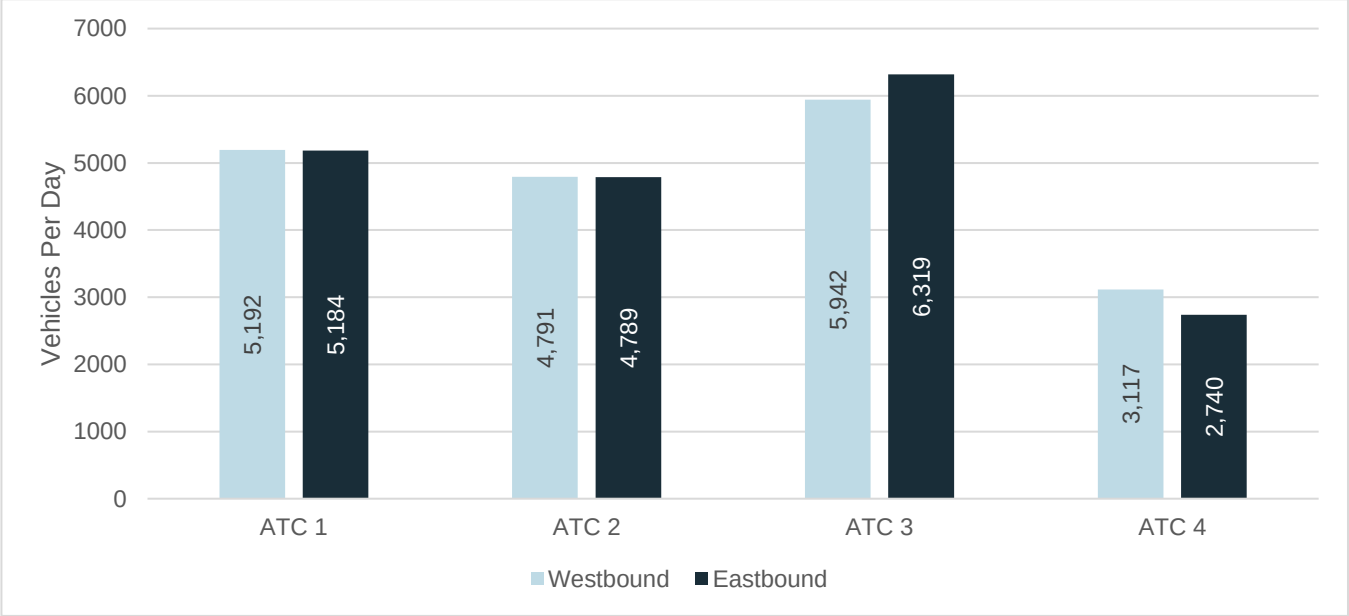


Table 3-4 shows the speed counts along the corridor. The highest average speed was observed at ATC 02, located at Segment 03, and it is higher than the posted speed limit of 50km/h. The lowest speed was recorded at Segment 05, as average of 45km/h.

Table 3-4 - Typical Speeds

Location	Direction	Average Speed (km/h)	85th Percentile Speed (km/h)
ATC 01 – Segment 01	Westbound	51.31	62.08
	Eastbound	48.93	57.80

Location	Direction	Average Speed (km/h)	85th Percentile Speed (km/h)
ATC 02 – Segment 03	Westbound	56.23	64.81
	Eastbound	59.08	68.68
ATC 03 – Segment 04	Westbound	46.16	53.46
	Eastbound	44.93	52.26
ATC 04 – Segment 05	Northbound	44.79	52.27
	Southbound	45.93	52.26

3.2.7 Utilities

Existing utility information was collected from relevant providers, shown in Table 3-5. Maps of the available utility information are provided in Appendix C.

Table 3-5 - Existing Utilities in Mullingar 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

3.2.8 Public Transport

There are several bus routes operating in Mullingar town, offering connection to Dublin city, Dublin Airport, Sligo, Athlone, Drogheda, Dundalk among other towns. The services are indicated in Figure 3-21.

The main bus service operating in Mullingar is the 115, operated by Bus Éireann. This bus route connects Mullingar to Dublin City, with stops in Kinnegad, Enfield, Kilcock and Maynooth with services every 30 minutes in the AM and PM peaks and on an hourly basis the rest of the day, with a total of 19 services leaving Mullingar towards Dublin and 20 services from Dublin to Mullingar from Monday to Friday. Route 115C has only 3 services each way throughout the day and connects Mullingar to Kilcock via Longwood, Killucan and Summerhill.

Route 23 connects Mullingar to the Dublin Airport and to Sligo. The route is operated by Expressway with 5 services each way spread out throughout the day from Monday to Saturday, with the first service at 03:00 towards the airport and the last service at 00:40 towards Sligo.

Bus route 190, operated by Bus Éireann, links Drogheda to Athlone, with stops in Mullingar. The route has 20. services a day both ways from Monday to Friday, approximately at every 2 hours.

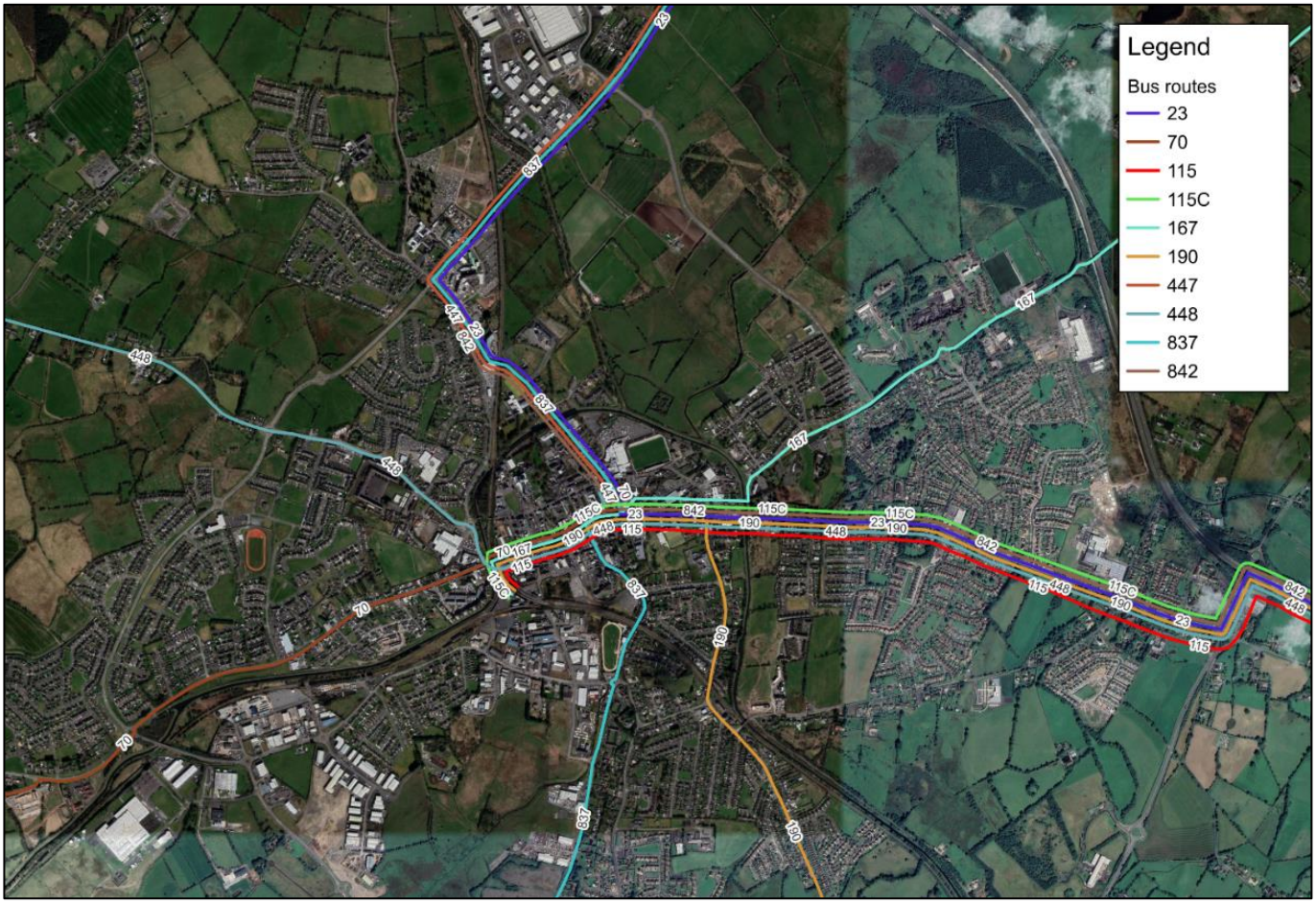
Another bus service operated by Bu Éireann, bus route 167, provides linkage between Mullingar and Dundalk, with connections in Louth and Ardee. The service is operated 8 times a day, with 4 services each way from 06:00 to 20:00.

Route 70 connects the two largest towns in Co. Westmeath, Mullingar and Athlone, 4 times a day in each direction from Monday to Friday and is also operated by Bus Éireann.

Routes 447 and 448 offer connections to villages located adjacent to Mullingar. Both routes operate only once a week with only one service in each direction. Route 447 operates on Thursdays and connects Mullingar to Finea Village and route 448 operates on Fridays only to and from Shandonagh.

Mullingar town is also serviced by 2 private bus companies, Slieve Bloom Coaches and M4 Direct. Slieve Bloom Coaches operate bus route 837 and provides connection between Mullingar and Tullamore with 4 services a day in each direction from 07:00 to 19:00 Monday to Friday. The M4 Direct service, route 842, is from Ballymahon to Dublin Airport, also with 4 services a day each way.

Figure 3-21 – Bus Services in Mullingar

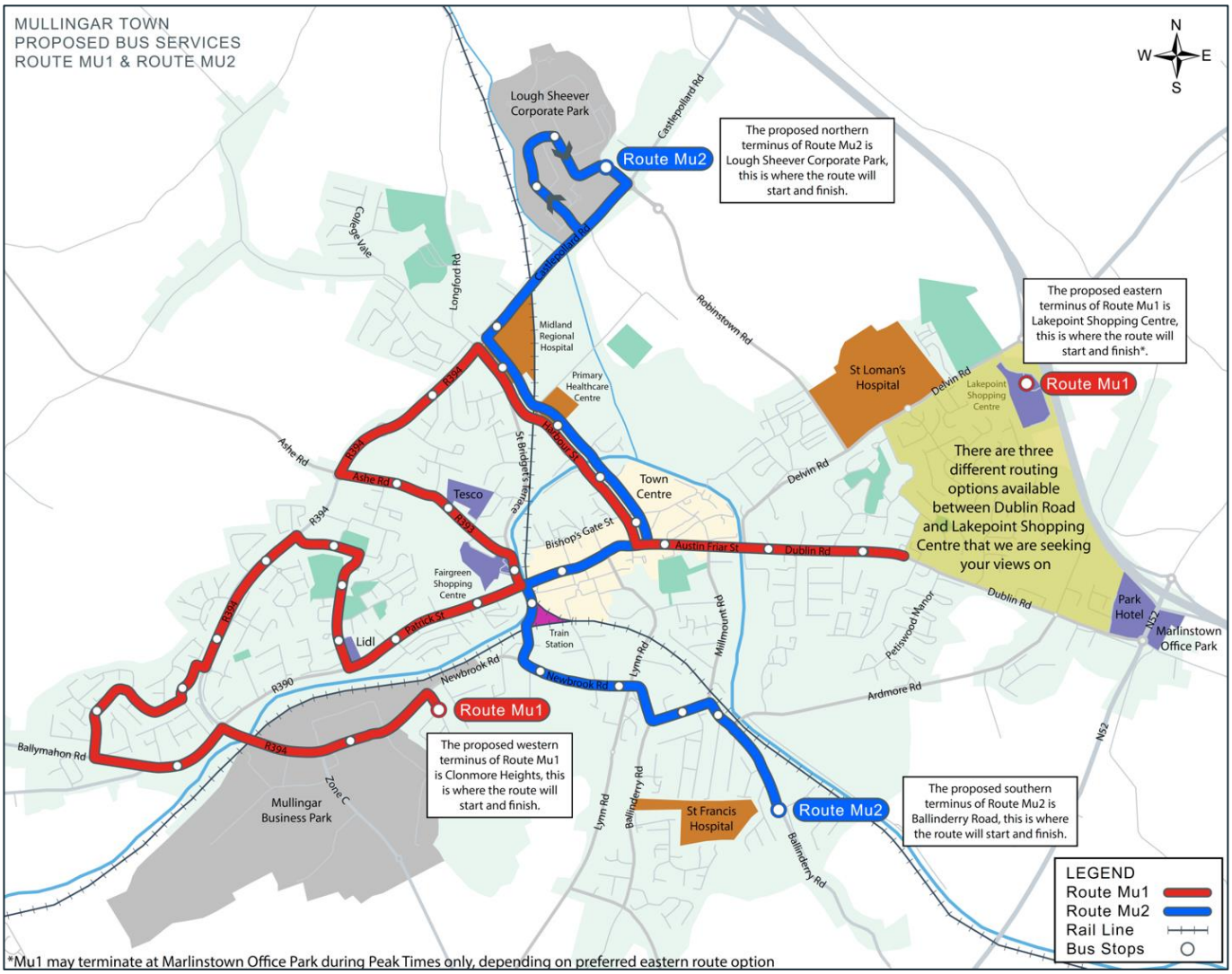


Mullingar has a train station with approximately 9 daily services in each direction from Sligo to Dublin Connolly and from Longford to Pearse Station.

The NTA, alongside Westmeath County Council, are proposing town bus services in Mullingar as the town has grown significantly over the last number of years and the introduction of a local bus service would ensure the sustainable development of the town into the future. Two bus routes are proposed, MU1 and MU2, as indicated in Figure 3-22. Route MU1 would connect the Mullingar Business Park on the west to the Lakepoint Shopping Centre/Marlinstown Park on the east. Route MU2 would link the Lough Sheever Corporate Park to the northwest to Ballinderry Road on the southeast, with stops at the Midlands Regional Hospital.

The NTA currently plans to tender for and commence this service in 2025.

Figure 3-22 – Proposed Local Bus Services in Mullingar



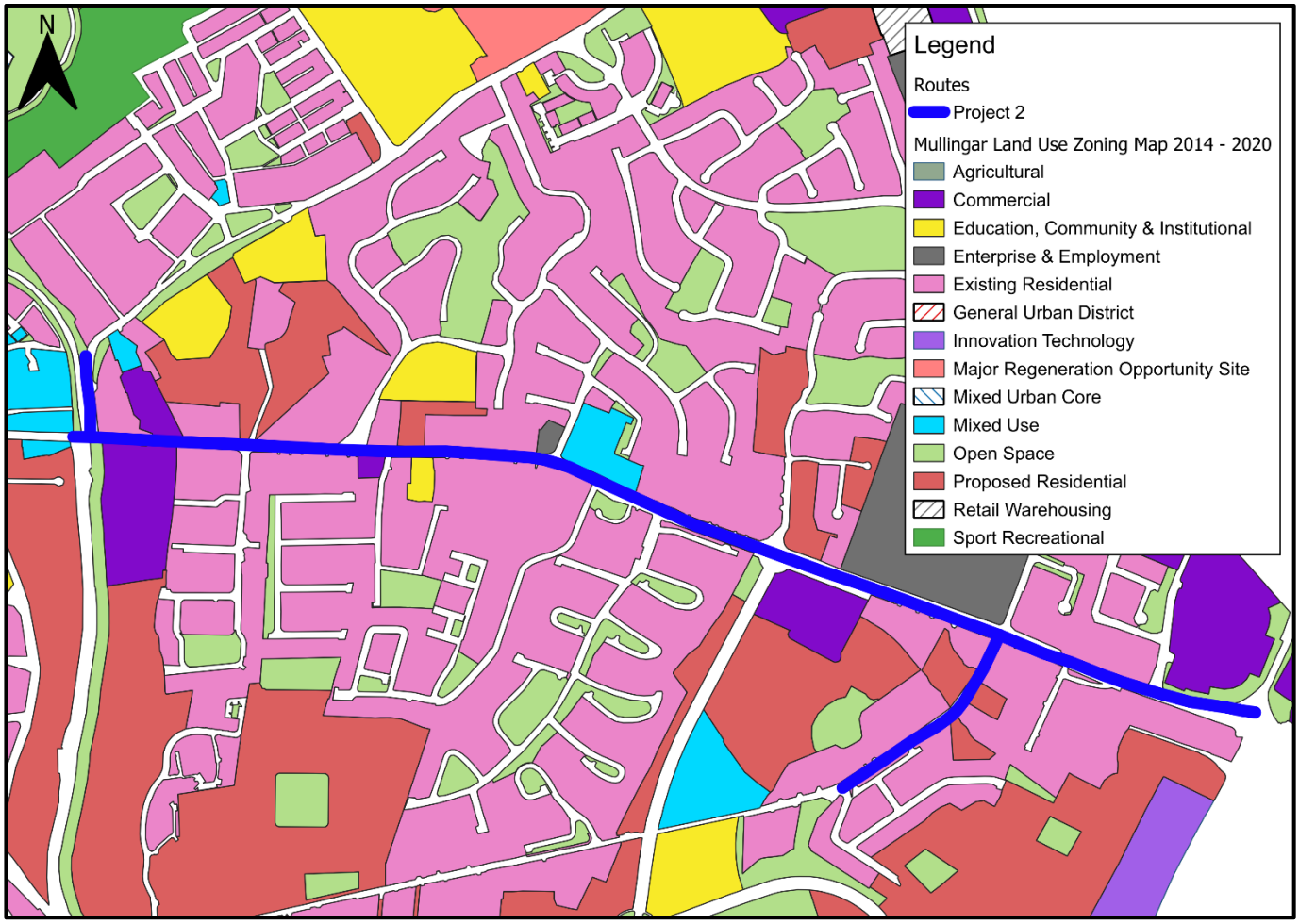
3.2.9 Land Use Zoning

The Land Use Zoning Map for Mullingar was consulted to obtain information on existing land use zoning and to obtain information of main trip generation areas within the town. Figure 3-23 shows the Mullingar Local Area Plan 2014 – 2020 (extended) zoning map.

Land-uses along Project 2 primarily comprise existing residential, with some areas of commercial, proposed residential, enterprise & employment and mixed use.

The major destinations include Bellview Clinic, Aldi Food store, Aspire Training, National Science Park and Mullingar Park Hotel.

Figure 3-23 – Mullingar Land Use Zoning Map



3.3 Disability Audit

The following sections describe the findings at the major junctions along the corridor regarding the existing conditions for visually and mobility impaired users.

3.3.1 Dublin Road/Delvin Road Signalised Junction

The existing conditions at the Dublin Road/Delvin Road junction are described below:

- The junction provides signalised crossing points on all arms and caters for all desire lines for pedestrians. All crossings have tactile paving and drop kerbs.
- One of the crossing points is positioned at the Royal Canal Greenway access to provide continuous movement for users of the greenway.
- The section of footpath on the southern side is below appropriate standard in width.
- It is noted that, previously, the crossing point on the western arm was at the bridge and it was moved west to be at the Royal Canal Greenway access, however, the tactile paving was not removed from the initial location, which might confuse visually impaired users that are not familiar with the updated crossing.

Figure 3-24 – Dublin Road/Delvin Road Junction (Google Maps)

3.3.2 Dublin Road/Bellview Priority Junction

The existing conditions for visually and mobility impaired users along the Bellview estate junction are not in accordance with DMURS and other design standards. The following issues have been identified:

- The junction provides an additional slip lane for vehicles coming from the western side. The radius of the lane is excessive and allows vehicles to enter the junction at speed.
- There are no dedicated crossing facilities at the junction. There is one raised table located on the Bellview arm of the junction that is used as a crossing facility as it is flush with the adjacent footpaths, however, as it is not an actual crossing facility and may pose risks to all users.
- The cycle lane on the eastbound side of the road terminates at the junction and the footpath turns into a shared path for cyclists and pedestrians. There is no tactile paving or appropriate signage to indicate the presence of cyclists on the path.
- Footpaths are below standard, especially on the western arm of the junction. The footpaths are also not in good condition.

Figure 3-25 – Dublin Road/Bellview Junction (Google Maps)

3.3.3 Dublin Road/Aldi Food Store/Glenmore Wood Signalised Junction

The following have been observed at the signalised junction connecting Dublin Road to the Aldi Food Store and Glenmore Wood estate:

- Three out of the four arms of the junction have pelican crossings. The crossings are at road level and have dropped kerbs and tactile paving.
- On the south side of the road, a shared path is provided, and appropriate tactile paving is located near the crossings to indicate the share path to visually impaired users. However, the shared path does not have sufficient width according to the CDM.
- The eastern arm of the junction does not provide any crossing facility and users wishing to cross the road at this location have to do so following the three crossings at the junction, which greatly increases the travel time.
- The northern arm, the access to Aldi, has a slip lane into Dublin Road. The slip lane layout adds an extra crossing point for pedestrians, therefore, also increasing the travel time.
- Footpaths are provided in accordance with standards and are generally in good condition.

Figure 3-26 – Dublin Road/ Aldi Food Store/Gleenmore Wood Junction (Google Maps)

3.3.4 National Science Park Roundabout

The National Science Park roundabout does not offer appropriate facilities for mobility and visually impaired users. The following issues have been identified:

- The junction has one signal-controlled crossing facility on the eastern arm and one uncontrolled crossing on the northern arm. The other two arms do not have any crossing facilities.
- Pedestrian desire lines are not considered at the junction and pedestrians are likely to cross at unsafe locations.
- Footpath widths are also not in accordance with DMURS at several locations at the junction and are also not in good standing quality.
- Entry lanes and circulatory lanes at the roundabout are too wide which allow vehicles to travel at excessive speeds with little deflection.

Figure 3-27 – National Science Park roundabout (Google Maps)

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

Other transport infrastructure currently being developed in Mullingar that could influence/impact the proposed scheme are outlined below and discussed in further details in the following sections.

- Mullingar Town Bus Services
- Footpath and Cycle path works at Ardmore Road (Phase 3)
- Pedestrian and Cycle Bridge at Saunders Bridge.

3.4.1.1 Mullingar Town Bus Services

As mentioned in Section 3.2.8, there are plans to implement two local bus services, MU1 and MU2, in Mullingar. The town has experienced growth over the past years and the implementation of a local bus service is required to ensure sustainable development into the future. The National Transport Authority (NTA), in collaboration with Westmeath County Council, is delivering the project.

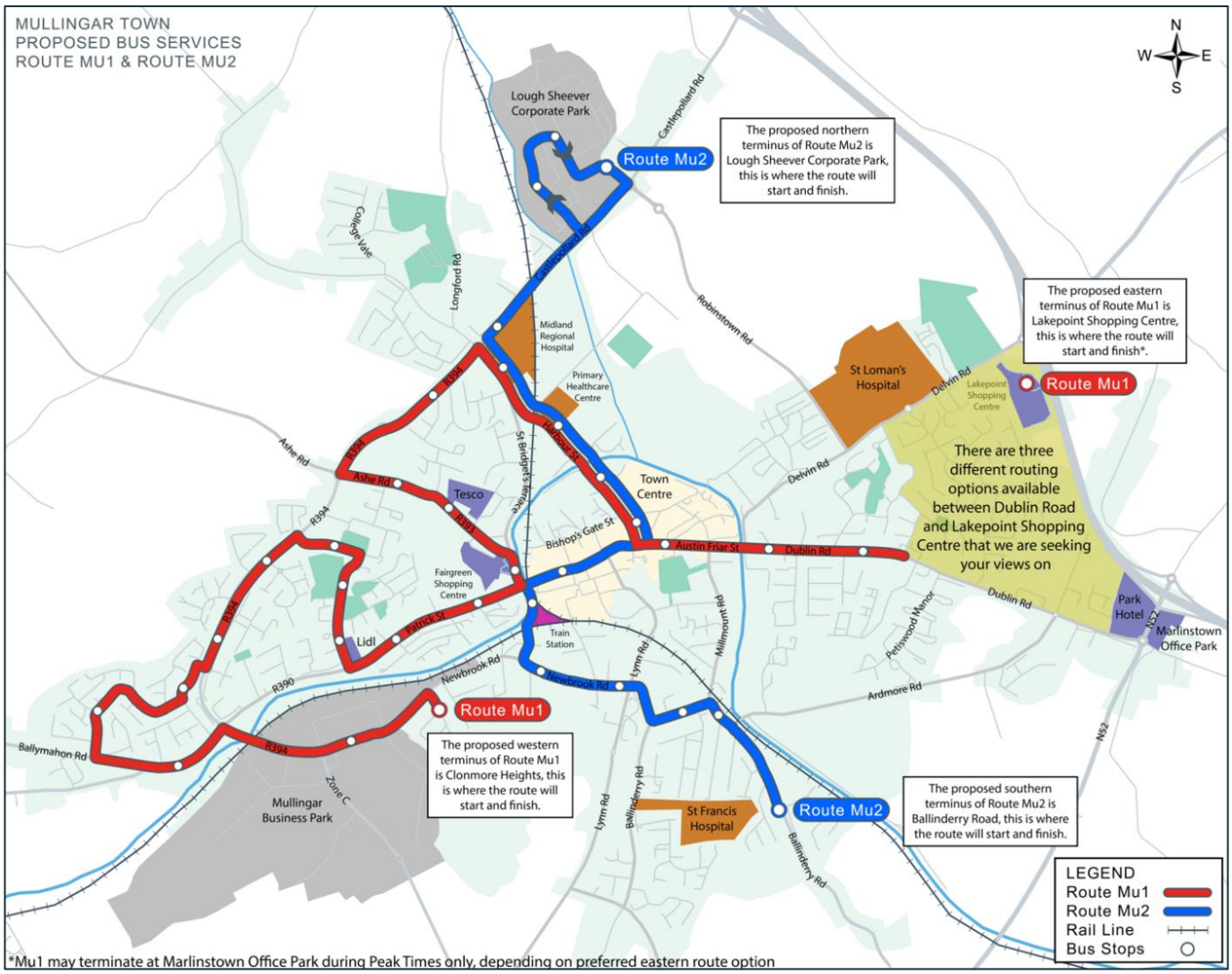
The proposed buses would be low-floor accessible urban style buses that would run on a 30-minute interval from 07:00 to 22:00 from Monday to Saturday and between 09:00 to 22:00 on Sundays. Appropriate bus stops would also be provided at approximately 400m intervals so the catchment area is maximised, with bus shelters placed at specific locations.

A public consultation was held in early 2021 where the proposed routes were shown, outlined in Figure 3-28. At the public consultation, the public was asked about the terminus location of route MU1. Three routes were proposed:

- Option 1: From Dublin Road through Lakepoint Park and terminating at Lakepoint Shopping Centre. At peak times, the route would terminate at the Marlinstown Office Park.
- Option 2: From Dublin Road to Lakepoint Shopping Centre through Bellview House. This option would also terminate at Marlinstown Park at AM and PM peaks.
- Options 3: From Dublin Road through the N52 and the N4 to Lakepoint Shopping Centre. This is the only option that serves the National Science Park and Mullingar Park Hotel; however, it does not connect to St. Loman's Hospital.

The NTA plans to tender for the works and commence the services in 2025.

Figure 3-28 – Proposed Local Bus Services in Mullingar

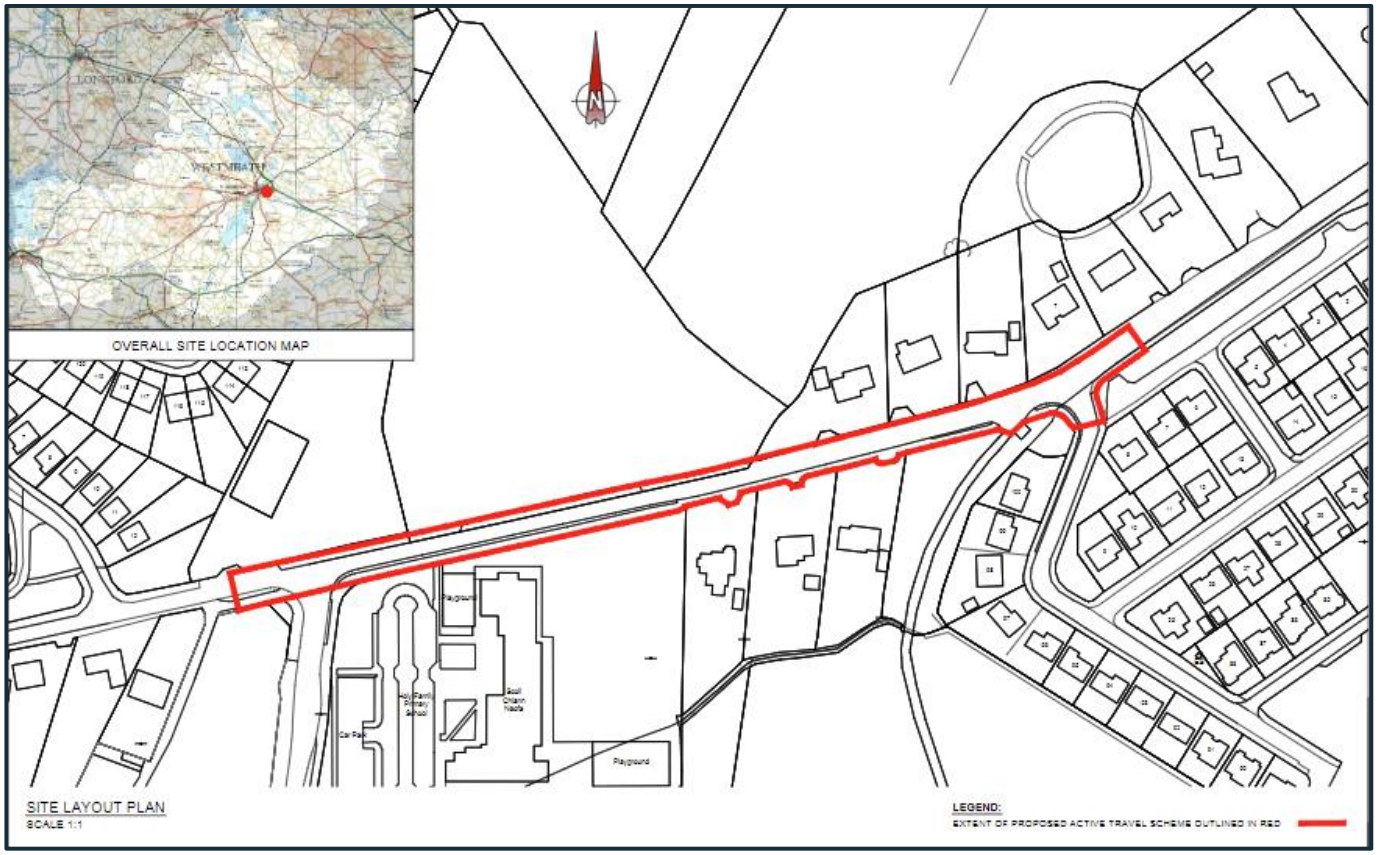


3.4.1.2 Footpath and Cycle Path Works at Ardmore Road (Phase 3)

Works have recently completed for Phase 3 of the Footpath and Cycle Path works at Ardmore Road. The scheme extends from east of the Ardmore Close entrance access to the east of the Ardmore Hills junction, along Ardmore Road, indicated in Figure 3-29.

The scheme improves active travel facilities along the road by providing a 3m shared active travel facility on the northern side of the road, where there were no existing facilities, segregated from vehicular traffic. On the southern side, from the Holy Family National School to the Ardmore Hill junction, the existing shared active travel facility will be retained. To the east of the junction with Ardmore Hills until the boundary of the scheme, improved facilities have been implemented, including a new controlled zebra crossing provided to the east of the junction with Ardmore Hills.

Figure 3-29 – Site Location of the Footpath and Cycle Path Works at Ardmore Road (Phase 3)

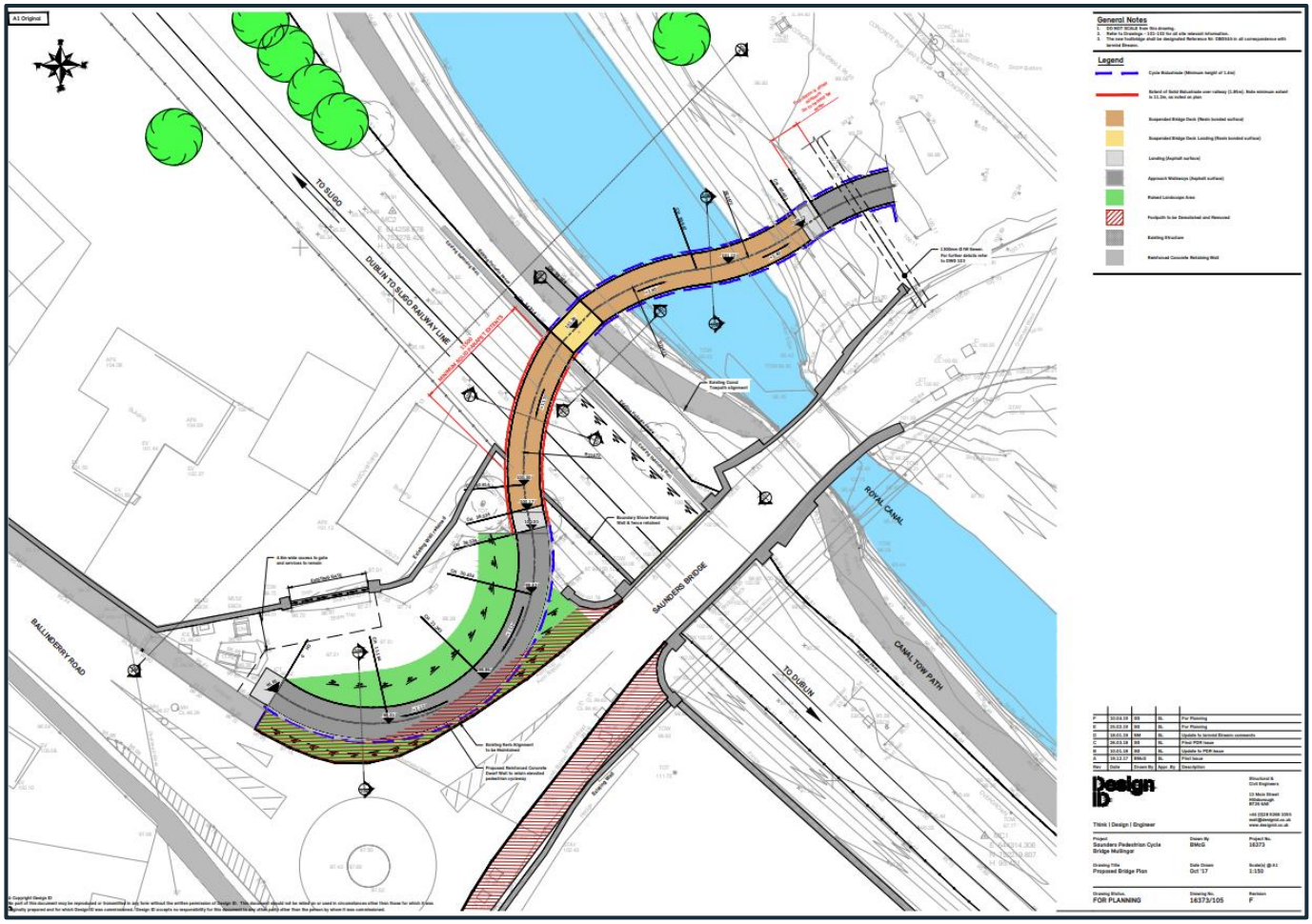


3.4.1.3 Pedestrian and Cycle Bridge at Saunders Bridge

The proposal includes the construction of a pedestrian and cyclist bridge over the Royal Canal Greenway and the Dublin-Sligo Railway line, at the Saunders Bridge, Ardmore Road. The scheme includes a suspended deck and landing, bridge supporting infrastructure, approach walkways/cycle ways, revised landscape area, cycle balustrades and ancillary works. Figure 3-30 shows the proposals.

The scheme has now received full planning and technical approval. The bridge construction is currently at tender stage.

Figure 3-30 – Proposed Saunders Bridge Pedestrian Cycle Bridge



3.4.2 Funding

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

3.4.3 Construction Phasing

As the route corridor is part of the Pathfinder Programme, construction is required to be completed by the end of 2025.

3.4.4 Technical Standards

The network will be designed to current design standards outlined 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 2021 – 2027 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 affect any protected site.

3.4.5 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 site of the proposed development is a sensitive area with respect to archaeology and cultural heritage as Project 2 cross several Sites and Monuments Records (SMRs), Zone of Notification (ZoNs), National Inventory of Architectural Heritage (NIAHs) and Record of Protected Structures (RPS). An appropriately qualified archaeologist / cultural heritage specialist will be appointed as the project progresses.
- Project 2 borders the Royal Canal. The Brosna River is located ca. 340m from Project 2. Mitigation measures will be implemented during construction stage to protect these watercourses.
- Groundwater is potentially shallow within the vicinity of Project 2 and it is therefore recommended that a Ground Investigation is undertaken as the project progresses and relevant migration measures developed / implemented to minimise / avoid impacts on groundwater resources which will be documented in a Construction Environmental Management Plan (CEMP) which will be prepared for the construction stage.
- The proposed project should be subject to the Appropriate Assessment screening process following completion of scheme design.
- A Pre-Construction Invasive Plant Species survey is recommended to be undertaken by an appropriately qualified ecologist within the optimum seasonal window.
- The proposed scheme crosses Royal Canal proposed Natural Heritage Area. Construction stage mitigation measures are recommended to be developed for the protection of this nationally important area.
- Considering the small scale of the project and that it will be undertaken almost entirely on existing hardstanding surfaces of public roadways and pathways, adverse impacts to features of high ecological value are not considered likely.
- A review of GSI (2024) indicates that there are 2 Geological Heritage Areas (GHA) within 5km of Project 2. A hydrogeological connection exists to Mullingar Bypass and mitigation measures will be implemented during construction to minimise / avoid impacts on these areas.
- From a review of aerial imagery (Bing Maps, 2024), there are a number of trees located along Projects 2. It is recommended that an Arboricultural Survey is undertaken as the project progresses.
- It is recommended that a landscape architect is consulted regarding the potential for landscape impacts along the scheme and should be involved in the design of the proposed project should it be required.
- Given the urban nature of Project 2, 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 which will be documented in a Construction Environmental Management Plan (CEMP) which will be prepared for the construction stage.
- High Radon levels have been reported in the area. Given the nature of the development, impacts from Radon do not need further consideration.

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.

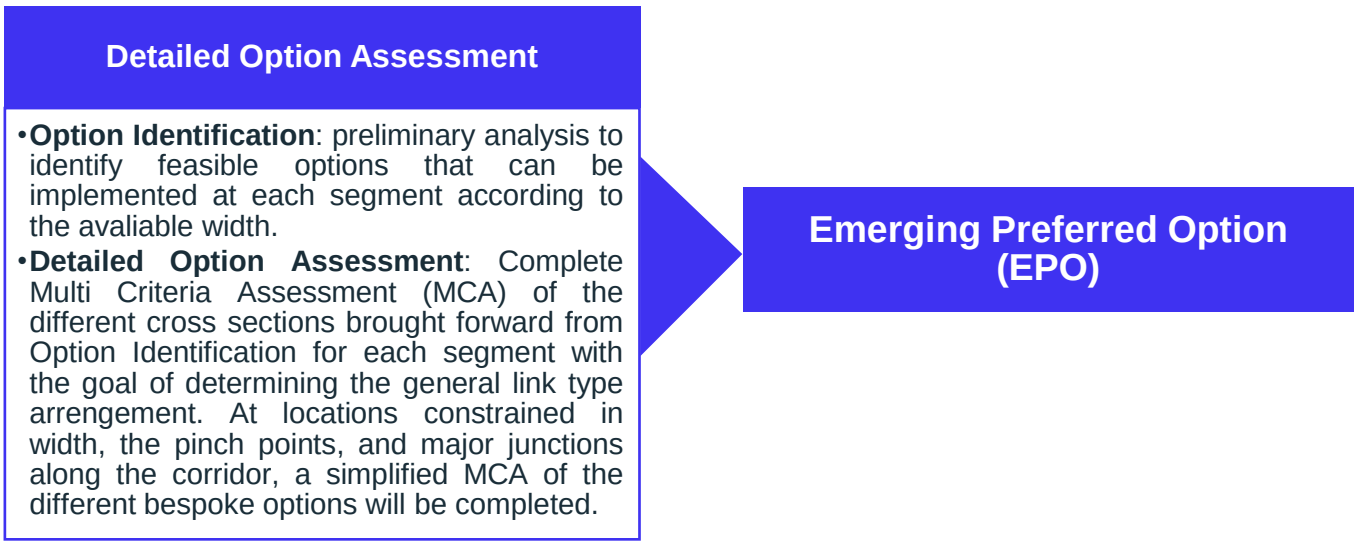
4. Option Selection Methodology

4.1 Overall Approach

The approach used to identify the Emerging Preferred Option for the Mullingar Active Travel 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 project of the Mullingar Active Travel Bundle. The appraisal will be completed in only one stage, the Detailed Option Assessment, which aligns with the TAF. The Detailed Option Assessment will comprise the assessment of the link types as well as the pinch point locations and major junctions, where bespoke options need to be considered.

Figure 4-1 – Option Selection Methodology



4.2 Detailed Option Assessment Methodology

The Detailed Option Assessment process focuses on evaluating link types, pinch points and major junctions. The aim of this process is to develop and investigate the reasonableness of alternative options based on other route development principles.

The initial process of the Detailed Option Assessment is to identify possible link type options for each segment based on the available width, obtained from topographical survey data and aerial imagery. This is known as the “Option Identification” stage.

The following step of the Detailed Option Assessment is the Detailed Option Assessment. The methodology for the Detailed Option Assessment process focuses 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 along with schedules of rates published by the NTA.
- Consideration to local environment and climate change aspects associated with each option assessed, based on the principles outlined in the TAF.

The Detailed Option Assessment MCA considers six of the seven TAF criteria, obtained from the Transport Appraisal Framework Module 7.0 Detailed Guidance on Appraisal Techniques, published by the Department of Transport, listed below. The Climate Change criteria has been screened out 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 and 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 Detailed Option Assessment. The sub-criteria and key impacts to be measured have been developed by AtkinsReális based on the TAF publication, the NTA PAG, project objectives and the principles outlined above. Therefore, the outcome of the Detailed Option assessment is to compare the options brought forward from the Option Identification against project objectives through a detailed and rigorous assessment process in order to identify the Emerging Preferred Option for the scheme.

Table 4-1 - 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 Detailed Option Assessment at Pinch Points and Major Junctions

At locations constrained in width and 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 – Detailed Option Assessment for Pinch Points and 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
	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 Detailed Option Assessment 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 each segment is then determined based on which option is most advantageous compared to others. Consistency across adjacent segments will also be taken into account 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 December 2023 and the NTA Cycle Propensity Tool[1] for the Eastern Region were used. The NTA cycle propensity tool provides a reference scenario and two future growth scenarios, i.e., the high propensity and the high propensity with e-bikes scenarios. The reference scenario is the NTA model for 2028 which considers cycling attitudes not significantly changed from the present. The two future growth 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.

Traffic volumes were obtained from Automated traffic counts (ATC) undertaken at four locations along the route. According to the ATCs, the busiest segment is Segment 04, located between the National Science Park roundabout and Marlinstown Roundabout, with a total of 13,742 vehicles recorded travelling along the road on Friday the 8th of December 2023. The reference scenario in the cycle propensity tool zone located along Segment 04 indicates that 89.7% of the trips along the area comprise of motorised vehicles and that 1.4% 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 15,320 users travel along the road, be it by private cars, HGVs, bicycles or on foot. Based on the number of cyclists representing 1.2% of the total trips along the segment, it's expected that a total of 16 cyclists travelled 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 1.2% 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 628 users during a 24-hour period.

At peak hours, Segment 04 registered a maximum of 1,163 vehicles between 15:00 and 16:00 on Friday the 8th of December, which represents 8.5% of the total vehicles during the 24-hour period. When translating the numbers presented above to the peak period, the maximum number of cyclists expected is approximately 53 cyclists per hour. As Segment 04 is the busiest segment along the corridor, and the maximum number of cyclists expected based on the cycle propensity tool is 56 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.

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

Figure 5-1 – Cycle Propensity Scenario Tool at Segment 04

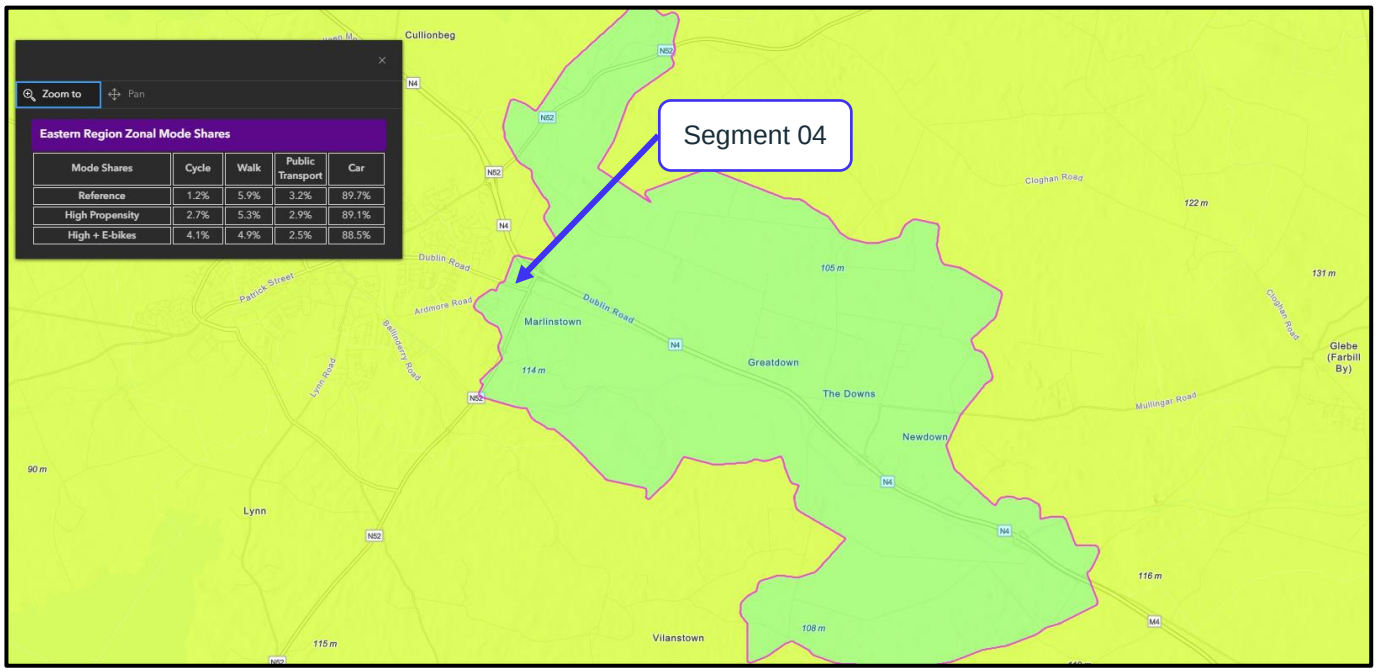


Table 5-1 - Cycle Flows calculations

	ATC values	Total trips based on the Cycle Propensity Tool Reference Scenario	No. of cyclists based on the Reference Scenario	No. of cyclists based on the High Propensity with E-bikes
24-hour	13,742	15,320	183	628
Peak hour	1,163	1,297	16	53

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.

5.3 Link Types Options

Based on the constraints identified for Project 2, 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 topographical 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:

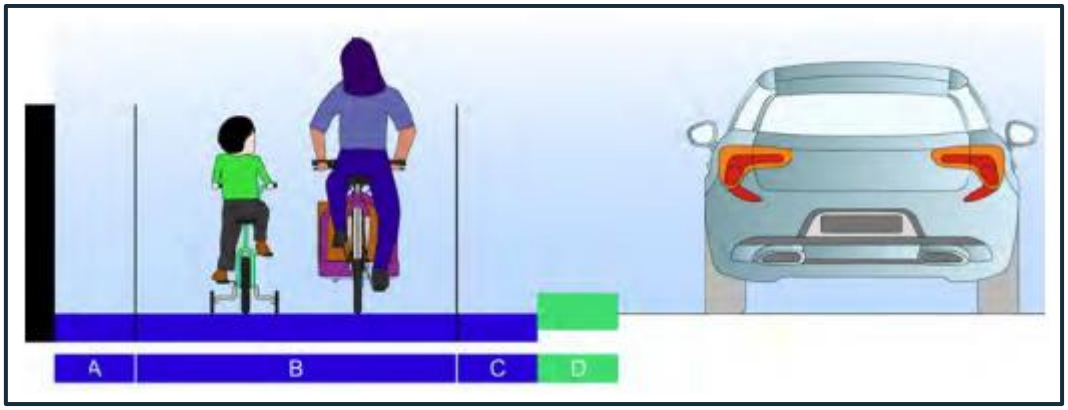
- Standard Cycle Track
- Stepped Cycle Track
- Protected Cycle Lanes
- Mandatory Cycle Lane
- Shared Active Travel Facilities
- Cycling in Mixed Traffic.

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.

The width of the cycle facility is based on four elements: inside clearance (A), central width (B), outside clearance (C) and buffer (D), shown in Figure 5-2. The inside (A) and outside (C) clearance are the spaces at the edge of the cycle facility which the width is based on the height of the kerb used; the central width (B) is the actual space used by cyclists and it is determined by the volumes of cyclists and the facility type; and the buffer (D) is a horizontal separation between the cycle facility and the traffic, which is mandatory for two-way cycle tracks and is based on the speed limit of the road.

The footpath will be designed in accordance with Section 4.3.1 of DMURS. The desirable minimum width will be considered with 2m wide, and the absolute minimum width is 1.8m, considered by DMURS the minimum comfortable width for two wheelchairs to pass one another. The footpaths will be raised 60mm from the cycle track, which according to the CDM, does not require additional inside clearance (A) and are the preferable way to detect a separation between facilities.

Figure 5-2 – Elements of a Cycle Facility



5.3.1 Standard Cycle Track

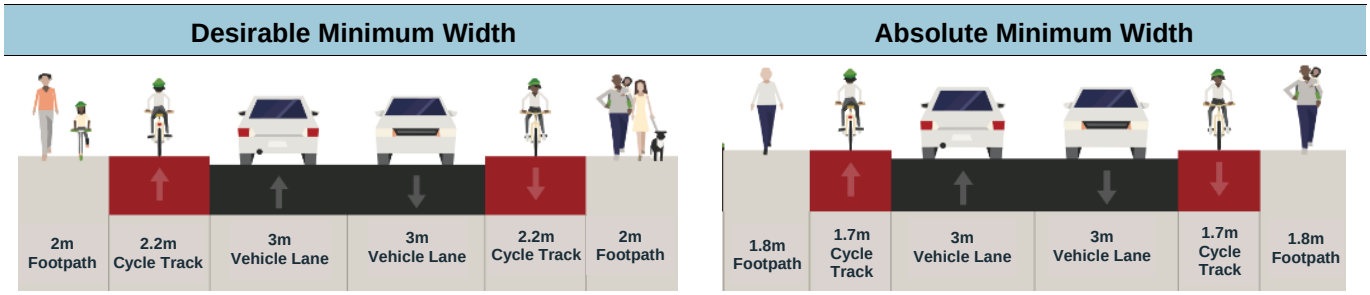
These options, detailed below, offer the highest level of service in terms of safety, comfort and quality for pedestrians and cyclists (active modes). These options can typically only be provided by traditional build construction methods, as they would require the realignment of kerb lines, construction 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 5-3 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 and no buffer (D). 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, segregated to the cycle track by a 60mm high kerb, and a carriageway of 6m wide inside the town centre and 6.5m wide in the remaining areas 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 wide (B), no inside clearance (A), 0.2m outside clearance (C) and no buffer (D), which brings the cycle facility to 1.7m in each direction. The footpath width for the absolute minimum options would have 1.8m, which will be raised 60mm above the cycle track, and the carriageway would be similar to the carriageway described above, 6m in the town centre and 6.5m elsewhere. The widths for this option are considered to provide the minimum level of service in terms of pedestrian comfort and safety.

Figure 5-3 – One-Way Cycle Tracks



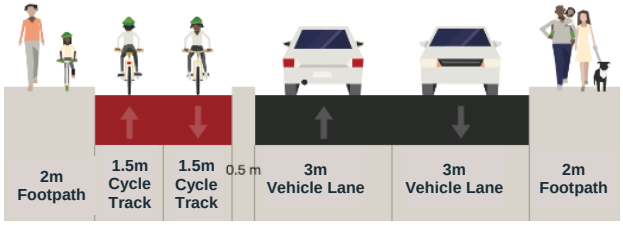
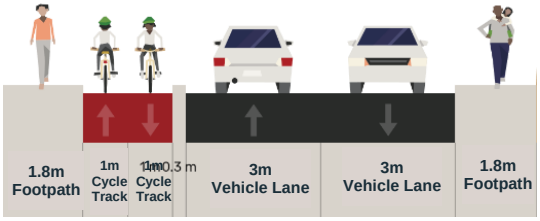
5.3.1.2 Two Way Cycle Track

Figure 5-4 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 at a road with a speed limit of 50km/h, the desirable minimum width according to the CDM is 0 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 or 6.5m, 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 6-6.5m 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.

Figure 5-4 – Two-Way Cycle Tracks

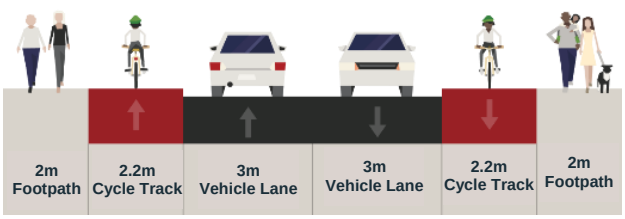
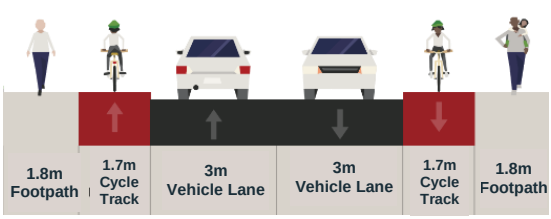
Desirable Minimum Width	Absolute Minimum Width
	

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 a 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) is considered. The absolute minimum width is 1.7m, comprising of 1.5m central width (B) and 0.2m outside clearance (C). Figure 5-5 illustrates both options. The road carriageway and footpaths follow DMURS and are 6-6.5m and 1.8-2m, respectively.

Figure 5-5 – Stepped Cycle Tracks

Desirable Minimum Width	Absolute Minimum Width
	

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, discreate 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 was considered to be 2.40m, which comprises of 0.20m inside clearance (A), 2.0m central width (B), 0.2m of outside clearance (C) and no buffer (D). 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).

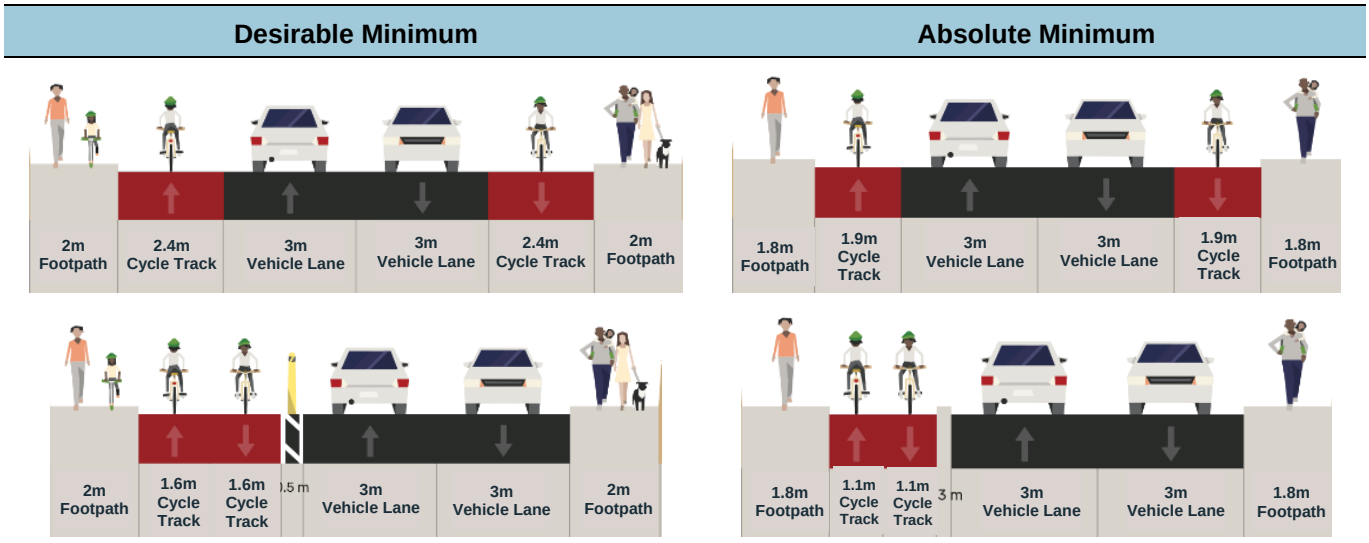
For two-way cycle facilities, the desirable minimum width considered is 3.70m (0.20 (A), 3.0 (B), 0 (C) and 0.5 (D)) and 2.50m for the absolute minimum (0.20m (A), 2.0m (B), 0m (C) and 0.3m (D)).

Figure 5-6 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 6.5m elsewhere.

These widths are indicative only and vary depending on 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 Departure from Standard is required if two-way vehicular traffic flows are higher than 400 PCU/h.

Figure 5-6 - Types of Protected Cycle Lanes



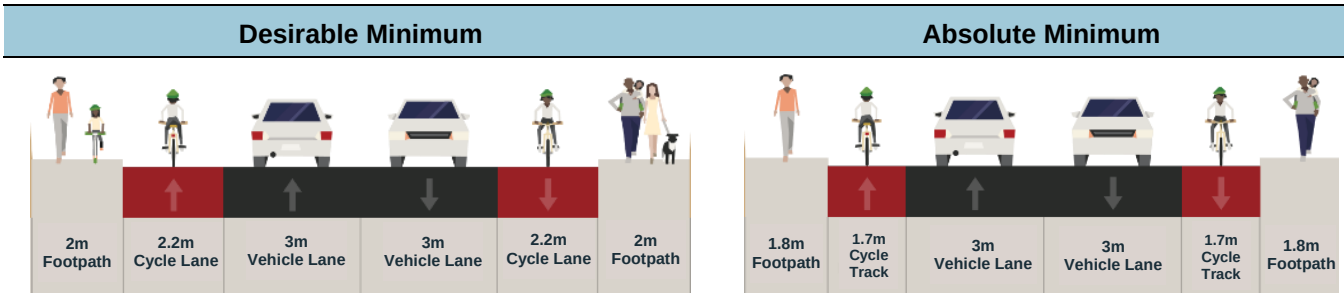
5.3.4 Mandatory Cycle Lanes

Mandatory cycle lanes do not provide physical separation between cyclists and motorized traffic. The separation between cyclists and cars is achieved by only continuous white lines and can be perceived as not safe enough for less confident users. Table 2.1 of the CDM states that when traffic volumes are over 400 pcu/hour on a 50km/h road, mandatory cycle facilities are not recommended as it is unlikely to be suitable for all users and Departure from Standard is required. This option has not been considered for two-way cycle facilities as the CDM states that cycle lanes can only be provided for one-way facilities.

The desirable minimum width for mandatory cycle lanes was considered to be 2.20m, which provides an inside clearance (A) of 0.20m and a central width (B) of 2.0m. The absolute minimum width is 1.70m, with an inside clearance (A) of 0.20m and a central width (B) of 1.5m. As the cycle lanes do not provide any physical separation between the cycle facility and the road carriageway, no outside clearance (C) and buffer (D) have been considered. Footpaths are in accordance with DMURS and are 2-1.8m and the road carriageway is 6-6.5m.

This option can be provided by both traditional and rapid build methods; however, rapid build can only be provided where the width from kerb-to-kerb is sufficient to allow for the installation of the cycle facility without the requirement of changes to the kerblines. Figure 5-7 illustrates the desirable and absolute minimum cycle lane cross-section arrangements that can be considered.

Figure 5-7 - Types of Mandatory Cycle Lanes



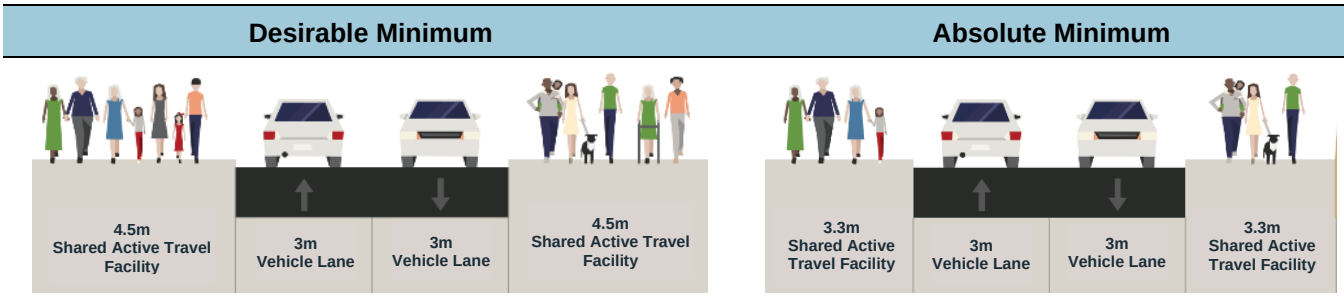
5.3.5 Shared Active Travel Facilities

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 5-8 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 4.5m for the desirable minimum (4.0 for central width B and 0.5m for buffer D) and 3.3m for the absolute minimum width (3.0m B and 0.5m D). The buffer has been included as in some instances the shared active travel path will be used as a two-way cycle facility. The carriageway is considered 6.0m in the town centre areas and 6.5m in 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.

Figure 5-8 - Types of Shared Active Travel Facilities Provision



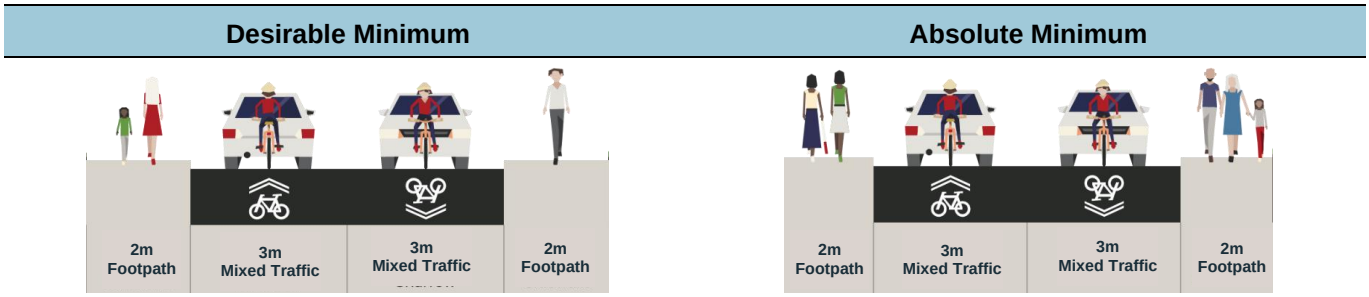
5.3.6 Cycling in Mixed Traffic

Mixed traffic provision does not provide any separation or segregation between cyclists and traffic, and it is only suitable for roads with low volumes of traffic, such as residential streets, local roads and rural lanes. Rapid build construction 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 5-9 illustrates the desirable and absolute minimum mixed traffic cross-section arrangements considered.

Figure 5-9 - Types of Mixed Traffic Provision



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 3.25m wide by default and 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: footpaths and cycle tracks were widened to the desirable minimum width or 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 5-10 and Figure 5-11. 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 5-10 - Example of One-Way Cycle Track Priority Junction Treatment

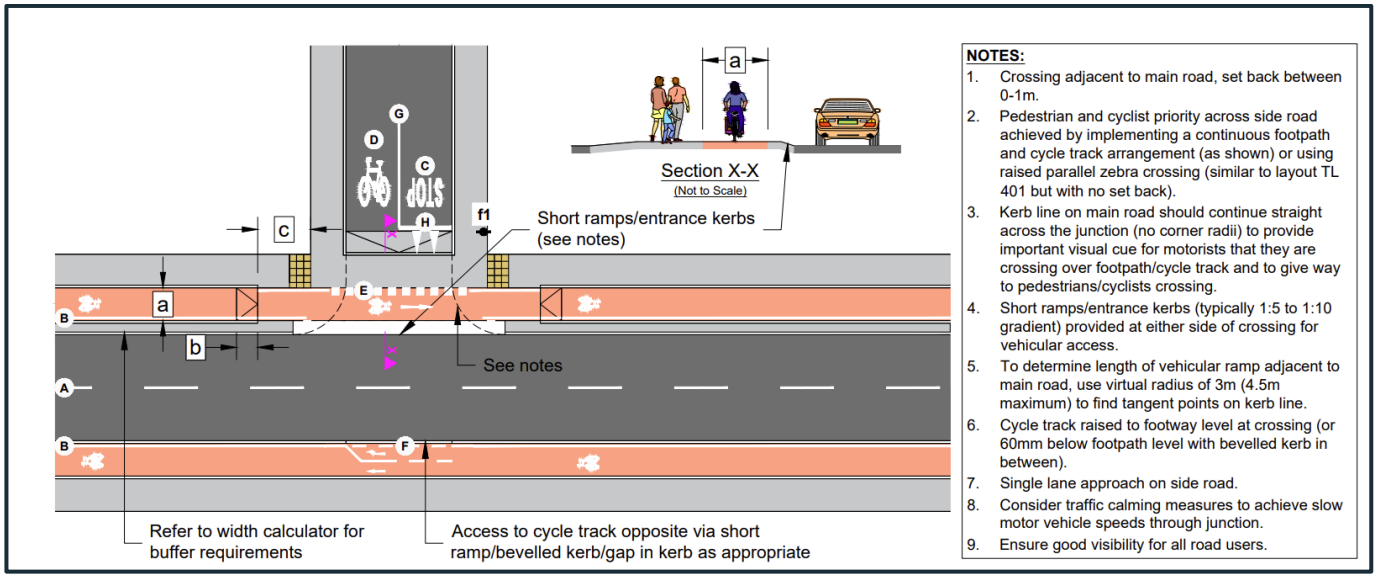
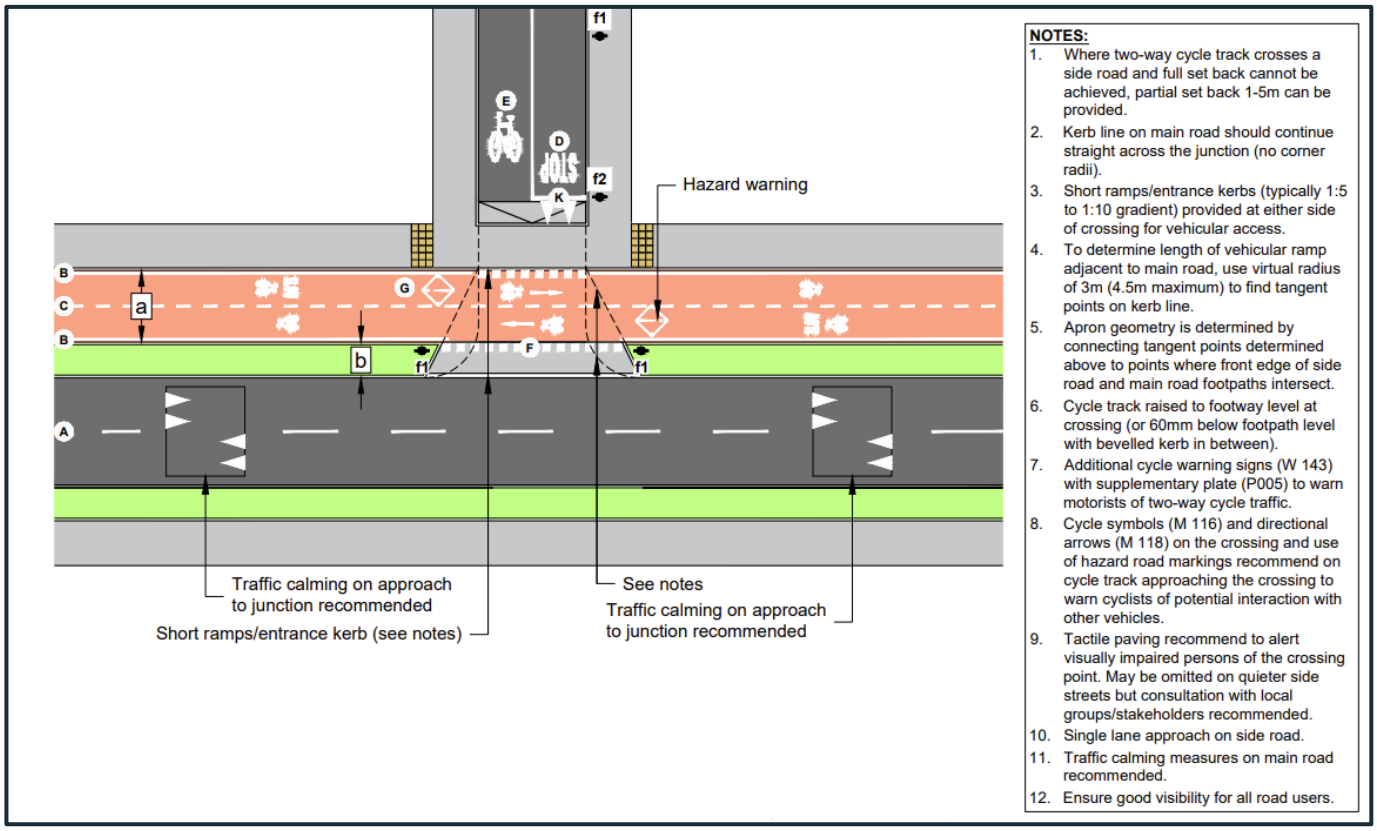
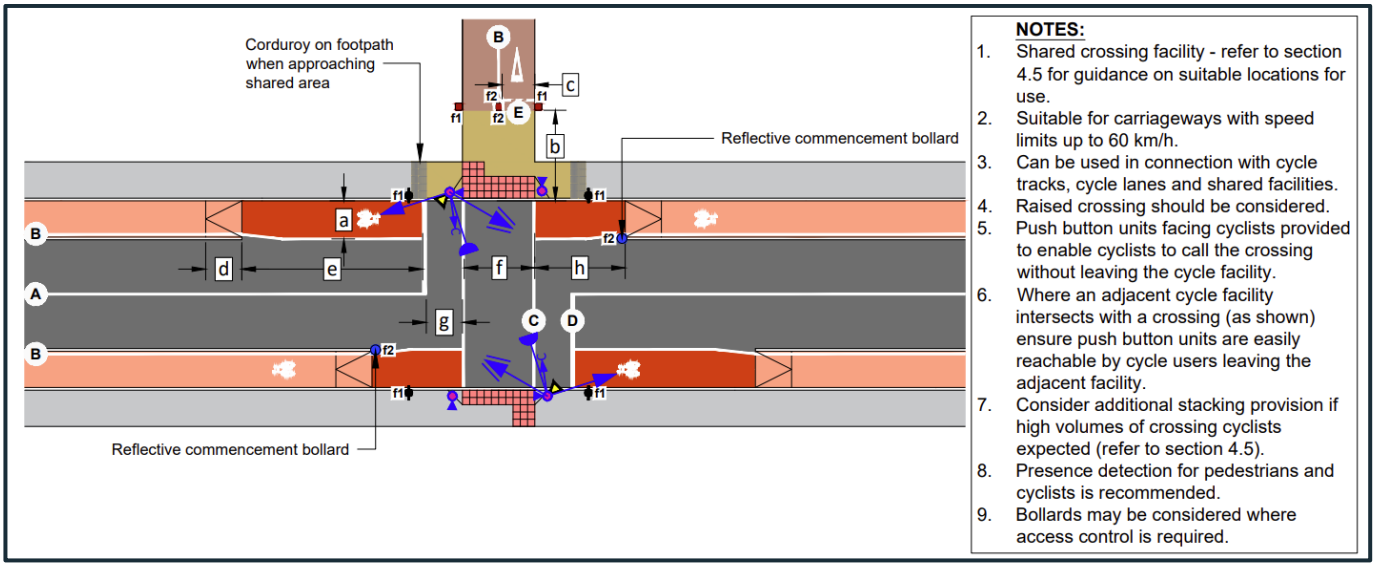


Figure 5-11 - Example of Two-Way Cycle Track Priority Junction Treatment



- Crossings
  - The location 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 5-12 shows the details for two alternative toucan crossing configurations.

Figure 5-12 - Example of Toucan Crossing Design

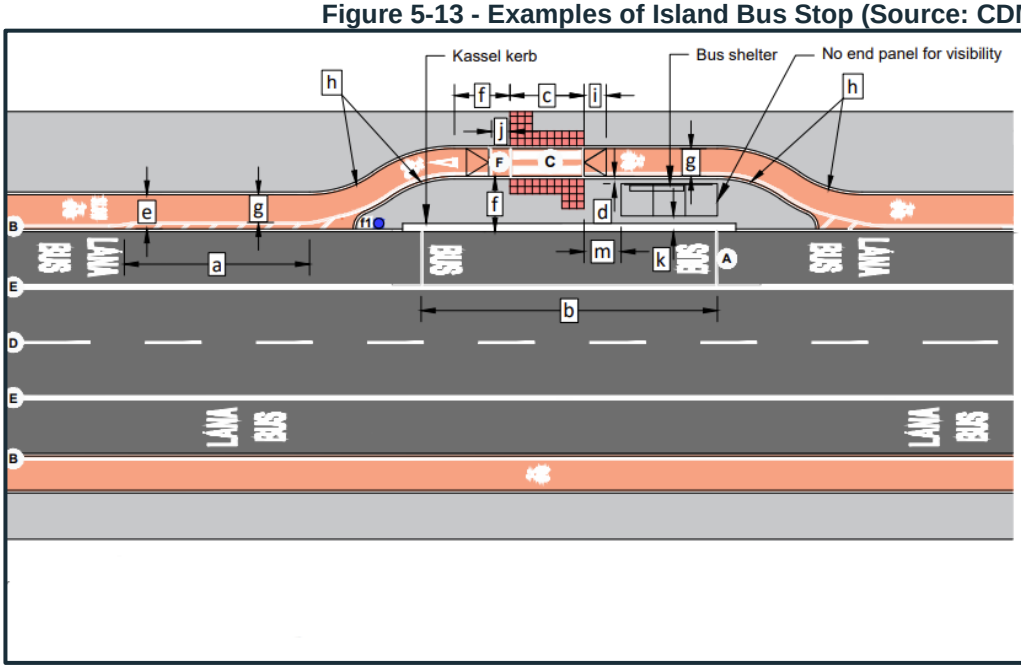


NOTES:

1. Shared crossing facility - refer to section 4.5 for guidance on suitable locations for use.
2. Suitable for carriageways with speed limits up to 60 km/h.
3. Can be used in connection with cycle tracks, cycle lanes and shared facilities.
4. Raised crossing should be considered.
5. Push button units facing cyclists provided to enable cyclists to call the crossing without leaving the cycle facility.
6. Where an adjacent cycle facility intersects with a crossing (as shown) ensure push button units are easily reachable by cycle users leaving the adjacent facility.
7. Consider additional stacking provision if high volumes of crossing cyclists expected (refer to section 4.5).
8. Presence detection for pedestrians and cyclists is recommended.
9. Bollards may be considered where access control is required.

- 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 Island Bus Stops, as shown in Figure 5-13, 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 5-14. 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.

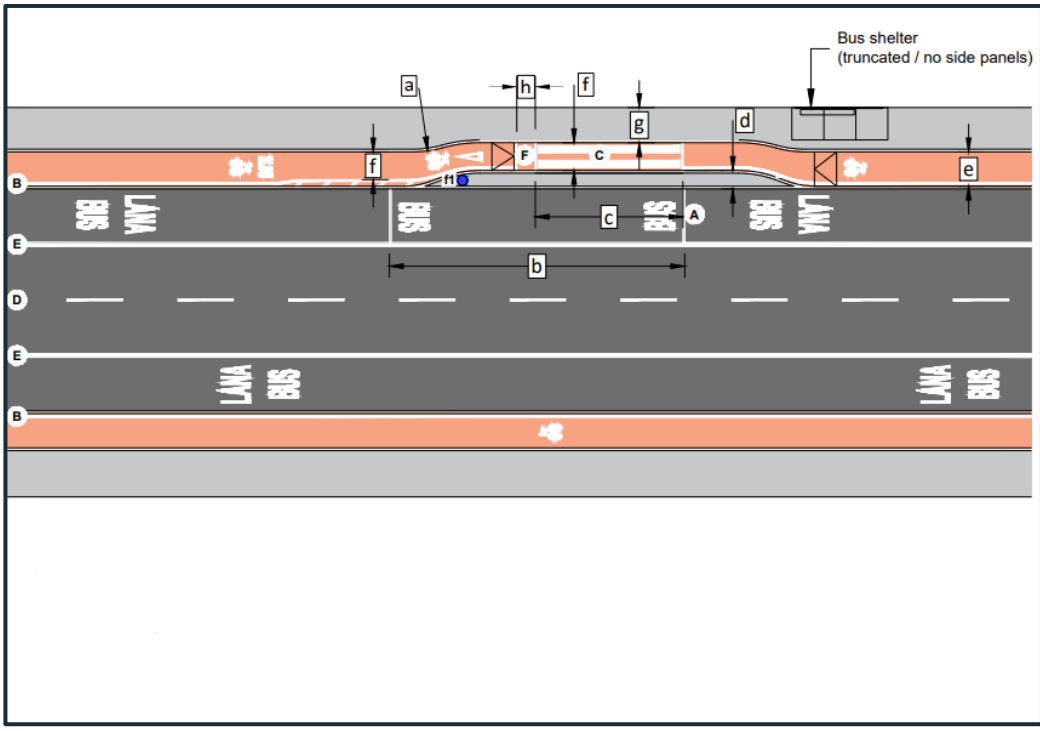
Figure 5-13 - Examples of Island Bus Stop (Source: CDM)



NOTES:

1. Preferred bus stop arrangement where space permits.
2. Suitable for use with in-line bus stops either in bus lanes or traffic lanes. See TL 203 for arrangement where bus laybys exist.
3. Suitable for one-way & two-way cycle tracks.
4. Pedestrian priority over cycle track provided by raised zebra crossing typically (refer to Section 4.2.14 for alternative options in exceptional circumstances).
5. Ensure cycle speeds are slowed appropriately at the crossing point. Reverse curves recommended on approach (where space allows) followed by minimum 3m straight approaching the pedestrian crossing.
6. Cycle track narrowed to 1.5m (absolute minimum) behind bus stop to encourage single file cycling at crossing point.
7. Ensure good tonal contrast between the cycle track and footpath/island. Cycle track surfaced red with footpath and island constructed in contrasting colour to cycle track.
8. Ensure good visibility between all users e.g. avoid end panels on bus shelters, avoid unnecessary street clutter and ensure any planting (if used) is low-level.

Figure 5-14 – Example of Shared Bus Stop Landing Zone (Source: CDM)



NOTES:

1. For use in constrained locations only where island bus stop/bus stop relocation is not feasible and where no. of bus passengers boarding/alighting and cycle flows are also low.
2. 1.0m (max.) buffer zone provided for bus passengers to board/alight. Wider buffer not recommended as may encourage passengers to wait in the buffer area.
3. Ensure raised kerb and reflective bollard at start of buffer to deflect cyclists away from buffer zone.
4. Pedestrian priority over cycle track provided by raised zebra crossing.
5. Cycle track narrowed to 1.5m (1.3m absolute min.) throughout extents of bus stop.
6. Minimum footpath width as per DMURS.
7. Cycle track, footpath and buffer zone to be flush with one another at crossing point.
8. Ensure good tonal contrast between the cycle track and footpath/buffer. Cycle track should be surfaced red and buffer should be constructed using similar palette to the footway.
9. Ensure good inter-visibility between bus passengers and cyclists, to minimise potential for conflict.

6. Detailed Option Assessment Appraisal

As outlined previously, the option assessment process comprises of an initial identification process, followed by a detailed option assessment, 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 text outlines the principles applied to the development of the cross-section options for each corridor segment:

- The key objective is to provide 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.
- Due to reduced available width at some segments, active travel facilities were only proposed on one side of the road following the existing arrangements.
- If the road space allows for reallocation for active travel modes, 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 facility.

6.1 Link Types Appraisal

The initial stage for the assessment of the options for the link types is an identification process based on the cross-section options shown in Section 5.3 and on the Cross Section Width exercise described in Section 3.2.1.6. Based on the typical width for each corridor, the Option Identification process identifies cross section options that fit within the existing road boundaries. In the case where the standard segregated cycle track provision does not fit within the existing road boundaries 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 to be completed.

The second stage is a Detailed Option Assessment, 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 as shown in Table 6-1. The goal of the MCA is to make recommendations on the preferred end-to-end cross section option for each segment.

Table 6-1 - 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

6.1.1 Segment 01: Access to Royal Canal to Dublin Road/Meadow Court Junction

Based on the cross-section width analysis, as shown in Section 3.2.1.6, Segment 01 has a typical width of 12m, however at pinch point areas the width reduces to 10.2m. This section has a cycle lane on the north side of the road for most of the segment, but it is substandard and measures around 1m in width. Options for this segment consider sections of land acquisition along the pinch points to provide fully segregated pedestrian and cycle facilities as well

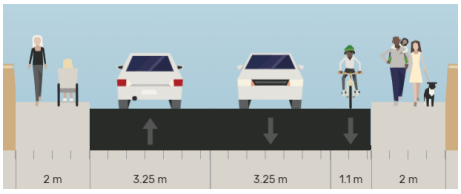
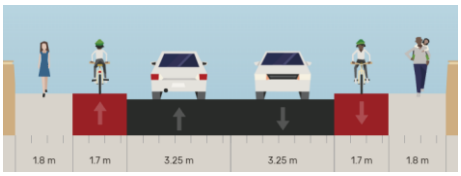
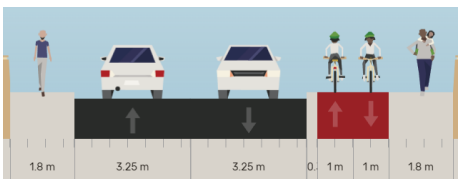
as an option that utilises only the existing road space. However, due to the presence of the protected structures, bespoke options were also considered. The options assessed for the segment are as discussed in Table 6-2.

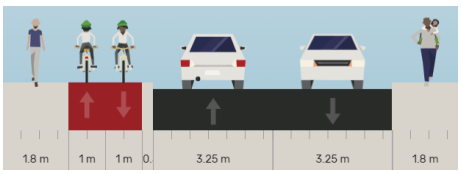
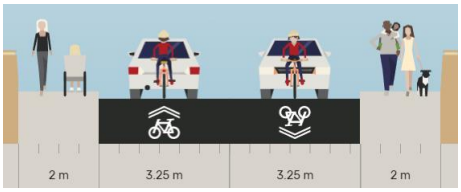
The major junctions located along the segment are assessed in Sections 6.3.1 and 6.3.2.

Figure 6-1 – Segment 01

6.1.1.1 Option Identification

Table 6-2 - Segment 01 Options

Option Description	Reference
Option 1 Do Nothing This option would retain the existing footpaths on both sides of the road, the mandatory cycle lane on the north side and the parking area.	
Option 2: One-way Cycle Track (13.5m cross section) Option 2 proposes to implement a 1.7m one-way cycle track and 1.8m footpaths on both sides of the road. The road carriageway would be reduced to 6.5m and the hard shoulder area used as parking bays would be removed. This option would be implemented using traditional build methods as it would require full road reconstruction and would also require land acquisition at several points along the segment. To avoid land acquisition at the protected structures along the segment, the cycle track would locally turn into shared active travel paths in order to fit in the existing road space.	
Option 3: Two-way cycle track on the north side (12.4m cross section) This option would provide a 2.3m two-way cycle track to the north and 1.8m footpaths on both sides of the road. The carriageway would be reduced to 6.5m and the hard shoulder area used as parking bays would be removed. This option would also require a full road reconstruction and land acquisition. Similar to Option 2 above, the two-way cycle track would be locally turned into a shared active travel path adjacent to the protected structures.	

Option Description	Reference
Option 4: Two-way cycle track on the south side (12.4m cross section) This option would provide a 2.3m two-way cycle track to the south and 1.8m footpaths on both sides of the road. The carriageway would be reduced to 6.5m and the parking area would be removed. This option would also require a full road reconstruction and land acquisition. Similar to Option 2 above, the two-way cycle track would be locally turned into a shared active travel path adjacent to the protected structures.	
Option 5: Mixed Traffic (10.5m cross section) Option 5 continues to accommodate cyclists along the road and widens the existing footpaths to 2.0m consistently across the segment. The road carriageway would be reduced to 6.5m and the parking area would be retained. No land acquisition is required, and the construction method is rapid build as it can be achieved with new in-situ kerb line and widening of the existing path.	

6.1.1.2 Detailed Option Assessment

The MCA analysis indicates that the preferred option for Segment 01 is either Option 3 or Option 4, both two-way cycle facilities that could be turned into shared active travel facilities at the pinch points. Both options allow for good continuity along the corridor and provide high-quality segregation between cyclists, pedestrians and vehicles and would increase safety, especially for vulnerable users. As there is more available space to implement active travel facilities on the southern side of the road, Option 4, the two-way cycle track on the south side has been identified as the emerging preferred option. The implementation of the shared active travel paths would still allow for continuity of movement for both cyclists and pedestrians and would segregate them from vehicular traffic. There would not be a significant impact on traffic capacity. The options also seek to improve the existing bus stops along the segment to be in accordance with the Cycle Design Manual. Full details of the MCA analysis are displayed in Appendix D.

Table 6-3 - Segment 01 MCA Analysis

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5
Transport User Benefits and Other Economic Impacts	Land acquisition area					
	Construction and maintenance					
	Programme Impacts					
	Rapid build achievability and construction impacts					
	Connections to existing and proposed public transport					

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5
Accessibility Impacts	Access to key services					
	Impacts on loading and parking bays					
	Route consistency and continuity					
	Directness and maintenance of cyclist progression					
	Provision of comfort for pedestrians and cyclists through assessment of width					
	Attractiveness of the route					
Social Impacts	Opportunities for social, community and recreational activity participation					
	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)					
	Qualitative assessment of accessibility to serve users of all ages and abilities					
	How the proposal may have gender specific impacts					
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI					
	Impact on green areas					
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					
	Impact on traffic capacity due to the proposals					
Local Environmental Impact	Air Quality Impact					
	Potential Sensitive receptors					
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas					
	Impact on Biodiversity along scheme extents					
	Groundwater Quality, Groundwater resources / Levels Surface water quality and flows					
	Landscape and visual assessment					
	Impact at national monuments, NIAH features and ACAs					
EMERGING PREFERED OPTION		**NO**	**NO**	**NO**	**YES**	**NO**

6.1.2 Segment 02: Dublin Road/Meadow Court Junction to west of Dublin Road/Gleann Petit Drive Junction

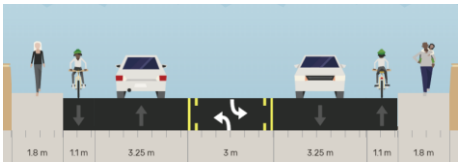
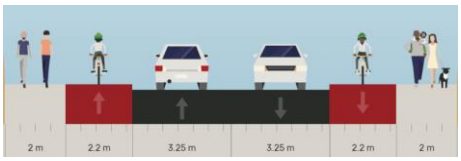
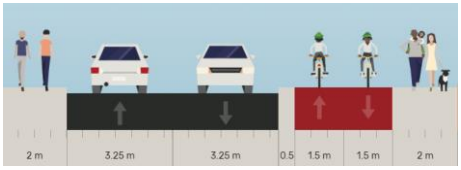
Segment 02 has a typical width of 18m due to the presence of the cycle lanes, the shared path, the grass verge and the turning lanes. Options for this segment would implement the desirable minimum width cycle tracks which would possibly require the removal of the turning lanes and relocation of road space. As there is available width along the whole extent of the segment, no land acquisition is required for any option and only fully segregated options have been considered. Both traditional and rapid build options have been considered.

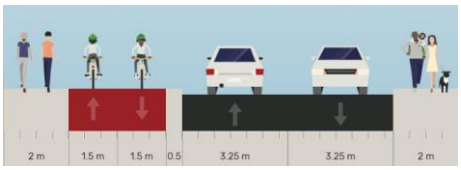
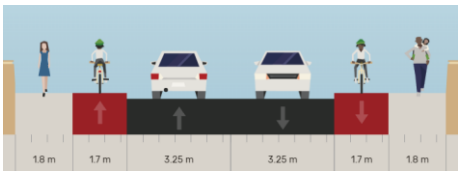
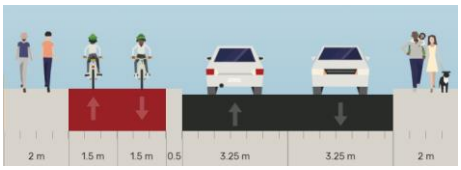
The major junction along the segment is included in Section 6.3.3.

Figure 6-2 – Segment 02

6.1.2.1 Option Identification

Table 6-4 - Segment 02 Options

Option Description	Reference
Option 1 Do Nothing This option would retain the existing footpaths and mandatory cycle lanes on both sides of the road.	
Option 2: One-way Cycle Track (14.9m cross section) Option 2 proposes to implement a 2.2m one-way cycle track and 2.0m footpaths on both sides of the road and to reduce the carriageway to 6.5m. Turning lanes could be retained in this option. This option would be implemented using traditional build methods as it would require full road reconstruction.	
Option 3: Two-way cycle track on the north side (14.0m cross section) This option would provide a 3.5m two-way cycle track to the north and 2.0m footpaths on both sides of the road. The carriageway would be reduced to 6.5m. Turning lanes could be retained in this option. This option would also require a full road reconstruction.	

Option Description	Reference
Option 4: Two-way cycle track on the south side (14.0m cross section) This option would provide a 3.5m two-way cycle track to the north and 2.0m footpaths on both sides of the road. The carriageway would be reduced to 6.5m. Turning lanes could be retained in this option. This option would also require a full road reconstruction.	
Option 5: One-way cycle track rapid build (13.5m cross section) The segment has mandatory cycle lanes, and this option proposes to raise these cycle facilities to provide adequate segregation from vehicular traffic and widen to the absolute minimum width of 1.7m. The segregation can be implemented by rapid build construction and no land acquisition is required.	
Option 6: Two-way cycle track on the south side rapid build (14.0m cross section) This option would remove the mandatory cycle lanes and relocate the road to the north to provide space to the south to implement a 3.5m two-way cycle track. This option would be constructed using rapid build methods and does not require land acquisition.	

6.1.2.2 Detailed Option Assessment

According to the MCA results, Option 5 is the emerging preferred option for the segment, followed closely by Option 6. However, to provide improved connectivity with the other segments of the corridor and the wider network, Option 6, a two-way cycle track on the south side also built as a rapid build, is considered the emerging preferred option for the segment. As it is a rapid build option, it is cheaper and quicker to build compared to other options and it can also be in operation sooner than the traditional build options. This option would provide improved safety and connectivity along the segment while also making good use of the existing road space. This option also seeks to improve the existing bus stop along the segment to be in accordance with the Cycle Design Manual. Full details of the MCA analysis are displayed in Appendix D.

Table 6-5 - Segment 02 MCA Analysis

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Transport User Benefits and Other Economic Impacts	Land acquisition area						
	Construction and maintenance						
	Programme Impacts						
	Rapid build achievability and construction impacts						
	Connections to existing and proposed public transport						

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Accessibility Impacts	Access to key services						
	Impacts on loading and parking bays						
	Route consistency and continuity						
	Directness and maintenance of cyclist progression						
	Provision of comfort for pedestrians and cyclists through assessment of width						
	Attractiveness of the route						
Social Impacts	Opportunities for social, community and recreational activity participation						
	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)						
	Qualitative assessment of accessibility to serve users of all ages and abilities						
	How the proposal may have gender specific impacts						
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI						
	Impact on green areas						
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						
	Impact on traffic capacity due to the proposals						
Local Environmental Impact	Air Quality Impact						
	Potential Sensitive receptors						
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas						
	Impact on Biodiversity along scheme extents						
	Groundwater Quality, Groundwater resources / Levels Surface water quality and flows						
	Landscape and visual assessment						
	Impact at national monuments, NIAH features and ACAs						
EMERGING PREFERED OPTION		**NO**	**NO**	**NO**	**NO**	**NO**	**YES**

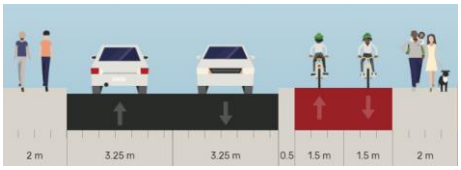
6.1.3 Segment 03: Dublin Road/Gleann Petit Drive Junction to the National Science Park roundabout

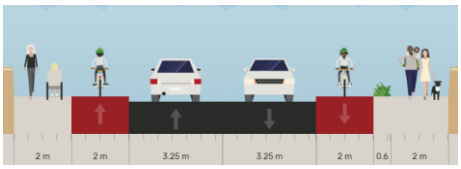
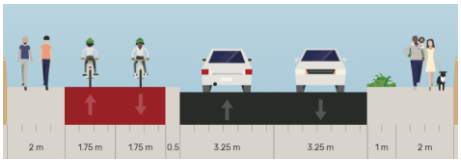
The Segment 03 has a wide typical width of 21m as it has cycle lanes on the north side, a shared path on the south side and a grass verge. Due to available width, all options for this segment consider the desirable minimum width according to the CDM and are fully segregated. No land acquisition is required as there is sufficient available width. The rapid build options considered for the segment would reutilise the road space and the grass verge to implement the cycle tracks.

Figure 6-3 – Segment 03

6.1.3.1 Option Identification

Table 6-6 - Segment 03 Options

Option Description	Reference
Option 1 Do Nothing This option would retain the existing footpaths, the mandatory cycle lanes to the north and the shared path to the south.	
Option 2: Two-way cycle track on the north side (14.0m cross section) This is the only full road reconstruction option for the segment. This option would provide a 3.5m two-way cycle track to the north and 2.0m footpaths on both sides of the road. In order to construct this option, the grassed area to the south would be fully removed and parts of the grassed area to the north as well. The footpath to the north would be retained at its current location. This option would require a full road reconstruction and traditional construction methods.	

Option Description	Reference
Option 3: One-way Cycle Track Rapid Build (14.5m cross section) Option 3 proposes to implement a 2.0m one-way cycle track and to reduce the carriageway to 6.5m. The footpaths would not be changed in this option as they have the required width. This option would make use of the existing mandatory cycle lanes and raise them to the footpath level. Rapid build methods would be applied and the grassed area to the south and parts of the area to the north would have to be removed to relocate space to the cycle track.	
Option 4: Two-way Cycle Track on the south side Rapid Build (14.5m cross section) Similar to Option 3 above, this option would be implemented using rapid build methods and the available carriageway space. The cycle lane to the north would be removed and a raised 4.0m two-way cycle track would be constructed on the south side. Both footpaths would be retained and the grassed area to the south would be removed.	

6.1.3.2 Detailed Option Assessment

Similar to Segment 02, the MCA indicates that the preferred option for this segment is Option 3, followed closely by Option 4. To provide consistency, comfort and directness, Option 4 a two-way cycle track on the south side has been selected as the emerging preferred option for the segment. The segment would make great use of the existing road space and would not require full road reconstruction as it could be built as a rapid build and the option is also the cheapest to build compared to other options. The option would also allow for high-quality segregation between cyclists, pedestrians and vehicles that would create an increased sense of safety, especially for more vulnerable road users. This option would also improve the existing bus stop to Cycle Design Manual Standards to increase public transport connectivity. Full details of the MCA analysis are displayed in Appendix D.

Table 6-7 - Segment 03 MCA Analysis

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Transport User benefits and Other Economic Impacts	Land acquisition area				
	Construction and maintenance				
	Programme Impacts				
	Rapid build achievability and construction impacts				
	Connections to existing and proposed public transport				
Accessibility Impacts	Access to key services				
	Impacts on loading and parking bays				
	Route consistency and continuity				
	Directness and maintenance of cyclist progression				
	Provision of comfort for pedestrians and cyclists through assessment of width				
	Attractiveness of the route				

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Social Impacts	Opportunities for social, community and recreational activity participation				
	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)				
	Qualitative assessment of accessibility to serve users of all ages and abilities				
	How the proposal may have gender specific impacts				
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI				
	Impact on green areas				
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				
	Impact on traffic capacity due to the proposals				
Local Environmental Impact	Air Quality Impact				
	Potential Sensitive receptors				
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas				
	Impact on Biodiversity along scheme extents				
	Groundwater Quality, Groundwater resources / Levels Surface water quality and flows				
	Landscape and visual assessment				
	Impact at national monuments, NIAH features and ACAs				
EMERGING PREFERED OPTION		**NO**	**NO**	**NO**	**YES**

6.1.4 Segment 04: National Science Park roundabout to Marlinstown Roundabout

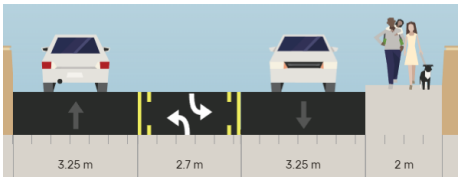
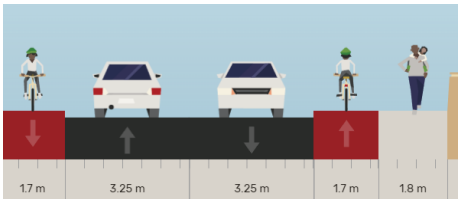
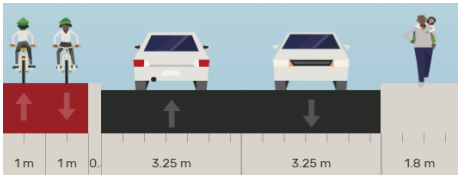
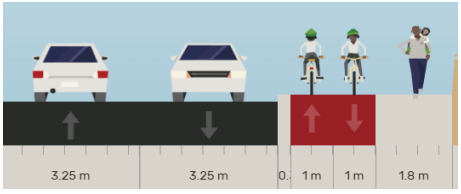
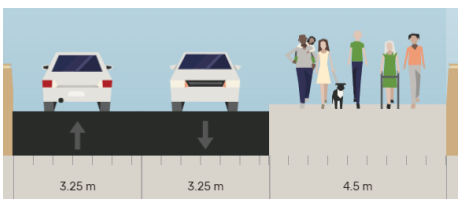
Segment 04 is constrained in width as it only provides continuous footpath on the north side of the road. The typical width is 12.5m, however, there is a section as low as 10.9m in width. All the options considered for this segment would continue to provide a footpath only on the north side of the road. One option requires additional land adjacent the carriageway and the remaining options fit within the existing boundaries.

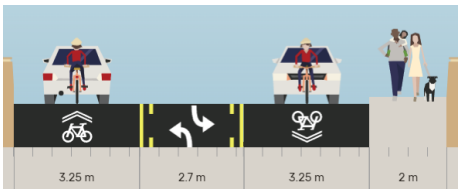
The major junction at the segment is discussed in Section 6.1.4.

Figure 6-4 – Segment 04

6.1.4.1 Option Identification

Table 6-8 - Segment 04 Options

Option Description	Reference
Option 1: Do Nothing The Do-Nothing option would continue to provide a continuous footpath only on the northern side of the road and retain the turning lanes and parking area.	
Option 2: One-Way cycle track (11.7m cross section) This option would provide a 1.7m one-way cycle track on both sides of the road and a 1.8m footpath only on the north side. The road carriageway would be reduced to 6.5m and the turning lanes and parking area would be removed to allow space to be relocated to the active travel facilities.	
Option 3: Two-way cycle track on the south side (10.6m cross section) Option 3 could be implemented using rapid build methods. A 2.3m wide two-way cycle track would be constructed on the south side and the footpath on the north side would be retained to a minimum of 1.8m. The median lane would have to be removed. No land acquisition is required.	
Option 4: Two-way cycle track on the north side (10.6m cross section) Similar to Option 3 above, however, this option would provide a 2.3m two-way cycle track on the north side. No land acquisition is required.	
Option 5: Shared Active Travel Path on the north side and no facility on the southern side (11.0m cross section) This is a rapid build option that would look into widening the existing footpath to the north into a 4.5m shared active travel facility to accommodate both pedestrians and cyclists. The shared path would be facilitated with the removal of the turning lanes and the median strip and would not require land acquisition.	

Option Description	Reference
Option 6: Mixed traffic (11.2m cross section) The final option for the segment would continue to accommodate cyclists along the road and would not require the removal of the turning lanes and parking area. This option would locally widen the footpath at some locations to 2.0m using rapid build methods and would not provide a footpath on the southern side. Similar to Option 5, would not require land acquisition. Traffic calming measures would be implemented along the road to improve safety for all road users and to reduce speeds.	

6.1.4.2 Detailed Option Assessment

Options 3 and 4 score reasonably similarly across the full MCA. However, Option 3 is the preferred option in this Segment as it requires less space and can be constructed using rapid build methods compared to Options 2 and 4 which would take longer, require more space and be more expensive to construct. This option fits within the existing road space and would provide safe and attractive facilities for all users and would not affect the existing hedgerow on the southern side of the road. This option would also provide improved connectivity and directness with the remaining segments of the corridor. Full details of the MCA analysis are displayed in Appendix D.

Table 6-9 - Segment 04 MCA Analysis

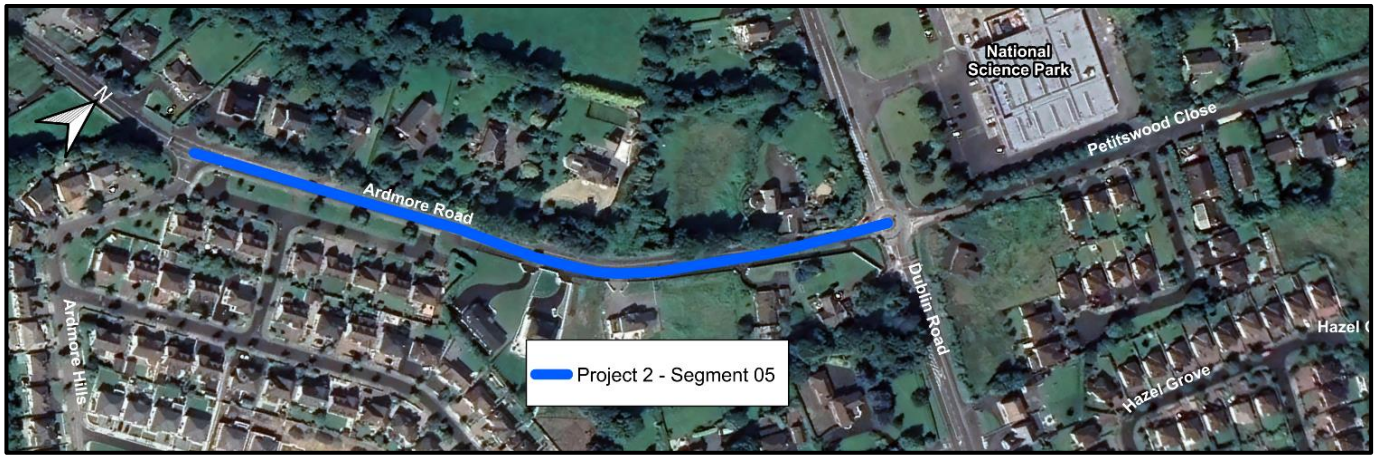
Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Transport User benefits and Other Economic Impacts	Land acquisition area						
	Construction and maintenance						
	Programme Impacts						
	Rapid build achievability and construction impacts						
	Connections to existing and proposed public transport						
Accessibility Impacts	Access to key services						
	Impacts on loading and parking bays						
	Route consistency and continuity						
	Directness and maintenance of cyclist progression						
	Provision of comfort for pedestrians and cyclists through assessment of width						
	Attractiveness of the route						
Social Impacts	Opportunities for social, community and recreational activity participation						
	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)						
	Qualitative assessment of accessibility to serve users of all ages and abilities						
	How the proposal may have gender specific impacts						

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI						
	Impact on green areas						
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						
	Impact on traffic capacity due to the proposals						
Local Environmental Impact	Air Quality Impact						
	Potential Sensitive receptors						
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas						
	Impact on Biodiversity along scheme extents						
	Groundwater Quality, Groundwater resources / Levels Surface water quality and flows						
	Landscape and visual assessment						
	Impact at national monuments, NIAH features and ACAs						
EMERGING PREFERED OPTION		**NO**	**NO**	**YES**	**NO**	**NO**	**NO**

6.1.5 Segment 05: National Science Park roundabout to Ardmore Hills

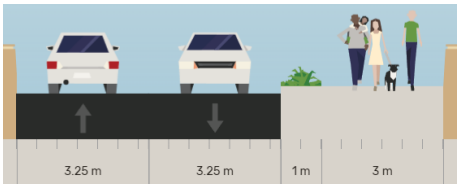
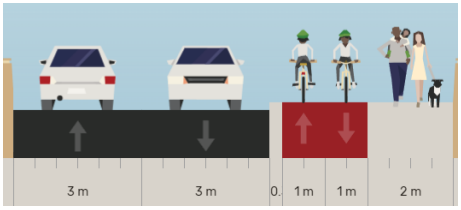
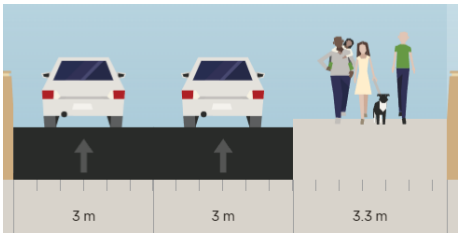
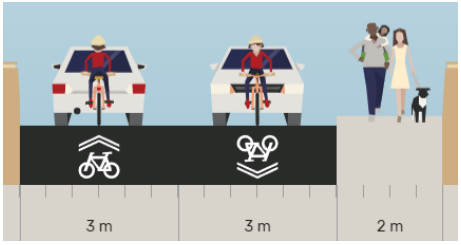
The final segment of Project 2 is also constrained in width as it also only has footpaths on one side of the road. The typical width is 11.5m with a small area of only 8.9m wide. All options for the segment would continue to provide facilities only on the eastern side of the road due to the existent road arrangements. A section of land would have to be acquired along Ardmore Hills estate due to pinch point for Options 2 and 3 and all options can be implemented using rapid build methods. This segment connects to the Footpath and Cycle path works at Ardmore Road (Phase 3) scheme that implemented a shared active travel path on the western side of the road and a raised zebra crossing at the intersection between the scheme and Segment 05.

Figure 6-5 – Segment 05



6.1.5.1 Option Identification

Table 6-10 - Segment 05 Options

Option Description	Reference
Option 1 Do Nothing This option would retain the existing footpath on the eastern side and cyclists would be retained at the road.	
Option 2: Two-way cycle track on the eastern side and no facility on the western side (10.3m cross section) Option 2 proposes to reduce the carriageway to 6.0m to be the same as the remaining section of Ardmore Road. On the eastern side, a 2.3m cycle track and a 2.0m footpath would be installed making use of the existing facility, the road space and the grassed area.	
Option 3: Shared Active Travel Path on the eastern side and no facility on the western side (9.3m cross section) Option 3 widens the existing footpath to 3.3m along Ardmore Hills and retain the wide path in the remaining of the segment. The road would also be reduced to 6.0m.	
Option 4: Mixed Traffic (8.5m cross section) This option fits within the road space and would require the path to be widened to a minimum of 2.0m along the whole extent of the segment. Cyclists would continue to be accommodated along the road; however, traffic calming measures would be implemented to reduce traffic speeds and increase safety for all users.	

6.1.5.2 Detailed Option Assessment

The preferred option for the final segment, Segment 05, is Option 2, a two-way cycle track on the eastern side and no facility on the western side. This option makes good use of the small width available along Segment 05 while also

providing good segregation between cyclists, pedestrians and vehicles and allowing for increased safety and comfort for all users despite the narrow width. This option would allow for continuity of the Footpath and Cycle path works at Ardmore Road (Phase 3) recently constructed.

Table 6-11 - Segment 05 MCA Analysis

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Transport User benefits and Other Economic Impacts	Land acquisition area				
	Construction and maintenance				
	Programme Impacts				
	Rapid build achievability and construction impacts				
	Connections to existing and proposed public transport				
Accessibility Impacts	Access to key services				
	Impacts on loading and parking bays				
	Route consistency and continuity				
	Directness and maintenance of cyclist progression				
	Provision of comfort for pedestrians and cyclists through assessment of width				
	Attractiveness of the route				
Social Impacts	Opportunities for social, community and recreational activity participation				
	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)				
	Qualitative assessment of accessibility to serve users of all ages and abilities				
	How the proposal may have gender specific impacts				
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI				
	Impact on green areas				
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				
	Impact on traffic capacity due to the proposals				

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Local Environmental Impact	Air Quality Impact				
	Potential Sensitive receptors				
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas				
	Impact on Biodiversity along scheme extents				
	Groundwater Quality, Groundwater resources / Levels Surface water quality and flows				
	Landscape and visual assessment				
	Impact at national monuments, NIAH features and ACAs				
EMERGING PREFERED OPTION		**NO**	**YES**	**NO**	**NO**

6.1.6 Segment 06: Delvin Road to Royal Canal Greenway

Segment 06 has been included in the scheme to provide improved connection to the Royal Canal Greenway on the western side of the road. There is already a wide path on the western side where both cyclists and pedestrians are able to use to access the greenway, however, the footpath on the eastern side is narrow and not in compliance with DMURS. Based on this, no assessment will be carried out for the segment and the proposal is to improve the footpath on the eastern side to be in accordance with standards and convert the path on the western side to an appropriate shared active travel path according to the Cycle Design Manual, with tactile paving and signage.

The road carriageway is also proposed to be reduced from a 3-lane road to a 2 lane, with one lane in each direction. However, this will be further assessed as part of the Mullingar Local Area Plan that is being prepared by SYSTRA alongside the Mullingar Active Travel Bundle.

Figure 6-6 – Segment 06

6.2 Route Corridor Recommended Cross Sections

Based on the MCA results shown in the above sections, Table 6-12 outlines the proposal for each segment of the corridor.

Table 6-12 – Route Corridor Preferred Cross Section

Segment	Proposal
Segment 01	Option 4: Two-way cycle track on the south side with sections of a shared active travel path at the pinch point (traditional build, 13.5m cross section)
Segment 02	Option 6: Two-way cycle track on the south side (rapid build, 14.0m cross section)
Segment 03	Option 4: Two-way Cycle Track on the south side (rapid build, 14.5m cross section)
Segment 04	Option 3: Two-way cycle track on the south side (rapid build, 10.6m cross section)
Segment 05	Option 2: Two-way cycle track on the eastern side and no facility on the western side (traditional build, 10.3m cross section)
Segment 06	Shared active travel path on the western side, footpath on the eastern side and removal of left turning lane into Delvin Road.

6.3 Pinch Point and Junctions Appraisal

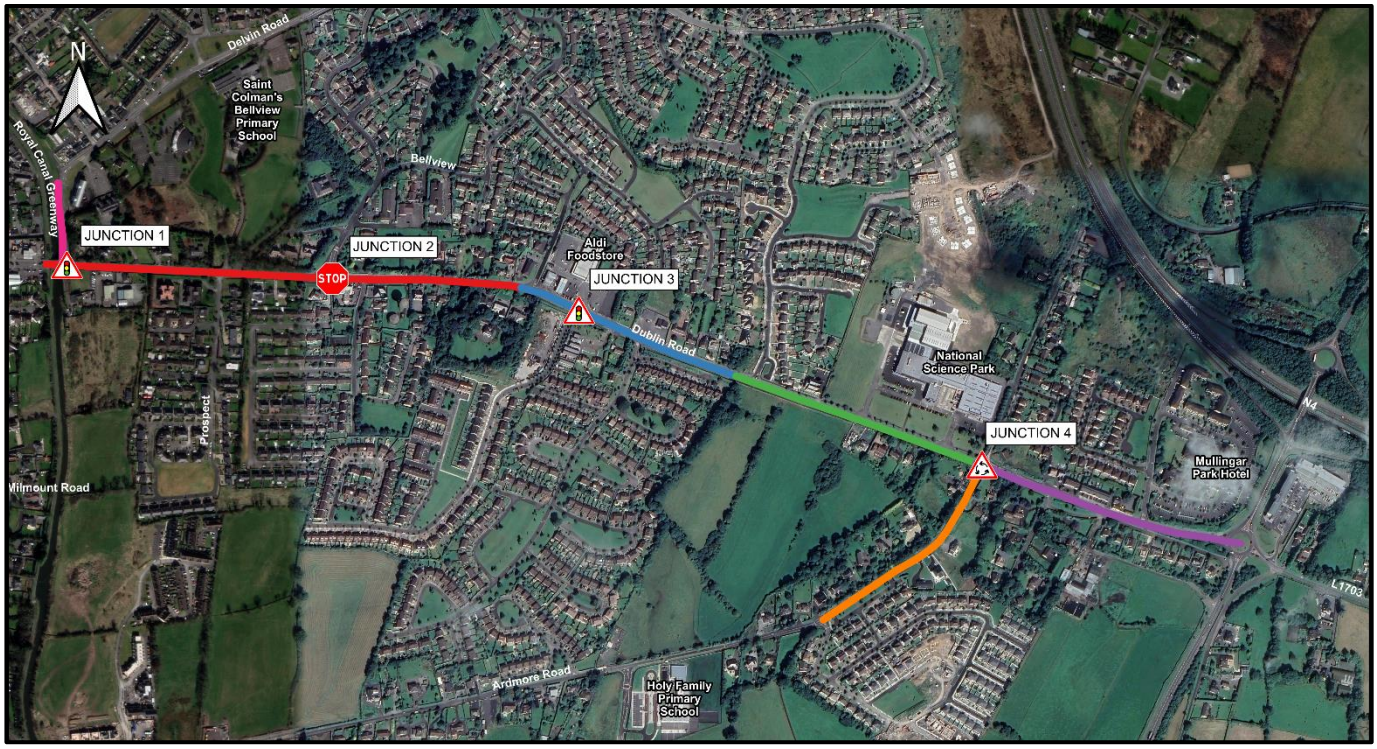
As mentioned previously, the junctions have been assessed separately from the link type assessment as they require individually bespoke options.

Project 2 has a total of four junctions, as outlined in Figure 6-7, that are considered major junctions in the town due to high traffic volumes and key connectors to major locations and within the town and environs. Based on this, appropriate options have been considered for each junction based on traffic volumes, speeds, existing junction type and existing land available in and around the junctions.

In July 2023, the NTA published a document titled “Roundabout Retrofit: Including Rapid Build Options”. This document is part of the NTA publications under the Rapid Build Guidance to speed the rollout of active travel schemes in the county.

Based on this document, rapid build options have also been considered for junctions. The rapid build options align with the NIFTI hierarchy of investments, as it would provide “improved” and “optimised” facilities instead of “new”.

Figure 6-7 – Junction Locations



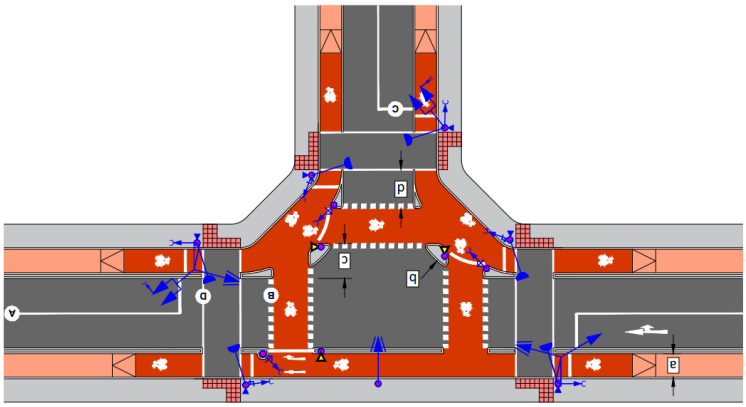
6.3.1 Junction 1: Dublin Road/Delvin Road Signalised Junction

Table 6-13 describe the options considered for the junction between Dublin Road and Delvin Road.

6.3.1.1 Option Identification

Table 6-13 - Junction 1 Options

Option Description	Reference
Option 1: Do Nothing This junction is being considered from the west of the canal bridge to the east of Delvin Road. The Option 1, Do Nothing, would retain the existing junction arrangements – signalised junction with a left turning lane on both approaches of Dublin Road into Delvin Road and no dedicated space for cyclists. This junction also provides connectivity to the Royal Canal Greenway on both sides on the west, with a toucan crossing to facilitate both pedestrian and cyclist movements. The existing arrangements would force cyclists into the road, alongside motorised vehicles, which is not in line with the CDM Table 2.1 – Cycle Facilities Selection Guide, due to the high volume of vehicular traffic along Dublin Road.	

Option Description	Reference
Option 2: Upgrade Junction into a Fully Signal Control Protected Junction Option 2 proposes to retain the existing signal control junction, however, upgrading it into a full signal control junction, as described in the CDM. This option would provide signal controlled movements to all users of the junction and pedestrians and cyclists cross the road at different crossing points. To implement this option, due to the constrained nature of the canal bridge, the right turning lane on the eastern arm of the junction would need to be removed.	

6.3.1.2 Detailed Option Assessment

The preferred option for Dublin Road Delvin Road Junction is Option 2, this would upgrade the junction into a fully signal control protected junction. While being more costly and having an impact on traffic capacity, this option outscored Option 1 particularly in relation to the improvements in segregation, where pedestrians, cyclists and vehicles would all be separated from one another, which would increase the comfort and perception of safety for all road users. This option also provides better connectivity with the proposals along Segment 01. Full details of the MCA analysis are displayed in Appendix D.

Table 6-14 – Junction 1 MCA Analysis

Criteria	Indicator	Option 1	Option 2
Transport User benefits and Other Economic Impacts	Land acquisition area		
	Construction and maintenance		
	Rapid build achievability and construction impacts		
Accessibility Impacts	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression		
	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness		
Social Impacts	Qualitative assessment of accessibility of the options to serve users of all ages and abilities		
	How the proposal may have gender specific impacts		
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI		
	Impact on green areas		
Safety Impact	Segregation between cyclists and vehicles		
	Segregation between cyclists and pedestrians		
	Safety for all users regarding traffic volumes and speeds along route		

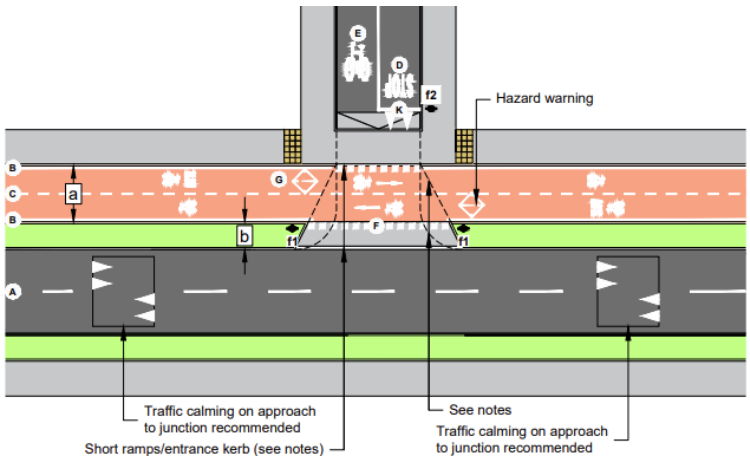
Criteria	Indicator	Option 1	Option 2
	Impact on traffic capacity due to the proposals		
Local Environmental Impact	Air Quality Impact		
	Potential Sensitive receptors		
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas		
	Impact on Biodiversity		
	Groundwater Quality, Groundwater resources / Levels, Surface water quality and flows		
	Landscape and visual assessment		
	Impact at national monuments, NIAH features and ACAs		
EMERGING PREFERED OPTION		**NO**	**YES**

6.3.2 Junction 2: Dublin Road/Bellview Priority Junction

Table 6-15 outlines the options assessment for Junction 2 Dublin Road/Bellview Priority Junction.

6.3.2.1 Option Identification

Table 6-15 - Junction 2 Options

Option Description	Reference
Option 1: Do Nothing This option would retain the existing priority junction between Dublin Road and Bellview with the slip lane into Bellview to the west.	
Option 2: Removal of Slip Lane and Provide a Standard Side Road Crossing Option 2 proposes the removal of the slip lane from Dublin Road west into Bellview and the tightening of the existing junction to the east to DMURS standards. The removal of the slip lane would improve safety for both pedestrians and cyclists along the road, as well as vehicles. This option would be designed according to the CDM as a Protected Priority Junction and would provide appropriate space for pedestrians and cyclists segregated from vehicular traffic.	

6.3.2.2 Detailed Option Assessment

The preferred option for Dublin Road Bellview Junction is Option 2, this option would remove the slip lane to provide a standard side road crossing as detailed in the Cycle Design Manual. The option would incorporate segregation between cyclists and vehicles, greatly improving safety through the junction and would provide a good connection to the adjoining segments. The removal of the slip lane decreases the opportunities for conflicts between active travel users and vehicles at the junction. Full details of the MCA analysis are displayed in Appendix D.

Table 6-16 – Junction 2 MCA Analysis

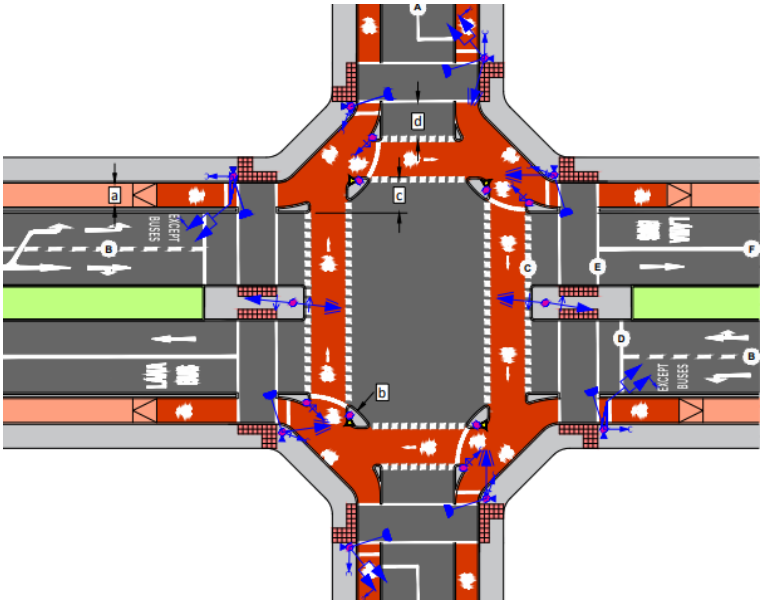
Criteria	Indicator	Option 1	Option 2
Transport User benefits and Other Economic Impacts	Land acquisition area		
	Construction and maintenance		
	Rapid build achievability and construction impacts		
Accessibility Impacts	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression		
	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness		
Social Impacts	Qualitative assessment of accessibility of the options to serve users of all ages and abilities		
	How the proposal may have gender specific impacts		
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI		
	Impact on green areas		
Safety Impact	Segregation between cyclists and vehicles		
	Segregation between cyclists and pedestrians		
	Safety for all users regarding traffic volumes and speeds along route		
	Impact on traffic capacity due to the proposals		
Local Environmental Impact	Air Quality Impact		
	Potential Sensitive receptors		
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas		
	Impact on Biodiversity		
	Groundwater Quality, Groundwater resources / Levels, Surface water quality and flows		
	Landscape and visual assessment		
	Impact at national monuments, NIAH features and ACAs		
EMERGING PREFERED OPTION		**NO**	**YES**

6.3.3 Junction 3: Dublin Road/Aldi Food Store/Glenmore Wood Signalised Junction

6.3.3.1 Option Identification

Table 6-17 describes the options assessed for Junction 3 Dublin Road/Aldi Food Store/Glenmore Wood Signalised Junction.

Table 6-17 - Junction 3 Options

Option Description	Reference
Option 1: Do Nothing The Do-Nothing option would retain the existing signal arrangements at the junction, which are a right turning lane on both approaches along Dublin Road into the Aldi Food Store, a left turning lane into Glenmore Wood on Dublin Road and a slip lane off the Aldi Food Store into Dublin Road. The existing arrangements provide toucan crossings on all approaches of the junction, with the additional stage at the slip lane.	
Option 2: Removal of the Slip Lane and Full Signal Control Junction Option 2 would retain the signal-controlled junction but would upgrade it to be DMURS and CDM compliant. In this option, the slip lane exiting Aldi onto Dublin Road would be removed and all turning vehicles would be accommodated in the main junction to the west. Likewise, the left turning lane into Gleenmore Wood would be removed. The right turning lanes into the Aldi Food Store would be retained so the new junction layout does not interfere with traffic associated with the retail outlet. This option also provides protected cycle facilities, and all movements are signal controlled, which improves safety for all road users.	

6.3.3.2 Detailed Option Assessment

The preferred option for Dublin Road Aldi Junction is Option 2, a fully signal controlled protected junction with the removal of the slip lane out of the retail outlet. The option would provide good connectivity with the segments adjoining it and would also create a much safer scenario arising from the improved segregation between cyclists and vehicles and the removal of the slip lane.

Table 6-18 – Junction 3 MCA Analysis

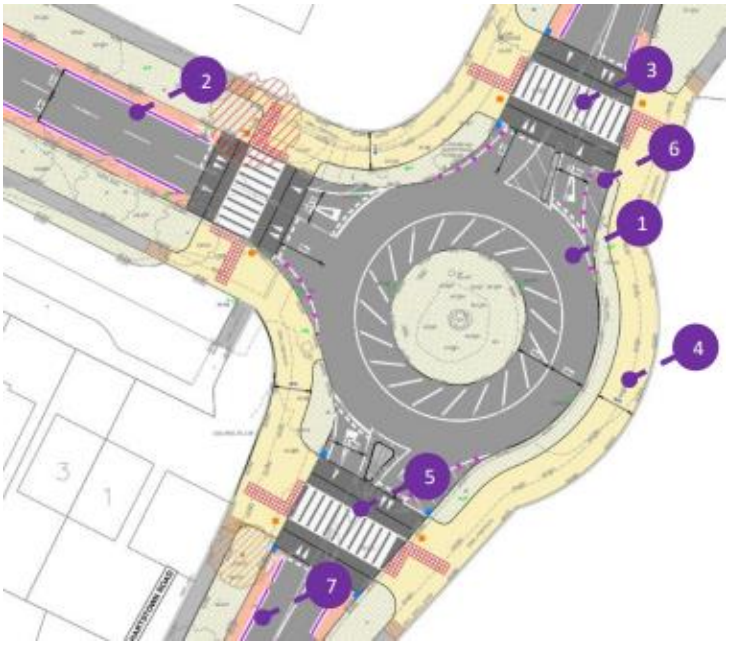
Criteria	Indicator	Option 1	Option 2
Transport User benefits and Other Economic Impacts	Land acquisition area		
	Construction and maintenance		
	Rapid build achievability and construction impacts		
Accessibility Impacts	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression		
	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness		
Social Impacts	Qualitative assessment of accessibility of the options to serve users of all ages and abilities		
	How the proposal may have gender specific impacts		
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI		
	Impact on green areas		
Safety Impact	Segregation between cyclists and vehicles		
	Segregation between cyclists and pedestrians		
	Safety for all users regarding traffic volumes and speeds along route		
	Impact on traffic capacity due to the proposals		
Local Environmental Impact	Air Quality Impact		
	Potential Sensitive receptors		
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas		
	Impact on Biodiversity		
	Groundwater Quality, Groundwater resources / Levels, Surface water quality and flows		
	Landscape and visual assessment		
	Impact at national monuments, NIAH features and ACAs		
EMERGING PREFERED OPTION		**NO**	**YES**

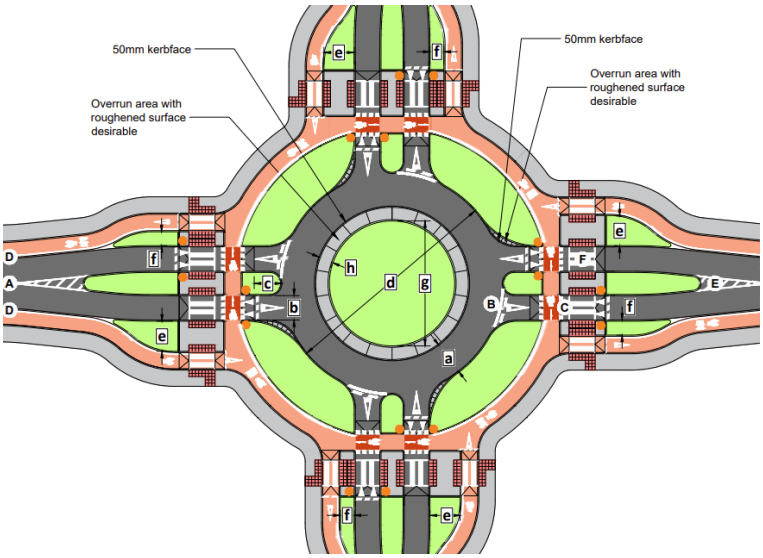
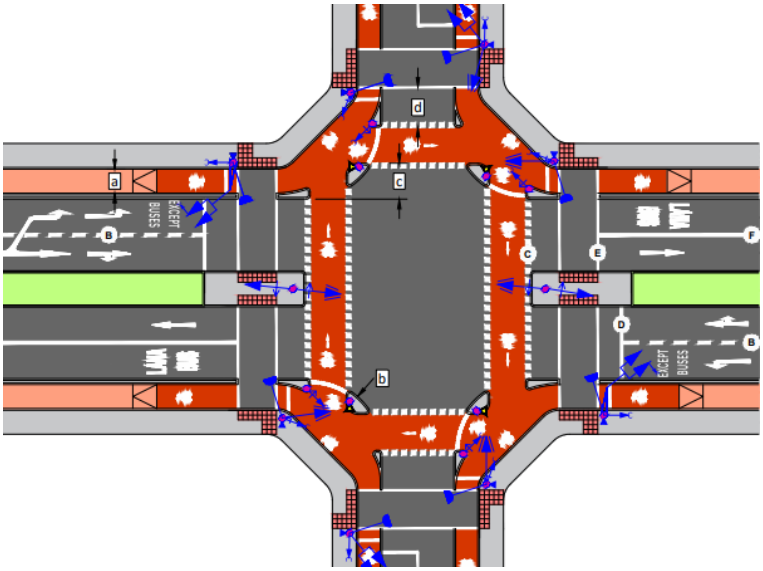
6.3.4 Junction 4: National Science Park Roundabout

6.3.4.1 Option Identification

The options assessed for Junction 4, National Science Park roundabout, are described in Table 6-19.

Table 6-19 - Junction 4 Options

Option Description	Reference
Option 1: Do Nothing Currently, the junction between Dublin Road and Ardmore Road is a 4-arm roundabout with a toucan crossing on the eastern arm. This option would retain this existing arrangement. Cyclists would merge into the roadway with vehicles to proceed along the junction.	
Option 2: Rapid Build Roundabout Upgrade The roundabout provides wide entry lanes and circulatory lanes, which facilitate excessive speeds and reduce safety for all road users. Based on the rapid build guidance for roundabouts, this option would provide a “Level 1” improvement. This option would not be the preferred option permanent layout for the roundabout as it is a temporary measure, however, it is being assessed as it could be implemented in a relatively short time before the Path Finder scheme deadline. The implementation of the rapid build upgrade also can give an indication of how the junction works prior to implementing a full design reconstruction of the junction. This option would reduce the entry lanes and the circulatory lane to a minimum, implement raised crossings on all arms, and improve the active travel facilities at the roundabout.	

Option Description	Reference
Option 3: Protected Roundabout with Cycle Priority Option 3 proposes to change the existing roundabout into a protected roundabout with cycle priority. The proposal is in line with both DMURS and the CDM and would cater for all road users. The roundabout would have one entry lane on each approach, which would be perpendicular to the central island. The circulatory lane would also be a single lane with an overrun area for HGV turning. Crossing points would be provided on all approaches of the junction and would be raised to the footpath level and segregated between cycle and pedestrian crossing points.	
Option 4: Replace Roundabout with Full Signal Control Junction Option 4 proposes to implement a signal controlled junction at the existing roundabout. This option would provide signal control movements to all users of the junction and pedestrians and cyclists cross the road at different crossing points.	

6.3.4.2 Detailed Option Assessment

The preferred option for the National Science Park Junction is Option 2, an upgraded roundabout to a protected roundabout using rapid build techniques. This option would allow for a similar traffic capacity while being lower cost than Option 3 and Option 4 and it does not require land acquisition. This option would create good active travel continuity with other sections of Project 2 as is connects 3 segments.

Table 6-20 – Junction 4 MCA Analysis

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Transport User benefits and Other Economic Impacts	Land acquisition area				
	Construction and maintenance				
	Rapid build achievability and construction impacts				

Criteria	Indicator	Option 1	Option 2	Option 3	Option 4
Accessibility Impacts	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression				
	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness				
Social Impacts	Qualitative assessment of accessibility of the options to serve users of all ages and abilities				
	How the proposal may have gender specific impacts				
Land Use Impact	How the proposal integrates with the Land use, the objectives from development plan and NIFTI				
	Impact on green areas				
Safety Impact	Segregation between cyclists and vehicles				
	Segregation between cyclists and pedestrians				
	Safety for all users regarding traffic volumes and speeds along route				
	Impact on traffic capacity due to the proposals				
Local Environmental Impact	Air Quality Impact				
	Potential Sensitive receptors				
	Bedrock and overburden, Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas				
	Impact on Biodiversity				
	Groundwater Quality, Groundwater resources / Levels, Surface water quality and flows				
	Landscape and visual assessment				
	Impact at national monuments, NIAH features and ACAs				
EMERGING PREFERED OPTION		**NO**	**YES**	**NO**	**NO**

7. Summary of Emerging Preferred Options and Appraisal

7.1 Summary of Emerging Preferred Options

Following the Detailed Option Assessment process and taking cognisant of the key objectives of the project, the proposed Emerging Preferred Options for Project 1 of the Mullingar Active Travel Bundle are shown in Table 7-1. The Emerging Preferred Options drawings for all segments, junctions and pinch points are included in Appendix E.

Table 7-1 – Project 1 Preferred Option

Location	Proposal
Segment 01	2.3m two-way cycle track on the south side of the road, locally changed to shared active travel paths at constrained locations 1.8m footpath on both sides of the road 6.5m carriageway
Segment 02	3.5m two-way cycle track on the south side Retention of the existing 1.8m+ footpaths on both sides of the road 6.5m carriageway
Segment 03	4.0m two-way cycle track on the south side Retention of the existing 1.8m+ footpaths on both sides of the road 6.5m carriageway
Segment 04	2.3m two-way cycle track on the south side Retention of the existing 1.8m+ footpath on the north side 6.5m carriageway
Segment 05	2.3m two-way cycle track on the east side 2.0m footpath on the east side 6.0m carriageway
Segment 06	3.3m Shared active travel path on the western side Footpath on the eastern side Removal of left turning lane into Dublin Road 6.0m carriageway
Dublin Road/Delvin Road Signalised Junction	Upgrade Junction into a Fully Signal Control Protected Junction as per the Cycle Design Manual.
Dublin Road/Bellview Priority Junction	Removal of Slip Lane and Provide a Standard Side Road Crossing as per the Cycle Design Manual.
Dublin Road/Aldi Food Store/Glenmore Wood Signalised Junction	Removal of the Slip Lane and Full Signal Control Junction as per the Cycle Design Manual.
National Science Park Roundabout	Rapid Build Roundabout Upgrade as per the NTA Roundabout Retrofit – Including Rapid Build Options guidance.

Location	Proposal
Parking bays affected	Removal of informal parking area at hard shoulder on Segment 01 adjacent to Prospect Court. Retention of the 7 parking bays adjacent to Cuainín terrace houses.
Land acquisition required	Approximately 300m2
Public transport links	Improvement to all bus stops located along the corridor to be in accordance with the Cycle Design Manual guidelines.

7.2 Feasibility Working Costs

Details of the Feasibility Cost Estimates for the emerging preferred option for all segments, junctions and pinch points are included in Appendix F. The Option Comparison Costs for all options considered are also included in Appendix F. These have been undertaken in line with the NTA Cost Management Guidelines. Contingencies have been added in accordance with the NTA Contingency Calculator (also included within Appendix F).

7.3 Statutory Process

The Mullingar Active Travel Bundle is divided into four projects. Each project will go through a Part VIII planning process which will be in accordance with the Planning and Development Regulations.

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 *PW-CF5 – Contract for Minor Building & Civil Engineering Works* designed by the Employer.

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 proposed Mullingar Active Travel Bundle Project 2, which comprises Dublin Road from the access to the Royal Canal Way to the west to the Marlinstown Roundabout to the east, and Ardmore Road, from the National Science Park roundabout to the access to Ardmore Hills, is an important project for Mullingar and County Westmeath, and 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 6.3 for the pinch point and 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 residents, school goers and leisure cyclists/walkers of Mullingar to choose active modes of travel, as well as provide a more accessible connection to the several employment areas, such as the National Science Park, the Royal Canal Greenway and the town centre. 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

June 2024

0086409DG0008

MULLINGAR ACTIVE TRAVEL BUNDLE

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 Mullingar Active Travel Bundle.

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This document has 29 pages including the cover.

Document history

Document title: Environmental Constraints Report

Document reference: 0086409DG0008

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0	Draft for client comment	OW	AMcC	CD		16.02.24
Rev 1	Final	OW	AMcC	CD	SW	16.06.24

Client signoff

Client	Westmeath County Council
Project	MULLINGAR ACTIVE TRAVEL BUNDLE
Job number	0086409
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 Mullingar Active Travel Bundle.

The Project is located in Mullingar Town, County Westmeath. The scheme extents and routes are highlighted on the map below as shown in Figure 1-1. Figure 1-1, outlines 4 separate projects; Projects 1 and 2 have been identified as the priority or (pathfinder) routes, and are therefore the subject of this constraints report.

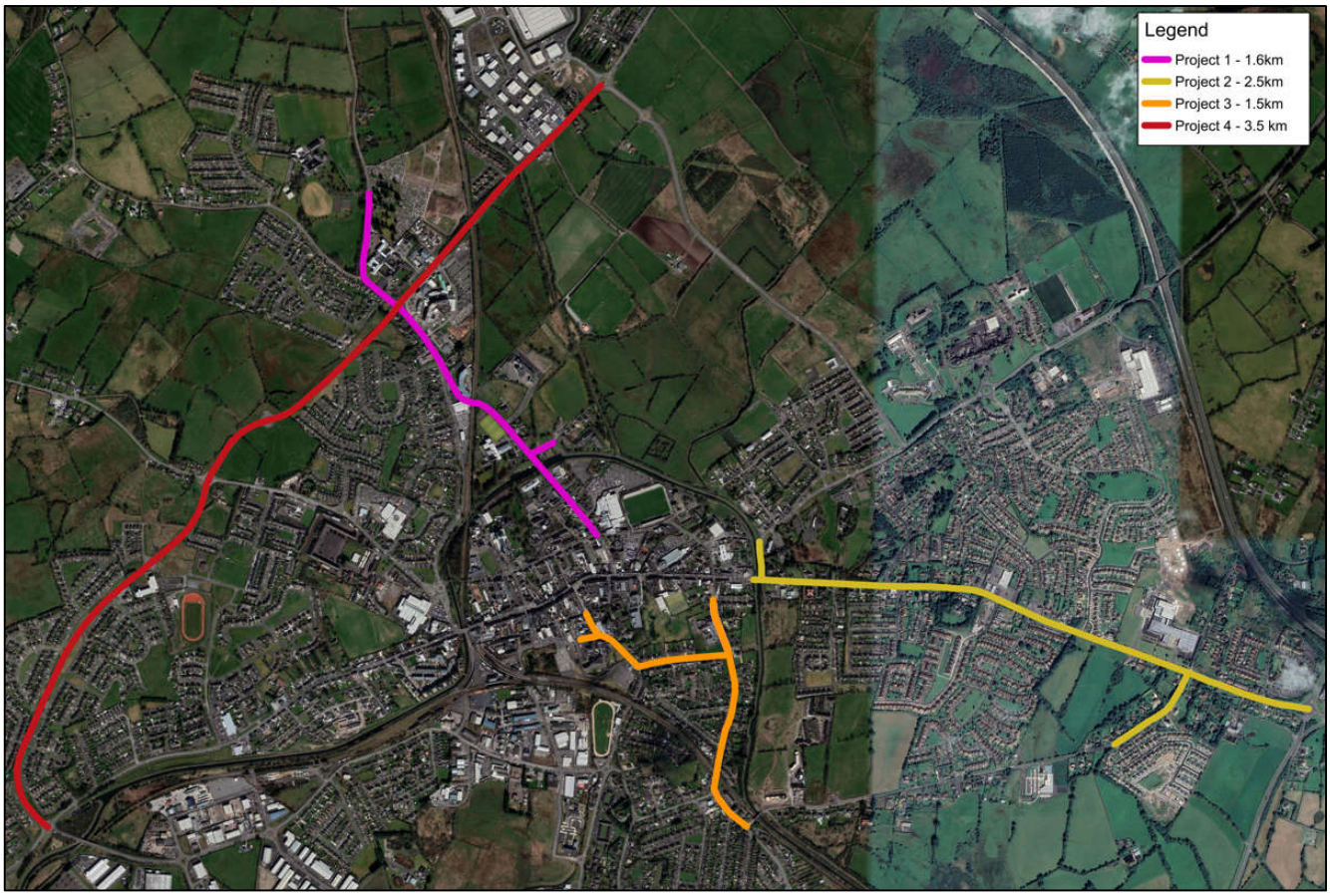

Figure 1-1 - Mullingar Active Travel Bundle Routes

The overall commission includes six different areas within Mullingar town which will be divided into four different projects, as outlined below:

- Project 1: WH/21/0004 St. Finian's to Harbour Street Footpath and Cycleway
- Project 2: WH/21/0005 and WH/21/0008 Dublin Road Footpath and Cycleway and National Science Park Junction Improvements
- Project 3: WH/21/0006 and WH/21/0009 Sundays Well Road - Lynn Road/Auburn Road - Millmount Junction Improvements and Mount Street Lower Pedestrian Interventions
- Project 4: WH/21/0007 Grange South to Orbital C-Link Segregated Cycling Scheme.

As previously mentioned, this environmental constraints report is being prepared for Projects 1 and 2 only.

1.2 Purpose of this Report

This report is being prepared to accompany the Feasibility and Options Selection Report for the proposed Mullingar Active Travel Bundle. The purpose of this report is to determine the identified environmental constraints within the site boundary and vicinity of Projects 1 and 2 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:

- 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 Topography

The general topography of the study area consists of urban streets bounded with properties and greenspace 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 areas for both routes appear to be generally flat in nature with a highpoint reported in the in the centre of Project 2. Levels of ca. 95 - 110mAOD are reported along projects 1 and 2, with levels along the centre of Project 2 reported as ca. 120mAOD.

2.2 Land, Soils and Geology

2.2.1 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 Mullingar Local Area Plan 2014 – 2020, land use zonings within the vicinity of Project 1 are as follows:

- Education, Community & Institutional
- Existing Residential
- Commercial
- Mixed Use
- Canals and Water Courses
- General Urban District
- Open Space

Similarly, land use zonings within the vicinity of Project 2 are as follows:

- Education, Community & Institutional
- Existing Residential
- Proposed Residential
- Commercial
- Enterprise & Employment
- Open Space
- Mixed Use
- Canals and Water Courses

Refer to Figure 2-1 below for details.

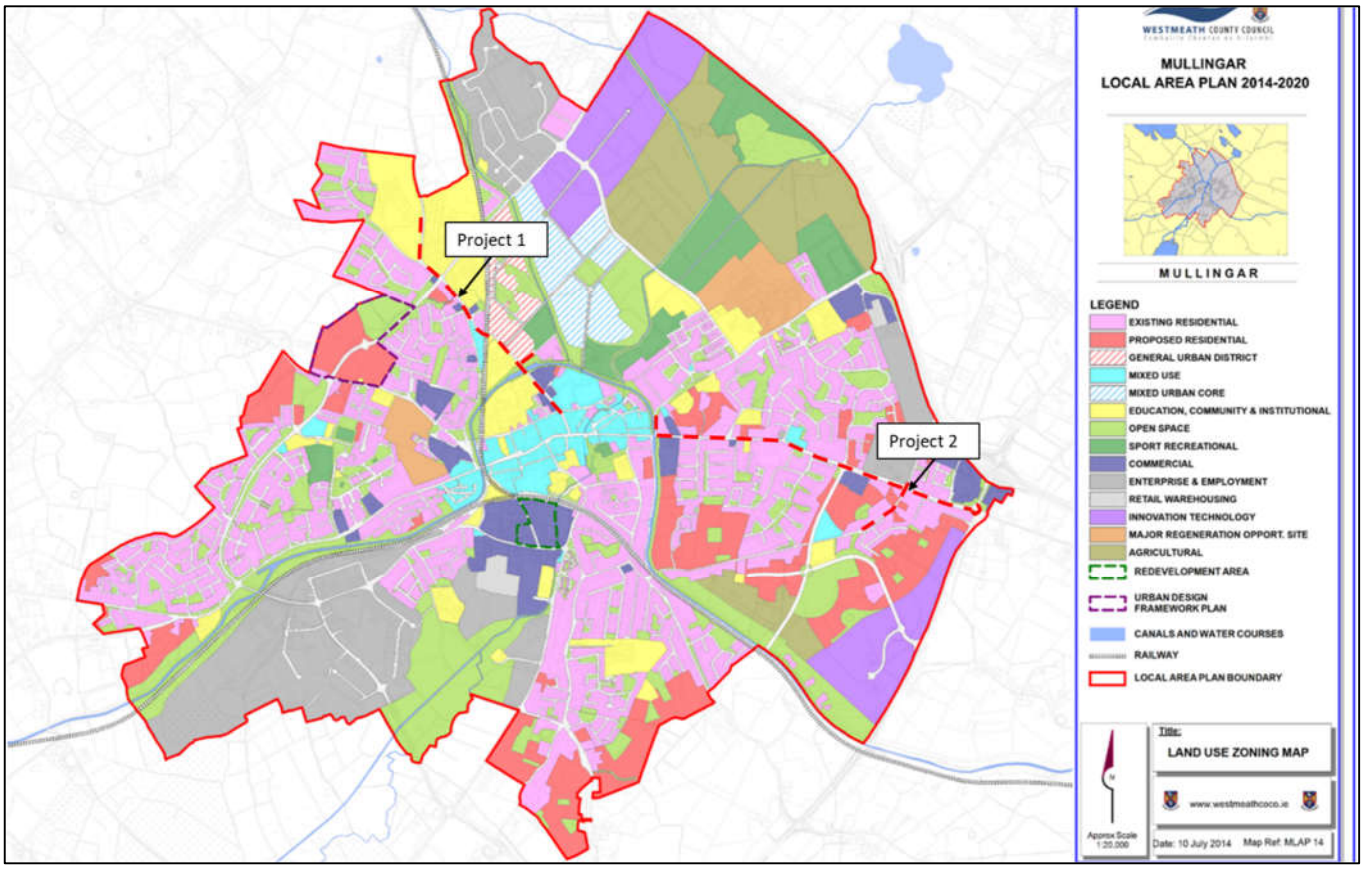

Figure 2-1 - Land Use Zonings within the vicinity (WCC, 2014)

2.2.2 Teagasc Soils

According to GSI (2024) the soil type in the vicinity of both projects is predominantly ‘made ground’ and ‘Till derived chiefly from limestone; Grey Brown Podzolics, Brown Earths’ with minor portions of ‘Till derived chiefly from limestone; Surface water Gleys, Ground water Gleys’ and ‘Bedrock at surface-Calcareous’ soils reported beneath Project 2 as shown in Figure 2-2.

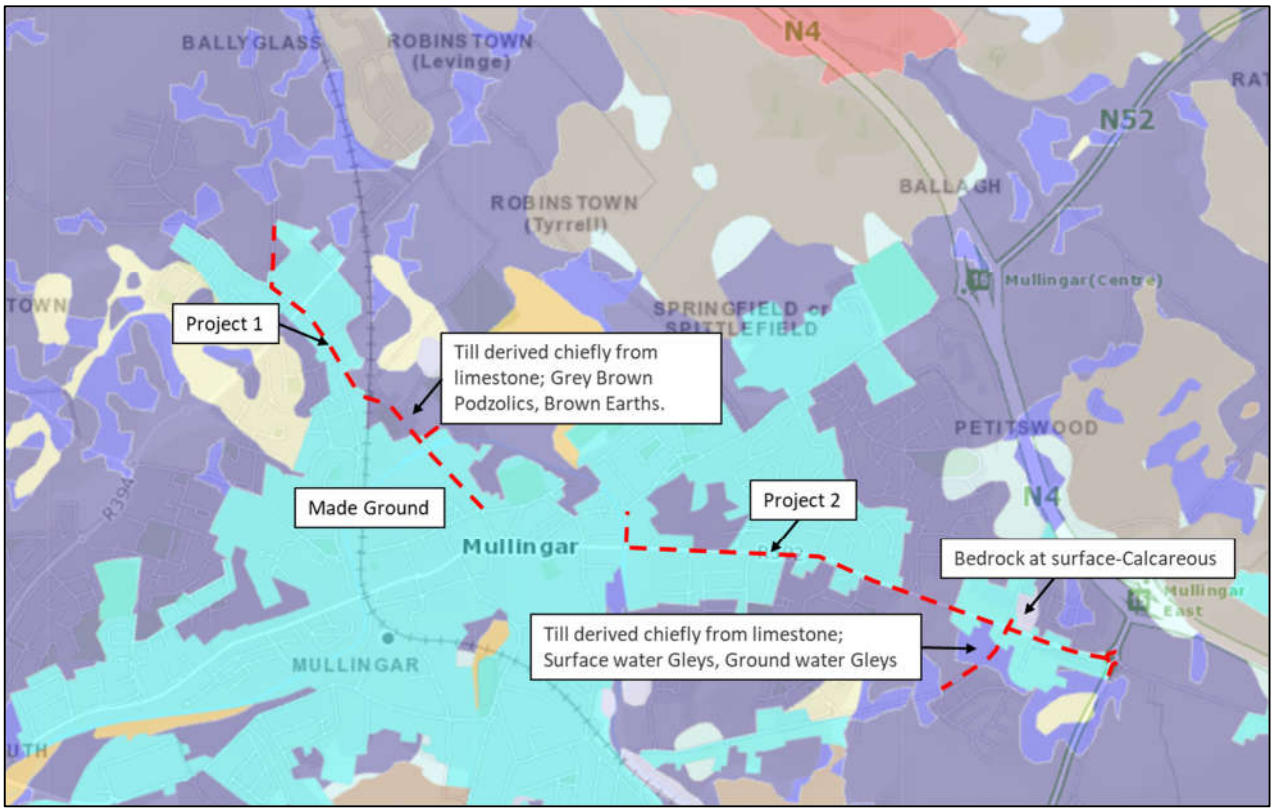

Figure 2-2 - Teagasc Soils within the vicinity of both route options (GSI, 2024)

2.2.3 Quaternary Sediments

A review of GSI (2024) indicates that the quaternary sediments underlaying both projects is predominantly classified as 'Till derived from limestones' and 'Urban' sediments with a minor portion of 'Bedrock outcrop or subcrop' beneath Project 2 (refer to Figure 2-3).

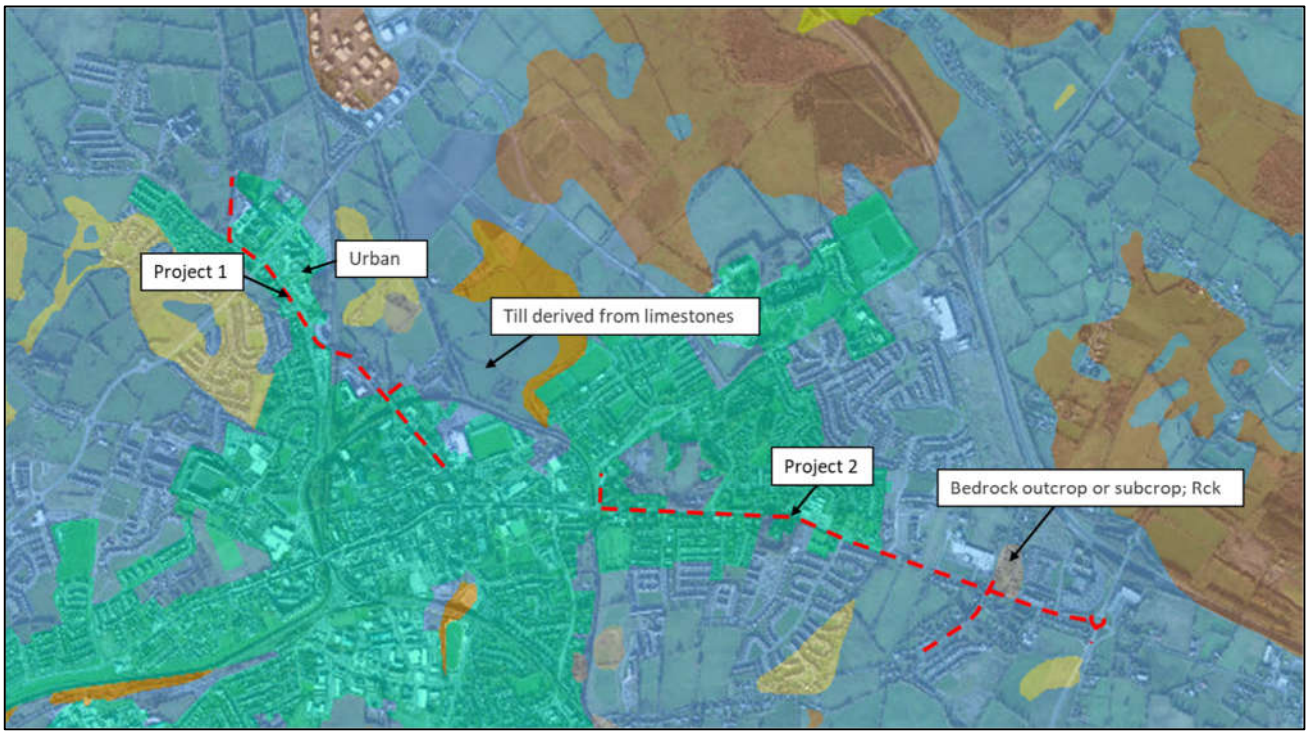

Figure 2-3 - Quaternary Sediments within the vicinity of both route options (GSI, 2024)

2.2.4 Bedrock Geology

GSI (2024) indicates that the Bedrock Geology within the vicinity of Projects 1 and 2 comprise 'Dark limestone & shale' of the Lucan Formation with the eastern most portion of Project 2 underlain by 'Massive unbedded lime-mudstone' of the Waulsortian Limestones Formation, as shown in Figure 2-4. A geological fault runs in a south west – north east direction, identified by GSI as a 'Structural linework feature' in the eastern portion of Project 2.

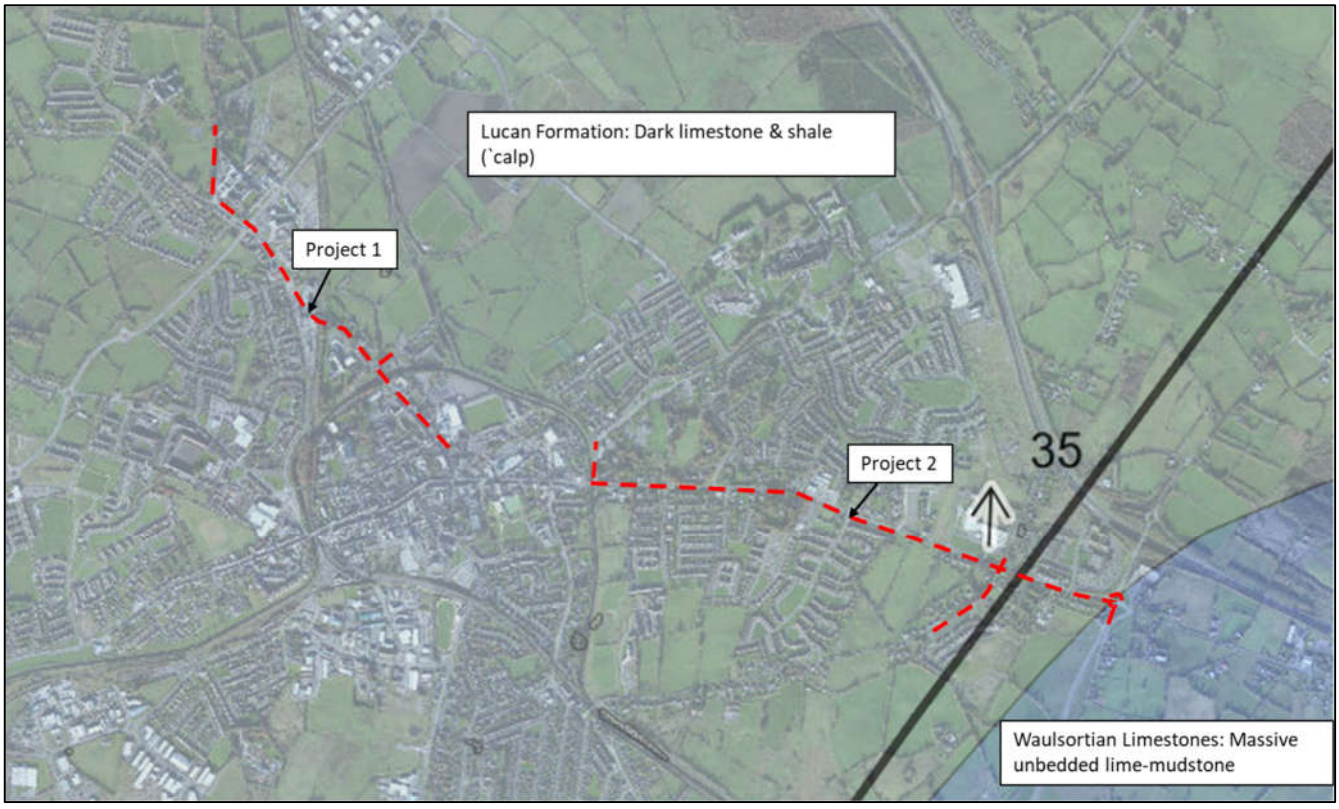

Figure 2-4 - Bedrock Geology within the vicinity (GSI, 2024)

2.2.5 Geological Heritage Areas

A review of GSI (2024) indicates that there are 2no. Geological Heritage Areas (GHA) within 5km of both projects; Mullingar Bypass, described by GSI (2024) as 'A roadcut section along the N4 road north of Mullingar, exposing limestone strata', is located ca.1.9km north of Project 1 and Portnashangan Quarry, described by GSI (2024) as a 'Site comprising a disused, roadside quarry' is located ca. 4.95km north of Project 1.

2.2.6 Landslide Susceptibility

A review of GSI (2024) indicates that landslide susceptibility within the vicinity of both routes are 'Low', 'Low inferred' and 'Made' land. There have been no landslide events reported by GSI (2024) within Mullingar. Therefore, no issues are identified with regards to landslide potential.

2.3 Water

2.3.1 Hydrology

2.3.1.1 Surface Water Features

EPA (2024) has identified 2no. rivers and 1no. Canal within the vicinity of both routes, as follows:

- Project 1 crosses the Royal Canal via. an existing bridge structure on the Harbour Road.
- Project 2 crosses the Royal Canal at an existing bridge structure on the Dublin Road R392.
- Project 1 crosses an existing arterial drainage channel; C45(5) / Robinstown, which in turns discharges to the Brosna River.
- The River Brosna runs ca. 487m from Project 1 and ca. 340m from Project 2.
- The Farranistick runs ca. 496m from Project 1.

The Water Framework Directive (WFD) status of each EPA reported watercourse is as follows: The Farranistick is 'Good' and the River Brosna is 'Poor' for the 2016-2021 monitoring period, with the River Brosna being 'At risk' of failing to achieve relevant WFD objectives by 2027 and The Farranistick being under review. The Canal is not an EPA watercourse, and therefore status or risk is not relevant to it.

The study area is located within the Lower Shannon catchment and the Brosna sub catchment.

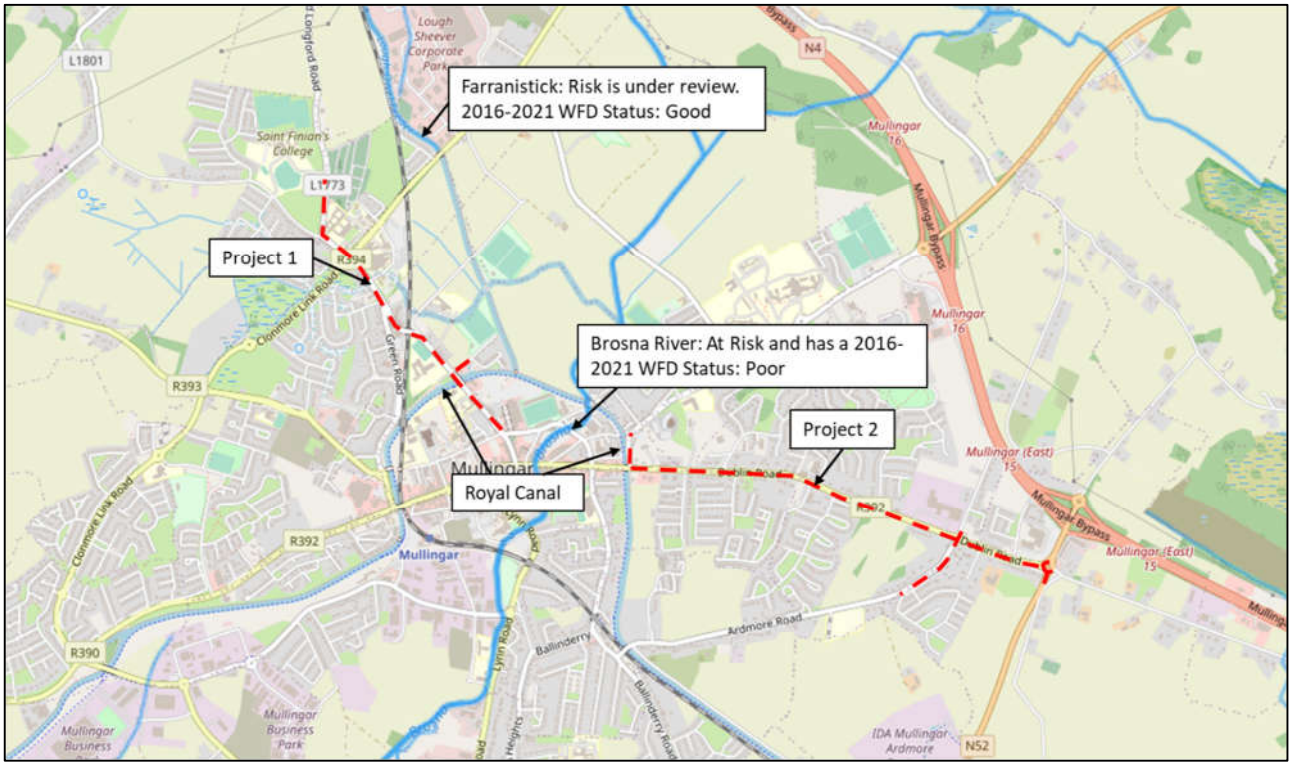

Figure 2-5 – River Crossing / Quality within the vicinity of both routes (EPA, 2024)

2.3.1.2 Flooding

2.3.1.2.1 CFRAM Predictive Flood Maps

The fluvial CFRAM predictive flood map of the study area for both projects was consulted. 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. Neither Project Route is located within any inundated areas. However, the OPW flood maps indicates that benefitting lands are present around Mullingar hospital within vicinity of Project 1.

2.3.1.2.2 Historic Flooding

OPW have reported 3no. recurrent flooding events within the vicinity of the proposed projects, as follows:

- 1no. event along Pearse St / Austin Friars St to the west of the Canal which is known as Brosna Austin Friar Pearse St Mullingar Recurring and is reported as a Recurring flood with a report in 2005 reporting it as 'Low lying floods every year after heavy rainfall. Inadequate drainage system – road culverts requiring maintenance'' (OPW, 2024). This recurring event is located ca. 400m from Project 1 and ca. 355m from Project 2.
- 1no. event along the Royal Canal Way south of the Canal which is known as Brosna Canal Aqueduct Mullingar Recuring and is reported as a Recurring flood with a report in 2005 reporting it as 'The River Brosna overflows its banks every year after heavy rainfall.' (OPW, 2024). This recurring event is located ca. 200m from Project 1 and ca. 390m from Project 2.
- 1no. event along the R400 south of the Canal which is known as Brosna Gaol Hill, Mullingar Recurring and is reported as a Recurring flood with a report in 2005 reporting it as 'The River Brosna overflows its banks upstream of the road culvert every year after heavy rain' (OPW, 2024). This recurring event is located ca. 430m from Project 1 and ca. 500m from Project 2.

2.3.2 Hydrogeology

2.3.2.1 Karst Features

There are no reported karst features within Mullingar (GSI, 2024) with the closest karst feature; a Spring (GSI ID: 2325SEK006) which is reported to within a 20m locational accuracy, located ca. 3km south of Project 2.

2.3.2.2 Wells and Springs

There are no GSI reported wells or springs within Mullingar (GSI, 2024). The closest well (GSI ID: 2325SWW007) is, located ca. 1.5km northwest of Project 1 and is reported to 1km locational accuracy.

2.3.2.3 Drinking Water Protection Areas

There are no Ground Water Drinking Water Source Protection Areas within 5km of either project (GSI, 2024). There are no Group Water Schemes located within 10km of either project.

2.3.2.4 Aquifers

GSI (2024) indicates that Mullingar, including the study areas for both projects 1 and 2 is underlain by a locally important aquifer – bedrock which is moderately productive only in local zones.

2.3.2.5 Groundwater Vulnerability

GSI (2024) have classified the groundwater vulnerability beneath Project 1 as 'High' with Project 2 being classified predominantly as having 'High' vulnerability with a small portion at the eastern end classified as 'Extreme' and 'Rock at or near surface or karst' vulnerability. All of these groundwater vulnerability classifications indicate that groundwater is potentially shallow and vulnerable to contamination. Refer to Figure 2-6.

Figure 2-6 – Groundwater Vulnerability within the vicinity of both routes (GSI, 2024)

2.3.2.6 Ground Water Quality

As indicated on EPA (2024) there are 2no. ground waterbodies (GWB) within the study areas of Project 1 and 2 as follows:

- Project 1 is within Inny GWB;
- Project 2 is within Inny and Waste Facility (W0071-02 GWB)

Both of these GWBs are reported by EPA (2024) 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.

2.4 Biodiversity

2.4.1 Ecology

This section of the report outlines the baseline ecological conditions and potential ecological constraints found within the study area of the proposed Mullingar Active Travel Bundle. Information and data on habitats and sites that are legally protected, are of conservation value or are of ecological importance has been collated to inform the development of route options for the proposed scheme.

A desk-based study was carried out to identify the potential ecological constraints associated with the study area for the proposed pedestrian and cycle network scheme, in line with the guidance set out in "*Guidelines for Assessment of Ecological Impacts of National Road Schemes"* (NRA, 2009). The sources of data used to compile this section include the following:

- National Parks and Wildlife Service (NPWS);
  - Information on sites designated for nature conservation, including spatial data
  - Habitats and species data
- National Biodiversity Data Centre (NBDC);
  - Species records

- Environmental Protection Agency (EPA);
  - Watercourses
- Ordnance Survey Ireland (OSI); and
  - Historic mapping
- Wetland Surveys Ireland (WSI)
  - Wetland Habitat Records.

2.4.2 Ecological Site Setting

The proposed Active Travel Bundle is located entirely withing the town of Mullingar. The study area is split into two areas project one and project two. Project one is approximately 1.55km and project two is approximately 2.3km as seen in figure 2-10 below.

The following ecological features of importance have been reviewed in relation to the study area:

- Internationally Designated Conservation sites – European Sites;
- Annex I Habitats;
- Sites of National Conservation Value – Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs);
- Other Ecological Receptors;
- Documented Rare and Protected Species (Species Records); and,
- Records of non-native species.

2.4.3 Internationally Designated Conservation Sites - European sites

There are no internationally designated conservation sites within the study area. The closest European site is located ca. 1.97km north of the study area. There are 16no. European sites within the zone of influence (ZoI) of the study area. The surface water drainage network from the project site is via the roadway drainage infrastructure and for the purposes of this assessment it is assumed to outfall to the River Brosna, therefore resulting in an indirect hydrological connection to designated conservation sites located downstream on the River Brosna. The European sites within the ZoI of the project sites are presented in Table 2-1 below. Figure 2-7 and Figure 2-8 below illustrate European sites within the ZoI of the proposed scheme.

Table 2-1 - Internationally Designed Conservation Sites and their connectivity to study area

Site Name	Site ID	Distance and Connectivity to Study Area
Lough Owel SAC	000688	1.97km north of study area. No hydrological connectivity to site
Lough Owel SPA	004047	1.97km north of study area. No hydrological connectivity to site
Wooddown Bog SAC	002205	2km east of study area. No hydrological connectivity to site
Lough Ennell SPA	004044	3.8km south of study area. Hydrologically connected via Brosna
Lough Ennell SAC	000685	3.8km south of study area. Hydrologically connected via Brosna

Site Name	Site ID	Distance and Connectivity to Study Area
Scragh Bog SAC	000692	4km north of study area. No hydrological connectivity to site
Lough Iron SPA	004046	8.7km north west of study area. No hydrological connectivity to site
Lough Derravaragh SPA	004043	8.7km north of study area. No hydrological connectivity to site
River Boyne and River Blackwater SAC	002299	9.9km east of the study area. No hydrological connectivity to site
River Boyne and River Blackwater SPA	004232	12.9km north east of the study area. No hydrological connectivity to site
Garriskil Bog SAC	000679	13.7km north west of the study area. No hydrological connectivity to site
Garriskil Bog SPA	004102	13.7km north west of the study area. No hydrological connectivity to site
Mount Hevey Bog SAC	002342	13.9km east of the study area. No hydrological connectivity to site
Lough Lene SAC	002121	15.6km north of the study area. No hydrological connectivity to site
Split Hill and Long Esker SAC	001831	17.2km south of the study area. Hydrologically connected via Brosna
Ballymore Fen SAC	002313	19km west of the study area. No hydrological connectivity to site

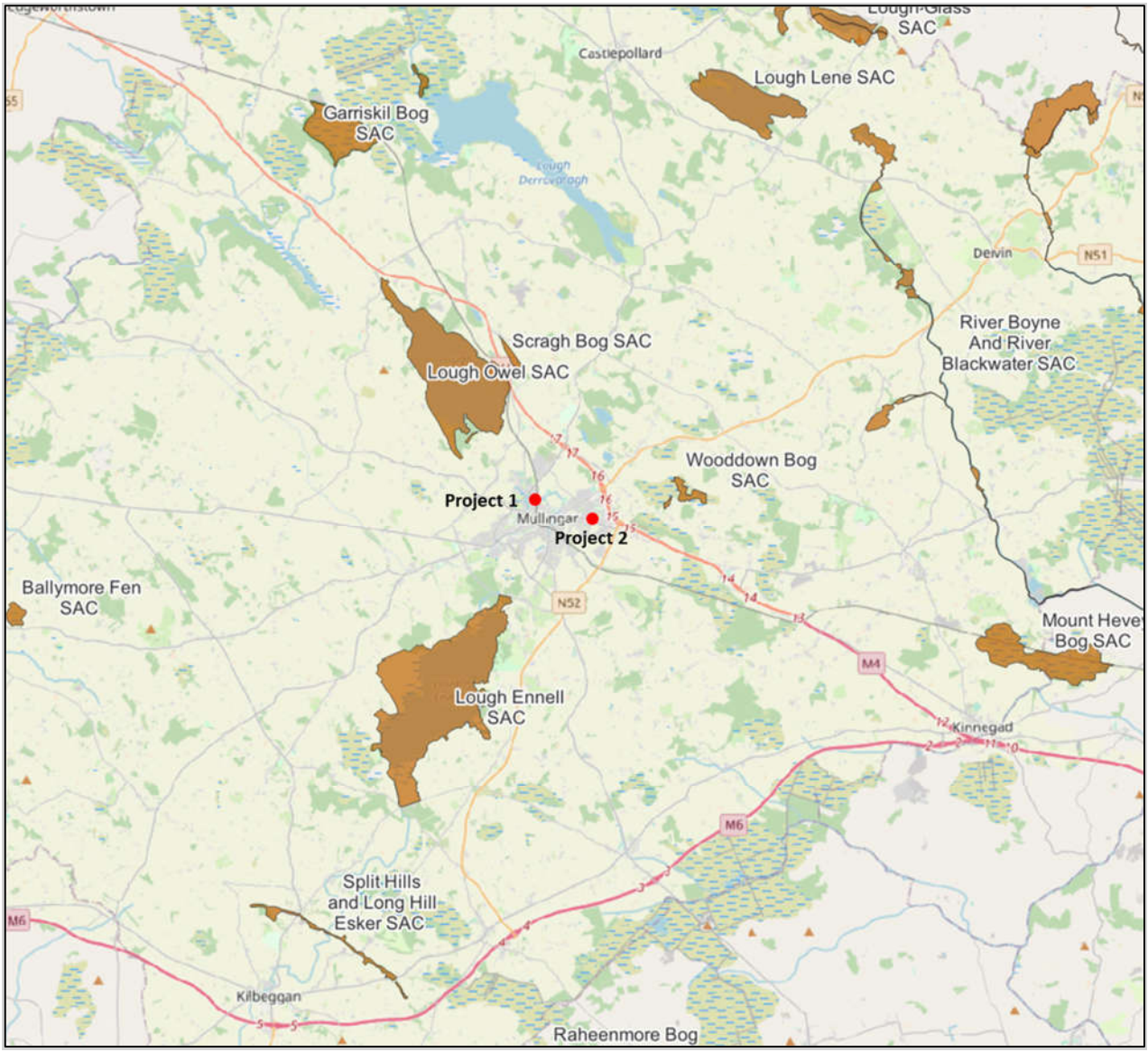

Figure 2-7 – Designated Sites - SACs within the vicinity of both routes

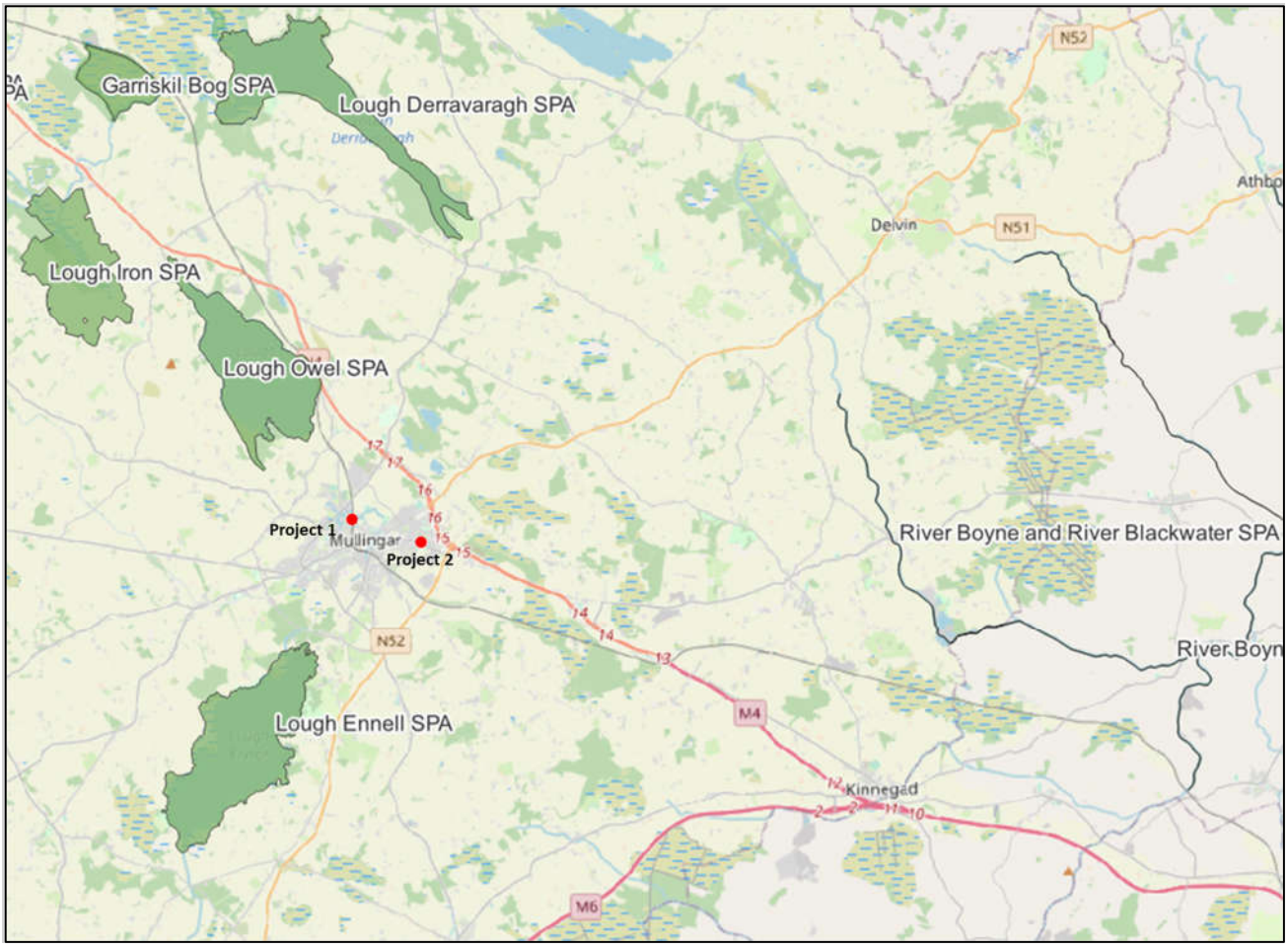

Figure 2-8 – Designated Sites - SPAs within the vicinity of both routes

2.4.4 Annex I Habitats

A review of NPWS datasets[1] identifies there are no Annex I habitats within the study areas. The following habitats have been identified within ca. 4km of the route

- Turloughs (3180)
- Transition mires (7140)
- Molina Meadow (6410)
- Alkaline fens (7230)

There is no connectivity between any Annex 1 habitats and the proposed scheme.

2.4.5 Sites of National Conservation Value – Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs)

NHAs are nationally designated sites which are considered important for the habitats present or which support species of plants and animals whose habitat requires protection. NHAs are legally protected under the Wildlife

[1] https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17/2019

Amendment Act 2000. pNHAs are sites that are of significance for wildlife and habitats. pNHAs are not statutorily designated, however their ecological value is recognised by planning and licensing authorities.

One pNHA is within the extents of the proposed scheme; Royal Canal pNHA [2]. A site summary of this pNHA is as follows;

> *"The Royal Canal is a man-made waterway linking the River Liffey at Dublin to the River Shannon near Tarmonbarry. There is a branch line from Kilashee to Longford Town. The canal pNHA comprises the central channel and the banks on either side of it. The main water supply is from Lough Owel (also an NHA) via a feeder channel into the canal at Mullingar. The Royal Canal was closed to navigation in 1961. The section of canal west of Mullingar was allowed to dry out, and the eastern section silted up and became overgrown. Restoration began in 1988, and is still in progress.*
>
> *A number of different habitats are found within the canal boundaries - hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland.*
>
> *The hedgerow, although diverse, is dominated by Hawthorn (Crataegus monogyna). On the limestone soils of the midlands Spindle (Euonymus europaeus) and Guelder-rose (Viburnum opulus) are present.*
>
> *The vegetation of the towpath is usually dominated by grass species. Crested Dog's-tail (Cynosurus cristatus), Quaking Grass (Briza media) and Sweet Vernal-grass (Anthoxanthum odoratum) are typical species of the calcareous grasslands of the midlands. Where the canal was built through a bog, soil (usually calcareous) was brought in to make the banks. The contrast between the calcicolous species of the towpath and the calcifuge species of the bog is very striking.*
>
> *Otter spraints are found along the towpath, particularly where the canal passes over a river or stream.*
>
> *The Rare and legally protected Opposite-leaved Pondweed (Groenlandia densa) (Flora Protection Order 1987) is present at one site in Dublin, between Locks 4 and 5. Tolypella intricata (a stonewort listed in the Red Data Book as being Vulnerable) is also in the Royal Canal in Dublin, the only site in Ireland where it is now found.*
>
> *The ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species. It crosses through agricultural land and therefore provides a refuge for species threatened by modern farming methods."*

There are 4no. NHAs and 11no. pNHAs within 15km of the study area. Details of pNHAs within 15km of the study area are listed in Table 2-2 and illustrated in Figure 2-9.

Table 2-2 - NHAs and pNHAs within 15km of the Study Area

Site name (site code)	Distance from study area	Connectivity
Royal Canal pNHA (002103)	pNHA within study area	Direct connectivity via Royal Canal
Lough Owel pNHA (000688)	1.97km north	No direct or indirect (hydrological) connectivity
Wooddown Bog NHA (000694)	2km east	No direct or indirect (hydrological) connectivity
Lough Sheever Fen/Slevin's Lough Complex pNHA (000690)	2km north	No direct or indirect (hydrological) connectivity

[2] https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-10/O_Devaney_Gardens_EIS_-_Appendix_8.1_-_Site_Synopses.pdf

Walshestown Fen pNHA (001731)	3.6km west	No direct or indirect (hydrological) connectivity
Lough Ennell pNHA (000685)	3.8km south	Hydrologic connectivity via Bronsa
Scragh Bog pNHA (000692)	4km north	No direct or indirect (hydrological) connectivity
Ballynafid Lake and Fen pNHA (000692)	6km north	No direct or indirect (hydrological) connectivity
Lough Iron pNHA (000687)	8.7km north west	No direct or indirect (hydrological) connectivity
Lough Derravaragh NHA (000684)	8.7km north	No direct or indirect (hydrological) connectivity
Milltownpass Bog NHA (002323)	8.8km south	No direct or indirect (hydrological) connectivity
Nure Bog NHA (001725)	12.3km south west	Hydrologic connectivity via Bronsa
Garriskil Bog pNHA (000679)	13.7km north west	No direct or indirect (hydrological) connectivity
Mount Hevey Bog pNHA (001584)	13.9km east	No direct or indirect (hydrological) connectivity
Lough Garr NHA (001812)	13.9km north west	No direct or indirect (hydrological) connectivity

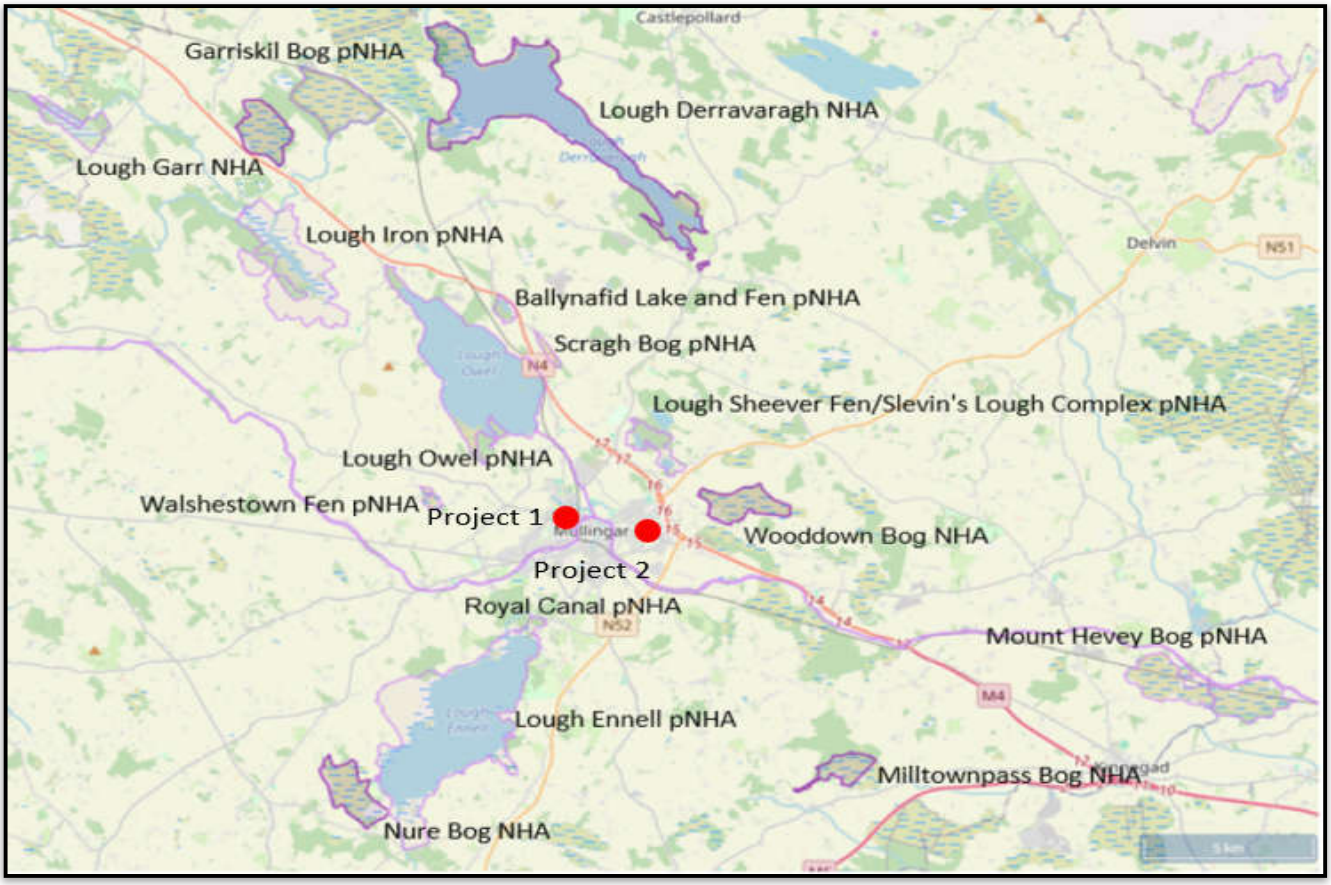

Figure 2-9 – pNHAs and NHAs within 15km of study area

2.4.6 Other Ecological Receptors

2.4.6.1 Freshwater Habitats

As stated in the Water Section above there are 2 no. rivers and 1 no. canal is located in the vicinity of the proposed scheme. The river Brosna is aligned ca. 487m from Project 1 and ca. 340m from Project 2 and the Farranistick is aligned ca. 496m from Project 1.

The waterbody of the Royal Canal is crossed by both Project 1 and Project 2 via existing bridges on Harbour Road and Dublin Road R392 respectively.

2.4.6.2 Wetland Habitats

A review of Wetland Survey Ireland (WSI) datasets confirms no WSI identified wetland habitats located within the scheme site.

There are 22 no. wetland habitats within 5km of the study area. Two of these wetlands Marlinstown Cutover Complex and Baltrasna North Fen have a connectivity to the site via the Royal Canal. These wetland sites are listed in the table below.

Table 2-3 - Wetlands within 5km pf the study area

Name	MIW Code	Description
Marlinstown Cutover Complex	WMI_WM126	This wetland is located 1.5km east of the site boundary. Cutover bog at Marlinstown, being used for active peat removal. Remaining high bog is afforested.
Baltrasna North Fen	WMI_WM345	This wetland is located 1.8km east of the site boundary. Data Pending, canal, wet grassland, fen and scrub.
Clonmore Fen	WMI_WM344	This wetland is located 1.83km south of the site boundary. Data pending, wet grassland, fen and scrub.
Tullaghan Fen – Lough Owel SAC	WMI_WM104	This wetland is located 1.97km north of the site boundary. Areas of marsh and fen occur in the northern and south-western corners of the lake. These areas (Bunbrosna marsh and Tullaghan fen) were formerly separate Areas of Scientific Interest but have now been included within the Lough Owel site.
Wooddown Bog NHA	WMI_WM80	This wetland is located 2.28km north east of the site boundary. The site comprises a raised bog that includes both areas of high bog and cutover bog. A small fen is located to the south-west of the bog. The cutover supports humid grassland, Birch and Gorse (Ulex europaeus) scrub and woodland.
Irishtown North Ponds	WMI_WM339	This wetland is located 2.5km north of the site boundary. Data pending, artificial pond and wet grassland.
Kilpatrick Bridge Fen cNHA	WMI_WM17	This wetland is located 2.77km south of the site boundary. A small wet Schoenus fen between the royal Canal and the disused railway line. Holds a range of fen species including the rare moss Homalothecium nitens.
Walshestown South Ponds	WMI_WM318	This wetland is located 3.1km west of the site boundary. Data pending, lake, reed, swamp, fen, scrub and wet grassland.
Culleen Beg Ponds	WMI_WM337	This wetland is located 3.3km north of the site boundary. Small seasonal lake was predominantly fed by surface water in the winter and drained by a stream that has been piped underneath Mullingar Rugby Club to prevent flooding on their grounds.
Macetown Bog	WMI_WM341	This wetland is located 3.3km north east of the site boundary. Data pending, wet grassland, raised bog, cutover bog, fen, bog woodland and scrub.
Kilpatrick Pond	WMI_WM343	This wetland is located 3.42km south of the site boundary. Data pending, artificial pond and scrub.
Woodddown South	WMI_WM342	This wetland is located 3.46km east of the site boundary. Data pending, wet grassland, raised bog fen and scrub.
Slevins Lake	WMI_WM101	This wetland is located 3.55km north of the site boundary. Lough Sheever Fen/Slevin's Lake Complex comprises two medium-sized lakes and their associated woodland and grassland habitats. Habitats of note here include fen vegetation forming on the shores of both Lough Sheever and Slevin's Lake.

Name	MIW Code	Description
Lough Sheever – Lough Sheever Fen/Slevins complex pNHA	WMI_WM96	This wetland is located 3.6km north east of the site boundary. Lough Sheever Fen/Slevin's Lake Complex comprises two medium-sized lakes and their associated woodland and grassland habitats. Habitats of note here include fen vegetation forming on the shores of both Lough Sheever and Slevin's Lake.
Walshestown Fen	WMI_WM44	This wetland is located 3.6km west of the site boundary. This is a partially cut-out bog in which bog holes frequently occur. Reed swamp and fen communities occur in the hollows. Orchid rich site.
Baltransa Bog Complex	WMI_WM346	This wetland is located 3.6km east of the site boundary. Data Pending, canal, wet grassland, raised bog, cutover bog, fen, bog woodland and scrub.
Culleen More Ponds	WMI_WM338	This wetland is located 4km north of the site boundary. Data pending, artificial pond, reed swamp and fen.
Brockagh Pond	WMI_WM336	This wetland is located 4.1km north of the site boundary. Data pending, artificial pond, reed swamp and fen.
Lough Drin cNHA	WMI_WM20	This wetland is located 4.1km north of the site boundary. Drained marl lake with Pyrola rotundifolia communities on former lake bed. Lake bed exposed by arterial drainage scheme.
Srahenry	WMI_WM102	This wetland is located 4.3km south of the site boundary. Alkaline fen, lake, river, wet grassland and scrub
Loughagar More Macetown Bog	WMI_WM333	This wetland is located 4.5km north east of the site boundary. Data pending, wet grassland, raised bog, cutover bog, fen, bog woodland and scrub.
Lynn Bog Woodland	WMI_WM401	This wetland is located 4.9km south of the site boundary. This woodland is composed of two different types - the majority of the site is birch (Betula pubescens) dominated woodland on cut over bog.

2.4.6.3 Nature Reserves

The proposed site does not lie within a nature reserve. The closest nature reserve is Scragh Bog Nature Reserve approximately 5km north of the proposed site and has no connectivity to the proposed scheme.

2.4.6.4 Native Woodland

A National Survey of Native Woodlands (NSNW) was conducted between 2003 and 2008 with the aim to identify areas of native woodlands within Ireland. There are no NSNW identified native woodlands within the study area.

There are no woodlands identified within the inventory of Ancient and Long-Established Woodlands of Ireland within the proposed scheme. the nearest NSNW identified woodland habitat is ca. 3km from the proposed scheme and has no connectivity to the project sites.

Table 2-4 - NSNW and Ancient Woodlands

Distance to Site and Connectivity	Ancient Woodland Name and Site code	NSNW Type and Site Code	NSNW Descriptions
2.85km north	Lough Slevins Wood	Lough Slevins Wood (91A0)	Old sessile oak woods with Ilex and Blechnum in the British Isles

2.4.6.5 Existing Habitat

The study area is located in the town of Mullingar and is divided into two routes, Project 1 and Project 2.

Project 1 is aligned from the north-western section of Mullingar along Harbour Street and finishes in the centre of the town. A single roundabout is present with amenity grassland and landscape features. The vast majority of this route is comprised of hardstanding surfaces with no ecological value. Small areas of low ecological value grass verges are present but infrequent. Trees in this area are predominantly off road behind stone walls in gardens, with a number of trees located along Lady Aberdeen Cottages Roadway and within the vicinity to the hospital entrance along the carriageway.

Project 2 travels from the south-eastern reaches of Mullingar in towards its centre. A section of this route travels down Ardmore Road. The Ardmore Road section of this project travels adjacent to a residential estate which is primarily hardstanding with areas of grass verges along the footpaths. Landscape feature deciduous trees are present along the property boundaries along Ardmore Road, with roadside trees located outside the National Science Park and Gleann Petit Residential estate. Along the Dublin Road R156 there are hedgerows and grass verges. The majority of this route is along existing hardstanding surfaces which provides no ecological value.

2.4.6.6 Bird Sites

There are no Irish Wetland Bird Survey (I-WeBS) count sites located within the proposed scheme extents. The nearest I-WeBS sites are Lough Sheever (0W006) 2.8km North Walshestown South Turlough (0W022) 3.1km west, , Slevin's Lake (0W013) 3.5km north and Lough Drin (0W015)4km north. None of these sites have a direct or indirect connectivity to Project 1 or Project 2.

2.4.6.7 Species Records

This section of the report outlines species that have been recorded within the study area. A search of National Biodiversity Data Centre records was carried out on the 10th of January 2024 and which included the study area and a 100m buffer zone to capture mobile species in the surrounding environs. Presented below is a detailed account of species previously recorded in the search area for the period 2014 to 2024.

2.4.6.8 Birds

Within the area studied, 1no. amber listed species; Starling (*Sturnus vulgaris*) has been recorded in 2015. No bird species with Birds of Conservation Concern in Ireland (BOCCI) red list were recorded within the sites within the last 10 years.

Common birds recorded within this study area include Black-billed Magpie (*Pica pica*), Eurasian Jackdaw (*Corvus monedula*) and Rook (Corvus frugilegus) all of which were recorded in 2015. In 2016 European Goldfinch (*Carduelis carduelis*) was recorded and in 2018 Common Swift (*Apus apus*) within the reviewed area.

2.4.6.9 Mammals

Within the area studied, a total of 3 no. mammals were recorded between 2014 and 2024. Otter (*Lutra lutra*) was recorded within in 2014, Pine Marten (*Martes martes*) in 2023 and Red Fox (*Vulpes vulpes*) in 2023 within the study area.

Historical records within NBDC datasets show Badger (*Meles meles*) was recorded in 2013.

2.4.6.10 Other Species

Protected and / or threatened amphibian species recorded within the study area also include:

- Common Frog (Rana temporaria) 2020 – Protected Species under EU Habitat Directive (Annex V) and Wildlife Acts.

2.4.6.11 Records of Non-native Species

Regulations 49 and 50 of Part 6 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) outlines the legal context for the prohibition of the introduction and dispersal of certain plant and animal species. Specifically, Section 49, paragraph 2 states that any person without the required licence "who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow" any plant species listed in Part 1 of the Third Schedule within the State shall be guilty of an offence.

Under Section 50 paragraph 1, a person without the required licence "shall be guilty of an offence if he or she has in his or her possession for sale, or for the purposes of breeding, reproduction or propagation, or offers or exposes for sale, transportation, distribution, introduction or release" of any plant species listed in Part 1 of the Third Schedule or anything from which "a plant referred to in Part 1 of the Third Schedule can be reproduced or propagated or "a vector material listed in Part 3 of the Third Schedule".

A review of NBDC (2023) indicates that no invasive I species have been reported within the proposed project in the past 20 years.

In the wider landscape of Mullingar town the following species have been within the past 10 years Butterfly-bush *(Buddleja davidii),* Cherry Laurel *(Prunus laurocerasus),* Giant Hogweed *(Heracleum mantegazzianum),* Himalayan Honeysuckle *(Leycesteria formosa),* Japanese Knotweed *(Fallopia japonica),* Sycamore *(Acer pseudoplatanus),* Jenkins' Spire Snail *(Potamopyrgus antipodarum),* Yellow-bellied Slider *(Trachemys scripta scripta),* American Mink *(Mustela vison),* Brown Rat *(Rattus norvegicus),* European Rabbit *(Oryctolagus cuniculus),*Greater White-toothed Shrew *(Crocidura russula) and Freshwater Shrimp (*Gammarus pulex*)*

2.4.7 Identification of Ecological Constraints

There are no internationally designated conservation sites within the study area. There is no direct connectivity to Natura 2000 sites located within the ZOI of the project, however indirect connectivity exists via. the Road drainage infrastructure which assumed to outfall to the River Brosna for the purposes of this assessment

The Royal Canal pNHA lies within the proposed scheme and is crossed by both Projects 1 and 2.

Wetland site; Marlinstown Cutover Complex and Baltrasna North Fen have indirect connectivity to the site via the Royal Canal. This connectivity exists as the canal borders these wetland sites.

There are no annexed habitats, woodlands, wetlands or wintering waterbird sites within the study area.

The main feature of high ecological interest within the study area is the Royal Canal and the protected species which this watercourse can accommodate.

As both projects are to be undertaken predominantly existing roadways the main ecological constraints are largely limited the landscape features trees, hedgerows and grass verges along the roadway borders.

Considering the small scale of the project and that it will be undertaken on primarily existing hardstanding surfaces it is not likely to cause adverse impacts to features of high ecological value.

2.5 Archaeology and Cultural Heritage

A search of the National Monuments Service (NMS, 2024) historic environment viewer identified Mullingar as a sensitive area in terms of archaeology and cultural heritage. As shown in Figure 2-10, both projects 1 and 2 border a number of Sites and Monuments Record (SMR) features and National Inventory of Architectural Heritage (NIAH) features. A review of the Record of Protected Structures (RPS) features listed within Volume 8 of the Westmeath County Development Plan 2021 – 2027 has been undertaken, and there are no additional features identified as an RPS feature that have not been listed as a NIAH feature on the NMS historic environment viewer within the vicinity of either route. The southern portion of Project 1 intersects an Archaeological Conservation Area (ACA) and zone of archaeological potential (WCC, 2015).

Figure 2-10 – SMRs, ZoNs and NIAHs within the vicinity of both routes (National Monuments Service, 2024)

2.6 Licenced Facilities

A review of EPA (2024) indicates that there are no EPA licenced facilities within the vicinity of either route, with the closest reported EPA licenced facilities being Data Packaging Limited (P0139) located ca. 620m south of Project 1 and Penn Racquet Sport Company (P0104) located ca. 1km south of Project 2 as shown on Figure 2-11. An EPA Waste Facailty; Marlinstown Landfill (W0071-02) is located ca. 460m north east of Project 2 and an EPA Waste Boundary; Sotec (Ireland) Ltd. (W0115-01) is located ca. 550m south of Project 1.

There are 2no. lower tier establishments located in County Westmeath. 1no. of these sites is located ca. 3.3km from the proposed route; Ecolab Manufacturing IE Limited in Forest Park, Zone C Mullingar Industrial Estate, Mullingar, Co. Westmeath.

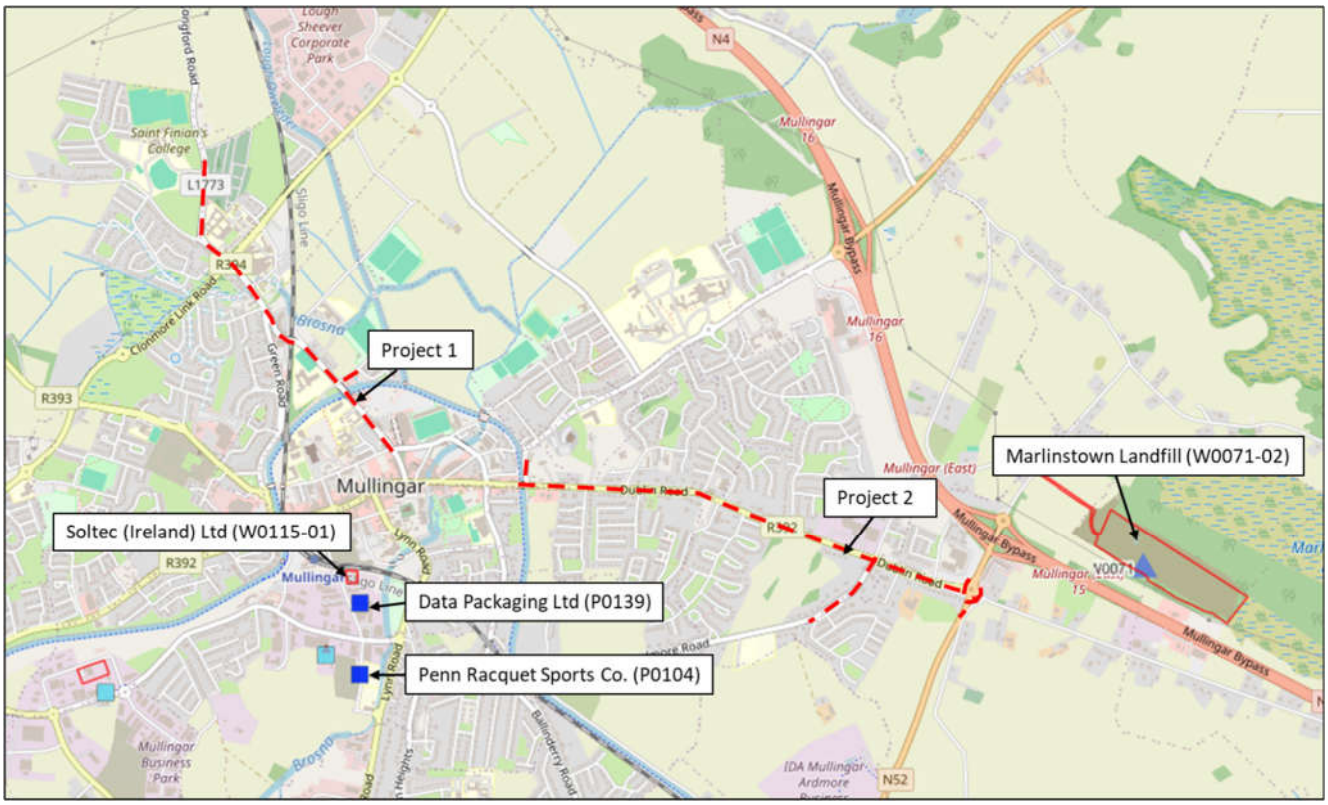

Figure 2-11 – Licenced Facilities within the vicinity of both routes (EPA, 2024)

2.7 Radon Levels

According to EPA (2024), radon levels within the vicinity of both routes are reported as 'about 1 in 10 homes in this area is likely to have high radon levels' with a small portion of the eastern end of Project 2 being reported as 'about 1 in 5 homes in this area is likely to have high radon levels'.

2.8 Landscape and Visual

2.8.1 Views and Prospects

Both routes are located entirely along existing roads within Mullingar. Projects 1 and 2 are located within the Royal Canal Corridor Landscape Character Area according to the Westmeath County Development Plan (2021-2027) with the area noted as '*The canal corridor includes features of vernacular architecture and industrial heritage such as stone bridges, lock keeper's cottages, lock gates and milestones which enhance the waterway.'*

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

2.8.2 Tree Preservation Orders

A review of the Westmeath County Development Plan 2021-2027 indicates that there are 6no. locations subjected to Tree Preservation Orders (TPO) within the town of Mullingar, none of which are within the vicinity of either Project 1 or 2. From a review of aerial imagery (Bing Maps, 2024), there are a number of trees located along both Project 1 and 2.

2.9 Noise and Vibration

Based on available baseline noise mapping from TII (2024) day-time (Lden), noise levels of 70-74dB are reported along Project 2 and at night-time (Lnight) reduce to 60-64dB. Project 1 is reported as having Lden levels ranging from 55-59 dB with areas of >75 dB in the north western sections with Lnight levels ranging from 45-49 dB and 65-69 dB.

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

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, 2024).

Sensitive receptors within the vicinity of Project 1 include, residential dwellings and businesses along the Harbour and Longford Roads. The midlands Regional Hospital is also located along the stretch of Project 1 which crosses the Royal Canal.

Sensitive receptors within the vicinity of Project 2 include residential dwellings and businesses along the R392.

2.10 Air Quality

According to the EPA (2024), the current baseline air quality index in the area is *'3-Good'* for Mullingar - Large Towns. It is noted that the information from monitoring instruments at representative locations in the location may not reflect local incidents of air pollution.

Sensitive receptors within the vicinity of Project 1 include residential dwellings and businesses along the Harbour and Longford Roads. The midlands Regional Hospital is also located along the stretch of Project 1 which crosses the Royal Canal.

Sensitive receptors within the vicinity of Project 2 include residential dwellings and businesses along the R392.

3. Summary / Recommendations

In summary, both study areas are located entirely along existing roads within Mullingar town with the following constraints identified.

- The site of the proposed development is a sensitive area with respect to archaeology and cultural heritage as both Project 1 and Project 2 cross several SMR, ZoN, NIAH and RPS features. An appropriately qualified archaeologist / cultural heritage specialist will be appointed as the project progresses.
- Project 1 crosses the Royal Canal via. an existing bridge structure, and Project 2 borders the Royal Canal. The Brosna and Farranistick Rivers are located ca. 487m and 496m from the Project 1 respectively, with the Brosna River located ca. 340m from Project 2. Project 1 crosses an existing arterial drainage channel C45(5) / Robinstown, which in turns discharges to the Brosna River. Benefitting lands from this channel are reported around Mullingar Hospital within vicinity of Project 1. Mitigation measures will be implemented during construction stage to protect these watercourses and drainage channel.
- Groundwater is potentially shallow within the vicinity of both projects and it is therefore recommended that a Ground Investigation is undertaken as the project progresses and relevant migration measures developed / implemented to minimise / avoid impacts on groundwater resources which will be documented in a Construction Environmental Management Plan (CEMP) which will be prepared for the construction stage.
- The proposed Mullingar Active Travel Scheme should be subject to the Appropriate Assessment process following completion of scheme design.
- A Pre-Construction Invasive Plant Species survey is recommended to be undertaken by an appropriately qualified ecologist within the optimum seasonal window.
- The proposed scheme crosses Royal Canal proposed Natural Heritage Area. Construction stage mitigation measures are recommended to be developed for the protection of this nationally important conservation area.
- Considering the small scale of the project and that it will be undertaken almost entirely on existing hardstanding surfaces of public roadways and pathways, adverse impacts to features of high ecological value are not considered likely.
- A review of GSI (2024) indicates that there are 2no. Geological Heritage Areas (GHA) within 5km of both projects; Mullingar Bypass is located ca.1.9km north of Project 1 and Portnashangan Quarry, is located ca. 4.95km north of Project 1. A hydrogeological connection exists to Mullingar Bypass and mitigation measures will be implemented during construction to minimise / avoid impacts on these areas.
- Project 1 crosses the Canal and arterial drain C45(5) / Robinstown and is aligned along lands which are identified as being at risk of flooding and which have been identified as benefitting lands. It is recommended that a Flood Risk Assessment is undertaken by an appropriately qualified hydrologist as the project progresses.
- From a review of aerial imagery (Bing Maps, 2024), there are a number of trees located along both Projects 1 and 2. It is recommended that an Arboricultural Survey is undertaken along both Projects 1 and 2 as the project progresses.
- It is recommended that a landscape architect is consulted regarding the potential for landscape impacts along the scheme and should be involved in the design of the proposed project should it be required.
- Given the urban nature of both Project 1 and 2, 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 which will be documented in a Construction Environmental Management Plan (CEMP) which will be prepared for the construction stage.
- High Radon levels have been reported in the area. Given the nature of the development, impacts from Radon do not need further consideration.

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Appendix B. Pavement Condition Survey

			Surface Defects		Structural Distresses (Load-Related)				Surface Distortion (Shape Problems)				Other Cracking					Surface Openings		Rate
Project	Segment_ID	Length of Segment (in meters)	Ravelling	Bleeding	Rutting	Potholes	Alligator Cracking	Edge Breakup and Cracking	Shoving	Settlement/Heave	Depressions/Sags	Bumps	Longitudinal Cracking	Transverse Cracking	Reflection Cracking	Meander Cracking	Slippage Cracking	Patching and Utility Repairs	Manhole-Ironworks defects	PSCI Rating System
2	1.0	750.7	Present	Absent	Absent	Present	Present	Absent	Absent	Absent	Present	Absent	< 20% / <= 12 mm	>20% / <= 12 mm	< 20% / <= 12 mm	Absent	Absent	Good Condition	Present	5
	2.0	380.2	Present	Absent	Absent	Present	Absent	Absent	Present	Absent	Present	Present	< 20% / > 12 mm	< 20% / <= 12 mm	< 20% / <= 12 mm	Absent	Absent	Fair Condition	Present	5
	3.0	417.6	Present	Absent	Absent	Absent	Absent	Absent	Absent	Present	Absent	Present	< 20% / <= 12 mm	< 20% / <= 12 mm	Absent	Absent	Absent	Good Condition	Present	6
	4.0	453.1	Present	< 10%	Absent	Absent	Present	Absent	Absent	Absent	Absent	Present	>20% / <= 12 mm	< 20% / <= 12 mm	Absent	Absent	Absent	Good Condition	Present	5
	5.0	371.9	Present	Absent	Absent	Absent	Present	Absent	Absent	Absent	Absent	Present	< 20% / <= 12 mm	Absent	Absent	Absent	Absent	Good Condition	Present	7

Appendix C. Utility Maps

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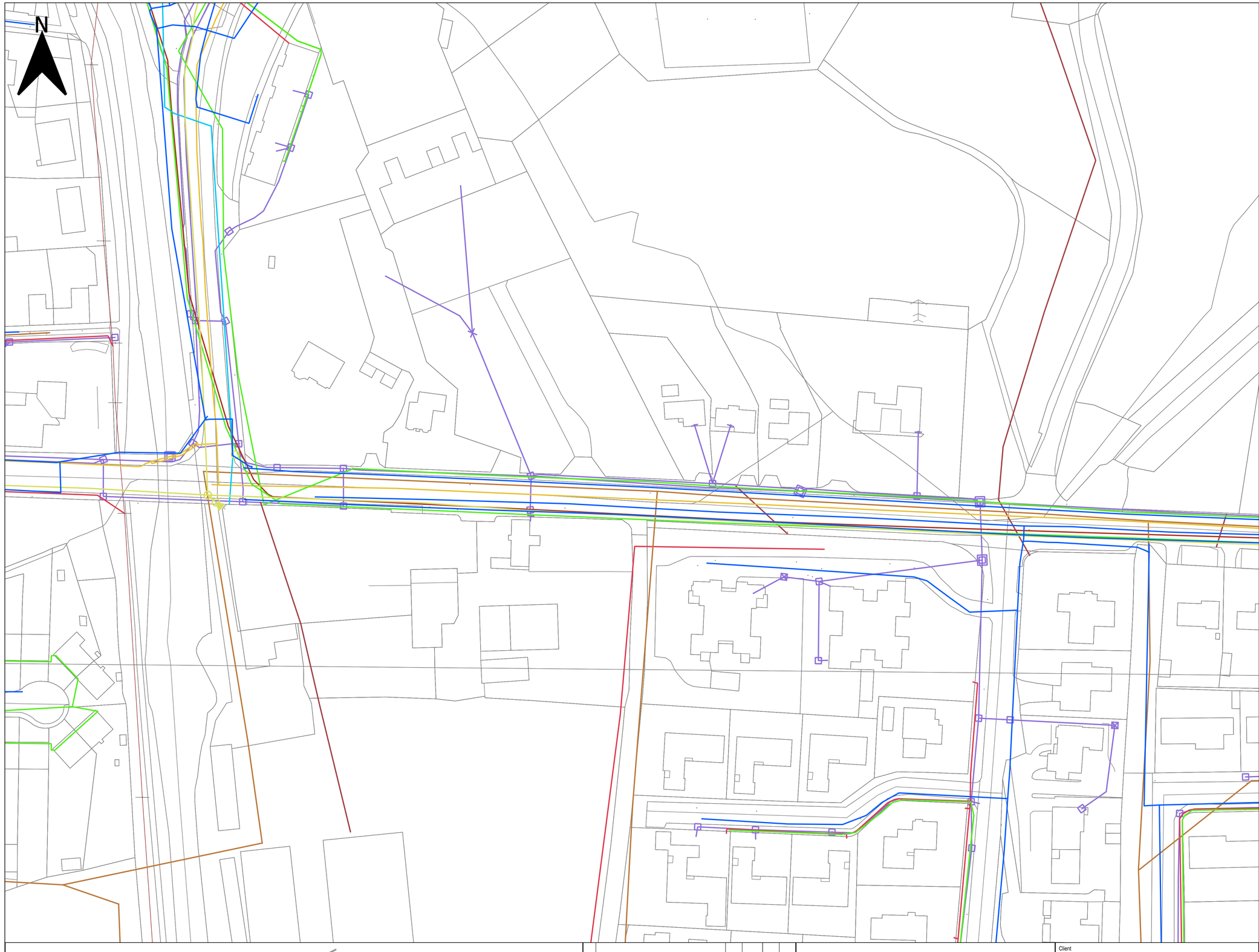

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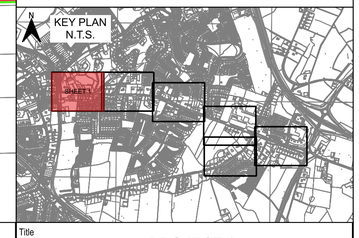

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EXISTING UTILITIES
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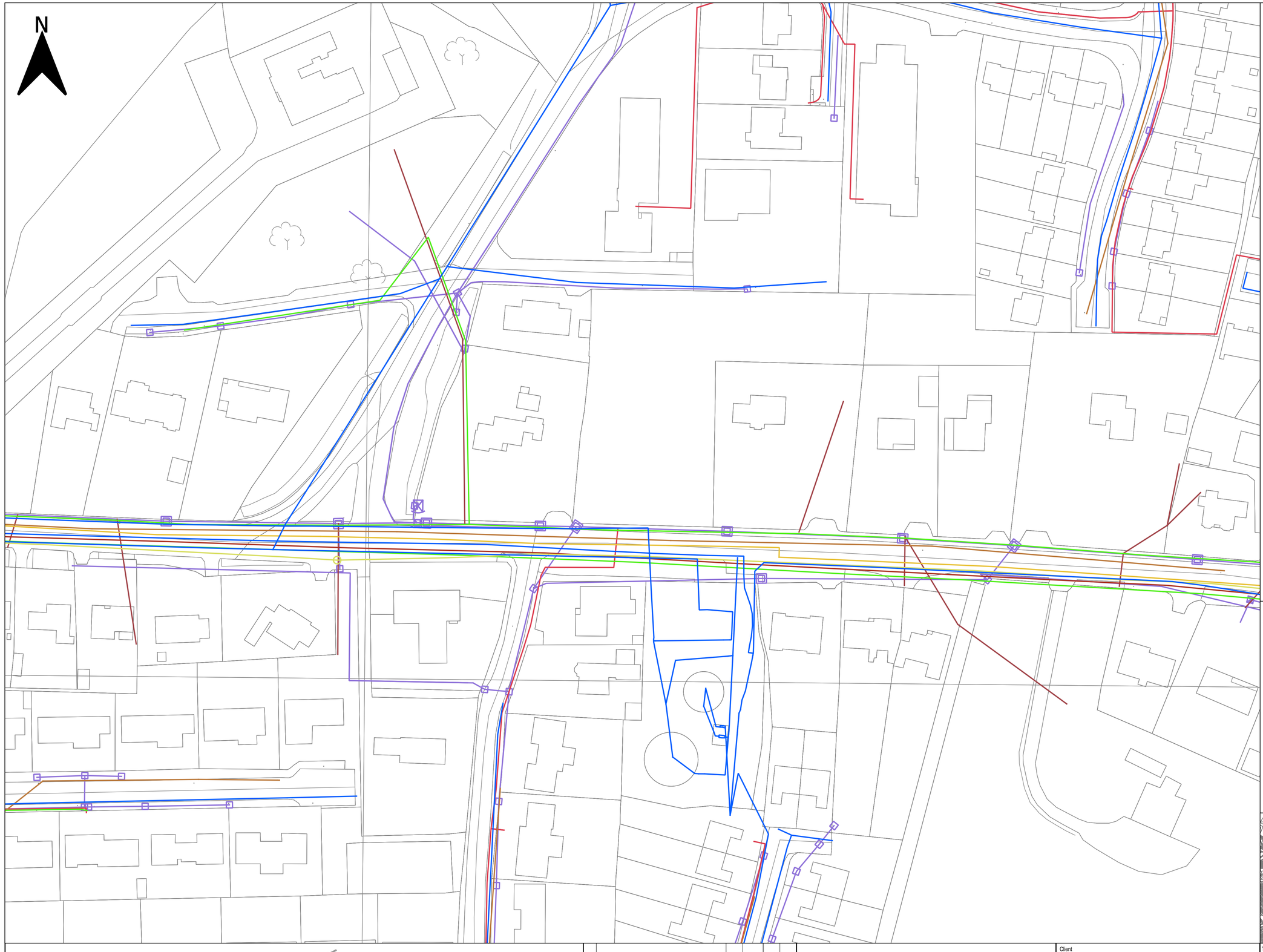

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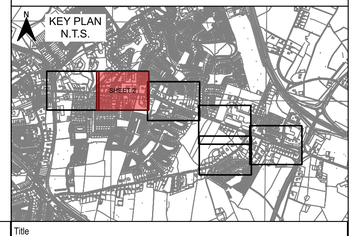

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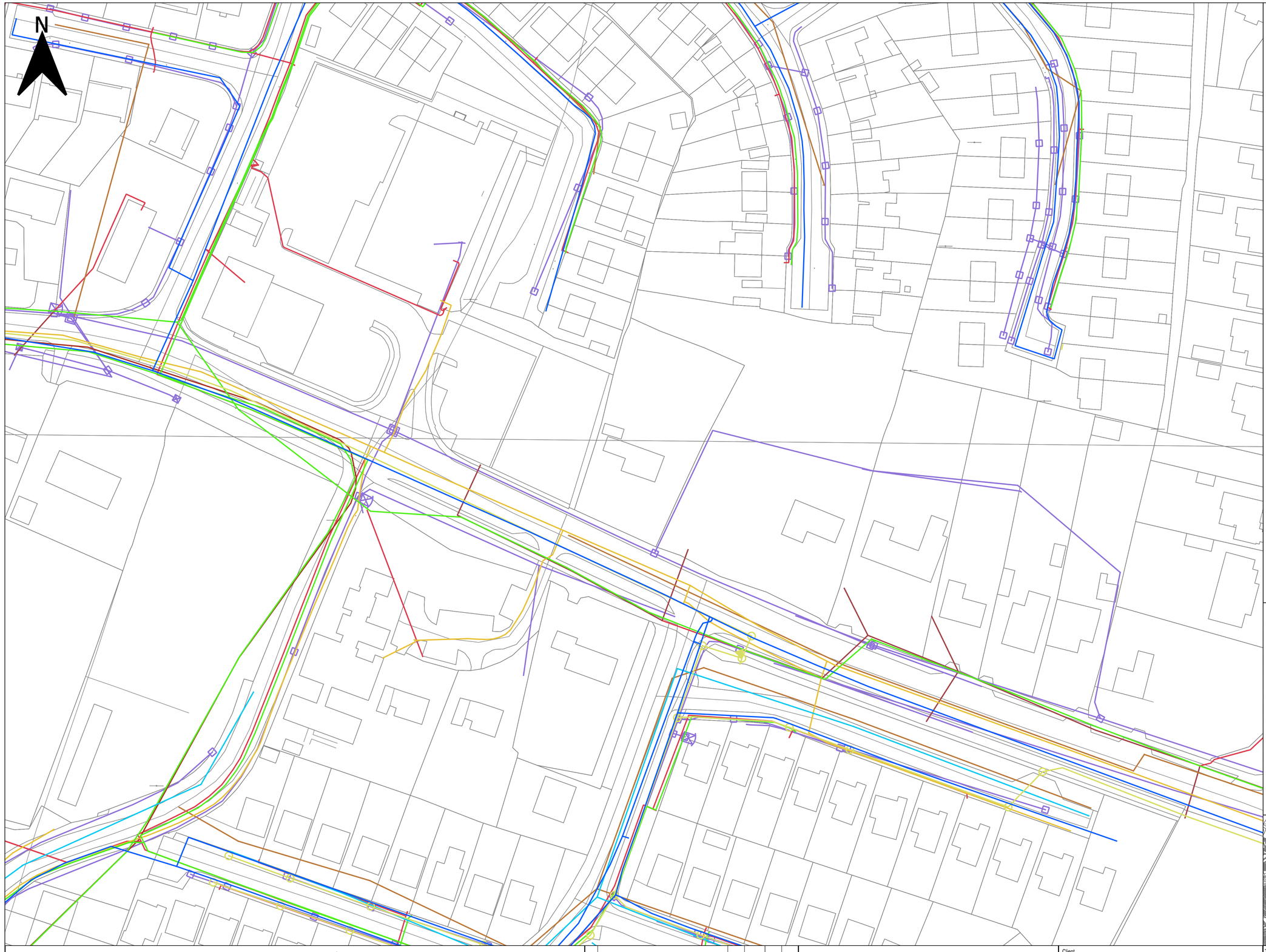

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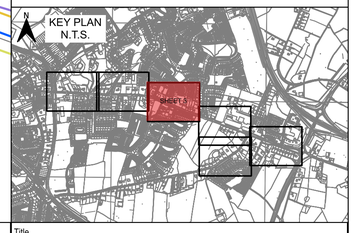

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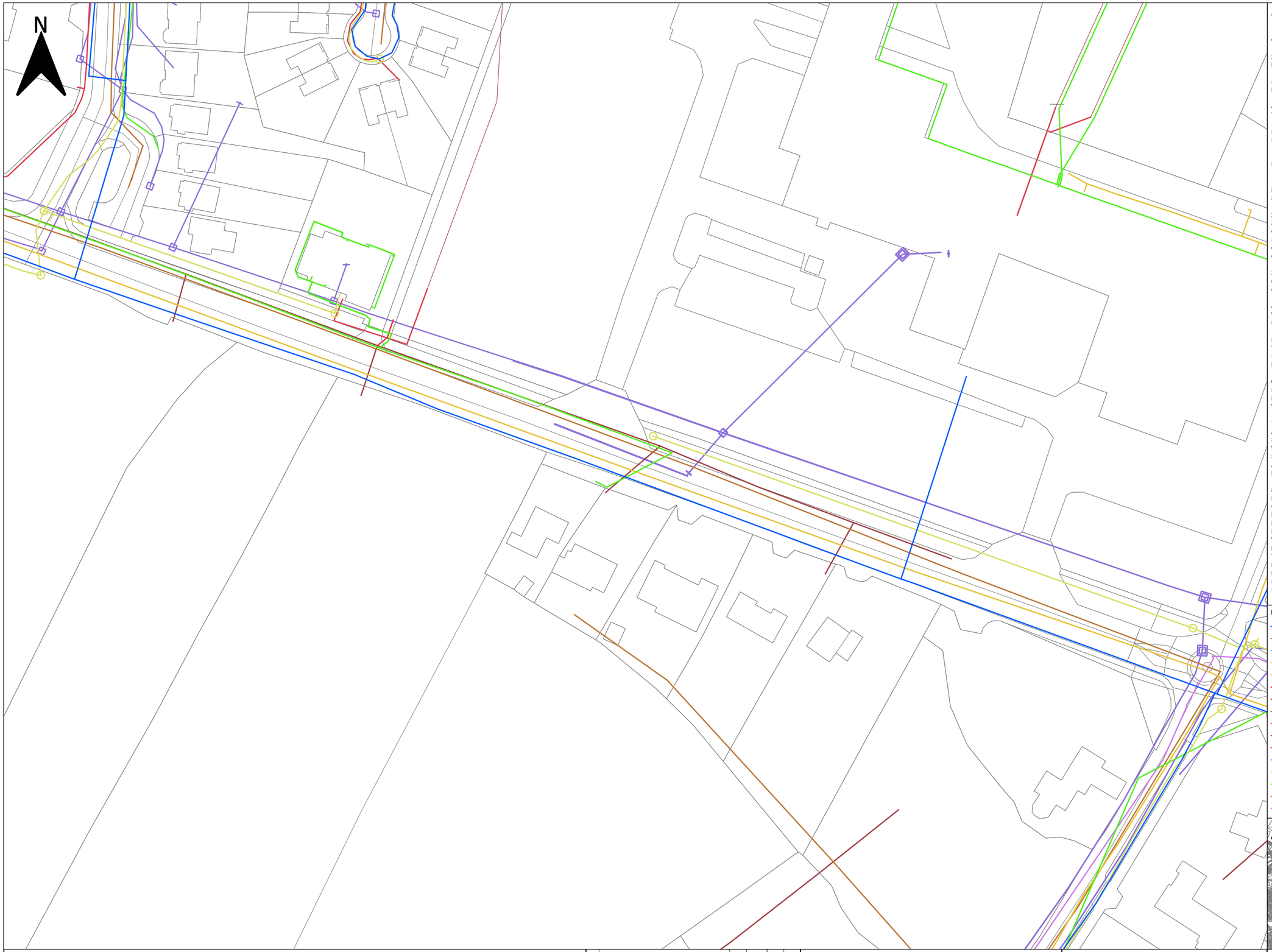

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WESTMEATH COUNTY COUNCIL
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Rev	Description	By	Date	Chk'd	Auth
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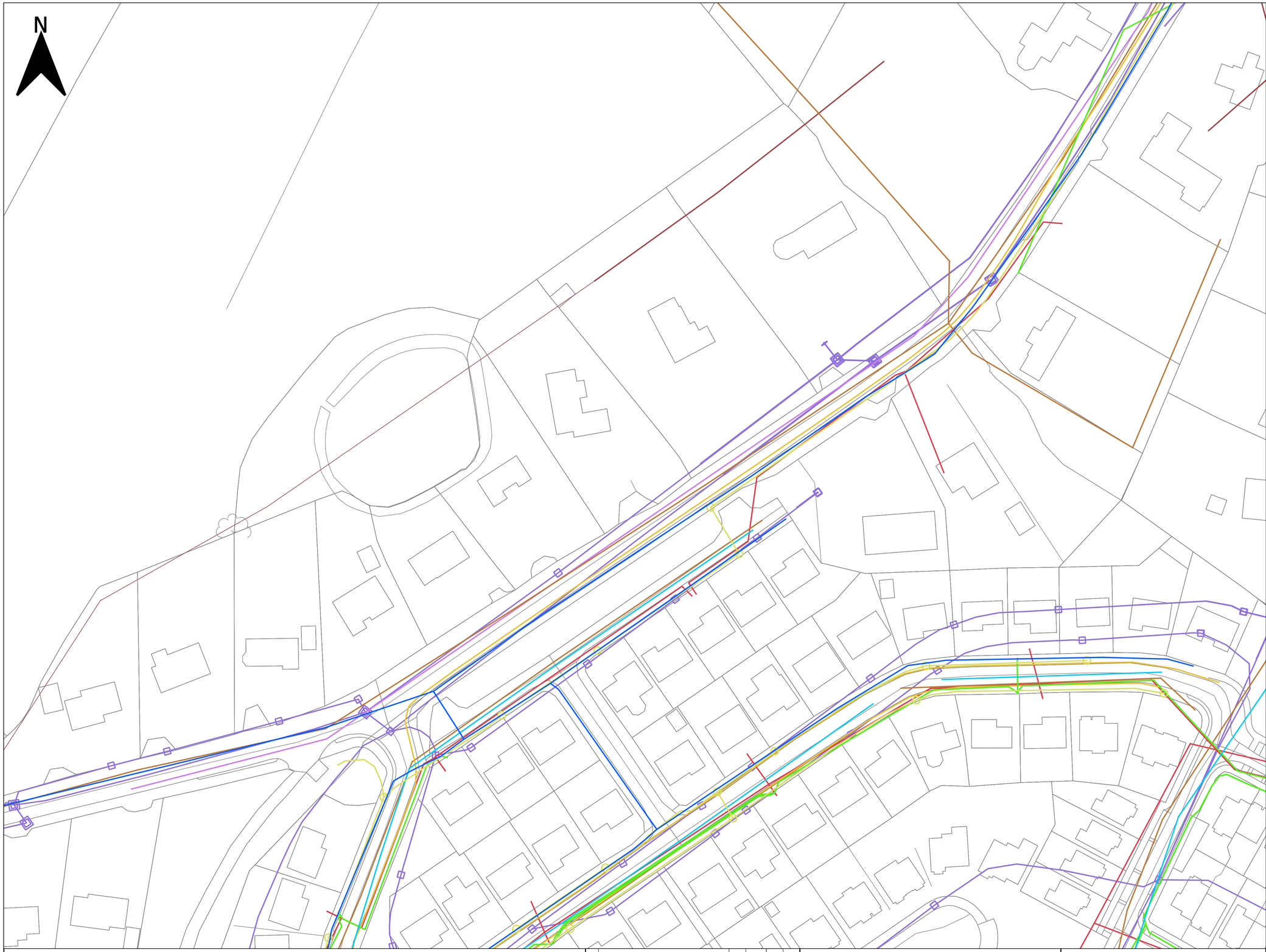
Client
WESTMEATH COUCNTY COUNCIL

Project
MULLINGAR ACTIVE TRAVEL BUNDLE

Title
PROJECT 2
EXISTING UTILITIES
SHEET 4 OF 6

Original Scale	Design/Drawn	Checked	Authorised
1:1,000	TC	SW	SW
	Date 03.2024	Date 03.2024	Date 03.2024

Status	Drawing Number	Rev
I	0086409-ATK-ZZ-ZZ-DR-C-960508	0



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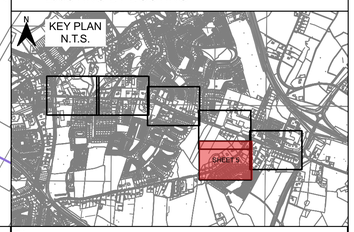

DO NOT SCALE

A1

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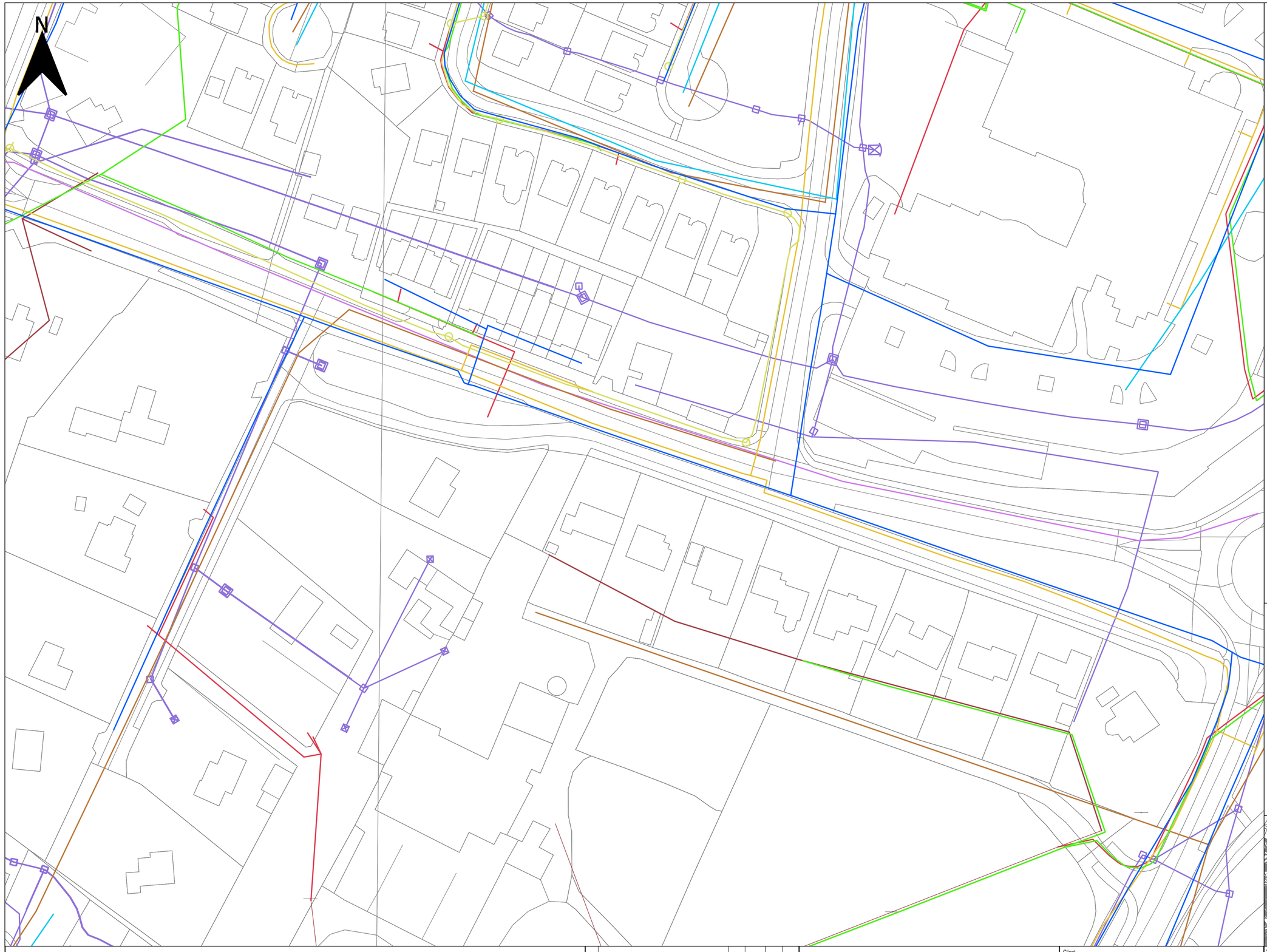

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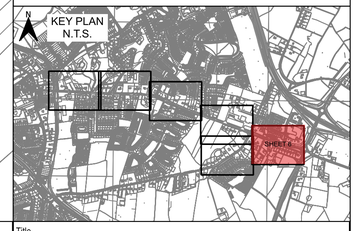

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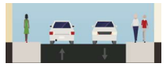
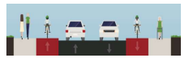
Appendix D. Multi-Criteria Analysis

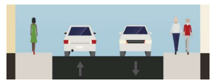
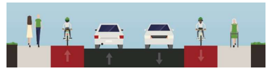
Project 2: Segment 1

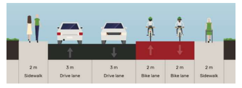



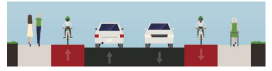

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Footpath on both sides and cycle lane on the north side only	Indicator Score	Option 2 Standard One-way Cycle Track - Traditional Build Absolute Minimum - 13.5m	Indicator Score	Option 3 Two-way cycle track on the north side - Traditional Build Absolute Minimum - 12.4m	Indicator Score	Option 4 Two-way cycle track on the south side - Traditional Build Absolute Minimum - 12.4m	Indicator Score	Option 5 Mixed Traffic - Rapid Build Desirable Minimum - 10.5m	Indicator Score
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition.	Significant advantages	This option requires approximately 600m2 of land acquisition. However, this area is mostly located in grassed area in front of private houses.	Significant disadvantages	This option requires approximately 280m2 of land acquisition, which comprise of only grassed areas in front of private houses.	Some disadvantages	This option requires approximately 280m2 of land acquisition, which comprise of only grassed areas in front of private houses.	Some disadvantages	This option can be implemented without land acquisition. At certain locations, the width of the footpath would have to be locally narrowed to approximately 1.9, which is still appropriate according to DMURS.	Significant advantages
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The costs of this option is higher than the other options (€1,181,407.66)	Significant disadvantages	The costs of this option is higher than the other options (€1,083,058.06)	Significant disadvantages	The costs of this option is higher than other options (€1,083,058.06)	Significant disadvantages	The costs of this option is lower than other options (€284,120.24)	Some disadvantages
		Programme Impacts	No impact on the programme as no construction is associated with this option.	Significant advantages	As this option requires full build out construction that would require the break out of existing facilities and land acquisition, this would impact programme and scheme may not be completed by the end of 2025.	Significant disadvantages	As this option requires full build out construction that would require the break out of existing facilities and land acquisition, this would impact programme and scheme may not be completed by the end of 2025.	Significant disadvantages	As this option requires full build out construction that would require the break out of existing facilities and land acquisition, this would impact programme and scheme may not be completed by the end of 2025.	Significant disadvantages	This option is a rapid build option, therefore, it is more likely to be concluded by the end of 2025.	Some advantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	Significant advantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities. However it would not require full road reconstruction.	Some disadvantages	This option would be constructed as a traditional build as it would require road reconstruction to accommodate the two-way cycle track.	Significant disadvantages	This option would be constructed as a traditional build as it would require road reconstruction to accommodate the two-way cycle track.	Significant disadvantages	This option can be constructed using Rapid Build methods as it fits within the road boundary.	Some advantages
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are 2No. bus stops and several bus services run along the segment. However, the bus stops does not offer appropriate waiting area for users and it is not well demarcated.	Significant disadvantages	A L202 Shared Bus Stop Landing Zone could be installed on either side of the road, however, it would require land acquisition as road is constrained at bus stops location.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the north side of the road and on the southern side the bus stop would be directly at the footpath. This option would also require land acquisition, however, less than Option 2.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the south side of the road and on the north side the bus stop would be directly at the footpath. This option would also require land acquisition, however, less than Option 2.	Significant advantages	This option would provide in-line bus stops as they are the type of bus stop for mixed streets.	Some advantages
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	There are several local businesses located along the segment. The existing cross section does not provide appropriate active travel infrastructure for users accessing these locations.	Significant disadvantages	This option would provide direct access to all key location along the segment as facilities would be provided on both sides of the road.	Significant advantages	As this option would only provide cycle facilities on the north side of the road, and there are several residential units on the south side, this option would not provide direct access to several locations.	Some advantages	This option would connect well to most residential units located along the segment, however, as it is only provided on one side of the road, would not provide direct access to some locations.	Some advantages	Improvements to facilities will facilitate community and recreational participation on along the segment, especially as it connects to many local businesses. It will improve active travel usage to and from the location, to a limited degree compared with other options as this option would be challenging for less confident users to access these services.	Some advantages
		Impacts on loading and parking bays	The segment has a section of hard shoulder that is used as a parking area. This option would not propose any changed to it.	Neutral	This option would incorporate the hard shoulder into the active travel facility area and therefore, would not allow parking at this location. However, as it is not a designated parking area, there would be no changes to the overall on-street parking in the town.	Neutral	This option would incorporate the hard shoulder into the active travel facility area and therefore, would not allow parking at this location. However, as it is not a designated parking area, there would be no changes to the overall on-street parking in the town.	Neutral	This option would incorporate the hard shoulder into the active travel facility area and therefore, would not allow parking at this location. However, as it is not a designated parking area, there would be no changes to the overall on-street parking in the town.	Neutral	This option could potentially retain the informal parking area currently used on the hard shoulder in this segment.	Neutral
	Coherence	Route consistency and continuity	There are cycle lanes inconsistently along sections of the segment. Footpaths are provided on both sides.	Significant disadvantages	This option requires a pinch point where the cycle tracks and footpaths will merge into a shared path on both sides of the road, however, apart from that, the option is consistent.	Some advantages	This option requires a pinch point where the cycle track and footpath will merge into a shared path on the north side but will be completely consistent besides the pinch point area.	Some advantages	This option requires a pinch point where the cycle track and footpath will merge into a shared path on the south side but will be completely consistent besides the pinch point area.	Some advantages	Footpaths and cycle facilities would be continuous in this option.	Significant advantages
	Directness	Directness along route and though junctions and maintenance of cyclists progression	Cyclists travelling west have to share the road with vehicles, therefore, progression is impeded by stopped and turning vehicles. Cyclists travelling east are accommodated in a cycle lane that is below standard. There are no appropriate crossing facilities and pedestrian progression is not maintained.	Significant disadvantages	At the cycle track, cyclist movements would flow well and unimpeded. But at the narrow shared paths, cyclist might conflict with pedestrians.	Some advantages	Cyclists would be accommodated for at the two-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	Cyclists would be accommodated for at the two-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	The lack of cycling facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stopped vehicles.	Significant disadvantages
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Limited cycle facilities and limited signage to indicate motorists of cyclists on road. The footpath is also below standard along the segment.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines. However, there is a pinch point area where the width available is approximately 11.3m and it is proposed to reduce the road carriageway to 6.0m and a 1.8m footpath on one side of the road and a 3.5m shared path on the other side for approximately 100m. The widths would still be in accordance with DMURS and the CDM.	Some advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines. However, there is a pinch point area where the width available is approximately 11.3m and it is proposed to reduce the road carriageway to 6.0m and a 1.8m footpath on one side of the road and a 3.5m shared path on the other side for approximately 100m. The widths would still be in accordance with DMURS and the CDM.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines. However, there is a pinch point area where the width available is approximately 11.3m and it is proposed to reduce the road carriageway to 6.0m and a 1.8m footpath on one side of the road and a 3.5m shared path on the other side for approximately 100m. The widths would still be in accordance with DMURS and the CDM.	Significant advantages	Footpaths would be provide according to DMURS guidelines and cyclists would be accommodate on road.	Some disadvantages
	Attractiveness	Attractiveness of the route	As the level of active travel infrastructure provided is limited, existing scenario is not considered attractive.	Significant disadvantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses. However, the narrow width of the shared path at the pinch point areas might not be attractive for all users.	Some advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses. Signage and markings would be in place to ensure drivers are aware of the presence of cyclists along the link, this would still likely not be highly attractive for cyclists especially less confident users, due to the lack of segregation between vehicles and cyclists.	Some disadvantages
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to local businesses, however, it does not provide suitable opportunities for all users.	Significant disadvantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses. This option is limited in providing for less confident and vulnerable users that are less likely to feel comfortable sharing the carriageway with vehicles which would result in a lesser uptake of these activities.	Some disadvantages
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel infrastructure to impact on modal shift.	Significant disadvantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to multiple services, however, the lack of segregation between cyclists and vehicles would likely lead to a significantly lower modal shift than other options.	Some disadvantages
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	There are no consistent cycle facilities. Therefore, existing scenario is not accessible for all users. Footpaths are also not designed to standard and may not be able to accommodate all users.	Significant disadvantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	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/confident users.	Some disadvantages
	Gender Impacts	How the proposal may have gender specific impacts	Lack of physical segregation between car and cyclist users is problematic as the cars travel at high speeds along the route which could have an impact especially for usage by women and children on the segment.	Significant disadvantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The widening of the footpath and proper signage to indicate mixed traffic would increase perception of safety for women and children to an extent, yet the cyclists sharing the carriageway with vehicles would not improve feelings of safety significantly along the segment.	Some disadvantages

Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Significant advantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages
		Impact on green areas	No changes in green areas.	Significant advantages	This option would require the removal of green areas along the segment.	Significant disadvantages	This option would require the removal of green areas along the segment.	Significant disadvantages	This option would require the removal of green areas along the segment.	Significant disadvantages	No changes on green areas are expected with the implementation of this option.	Significant advantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is no physical segregation between cyclists and vehicles.	Significant disadvantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	This option would not provide segregation between cyclists and vehicles. However, footpath might be able to accommodate less experienced users.	Significant disadvantages
		Segregation between cyclists and pedestrians	Cyclists travel on road and pedestrian travel on the footpath.	Significant advantages	Cyclists and pedestrians would be segregated from one another for most part of the segment, apart from the pinch point location where a shared path is being proposed.	Some disadvantages	Cyclists and pedestrians would be segregated from one another for most part of the segment, apart from the pinch point location where a shared path is being proposed.	Some disadvantages	Cyclists and pedestrians would be segregated from one another for most part of the segment, apart from the pinch point location where a shared path is being proposed.	Some disadvantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Based on the traffic volumes of the segment, this option is not appropriate and does not meet CDM standards.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	There is a high volume of traffic along the segment, over 400 pcu/hr in standard peak traffic times, therefore, measures would have to be implemented to reduce vehicular speeds to improve safety for all road users. Also, based on Table 2.1 of the CDM, the implementation of a mixed traffic along the route is not suitable. The speed limit would have to be reduced to 20km/h and it would be a departure from standard.	Significant disadvantages
		Conflicts at junctions and side roads between vehicles and cyclists	As there is no segregation and appropriate signage to indicate motorists of the presence of cyclists, there is a potential for conflicts at junctions.	Significant disadvantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points.	Significant advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	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.	Some disadvantages
	Traffic	Impact on traffic capacity due to the proposals	No changes with traffic are expected with the implementation of this option.	Some advantages	No changes with traffic are expected with the implementation of this option.	Some advantages	No changes with traffic are expected with the implementation of this option.	Some advantages	No changes with traffic are expected with the implementation of this option.	Some advantages	This option might impact traffic capacity due to traffic calming measures implemented.	Some disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	Some disadvantages	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	Some advantages	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	Some advantages	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	Some advantages	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 improving local air quality. Construction impacts will be short term and not significant as mitigation measures will be implemented	Some disadvantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	Some disadvantages	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.	Some advantages	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in local noise and vibration levels during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Some advantages	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.	Some advantages	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	Some disadvantages
	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.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	There will be no impact on any ecological features of importance.	Some advantages	There will be a small loss of low ecological value roadside grassland verges and managed garden hedgerows.	Some disadvantages	There will be a small loss of low ecological value roadside grassland verges and managed garden hedgerows.	Some disadvantages	There will be a small loss of low ecological value roadside grassland verges and managed garden hedgerows.	Some disadvantages	There will be no impact on any ecological features of importance.	Some advantages
	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.	Neutral	The Canal is crossed along the existing bridge structure immediately west of this segment. There are no 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.	Neutral	The Canal is crossed along the existing bridge structure immediately west of this segment. There are no 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.	Neutral	The Canal is crossed along the existing bridge structure immediately west of this segment. There are no 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.	Neutral	The Canal is crossed along the existing bridge structure immediately west of this segment. 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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes to landscape and visual receptors	Neutral	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	Unlikely to have an impact on archaeological & architectural heritage assets.	Neutral	At this stage of the desktop analysis and according to available relevant resources a monument (15311003 & Glenmore : demesne walls/gates/railings (15311002) border this segment. However it is not anticipated that they will be impacted by any option.	Neutral	At this stage of the desktop analysis and according to available relevant resources a monument (15311003 & Glenmore : demesne walls/gates/railings (15311002) border this segment. However it is not anticipated that they will be impacted by any option.	Neutral	At this stage of the desktop analysis and according to available relevant resources a monument (15311003 & Glenmore : demesne walls/gates/railings (15311002) border this segment. However it is not anticipated that they will be impacted by any option.	Neutral	At this stage of the desktop analysis and according to available relevant resources a monument (15311003 & Glenmore : demesne walls/gates/railings (15311002) border this segment. However it is not anticipated that they will be impacted by any option.	Neutral

Project 2: Segment 2

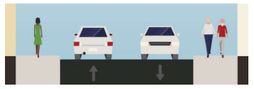





Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Footpath on both sides, cycle lanes/track with several turning lanes	Indicator Score	Option 2 One-way Cycle Track - Traditional Build Desirable Minimum - 14.9m	Indicator Score	Option 3 Two-way cycle track on the south side - Traditional Build Desirable Minimum - 14.0m	Indicator Score	Option 4 Two-way cycle track on the north side - Traditional Build Desirable Minimum - 14.0m	Indicator Score	Option 5 One-way cycle track - Rapid Build Absolute minimum - 14.3	Indicator Score	Option 6 Two-way cycle track on the south side - Rapid Build Desirable minimum - 14.0m	Indicator Score
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The costs of this option is higher than all other options (€667,844.54)	Significant disadvantages	The costs of this option is higher than all other options (€623,349.74)	Significant disadvantages	The costs of this option is higher than other options (€623,349.74)	Significant disadvantages	The cost of this option is the lowest (€337,310.30)	Some disadvantages	The cost of this option is lower than other options (€308,871.34)	Some disadvantages
		Programme Impacts	No impact on the programme as no construction is associated with this option.	Significant advantages	As this option requires full build out construction that would require the break out of existing facilities, this would impact programme and the scheme is less likely to be completed before the end of 2025.	Some disadvantages	This option would be constructed as a traditional build as it would require road reconstruction to accommodate the two-way cycle track and the footpath to the south, therefore, it is less likely to be concluded by the end of 2025.	Significant disadvantages	This option would be constructed as a traditional build as it would require road reconstruction to accommodate the two-way cycle track and the footpath to the north, therefore, it is less likely to be concluded by the end of 2025.	Significant disadvantages	This option is a rapid build option, therefore, it is more likely to be concluded by the end of 2025.	Some advantages	This option is a rapid build option, therefore, it is more likely to be concluded by the end of 2025.	Some advantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements. No changes to drainage or construction involved with this option.	Significant advantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities.	Significant disadvantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities.	Significant disadvantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities.	Significant disadvantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There are 2No. bus stops and several bus services run along the segment. However, the bus stops does not offer appropriate waiting area for users and it is not well demarcated.	Significant disadvantages	A L202 Shared Bus Stop Landing Zone could be installed on both sides of the road.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the cycle track side and on the other side the bus stop would be directly at the footpath.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the cycle track side and on the other side the bus stop would be directly at the footpath.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the cycle track side and on the other side the bus stop would be directly at the footpath.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the cycle track side and on the other side the bus stop would be directly at the footpath.	Significant advantages
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	There are several local businesses located along the segment. The existing cross section does not provide appropriate active travel infrastructure for users accessing these locations.	Significant disadvantages	This option would link well key locations along the segment as the facilities would be provided on both sides of the road.	Significant advantages	The key location along the segment is located opposite the proposed two-way cycle track, therefore, it would not provide direct access and cyclists would have to cross the road.	Some advantages	The key location is provided on the same side as the proposed two-way cycle track, therefore, this option provides direct access.	Significant advantages	This option would link well key locations along the segment as the facilities would be provided on both sides of the road.	Significant advantages	The key location along the segment is located opposite the proposed two-way cycle track, therefore, it would not provide direct access and cyclists would have to cross the road.	Some advantages
		Impacts on loading and parking bays	There is no on-street car park at the segment.	Neutral	There is no on-street car park at the segment.	Neutral	There is no on-street car park at the segment.	Neutral	There is no on-street car park at the segment.	Neutral	There is no on-street car park at the segment.	Neutral	There is no on-street car park at the segment.	Neutral
	Coherence	Route consistency and continuity	On the north side, the cycle lane is continuous but on the southern side the shared path turns into a cycle lane, however, there is no appropriate signage indicating the change. Footpaths are provided on both sides.	Significant disadvantages	Footpaths and cycle facilities would be continuous on both sides of the road in this option.	Significant advantages	Footpaths and cycle facilities would be continuous on both sides of the road in this option.	Significant advantages	Footpaths and cycle facilities would be continuous on both sides of the road in this option.	Significant advantages	Footpaths and cycle facilities would be continuous on both sides of the road in this option.	Significant advantages	Footpaths and cycle facilities would be continuous on both sides of the road in this option.	Significant advantages
	Directness	Directness along route and though junctions and maintenance of cyclists progression	Cycle movement is not direct on the southern side as the facility changes from mandatory cycle lane to shared path. At the shared path, directness of cyclists can be impeded by pedestrians.	Significant disadvantages	Cyclists would be accommodated for at the one-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	Cyclists would be accommodated for at the two-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	Cyclists would be accommodated for at the two-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	Cyclists would be accommodated for at the one-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages	Cyclists would be accommodated for at the two-way cycle facility, which would be direct and flow well. The footpaths would also be provided continuously along the segment, with appropriate crossings at junctions.	Significant advantages
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Width of cycle lanes are below standard with sections of only 1.1m wide. Footpaths are also below standard in some locations.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages
	Attractiveness	Attractiveness of the route	The segment provides shared paths and mandatory cycle lanes, however, as the cycle lanes are not physically segregated from vehicular traffic, it might not be attractive for all users.	Significant disadvantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to local businesses, however, it does not provide suitable opportunities for all users.	Significant disadvantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to local businesses.	Significant advantages
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The cycle lanes and shared path attract some users, however, will not lead to an increased modal shift under existing circumstances.	Significant disadvantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Cycle Lanes are not fully accessible to all users, especially less experienced and confident users.	Significant disadvantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Lack of physical segregation between car and cyclist users is problematic as the cars travel at high speeds along the route which could impact on some women and children using the segment.	Significant disadvantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety for particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety for particularly for women and children.	Significant advantages

Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Significant advantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages
		Impact on green areas	No changes in green areas.	Significant advantages	This option would require the removal of small sections of green area.	Significant disadvantages	This option would require the removal of small sections of green area.	Significant disadvantages	This option would require the removal of small sections of green area.	Significant disadvantages	This option would require the removal of small sections of green area.	Significant disadvantages	This option would require the removal of small sections of green area.	Significant disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	The segregation is only through road markings.	Significant disadvantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages
		Segregation between cyclists and pedestrians	For most of the segment, pedestrians and cyclists are segregated. There is a small section of a shared active travel path to the east of the Aldi junction.	Some disadvantages	Cyclists and pedestrians would be segregated from one another.	Some advantages	Cyclists and pedestrians would be segregated from one another.	Some advantages	Cyclists and pedestrians would be segregated from one another.	Some advantages	Cyclists and pedestrians would be segregated from one another.	Some advantages	Cyclists and pedestrians would be segregated from one another.	Some advantages
		Safety for all users regarding traffic volumes and speeds along route	Unprotected cycle lanes are not appropriate to 50km/h roads according to the CDM required traffic volumes and speeds.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages
		Conflicts at junctions and side roads between vehicles and cyclists	Unprotected cycle lanes increase the risk of conflicts at side junctions and driveways.	Significant disadvantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points.	Significant advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points.	Significant advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict opportunities. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages
	Traffic	Impact on traffic capacity due to the proposals	No changes with traffic are expected with the implementation of this option.	Significant advantages	This option could possibly retain the turning lanes as the road is wide enough to relocate space for active travel and retain median lane.	Some advantages	This option could possibly retain the turning lanes as the road is wide enough to relocate space for active travel and retain median lane.	Some advantages	This option could possibly retain the turning lanes as the road is wide enough to relocate space for active travel and retain median lane.	Some advantages	As this option is a rapid build that proposes to implement a cycle track at the existing road space, the turning lanes would have to be removed. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages	As this option is a rapid build that proposes to implement a cycle track at the existing road space, the turning lanes would have to be removed. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages
	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.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral
	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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes / impacts to landscape & visual receptors	Neutral	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	Unlikely to have an impact on archaeological & architectural heritage assets.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Project 2: Segment 3

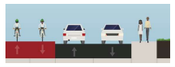


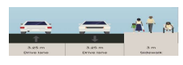
Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Footpaths and cycle lanes on both sides	Indicator Score	Option 2 Two-way cycle track on the north side - Traditional Build Desirable Minimum - 14.0m	Indicator Score	Option 3 One-way cycle track - Rapid Build 2.0 cycle facility - backfill option	Indicator Score	Option 4 Two-way cycle track on the south side - Rapid Build 4.0 cycle facility - backfill option	Indicator Score
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The costs of this option is higher than other options (€658,323.50)	Significant disadvantages	The costs of this option is higher than other options (€398,371.20)	Some disadvantages	The costs of this option is higher than other options (€340,214.55)	Some disadvantages
		Programme Impacts	This option would not require any special maintenance considerations beyond standard maintenance activities required of all roads.	Significant advantages	As this option requires full build out construction that would require the break out of existing facilities, this would impact programme and the scheme is less likely to be completed before the end of 2025. This option would also require full road reconstruction to accommodate the two-way cycle track.	Significant disadvantages	This option is a rapid build option, therefore, it is more likely to be concluded by the end of 2025.	Some advantages	This option is a rapid build option, therefore, it is more likely to be concluded by the end of 2025.	Some advantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	Significant advantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities	Significant disadvantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages
	Connectivity with public transport facilities	Connections to existing and proposed public transport	Several bus services make use of the segment and there is a bus stop located to the west of the National Science Park roundabout. The bus stop does not provide a bus cage or appropriate waiting area.	Significant disadvantages	This option would implement an appropriate bus stop according to standards.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the south side of the road.	Significant advantages	A L202 Shared Bus Stop Landing Zone could be installed on the south side of the road.	Significant advantages
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	There are employment and manufacturing hubs located along the segment. The existing cross section does not provide appropriate active travel infrastructure for users accessing these locations.	Significant disadvantages	This option would provide direct access to the key location on the north side.	Significant advantages	This option provides direct access to the key locations along the segment as facilities are provided on both sides of the road.	Significant advantages	As the key location along the segment is provided on the other side as the proposed two-way cycle track, this option would not provide direct access.	Some advantages
		Impacts on loading and parking bays	There is no on-street car parking.	Neutral	There is no on-street car parking.	Neutral	There is no on-street car parking.	Neutral	There is no on-street car parking.	Neutral
	Coherence	Route consistency and continuity	On the north side there is a cycle lane and on the north side is a shared path. Both facilities are continuous along the segment, however, cyclists coming from the National Science Park roundabout cannot enter the shared path on the southern side and are forced to continue along the road.	Significant disadvantages	Footpaths and cycle facilities would be continuous in this option, this would link into Ardmore Road active travel facilities, enhancing continuity	Significant advantages	Footpaths and cycle facilities would be continuous in this option, this would link into Ardmore Road active travel facilities, enhancing continuity	Significant advantages	Footpaths and cycle facilities would be continuous in this option, this would link into Ardmore Road active travel facilities, enhancing continuity	Significant advantages
	Directness	Directness along route and though junctions and maintenance of cyclists progression	There are mandatory cycle lanes on the north side and a shared path on the south side, however, both pedestrians and cyclists lose progress at junctions as there are no appropriate crossings.	Significant disadvantages	Cyclists would be accommodated at the two-way cycle facility, which would be direct and flow well.	Significant advantages	Cyclists would be accommodated for at the one-way cycle facilities, which would be direct and flow well.	Significant advantages	Cyclists would be accommodated at the two-way cycle facility, which would be direct and flow well.	Significant advantages
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Width of cycle lanes are below standard with sections of only 1.3m wide. The shared path is also too narrow.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages
	Attractiveness	Attractiveness of the route	The narrow nature of the facilities and the lack of segregation between cyclists and vehicles are not attractive for all users.	Significant disadvantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local employment and manufacturing hubs.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local employment and manufacturing hubs.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local employment and manufacturing hubs.	Significant advantages
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to local employment and manufacturing hubs, however, it does not provide suitable opportunities for all users.	Significant disadvantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to the local employment and manufacturing hubs.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to the local employment and manufacturing hubs.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially connecting to the local employment and manufacturing hubs.	Significant advantages
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel infrastructure to impact on modal shift.	Significant disadvantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Cycle Lanes might not be fully accessible to all users, especially less experienced and less confident users.	Significant disadvantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Adequate lighting, yet narrow cycling facilities might reduce feelings of safety particularly for women and children.	Significant disadvantages	The segregated cycle track and footpath would improve perception of safety for particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages

Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Significant advantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages
		Impact on green areas	No changes in green areas.	Significant advantages	The grassed area on the south side would have to be fully removed and parts of the north side as well. Leading to large loss of green area along the segment	Significant disadvantages	The grassed area on the south side would have to be partially removed and parts of the north side as well.	Some disadvantages	The grassed area on the south side would have to be partially removed and parts of the north side as well.	Some disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	The segregation is only through road markings.	Significant disadvantages	Cyclists would be physically segregated from vehicular traffic.	Significant advantages	Cyclists would be physically segregated from vehicular traffic.	Significant advantages	Cyclists would be physically segregated from vehicular traffic.	Significant advantages
		Segregation between cyclists and pedestrians	Pedestrians and cyclists shared the path on the south side.	Significant disadvantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Cycle lanes are not appropriate to 50km/h roads according to the CDM.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages
		Conflicts at junctions and side roads between vehicles and cyclists	There is limited segregation using painted cycle lanes, leaving opportunity for conflicts at the junctions and side roads	Significant disadvantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points.	Significant advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers existing side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages
	Traffic	Impact on traffic capacity due to the proposals	No proposed changes.	Neutral	No changes with traffic are expected with the implementation of this option.	Neutral	No changes with traffic are expected with the implementation of this option.	Neutral	No changes with traffic are expected with the implementation of this option.	Neutral
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	Some disadvantages	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	Some advantages	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	Some advantages	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	Some advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	Some disadvantages	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	Some advantages	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	Some advantages	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	Some advantages
	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.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features.	Some advantages	There will be a loss of a number of standard sized roadside trees and associated grass verges - these features are of low ecological value. This loss of street side trees will be the same for any link type.	Some disadvantages	There will be a loss of a number of standard sized roadside trees and associated grass verges - these features are of low ecological value. This loss of street side trees will be the same for any link type.	Some disadvantages	There will be a loss of a number of standard sized roadside trees and associated grass verges - these features are of low ecological value. This loss of street side trees will be the same for any link type.	Some disadvantages
	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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes to landscape and visual receptors	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	Unlikely to have an impact on archaeological & architectural heritage assets.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Project 2: Segment 4



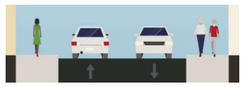


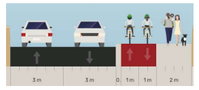


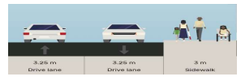

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Footpaths on the north side and a small section with cycle lanes	Indicator Score	Option 2 One-way Cycle Track no pedestrian facility on the south side - Traditional Build Absolute Minimum - 11.7m	Indicator Score	Option 3 Two-way cycle track on the south side - Rapid Build Absolute Minimum - 10.6m	Indicator Score	Option 4 Two-way cycle track on the north side - Traditional Build Absolute Minimum - 10.6m	Indicator Score	Option 5 Shared Active Travel Path on the north side and no facility on the southern side - Rapid Build Absolute Minimum - 11.0m	Indicator Score	Option 6 Mixed Traffic - Rapid Build Desirable Minimum - 11.2m	Indicator Score
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	Neutral	This option requires approximately 125m2 of land along WCC controlled area.	Neutral	This option would not require land take.	Neutral	This option would not require land take.	Neutral	This option requires some land that is in control of WCC.	Neutral	This option fits within the existing road boundary and does not require land acquisition.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The costs of this option is higher than the other options (€620,965.47)	Significant disadvantages	The costs of this option is higher than the other options (€287,623.82)	Some disadvantages	The costs of this option is higher than the other options (€643,964.82)	Significant disadvantages	The costs of this option is lower than other options (€220,754.18)	Some disadvantages	The costs of this option is lower than other options (€208,959.99)	Some disadvantages
		Programme Impacts	No impact on the programme as no construction is associated with this option.	Significant advantages	As this option requires full build out construction that would require the break out of existing facilities, this would impact programme and the scheme is less likely to be completed before the end of 2025.	Significant disadvantages	This option is a rapid built option, therefore, it is expected to be concluded by the end of 2025.	Some advantages	As this option requires full build out construction that would require the break out of existing facilities, this would impact programme and the scheme is less likely to be completed before the end of 2025.	Significant disadvantages	This option is a rapid built option, therefore, it is expected to be concluded by the end of 2025.	Some advantages	This option is a rapid built option, therefore, it is expected to be concluded by the end of 2025.	Some advantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	Significant advantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities.	Significant disadvantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages	This option would be constructed using traditional build as it would require full construction of the cycle facilities and the road carriageway to accommodate the two-way cycle track.	Significant disadvantages	This option can be constructed using Rapid Build methods as it fits within the road boundary. Proposed cycle facility can be backfilled with tarmac.	Some advantages	This option can be constructed using Rapid Build methods as it fits within the road boundary.	Some advantages
	Connectivity with public transport facilities	Connections to existing and proposed public transport	Currently well designed bus stops present, but the lack of facilities for active travel users impedes the inclusivity of the connectivity	Significant disadvantages	Bus stop would be redesigned to be in accordance with the CDM.	Significant advantages	The option allows for better connectivity to the planned bus networks upgrades, as well as current bus routes.	Significant advantages	The option allows for better connectivity to the planned bus networks upgrades, as well as current bus routes.	Significant advantages	The option allows for better active travel connectivity to the current bus routes whilst maintaining current bus bay and shelter.	Significant advantages	The option allows for better active travel connectivity to the current bus routes whilst maintaining current bus bay and shelter.	Significant advantages
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	There are several local businesses located along the segment. The existing cross section does not provide appropriate active travel infrastructure for users accessing these locations.	Significant disadvantages	This option would link well to the key locations on the north side and the residential units on the south side.	Significant advantages	As the key locations along the segment are provided on the north side and the proposed two-way cycle track is on the south side, this option does not provide direct access.	Some advantages	This option would provide direct access to the key locations on the north side of the segment.	Significant advantages	This option would provide direct access to the key locations on the north side of the segment.	Significant advantages	This option would provide direct access to the key locations on the north side of the segment. However, less confident cyclists would still struggle with having no segregation with vehicles which would decrease the accessibility to these services from these users.	Some disadvantages
		Impacts on loading and parking bays	No changes proposed to the existing on-street parking bays.	Significant advantages	This option would require the removal of the on-street car parking.	Significant disadvantages	This option would require the removal of the on-street car parking.	Significant disadvantages	This option would require the removal of the on-street car parking.	Significant disadvantages	This option would require the removal of the on-street car parking.	Significant disadvantages	No changes to the existing on-street car parking.	Significant advantages
	Coherence	Route consistency and continuity	Little provisions for cyclists and pedestrians, cycle lanes are only adjacent to the National Science Park roundabout and footpaths are only provided on the north side of the road.	Significant disadvantages	A footpath and cycle facilities would be in this option, this would link into Ardmore Road active travel facilities, enhancing continuity.	Significant advantages	Footpaths and cycle facilities would be in this option, this would link into Ardmore Road active travel facilities, enhancing continuity.	Significant advantages	Footpaths and cycle facilities would be in this option, this would link into Ardmore Road active travel facilities, enhancing continuity.	Significant advantages	The shared active travel path would be one side of the road in this option. However, no facilities would be provided on the opposite side of the road.	Some advantages	The footpaths would be continuous in this option. The cycle facility would be continuous along the road.	Significant advantages
	Directness	Directness along route and though junctions and maintenance of cyclists progression	Cyclists travelling along the segment have to share the road with vehicles, therefore, progress is impeded by stopped and turning vehicles.	Significant disadvantages	Cyclists would be accommodated for at the one-way cycle facilities, which would be direct and flow well.	Significant advantages	Cyclists would be accommodated at the two-way cycle facility, which be direct and flow well.	Significant advantages	Cyclists would be accommodated at the two-way cycle facility, which would be direct and flow well.	Significant advantages	As cyclists and pedestrians would shared the facility, cyclist progression may be interrupted by pedestrian conflicts. Cyclist would continue across junctions and side-streets.	Some advantages	Cyclists travelling along the segment would have to share the road with vehicles, therefore, continuity would is impeded by stopped and turning vehicles. The proper signage and road markings are expected to improve the directness for cyclists slightly.	Some disadvantages
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	The footpath has sections less than 1.8m and the cycle lanes are below requirement.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the absolute minimum width guidelines.	Significant advantages	The shared path would be designed using the absolute minimum width. It can potentially increase conflicts between cyclists and pedestrians.	Some disadvantages	Footpaths would be provide according to DMURS guidelines, however cyclists would be accommodated on road only, impacting comfort.	Some disadvantages
	Attractiveness	Attractiveness of the route	As the level of active travel infrastructure provided is limited, existing scenario is not considered attractive.	Significant disadvantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses. Pedestrians having no facilities on the southern side of the carriageway will make this option less attractive to active travel especially regarding the residential areas on the southern side of the carriageway.	Some advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with local businesses. As it would be accommodated for with the same path this would slightly reduce the attractiveness of this option compared with fully segregated options.	Some advantages	The widening of the footpath and proper signage to indicate mixed traffic would increase perception of safety for all users, however, as cyclists and vehicles would share the carriageway this would be less attractive to cyclists.	Some disadvantages
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The segment links to a hotel and B&B, however, it does not provide suitable opportunities for all users due to a narrow footpath and lack of cycle facilities.	Significant disadvantages	Improvements to facilities will facilitate community and recreational participation along the road, especially regarding the hotel and B&B. Unlike options with two footpaths this option would not allow for pedestrian participation for users entering and leaving the residential area on the southern side of the carriageway.	Some advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially regarding the hotel and B&B.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially regarding the hotel and B&B.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially regarding the hotel and B&B, because this option would have no segregation between cyclists and pedestrians this option would not be as inclusive for less confident users and would not see as much of these activities being uptake as fully segregated options.	Some advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially regarding the hotel and B&B. This option is limited in providing for less confident and vulnerable users that are less likely to feel comfortable sharing the carriageway with vehicles which would result in a decrease in uptake of these activities.	Some disadvantages
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel infrastructure to impact on modal shift.	Significant disadvantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users. The lack of improvement for pedestrians slightly reduces the expected modal shift to active travel modes of transport.	Some advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to a key services. Likewise, the implementation of the active travel facilities would improve safety along the segment, which could help increase the number of users.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services. The possibility of conflicts between cyclists and pedestrians decreases the expected modal shift with this option slightly.	Some advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to multiple services, however, the lack of segregation between cyclists and vehicles would likely lead to a significantly lower modal shift than other options.	Some disadvantages
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Footpath is only provided on one side of the road. Likewise, there is close to no cycle facilities. Therefore, existing scenario is not accessible for all users.	Significant disadvantages	The cycle track and footpath would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The shared active travel path would be designed as the absolute minimum width and would be shared between cyclists and pedestrians, however it would be accessible to all.	Some advantages	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 users.	Some disadvantages
	Gender Impacts	How the proposal may have gender specific impacts	Limited lighting and poor cycling facilities. The footpath only provided on one side of the road also affects the sense of security particularly for women and children.	Significant disadvantages	The segregated cycle track and would improve perception of safety for women and children, however, the pedestrians still having one footpath would not improve pedestrians sense of security along the route.	Some advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregated cycle track and footpath would improve perception of safety particularly for women and children.	Significant advantages	The segregation of cycling and car users would improve safety perception for women and children, however, this would reduce perception of safety for pedestrians as they lose their segregation from cyclists in this scenario. The lack of facilities on the southern side would reduce perception of safety further.	Some disadvantages	The widening of the footpath and proper signage to indicate mixed traffic would slightly increase perception of safety for women and children. The improved perception of safety would be quite limited for cyclists due to their still being no segregation between themselves and vehicles on a busy road.	Some disadvantages

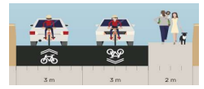
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Significant advantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages
		Impact on green areas	No proposed changes to the existing green areas.	Significant advantages	This option would require the removal of parts of green area to the south side.	Significant disadvantages	This option would require the removal of parts of green area to the south side.	Significant disadvantages	This option would require the removal of parts of green area to the south side.	Significant disadvantages	This option would impact minimally the green area to the south.	Some disadvantages	No impact on the green area.	Significant advantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is currently only segregation at one short section using a painted on cycle lane between cyclists and vehicles.	Significant disadvantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	Cyclists would be segregated from vehicular traffic.	Significant advantages	This option would not provide segregation between cyclists and vehicles. However, footpath might be able to accommodate less experienced users.	Significant disadvantages
		Segregation between cyclists and pedestrians	Cyclists travel on road and pedestrians travel on the footpath.	Significant advantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages	Cyclists and pedestrians would be segregated from one another.	Significant advantages	Cyclists and pedestrians would share the path.	Significant disadvantages	Pedestrians and cyclists would be segregated in this option.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Based on the traffic volumes of the segment, this option is not appropriate and does not meet CDM standards.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	There is a high volume of traffic along the segment, over 400 pcu/hr in standard peak traffic times, therefore, measures would have to be implemented to reduce vehicular speeds to improve safety for all road users. Also, based on Table 2.1 of the CDM, the implementation of a mixed traffic along the route is not suitable. The speed limit would have to be reduced to 20km/h and it would be a departure from standard.	Significant disadvantages
		Conflicts at junctions and side roads between vehicles and cyclists	As there is close to no segregation and appropriate signage to indicate motorists of the presence of cyclists, there is a potential for conflicts at junctions.	Significant disadvantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points.	Significant advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	This option would separate pedestrians and cyclists from vehicle traffic thus reducing the opportunity for conflicts. However, drivers turning out of driveways and side streets may not be expecting contra-flow cyclists on the shared path resulting in an increase in potential conflict.	Some disadvantages	Cyclists and vehicles sharing the road increase the vulnerability of cyclists. However, appropriate signage would be required to indicate the presence of cyclists on the road to improve safety.	Some disadvantages
	Traffic	Impact on traffic capacity due to the proposals	No proposed changes.	Significant advantages	Turning lanes would need to be removed as part of this option. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages	Turning lanes would need to be removed as part of this option. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages	Turning lanes would need to be removed as part of this option. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages	Turning lanes would need to be removed as part of this option. However, turning lanes on links are not typically provided in urban areas and their removal is likely to have only minor impacts.	Some disadvantages	This option might impact traffic capacity due to traffic calming measures implemented, however, turning lanes could be retained.	Some advantages
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some disadvantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some advantages	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.	Some disadvantages
	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.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features.	Some advantages	There will be a small loss of low ecological value managed hedgerow, loss is not significant	Some disadvantages	There will be a small loss of low ecological value managed hedgerow, loss is not significant	Some disadvantages	There will be a small loss of low ecological value managed hedgerow, loss is not significant	Some disadvantages	This option will not have an impact on any features of ecological importance.	Some advantages	This option will not have an impact on any features of ecological importance.	Some advantages
	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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	There are no 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.	Neutral	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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes to landscape and visual receptors	Neutral	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	Unlikely to have an impact on archaeological & architectural heritage assets.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Project 2: Segment 5









Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing Footpath on the eastern side only	Indicator Score	Option 2 Two-way cycle track on the eastern side and no facility on the western side - Rapid Build Absolute Minimum - 10.3m (2.3 cycle track and 2.0m footpath)	Indicator Score	Option 3 Shared Active Travel Path on the eastern side and no facility on the western side - Rapid Build Absolute Minimum - 9.3m	Indicator Score	Option 4 Mixed Traffic - Rapid Build Desirable Minimum - 8.5m - no footpath on the western side	Indicator Score
Transport User benefits and Other Economic Impacts	Cost and Programme Impacts	Land acquisition area	No land acquisition required.	Neutral	This option requires land that is controlled by Westmeath County Council resulting in no additional costs.	Neutral	This option requires land that is controlled by Westmeath County Council resulting in no additional costs.	Neutral	No land acquisition required to provide this option as it fits within the road boundary.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The costs of this option is higher than the other options (€479,861.66)	Significant disadvantages	The costs of this option is lower than other options (€111,336.21)	Some disadvantages	The costs of this option is lower than other options (€66,082.48)	Some advantages
		Programme Impacts	No impact on the programme as no construction is associated with this option.	Some advantages	This option is a rapid build option, therefore, it is likely to be concluded by the end of 2025.	Some disadvantages	This option is a rapid build option, therefore, it is likely to be concluded by the end of 2025.	Some disadvantages	This option is a rapid build option, therefore, it is likely to be concluded by the end of 2025.	Some disadvantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed to the existing road arrangements.	Some advantages	This option can be constructed using Rapid Build methods. Along Ardmore Hills, the green area would be backfilled to install the cycle track and footpath. The road carriageway would be narrowed to 6.0m and new gully posts would be provided on both sides of the road.	Some disadvantages	This option can be constructed using Rapid Build methods. Along Ardmore Hills, the green area would be backfilled to install the shared active travel path The road carriageway would be narrowed to 6.0m and new gully posts would be provided on both sides of the road.	Some disadvantages	This option can be constructed using Rapid Build methods. Along Ardmore Hills, the green area would be backfilled to install the widened footpath. The road carriageway would be narrowed to 6.0m and new gully posts would be provided on both sides of the road.	Some disadvantages
	Connectivity with public transport facilities	Connections to existing and proposed public transport	There is no public transport available along the segment, resulting in no change in connection to public transport	Neutral	There is no public transport available along the segment, resulting in no change in connection to public transport	Neutral	There is no public transport available along the segment, resulting in no change in connection to public transport	Neutral	There is no public transport available along the segment, resulting in no change in connection to public transport	Neutral
Accessibility Impacts	Access to Key Services	Access to key services (retail, groceries, banks, educational, healthcare, recreational facilities and employment areas)	There is a school located south of the segment and several employment areas to the north. The existing cross section does not provide appropriate active travel infrastructure for users accessing these locations.	Significant disadvantages	This option provides direct access to the key location south of the segment and connects well with the Ardmore Road scheme.	Significant advantages	This option provides direct access to the key location to the south of the segment however, this option requires pedestrians and cyclists to share a path which can lead to conflicts which will likely negatively affect usage of these users towards these services.	Some advantages	The proposal would connect well to the key location on the segment, however the lack of segregation between vehicles and cyclists would be of significant concern to less confident cyclists and would significantly impact the level of access available to these users.	Some disadvantages
		Impacts on loading and parking bays	There are no parking bays along the segment.	Neutral	There are no parking bays along the segment.	Neutral	There are no parking bays along the segment.	Neutral	There are no parking bays along the segment.	Neutral
	Coherence	Route consistency and continuity	Footpaths are provided only along the eastern side and there are no cycle facilities.	Significant disadvantages	This option would tie in with the scheme along Ardmore Road and would provide consistency and continuity of facilities. There is a crossing point on the southern side of the segment that would safely accommodate pedestrians and cyclists crossing the road.	Significant advantages	This option would tie in with the scheme along Ardmore Road and would provide consistency and continuity of facilities. There is a crossing point on the southern side of the segment that would safely accommodate pedestrians and cyclists crossing the road.	Significant advantages	Cyclists would be accommodated in the road and pedestrians along the footpath. These facilities would be continuous along the segment and would tie-in with the scheme along Ardmore Road. However, this would represent a change in facility type from the existing scheme and would impact the overall route continuity.	Some advantages
	Directness	Directness along route and though junctions and maintenance of cyclists progression	Cyclists have to shared the road with vehicles, therefore, progress is impeded by stopped and turning vehicles. There are no appropriate crossing facilities and pedestrian progression is not maintained.	Significant disadvantages	Cyclists would be accommodated at the two-way cycle facility, which would be direct and unimpeded.	Significant advantages	As cyclists and pedestrians would shared the facility, cyclist progression may be interrupted by pedestrian conflicts. Cyclist would continue across junctions and side-streets.	Some advantages	The lack of cycling facilities results in cyclists needing to share the road with vehicles. This results in cyclists progression being interrupted by turning and stopped vehicles.	Some disadvantages
	Comfort	Provision of comfort for pedestrians and cyclists through assessment of width	Footpaths are not in accordance with DMURS guidelines, with locations less than 1.8m wide. There are no cycle facilities and no appropriate signage to indicate motorists of cyclists on road.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to CDM following the minimum width guidelines.	Significant advantages	The shared path would be designed using the absolute minimum width, which may not be sufficient to accommodate both cyclists and pedestrians as it is located on only one side of the road. It can potentially increase conflicts between cyclists and pedestrians.	Some disadvantages	Footpath would be provided according to DMURS guidelines. However, cyclists would be required to cycle on street which may reduce comfort.	Some disadvantages
	Attractiveness	Attractiveness of the route	As the level of active travel infrastructure provided is limited, existing scenario is not considered attractive.	Significant disadvantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with the school.	Significant advantages	The improved facility would increase attractiveness along the segment, especially as it would enhance connectivity with the school.	Some advantages	The improved facility would slightly increase attractiveness along the segment. Signage and markings would be in place to ensure drivers are aware of the presence of cyclists along the link, but this option still be less attractive to less confident cyclists due to there being no segregation between cyclists and vehicles.	Some disadvantages
Social Impacts	Social inclusion for groups with deprived needs	Opportunities for social, community and recreational activity participation	The narrow nature of the footpath and the lack of cycle facilities is not provide opportunities for all users.	Significant disadvantages	Improvements to facilities will facilitate community and recreational participation along the road, especially as it connects to the school to the south.	Significant advantages	Improvements to facilities will facilitate community and recreational participation along the road, especially as it connects to the school to the south. The potential for conflicts between cyclists and pedestrians slightly decreases the expected uptake of these activities with this option.	Some advantages	Improvements to facilities will somewhat facilitate community and recreational participation along the road, especially as it connects to the school to the south. As there would be no increase in segregation for cyclists and vehicles the uptake to these activities would be significantly limited.	Some disadvantages
	Health impacts	Impact on modal Shift/activity levels (i.e., Cars to Cyclists)	The existing arrangements does not provide sufficient levels of active travel infrastructure to impact on modal shift.	Significant disadvantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services and continue the active travel provision along Ardmore Road.	Significant advantages	The improved facility has the potential to impact on the modal shift in the area, as it would improve connectivity to key services and continue the active travel provision along Ardmore Road. The possibility of conflicts between cyclists and pedestrians decreases the expected modal shift with this option slightly.	Some advantages	The improved facility will marginally impact on the modal shift in the area, as it would improve connectivity to key services and continue the active travel provision along Ardmore Road. As there would be no segregation between cyclists and vehicles the modal shift expected is significantly less than the other options.	Some disadvantages
	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Footpath is only provided on one side of the road and the width is less than the minimum required by DMURS. Likewise, there are no cycle facilities. Therefore, existing scenario is not accessible for all users.	Significant disadvantages	The cycle track and footpaths would be accessible to all users as they would be designed according to standards.	Significant advantages	The shared active travel path would be designed as the absolute minimum width, however, as the flow of active travel users it not high, the path is considered to be appropriate and accessible for all users.	Some advantages	The footpath would be adequate to accommodate the levels of pedestrians along the segment, however, the shared street might not be suitable for less experienced users.	Some disadvantages
	Gender Impacts	How the proposal may have gender specific impacts	Along the frontage of Ardmore Hills, there is appropriate lighting, which impacts the perception of safety. However, the narrow nature of the footpath may impact usage especially for women and children.	Significant disadvantages	The segregated cycle track and footpath would improve perception of safety especially for women and children.	Significant advantages	The wide path would provide benefits comparing to the existing narrow path, increasing feelings of safety particularly for women and children. The lack of segregation between cyclists and pedestrians would marginally decrease perception of safety for these users.	Some advantages	The footpaths would encourage usage with women and children but the mixed traffic element would increase sense of danger.	Some disadvantages

Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Significant advantages	Regarding NIFTI, this option would require implementation of new/improve facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages	Regarding NIFTI, this option would require optimization of the existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages
		Impact on green areas	The green area along the segment would not be impacted.	Significant advantages	To implement this option, the grass verge adjacent Ardmore Hills would have to be removed.	Significant disadvantages	To implement this option, the grass verge adjacent Ardmore Hills would have to be removed.	Significant disadvantages	To implement this option, the grass verge adjacent Ardmore Hills would have to be removed.	Significant disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is currently no segregation between cyclists and vehicles.	Significant disadvantages	Cyclists and vehicles would be segregated.	Significant advantages	The shared path would accommodate cyclists that would be segregated from vehicular traffic.	Significant advantages	This option would not provide segregation between cyclists and vehicles. However, footpath might be able to accommodate less experienced users.	Significant disadvantages
		Segregation between cyclists and pedestrians	Cyclists travel on road and pedestrian travel on the footpath.	Significant advantages	Pedestrians and cyclists would have their own paths.	Significant advantages	Pedestrians and cyclists would share the path, which can cause conflicts.	Significant disadvantages	Pedestrians and cyclists would be segregated in this option.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Based on the traffic volumes of the segment, this option is not appropriate and does not align with the Cycle Design Manual.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages	There is a high volume of traffic along the segment, over 400 pcu/hr in standard peak traffic times, therefore, measures would have to be implemented to reduce vehicular speeds to improve safety for all road users. Also, based on Table 2.1 of the CDM, the implementation of a mixed traffic along the route is not suitable. The speed limit would have to be reduced to 20km/h and it would be a departure from standard.	Significant disadvantages
		Conflicts at junctions and side roads between vehicles and cyclists	As there are no segregation and appropriate signage to indicate motorists of the presence of cyclists, there is a potential for conflicts at junctions and driveways.	Significant disadvantages	As cyclists would be segregated from vehicular traffic, it would reduce conflict points. However, drivers exiting side roads and junctions might not be expecting contra-flow cyclists which can cause conflicts.	Some advantages	This option would separate pedestrians and cyclists from vehicle traffic thus reducing the opportunity for conflicts. However, drivers turning out of driveways and side streets may not be expecting contra-flow cyclists on the shared path resulting in an increase in potential conflict.	Some advantages	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.	Some disadvantages
	Traffic	Impact on traffic capacity due to the proposals	No proposed changes.	Some advantages	No changes with traffic are expected with the implementation of this option.	Some advantages	No changes with traffic are expected with the implementation of this option.	Some advantages	This option might have a minor impact on traffic capacity due to traffic calming measures implemented.	Some disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No change to current air quality.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some disadvantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No change to current level of noise pollution.	Some disadvantages	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.	Some advantages	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.	Some advantages	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.	Some disadvantages
	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.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral	This option will not have an impact on any features of ecological importance.	Neutral
	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.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes to landscape and visual receptors	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	Unlikely to have an impact on archaeological & architectural heritage assets.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Dublin Road/Delvin Road Signalised Junction

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing	Indicator Score	Option 2 Upgrade Junction into a Fully Signal Control Protected Junction	Indicator Score
Transport User benefits and Other Economic Impacts	Cost impacts	Land acquisition area	No land acquisition required.	Significant advantages	This option requires land acquisition on the eastern arm of the junction.	Significant disadvantages
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The cost of this option is approximately €543,632.05.	Significant disadvantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Significant advantages	This option would built using traditional construction techniques resulting in slower construction times.	Significant disadvantages
Accessibility Impacts	Coherence and Directness	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression	Option would disrupt continuity of proposed plans for project 2, this would delay cyclists progression.	Significant disadvantages	The route would allow for continuity with other sections of project 2 and act as a pleasant entry/exit point for users of the project, allowing good progression.	Significant advantages
	Comfort and Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness	Currently narrow footpaths present and no cycle facilities at the junction is not attractive for most users.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to the CDM following the minimum width guidelines.	Significant advantages
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	All crossings are signalised with dropped kerbs and tactile paving, however, footpath is narrow and there are no cycle facilities, which makes it not accessible for all users.	Significant disadvantages	This option would allow cycle users to have further protection, which would be especially beneficial for more vulnerable users. Footpaths would also be widened to standard to allow for safe movement of all user types.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Limited active travel facilities particularly regarding cyclists is problematic, particularly for women and children.	Significant disadvantages	Improved crossing and cycling facilities would increase perception of safety along the route particularly for women and children.	Significant advantages
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Some advantages	Regarding NIFTI, this option would require installation of new facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages
		Impact on green areas	No green area at the junction.	Neutral	No green area at the junction.	Neutral
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is no segregation between cyclists and vehicles.	Significant disadvantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages
		Segregation between cyclists and pedestrians	Cyclists and pedestrians are segregated at the junction.	Neutral	Cyclists and pedestrians would be segregated at the junction.	Neutral
		Safety for all users regarding traffic volumes and speeds along route	Due to high volumes of traffic, the current scenario is not appropriate as per CDM standards.	Significant disadvantages	Cyclists would be segregated from vehicular traffic, which would comply with CDM standards.	Significant advantages
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed.	Significant advantages	The junction re-design would remove the right turning lanes on Dublin Road and the left turning lane on Delvin Road to reallocated space for active travel users, which would impact traffic capacity and may cause queues and delays. A cycle time at the traffic light system would also be introduced, which would reduce capacity even further.	Significant disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No changes to existing air quality.	Some disadvantages	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.	Some advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No changes to existing noise and vibration levels.	Some disadvantages	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Some advantages
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No changes / impacts to soils and geology.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features.	Neutral	No impact on any ecological features.	Neutral
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No changes / impacts to water resources.	Neutral	The Canal is located adjacent to / below this junction / bridge structure. There are no 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. Mitigation measures will be implemented for the protection of the canal if this option is brought forward.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	No change / impacts to cultural heritage.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Dublin Road/Bellview Priority Junction

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing	Indicator Score	Option 2 Removal of Slip Lane and Provide a Standard Side Road Crossing	Indicator Score
Transport User benefits and Other Economic Impacts	Cost impacts	Land acquisition area	No land acquisition is required.	Neutral	This option would require sections of the green area adjacent the junction to be incorporated as there is currently no sufficient space. Lands are in control of WCC.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The cost of this option is approximately €112,520.00.	Significant disadvantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Significant advantages	This option would be built using traditional construction techniques resulting in slower construction times.	Significant disadvantages
Accessibility Impacts	Coherence and Directness	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression	This option would not enable good continuity between the other segments or allow for quick progression of cyclists through the junction.	Significant disadvantages	Option would connect well to the other segments facilities and allow for cyclists to progress with ease. Pedestrian movement would also be more continuous as this option would provide crossing points on all arms of the junction.	Significant advantages
	Comfort and Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness	Limited cycle facilities and narrow footpaths make this option not attractive to all users.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to the CDM following the minimum width guidelines.	Significant advantages
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 and cycling crossing infrastructure make this a challenging junction at present for vulnerable users. The slip lane into Bellview also allows vehicles to enter the junction at speed which may cause conflict impacts with cyclists travelling east.	Significant disadvantages	This option would allow active travel users to have further protection, which would be especially beneficial for more vulnerable users. The removal of the slip lane would reduce conflicts at the junction and improve safety.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Limited active travel facilities particularly regarding cyclists is problematic for active travellers, particularly women and children.	Significant disadvantages	Improved crossing and cycling facilities would increase perception of safety along the route for women and children.	Significant advantages
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Some advantages	Regarding NIFTI, this option would require installation of new facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages
		Impact on green areas	Green area could remain in this option.	Significant advantages	This option would require the removal of some of the green area and several trees at the junction but a new green area could be implemented where the slip lane is to be removed.	Significant disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is no physical segregation between cyclists and vehicles at the junction.	Significant disadvantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages
		Segregation between cyclists and pedestrians	The eastern arm of the junction provides a shared path for cyclists and pedestrians travelling east.	Significant disadvantages	Cyclists and pedestrians would be segregated.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Currently not adequate for active travel users safety, due to a lack of crossing facilities and protected cycle lanes as it's a 50km/h road. The slip lane also reduces safety for all users as it allows vehicles to continue at speed through the junction, possibly conflicting with cyclists at the cycle lane.	Significant disadvantages	The proposed cross section is appropriate regarding traffic volumes and speeds.	Significant advantages
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed.	Some advantages	It is unlikely that the removal of the slip lane would reduce traffic capacity at the junction as left turning movements are not impeded, however, crossing points would be implemented on all arms, which would require vehicles to yield for pedestrians and cyclists wishing to cross the road and could possibly cause traffic delays.	Some disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No changes to existing air quality.	Some disadvantages	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.	Some advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No changes to existing noise and vibration levels.	Some disadvantages	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Some advantages
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No changes / impacts to soils and geology.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No loss of grasslands, and managed hedgerows.	Some advantages	Loss of all roadside grasslands, and managed hedgerows of low ecological value.	Some disadvantages
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No changes / impacts to water resources.	Neutral	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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	No change / impacts to cultural heritage.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Dublin Road/Aldi Foodstore/Gleenmore Wood Signalised Junction

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing	Indicator Score	Option 2 Removal of the Slip Lane and Full Signal Control Junction	Indicator Score
Transport User benefits and Other Economic Impacts	Cost impacts	Land acquisition area	No land acquisition required.	Neutral	No land acquisition required.	Neutral
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The cost associated with this options is approximately €701,204.70.	Significant disadvantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Significant advantages	As it requires the closure of the slip lane, traditional construction methods would be used. The cycle facilities could be constructed using rapid build methods.	Significant disadvantages
Accessibility Impacts	Coherence and Directness	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression	This option would disrupt continuity with the other segments, which would cause challenges for the cyclists progression.	Significant disadvantages	Option would connect well to the other segments facilities and allow for cyclists to progress with ease. Pedestrian movement would also be more continuous as this option would provide crossing points on all arms of the junction.	Significant advantages
	Comfort and Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness	There is a shared path on the southern side which is below the CDM standard and a cycle lane also below the CDM standard on the north side. The footpath on the north side is appropriate.	Significant disadvantages	The footpath would be designed according to DMURS and the cycle track according to the CDM following the minimum width guidelines.	Significant advantages
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	Not all arms of the junction have crossing points and widths are not appropriate. The slip lane increases the time required to cross the road on the north side and the shared path does not suit all ages and abilities.	Significant disadvantages	This option would allow active travel users to have further protection, which would be especially beneficial for more vulnerable users. Crossing facilities would be provided on all arms to reduce the time to cross the road. The removal of the slip lane would reduce conflicts at the junction and improve safety.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Limited active travel facilities is problematic for active travellers, especially women and children.	Significant disadvantages	Improved crossing and segregated cycling facilities would increase perception of safety along the route, particularly for women and children.	Significant advantages
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Some advantages	Regarding NIFTI, this option would require installation of new facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages
		Impact on green areas	No impact on green area.	Significant advantages	Green area to be slightly removed to allow relocation of space for active travel.	Significant disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	Cyclists and vehicles currently segregated by bike lane but no physical barriers between the two.	Significant disadvantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages
		Segregation between cyclists and pedestrians	Cyclists and pedestrians are not segregated on the south side as they share the same path. To the north, they are segregated.	Significant disadvantages	Cyclists and pedestrians are fully segregated at the junction.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Mandatory cycle lanes are not adequate at 50km/h roads according to the CDM.	Significant disadvantages	Standard cycle tracks are appropriate given the traffic volumes and speeds of the road.	Significant advantages
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed.	Significant advantages	This option would likely impact traffic capacity at the junction as it would remove the turning lanes and the slip lane off the Foodstore.	Significant disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No changes to existing air quality.	Some disadvantages	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.	Some advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No changes to existing noise and vibration levels.	Some disadvantages	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Some advantages
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No changes / impacts to soils and geology.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features of importance.	Neutral	No impact on any ecological features of importance.	Neutral
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No changes / impacts to water resources.	Neutral	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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	No change / impacts to cultural heritage.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

National Science Park Roundabout

Criteria	Sub-Criteria	Indicator to be measured	Option 1 Do Nothing	Indicator Score	Option 2 Upgrade roundabout to protected roundabout - Rapid Build	Indicator Score	Option 3 Protected Roundabout with Cycle Priority	Indicator Score	Option 4 Replace Roundabout with Signal control junction	Indicator Score
Transport User benefits and Other Economic Impacts	Cost impacts	Land acquisition area	No land acquisition required.	Significant advantages	No land acquisition required.	Significant advantages	Land acquisition is required to construct this option.	Significant disadvantages	No land acquisition required.	Significant advantages
		Construction and maintenance	No construction costs associated with the option.	Significant advantages	The cost of this options is approximately €170,600.00.	Some advantages	The cost of this options is approximately €206,522.20.	Some disadvantages	The cost of this options is approximately €687,884.70.	Significant disadvantages
	Construction impacts	Rapid build achievability and construction impacts, including construction requirements and drainage impact	No changes proposed.	Significant advantages	This option is a proposed rapid build hence it can be built quickly.	Some advantages	This option would built using traditional construction techniques resulting in slower construction times.	Significant disadvantages	This option would built using traditional construction techniques as it requires changes in the junction layout and installation of traffic signs.	Significant disadvantages
Accessibility Impacts	Coherence and Directness	Consistency, continuity and directness along the route and through junctions and the maintenance of cyclists' progression	Option would disrupt continuity with the other segments, and cause challenges for the cyclists progression.	Significant disadvantages	Option would connect well to the other segments facilities and allow for cyclists to progress with ease, with pedestrian and cyclist priority provided at zebra crossings.	Significant advantages	Option would connect well to the other segments facilities and allow for cyclists to progress with ease, with pedestrian and cyclist priority provided at zebra crossings.	Significant advantages	Option would connect well to the other segments facilities and allow for cyclists to progress with ease, although some delays may be experienced at traffic signals.	Some advantages
	Comfort and Attractiveness	Provision of comfort for pedestrians and cyclists through assessment of width and its attractiveness	No cycle facilities present and one arm with a signalised crossing only. Footpaths are below standard on eastern and southern arms.	Significant disadvantages	The shared path will be designed according to the CDM with the minimum width. Pedestrians and cyclists would be required to share space at the roundabout which may impact comfort.	Some advantages	The footpath would be designed according to DMURS and the cycle track according to the CDM following the minimum width guidelines.	Significant advantages	The footpath would be designed according to DMURS and the cycle track according to the CDM following the minimum width guidelines.	Significant advantages
Social Impacts	Accessibility for users with different mobility needs	Qualitative assessment of accessibility of the options to serve users of all ages and abilities	There is no appropriate crossing facilities on all arms of the junction, which limits usage. Cyclists are forced into the road with vehicles which also causes conflicts and safety concerns. Therefore, not appropriate for all users.	Significant disadvantages	This option would allow active travel users to have further protection, which would be especially beneficial for more vulnerable users. However, shared spaces between pedestrians and cyclists may reduce accessibility for some.	Some advantages	This option would allow active travel users to have further protection, which would be especially beneficial for more vulnerable users with segregation provided for all users.	Significant advantages	This option would allow active travel users to have further protection, which would be especially beneficial for more vulnerable users. The signal stage will ensure pedestrians and cyclists can cross the road in safety and segregated from one another.	Significant advantages
	Gender Impacts	How the proposal may have gender specific impacts	Limited active travel facilities is problematic for active travellers with safety concerns, particularly for women and children.	Significant disadvantages	Increase in protection for active travel users would increase perception of safety at the roundabout, particularly for women and children, as there will be crossing points on all arms. But shared space between cyclists and pedestrians might not be ideal to these users.	Some advantages	Increase in protection for active travel users would increase perception of safety at the roundabout especially for women and children, due to the presence of segregated paths for pedestrians and cyclists and appropriate crossing points.	Significant advantages	Increase in protection for active travel users would increase perception of safety, particularly for women and children at the junction due to the presence of segregated paths for pedestrians and cyclists and signalised crossing points.	Significant advantages
Land Use Impact	Integration with town environs	How the proposal integrates with the Land use, the objectives from development plan and NIFTI	Regarding NIFTI, this option would maintain the existing scenario, therefore, scores higher. Regarding land use, all options are equal. The option would not align with Westmeath County Development Plan 2021-2027 as much as the other options.	Some advantages	Regarding NIFTI, this option would mainly require improvement of existing facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some advantages	Regarding NIFTI, this option would require improvement of existing facilities and implementation of new facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Some disadvantages	Regarding NIFTI, this option would require installation of new facilities. Regarding land use, all options are equal. The option aligns with Westmeath County Development Plan 2021-2027.	Significant disadvantages
		Impact on green areas	No impact on green areas.	Significant advantages	Some infringement on the green space currently present at the junction.	Some disadvantages	Some infringement on the green space currently present at the junction.	Some disadvantages	Major infringement on the green space available at the junction.	Significant disadvantages
Safety Impact	Safety Impact	Segregation between cyclists and vehicles	There is no segregation between cyclists and vehicles at the junction.	Significant disadvantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages	Cyclists would be accommodated at the cycle track, segregated from vehicles.	Significant advantages
		Segregation between cyclists and pedestrians	The western and southern arms of the junction have shared active travel paths, therefore, users are not fully segregated at the junction.	Significant disadvantages	Pedestrians and cyclists would share the shared active travel path, however, the width would be increased at the junction to safety accommodate all users.	Some disadvantages	On the southern side, the shared path would be retained. On the other arms, cyclists and pedestrians would be segregated.	Significant advantages	On the southern side, the shared path would be retained. On the other arms, cyclists and pedestrians would be segregated.	Significant advantages
		Safety for all users regarding traffic volumes and speeds along route	Mixed street is not appropriate for a 50km/h road with over 400PCU/peak hour.	Significant disadvantages	The proposed cross section is appropriate regarding traffic volumes and speeds.	Significant advantages	This option would improve safety for active travel users through the protection measures.	Significant advantages	This option would improve safety for active travel users through the protection measures.	Significant advantages
	Traffic	Impact on traffic capacity due to the proposals	No changes proposed.	Significant advantages	Traffic capacity is likely to be impacted in this option due to the removal of entry width at the roundabout arms and the general additional geometric constraints.	Some disadvantages	Traffic capacity is likely to be impacted in this option due to the removal of entry width at the roundabout arms and the general additional geometric constraints.	Some disadvantages	Traffic capacity is likely to be impacted in this option due to the implementation of traffic signals including pedestrian and cyclist stages.	Significant disadvantages
Local Environmental Impact	Air Quality	Air Quality Impact	No changes to existing air quality.	Some disadvantages	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.	Some advantages	This option may further 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.	Significant advantages	This option may further 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.	Significant advantages
	Noise and Vibration	Potential Sensitive receptors including residential, commercial, education, healthcare properties	No changes to existing noise and vibration levels.	Some disadvantages	This option may encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Some advantages	This option may further encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Significant advantages	This option may further encourage more cycling / walking and less use of personal vehicles and therefore result in lower noise and vibration to local sensitive receptors during operation. Construction impacts will be short term and not significant as mitigation measures will be implemented.	Significant advantages
	Soils and geology	Bedrock and overburden. Alluvium Soils, Karst Features, Landslide susceptibility, Contaminated lands, Geological heritage areas	No changes / impacts to soils and geology.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral	There are no karst features, geological heritage areas or identified landslide issues within the vicinity.	Neutral
	Biodiversity	Impact on Biodiversity along scheme extents	No impact on any ecological features of importance.	Neutral	No impact on any ecological features of importance.	Neutral	No impact on any ecological features of importance.	Neutral	No impact on any ecological features of importance.	Neutral
	Water Resources	Groundwater Quality (Public and Private Wells, GWDTEs) Groundwater resources / Levels (vulnerable aquifers) Surface water quality and flows	No changes / impacts to water resources.	Neutral	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.	Neutral	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.	Neutral	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.	Neutral
	Landscape and Visual Quality	Landscape and visual assessment	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral	No changes / impacts to landscape & visual receptors.	Neutral
	Cultural and Heritage	Impact at national monuments, NIAH features and Architecture Conservation Areas (ACA)	No change / impacts to cultural heritage.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral	At this stage of the desktop analysis and according to available relevant resources there are no architectural or archaeological features. A cultural heritage specialist will be required to undertake surveys and input into the design as required.	Neutral

Appendix E. Emerging Preferred Option Drawings

Appendix F. Feasibility Working Costs

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	777.621	Road Rating:		
Total Mainline Width (m):	12.4	Land take Required:	☐ Check Box If Yes	
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	12	Months
Other Relevant Project Information:	Two-way cycle track south			

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 38,406.31
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 209,920.04
1.5	Drainage	€ 137,621.99
1.6	Pavements	€ 121,308.88
1.7	Kerbing & Footways	€ 320,479.94
1.8	Traffic Signs & Road Marking	€ 38,406.31
1.9	Road Lighting	€ 94,014.38
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 7,681.26
1.14	Other Project Costs	€ 656,152.05
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 115,218.94
	Sub-Total A - Construction Costs	**€ 1,739,210.11**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 52,777.81
1.16.1	Scope & Purpose				
1.16.2	Concept, Development & Option Selection	1		€ 28,874.15	€ 28,874.15
1.16.3	Preliminary Design	1		€ 17,470.47	€ 17,470.47
1.16.4	Statutory Processes	1		€ 6,433.19	€ 6,433.19
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 1,739,210.11	€ 173,921.01
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 226,698.82**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 1,965,908.94	€ 129,749.99
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 2,095,658.93	€ 804,733.03
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 2,095,658.93	€ 20,956.59
			Total Adjustments	**€ 955,439.61**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 2,921,348.54**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 2,868,570.73	**€ 387,257.05**
VAT *on Preparation and Administration Costs*	23%	%	€ 52,777.81	**€ 12,138.90**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 3,320,744.49**

Mainline Length	0.7507	Km	**Rate Per Km (Excluding VAT)**	**€ 3,891,499.32**
			Rate Per Km (Including VAT)	**€ 4,423,530.69**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 28,874.15	23.00	€ 6,641.05	€ 35,515.20
	1.3	Preliminary Design	1	Item	€ 17,470.47	23.00	€ 4,018.21	€ 21,488.68
	1.4	Statutory Processes	1	Item	€ 6,433.19	23.00	€ 1,479.63	€ 7,912.83
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 173,921.01	13.50	€ 23,479.34	€ 197,400.35
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 1,739,210.11	13.50	€ 234,793.37	€ 1,974,003.48
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 129,749.99	13.50	€ 17,516.25	€ 147,266.24
	1.12	Contingency Allowance	1	Item	€ 804,733.03	13.50	€ 108,638.96	€ 913,371.99
	1.13	Allowance for Arts (%)	1	Item	€ 20,956.59	13.50	€ 2,829.14	€ 23,785.73
				Sub-Total (Ex.VAT)	**€ 2,921,348.54**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 3,320,744.49**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1 Construction Costs

1.1 - Site Clearance: Assumed 5% of construction cost.
1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.
1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.
1.8 - Signs and lines: Assumed 5% of construction cost.
1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.
1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and CDM roundabouts) + utiilities cost.*
1.15 - Preliminaries: Assumed 15% of construction cost.
**Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*

2 Delivery and Construction Programme

At this point in the scheme, it is assumed that the project will be built from the year 2024 after all the planned stages of study and approval of the project have been carried out.

3 Preparation and Administration Costs

Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items. Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items

4 Traffic Management Related Costs

1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.

5 Land and Property Costs

6 Other Relevant Information

Revision	Title	Prepared By	Checked By	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

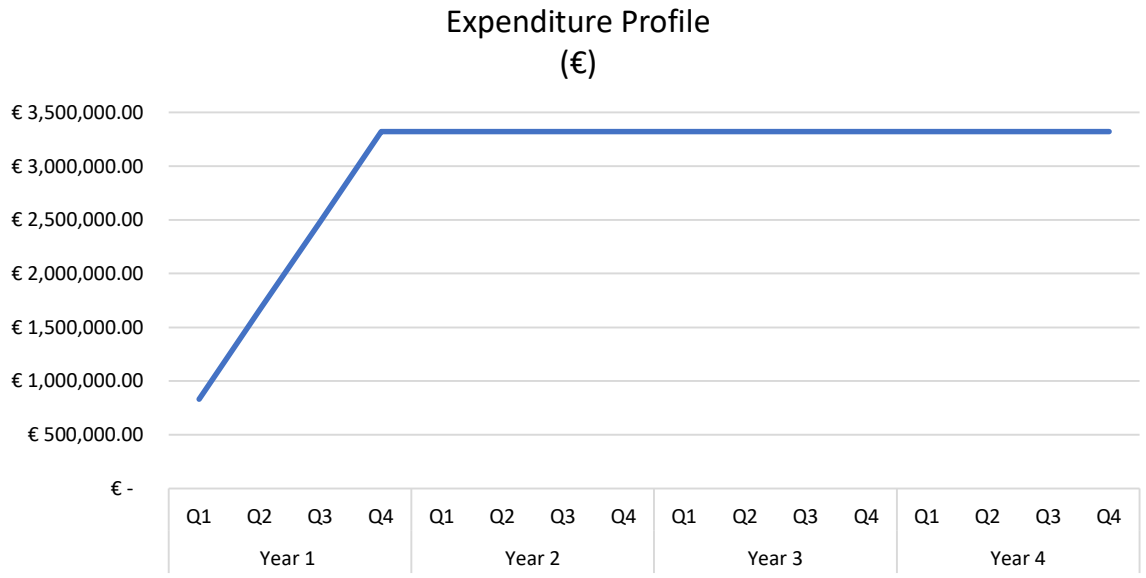
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
	2
	1
	3
	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 3,320,744.49	
Anticipated Programme Duration:	12	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 830,186.12	€ 830,186.12
	Q2	€ 830,186.12	€ 1,660,372.24
	Q3	€ 830,186.12	€ 2,490,558.37
	Q4	€ 830,186.12	€ 3,320,744.49
Year 2	Q1		€ 3,320,744.49
	Q2		€ 3,320,744.49
	Q3		€ 3,320,744.49
	Q4		€ 3,320,744.49
Year 3	Q1		€ 3,320,744.49
	Q2		€ 3,320,744.49
	Q3		€ 3,320,744.49
	Q4		€ 3,320,744.49
Year 4	Q1		€ 3,320,744.49
	Q2		€ 3,320,744.49
	Q3		€ 3,320,744.49
	Q4		€ 3,320,744.49



Revision	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance €	Variance %
1	Construction Costs	€ 1,083,058.06	€ 1,739,210.11	€ 656,152.05	61%
2	Preparation and Administration Costs	€ 52,777.81	€ 52,777.81	€ -	0%
3	Traffic Management Related Costs	€ 108,305.81	€ 173,921.01	€ 65,615.21	61%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 82,113.35	€ 129,749.99	€ 47,636.64	58%
6	Contingency	€ 509,281.93	€ 804,733.03	€ 295,451.10	58%
7	Per Cent for Art Scheme	€ 13,262.55	€ 20,956.59	€ 7,694.04	58%
8	Total Costs (Cumulative)	€ 1,848,799.51	€ 2,921,348.54	€ 1,072,549.03	58%
9	Add VAT @ 13.5%	€ 242,462.93	€ 387,257.05	€ 144,794.12	60%
10	Add VAT @ 23%	€ 12,138.90	€ 12,138.90	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 2,103,401.34**	**€ 3,320,744.49**	**€ 1,217,343.15**	58%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance Months	Variance %
1	Anticipated Programme Duration	4	12	8	200%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
0	Draft	TC	SW	29/04/2024

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 02		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Road Rating:		
Total Mainline Width (m):	14.3	Land take Required:	☐ Check Box If Yes	
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	6	Months
Other Relevant Project Information:	Two-way cycle on the south RB			

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 11,355.56
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 22,711.13
1.5	Drainage	€ 40,073.08
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 179,434.20
1.8	Traffic Signs & Road Marking	€ 11,355.56
1.9	Road Lighting	€ 7,604.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,271.11
1.14	Other Project Costs	€ 701,204.70
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 34,066.69
	Sub-Total A - Construction Costs	**€ 1,010,076.04**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 1,010,076.04	€ 101,007.60
1.18	Land and Property Costs				
	Sub-Total B - Add-On Costs				**€ 126,812.11**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 1,136,888.15	€ 75,034.62
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 1,211,922.77	€ 465,378.34
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 1,211,922.77	€ 12,119.23
			Total Adjustments	**€ 552,532.19**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 1,689,420.34**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 1,663,615.83	**€ 224,588.14**
VAT *on Preparation and Administration Costs*	23%	%	€ 25,804.50	**€ 5,935.04**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 1,919,943.51**

Mainline Length	0.3802	Km	**Rate Per Km (Excluding VAT)**	**€ 4,443,504.31**
			Rate Per Km (Including VAT)	**€ 5,049,825.12**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
		Daragh Scanlan		02/02/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 02		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€ 17,364.35
	1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€ 10,506.40
	1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€ 3,868.80
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 101,007.60	13.50	€ 13,636.03	€ 114,643.63
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 1,010,076.04	13.50	€ 136,360.27	€ 1,146,436.31
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 75,034.62	13.50	€ 10,129.67	€ 85,164.29
	1.12	Contingency Allowance	1	Item	€ 465,378.34	13.50	€ 62,826.08	€ 528,204.42
	1.13	Allowance for Arts (%)	1	Item	€ 12,119.23	13.50	€ 1,636.10	€ 13,755.32
				Sub-Total (Ex.VAT)	**€ 1,689,420.34**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 1,919,943.51**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 02
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1	**Construction Costs**
	1.1 - Site Clearance: Assumed 5% of construction cost. *1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.* *1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.* *1.8 - Signs and lines: Assumed 5% of construction cost.* *1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.* *1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and NCM roundabouts) + utiilities cost*.* *1.15 - Preliminaries: Assumed 15% of construction cost.* **Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*
2	**Delivery and Construction Programme**
	Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is *the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items.* *Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items*
3	**Preparation and Administration Costs**
	*Scheme has been designed in Q3 of 2022, the lead design team is ******** Ltd.*
4	**Traffic Management Related Costs**
	1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.
5	**Land and Property Costs**
6	**Other Relevant Information**

Revision	Title	Prepared By		Checked By		Issue Date	
		Daragh Scanlan					

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

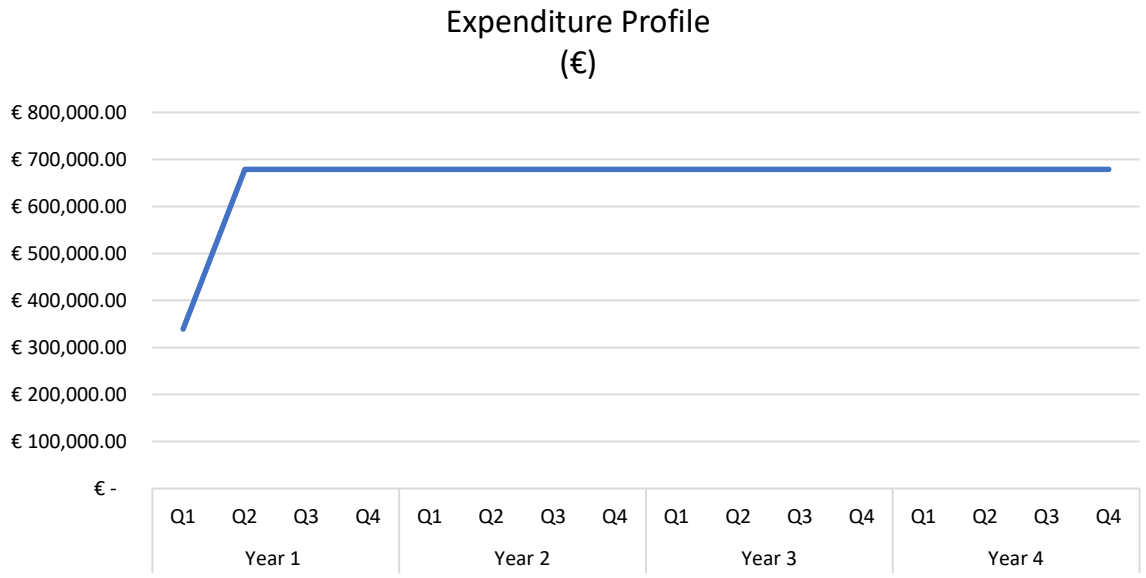
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
Public opposition (disturbance)	2
Archaeology - Project is near old monastery	1
Unknown services	3
Irish Water - additional scope	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 02	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 1,919,943.51	
Anticipated Programme Duration:	6	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 339,307.71	€ 339,307.71
	Q2	€ 339,307.71	€ 678,615.42
	Q3		€ 678,615.42
	Q4		€ 678,615.42
Year 2	Q1		€ 678,615.42
	Q2		€ 678,615.42
	Q3		€ 678,615.42
	Q4		€ 678,615.42
Year 3	Q1		€ 678,615.42
	Q2		€ 678,615.42
	Q3		€ 678,615.42
	Q4		€ 678,615.42
Year 4	Q1		€ 678,615.42
	Q2		€ 678,615.42
	Q3		€ 678,615.42
	Q4		€ 678,615.42



Revision	Title	Prepared by	Checked by	Issue Date
		Daragh Scanlan		

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 02
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance	
				€	%
1	Construction Costs	€ 308,871.34	€ 1,010,076.04	€ 701,204.70	227%
2	Preparation and Administration Costs	€ 25,804.50	€ 25,804.50	€ -	0%
3	Traffic Management Related Costs	€ 30,887.13	€ 101,007.60	€ 70,120.47	227%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 24,127.16	€ 75,034.62	€ 50,907.46	211%
6	Contingency	€ 149,641.01	€ 465,378.34	€ 315,737.33	211%
7	Per Cent for Art Scheme	€ 3,896.90	€ 12,119.23	€ 8,222.33	211%
8	Total Costs (Cumulative)	€ 543,228.05	€ 1,689,420.34	€ 1,146,192.29	211%
9	Add VAT @ 13.5%	€ 69,852.18	€ 224,588.14	€ 154,735.96	222%
10	Add VAT @ 23%	€ 5,935.04	€ 5,935.04	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 619,015.26**	**€ 1,919,943.51**	**€ 1,300,928.25**	210%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance	
				Months	%
1	Anticipated Programme Duration	4	6	2	50%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
		Daragh Scanlan		

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 03		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	417.6	Road Rating:		
Total Mainline Width (m):	14.5	Land take Required:	☐ Check Box If Yes	
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	12	Months
Other Relevant Project Information:	Two-way cycle track south RB			

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 12,507.89
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 25,015.78
1.5	Drainage	€ 26,141.76
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 215,664.00
1.8	Traffic Signs & Road Marking	€ 12,507.89
1.9	Road Lighting	€ 8,352.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,501.58
1.14	Other Project Costs	€ -
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 37,523.66
	Sub-Total A - Construction Costs	**€ 340,214.55**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 28,342.87
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 15,506.07	€ 15,506.07
1.16.3	Preliminary Design	1		€ 9,382.04	€ 9,382.04
1.16.4	Statutory Processes	1		€ 3,454.77	€ 3,454.77
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 340,214.55	€ 34,021.46
1.18	Land and Property Costs		m2		€ -
				Sub-Total B - Add-On Costs	**€ 62,364.33**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 402,578.88	€ 26,570.21
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 429,149.09	€ 164,793.25
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 429,149.09	€ 4,291.49
			Total Adjustments	**€ 195,654.95**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 598,233.83**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 569,890.96	**€ 76,935.28**
VAT *on Preparation and Administration Costs*	23%	%	€ 28,342.87	**€ 6,518.86**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 681,687.97**

Mainline Length	0.4176	Km	**Rate Per Km (Excluding VAT)**	**€ 1,432,552.28**
			Rate Per Km (Including VAT)	**€ 1,632,394.57**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 03		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 15,506.07	23.00	€ 3,566.40	€ 19,072.46
	1.3	Preliminary Design	1	Item	€ 9,382.04	23.00	€ 2,157.87	€ 11,539.90
	1.4	Statutory Processes	1	Item	€ 3,454.77	23.00	€ 794.60	€ 4,249.37
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 34,021.46	13.50	€ 4,592.90	€ 38,614.35
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 340,214.55	13.50	€ 45,928.96	€ 386,143.52
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 26,570.21	13.50	€ 3,586.98	€ 30,157.18
	1.12	Contingency Allowance	1	Item	€ 164,793.25	13.50	€ 22,247.09	€ 187,040.34
	1.13	Allowance for Arts (%)	1	Item	€ 4,291.49	13.50	€ 579.35	€ 4,870.84
				Sub-Total (Ex.VAT)	**€ 598,233.83**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 681,687.97**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 03
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1	**Construction Costs**
	1.1 - Site Clearance: Assumed 5% of construction cost. *1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.* *1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.* *1.8 - Signs and lines: Assumed 5% of construction cost.* *1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.* *1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and CDM roundabouts) + utiilities cost*.* *1.15 - Preliminaries: Assumed 15% of construction cost.* **Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*
2	**Delivery and Construction Programme**
	At this point in the scheme, it is assumed that the project will be built from the year 2024 after all the planned stages of study and approval of the project have been carried out.
3	**Preparation and Administration Costs**
	Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items. Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items
4	**Traffic Management Related Costs**
	1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.
5	**Land and Property Costs**
6	**Other Relevant Information**

Revision	Title	Prepared By	Checked By	Issue Date
0	Draft	TC	SW	29/03/2024
0	Draft	TC	SW	29/04/2024

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

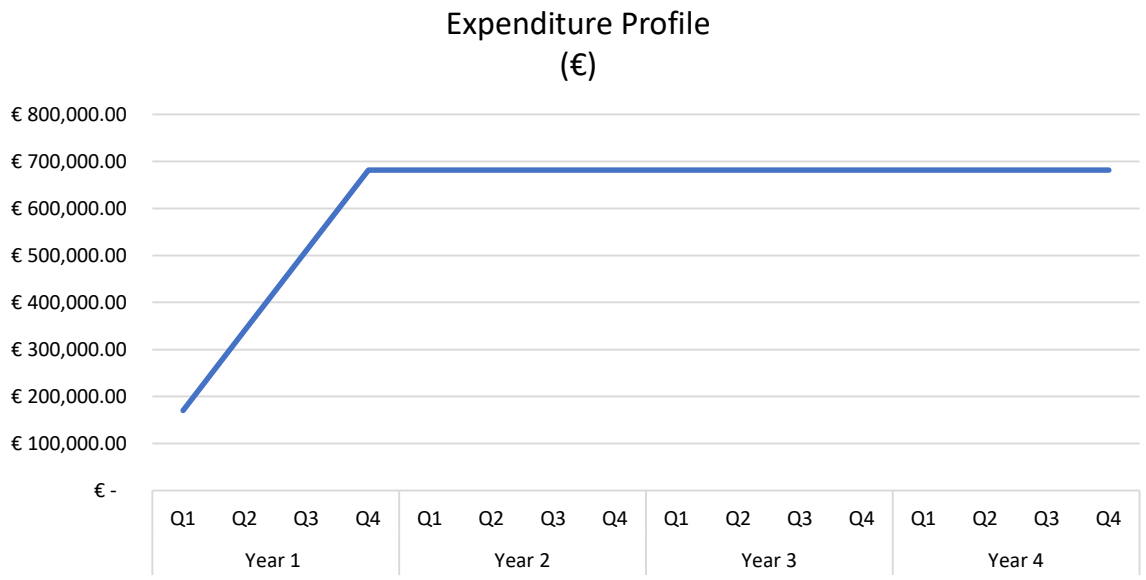
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
	2
	1
	3
	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 03	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 681,687.97	
Anticipated Programme Duration:	12	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 170,421.99	€ 170,421.99
	Q2	€ 170,421.99	€ 340,843.99
	Q3	€ 170,421.99	€ 511,265.98
	Q4	€ 170,421.99	€ 681,687.97
Year 2	Q1		€ 681,687.97
	Q2		€ 681,687.97
	Q3		€ 681,687.97
	Q4		€ 681,687.97
Year 3	Q1		€ 681,687.97
	Q2		€ 681,687.97
	Q3		€ 681,687.97
	Q4		€ 681,687.97
Year 4	Q1		€ 681,687.97
	Q2		€ 681,687.97
	Q3		€ 681,687.97
	Q4		€ 681,687.97



Revision	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
0	Draft	TC	SW	29/04/2024

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 03
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance	
				€	%
1	Construction Costs	€ 340,214.55	€ 340,214.55	€ -	0%
2	Preparation and Administration Costs	€ 28,342.87	€ 28,342.87	€ -	0%
3	Traffic Management Related Costs	€ 34,021.46	€ 34,021.46	€ -	0%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 26,570.21	€ 26,570.21	€ -	0%
6	Contingency	€ 164,793.25	€ 164,793.25	€ -	0%
7	Per Cent for Art Scheme	€ 4,291.49	€ 4,291.49	€ -	0%
8	Total Costs (Cumulative)	€ 598,233.83	€ 598,233.83	€ -	0%
9	Add VAT @ 13.5%	€ 76,935.28	€ 76,935.28	€ -	0%
10	Add VAT @ 23%	€ 6,518.86	€ 6,518.86	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 681,687.97**	**€ 681,687.97**	**€ -**	0%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance	
				Months	%
1	Anticipated Programme Duration	4	12	8	200%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 04		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Road Rating:		
Total Mainline Width (m):	12.4	Land take Required:	☐ Check Box If Yes	
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	12	Months
Other Relevant Project Information:	Two-way cycle track south			

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 10,574.40
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 21,148.81
1.5	Drainage	€ 84,050.05
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 118,238.00
1.8	Traffic Signs & Road Marking	€ 10,574.40
1.9	Road Lighting	€ 9,200.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,114.88
1.14	Other Project Costs	€ 206,522.20
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 31,723.21
	Sub-Total A - Construction Costs	**€ 494,145.95**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 494,145.95	€ 49,414.59
1.18	Land and Property Costs		m2		
				Sub-Total B - Add-On Costs	**€ 80,166.88**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 574,312.83	€ 37,904.65
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 612,217.48	€ 235,091.51
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 612,217.48	€ 6,122.17
			Total Adjustments	**€ 279,118.33**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 853,431.17**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 822,678.88	**€ 111,061.65**
VAT *on Preparation and Administration Costs*	23%	%	€ 30,752.29	**€ 7,073.03**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 971,565.84**

Mainline Length	**0.4531**	**Km**	**Rate Per Km (Excluding VAT)**	**€ 1,883,538.22**
			Rate Per Km (Including VAT)	**€ 2,144,263.61**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 04		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
	1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
	1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 49,414.59	13.50	€ 6,670.97	€ 56,085.57
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 494,145.95	13.50	€ 66,709.70	€ 560,855.65
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 37,904.65	13.50	€ 5,117.13	€ 43,021.77
	1.12	Contingency Allowance	1	Item	€ 235,091.51	13.50	€ 31,737.35	€ 266,828.87
	1.13	Allowance for Arts (%)	1	Item	€ 6,122.17	13.50	€ 826.49	€ 6,948.67
				Sub-Total (Ex.VAT)	**€ 853,431.17**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 971,565.84**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 04
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1	**Construction Costs**
	1.1 - Site Clearance: Assumed 5% of construction cost. *1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.* *1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.* *1.8 - Signs and lines: Assumed 5% of construction cost.* *1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.* *1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and CDM roundabouts) + utiilities cost*.* *1.15 - Preliminaries: Assumed 15% of construction cost.* **Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*
2	**Delivery and Construction Programme**
	At this point in the scheme, it is assumed that the project will be built from the year 2024 after all the planned stages of study and approval of the project have been carried out.
3	**Preparation and Administration Costs**
	Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items. Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items
4	**Traffic Management Related Costs**
	1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.
5	**Land and Property Costs**
6	**Other Relevant Information**

Revision	Title	Prepared By	Checked By	Issue Date
0	Draft	TC	SW	29/03/2024
0	Draft	TC	SW	29/04/2024

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

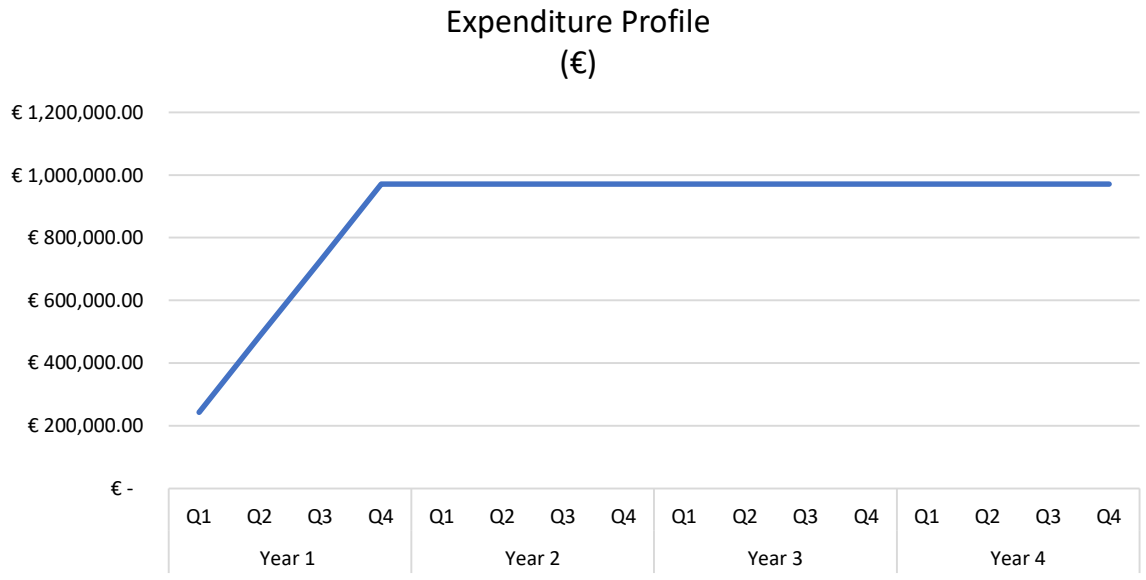
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
	2
	1
	3
	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 04	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 971,565.84	
Anticipated Programme Duration:	12	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 242,891.46	€ 242,891.46
	Q2	€ 242,891.46	€ 485,782.92
	Q3	€ 242,891.46	€ 728,674.38
	Q4	€ 242,891.46	€ 971,565.84
Year 2	Q1		€ 971,565.84
	Q2		€ 971,565.84
	Q3		€ 971,565.84
	Q4		€ 971,565.84
Year 3	Q1		€ 971,565.84
	Q2		€ 971,565.84
	Q3		€ 971,565.84
	Q4		€ 971,565.84
Year 4	Q1		€ 971,565.84
	Q2		€ 971,565.84
	Q3		€ 971,565.84
	Q4		€ 971,565.84



Revision	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 04
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance	
				€	%
1	Construction Costs	€ 287,623.75	€ 494,145.95	€ 206,522.20	72%
2	Preparation and Administration Costs	€ 30,752.29	€ 30,752.29	€ -	0%
3	Traffic Management Related Costs	€ 28,762.37	€ 49,414.59	€ 20,652.22	72%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 22,911.14	€ 37,904.65	€ 14,993.51	65%
6	Contingency	€ 142,099.03	€ 235,091.51	€ 92,992.49	65%
7	Per Cent for Art Scheme	€ 3,700.50	€ 6,122.17	€ 2,421.68	65%
8	Total Costs (Cumulative)	€ 515,849.07	€ 853,431.17	€ 337,582.10	65%
9	Add VAT @ 13.5%	€ 65,488.07	€ 111,061.65	€ 45,573.58	70%
10	Add VAT @ 23%	€ 7,073.03	€ 7,073.03	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 588,410.16**	**€ 971,565.84**	**€ 383,155.68**	65%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance	
				Months	%
1	Anticipated Programme Duration	4	12	8	200%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 05		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Single	Location:	Ardmore Road		
Total Mainline Length (m):	371.9	Road Rating:			
Total Mainline Width (m):	10.3	Land take Required:	☐ Check Box If Yes		
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	12	Months	
Other Relevant Project Information:	Two way cycle track to the east				

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 17,016.37
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 98,399.66
1.5	Drainage	€ 39,942.06
1.6	Pavements	€ 53,553.60
1.7	Kerbing & Footways	€ 154,518.50
1.8	Traffic Signs & Road Marking	€ 17,016.37
1.9	Road Lighting	€ 44,962.71
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 3,403.27
1.14	Other Project Costs	€ -
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 51,049.11
	Sub-Total A - Construction Costs	**€ 479,861.66**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,241.18
1.16.1	Scope & Purpose				
1.16.2	Concept, Development & Option Selection	1		€ 13,809.16	€ 13,809.16
1.16.3	Preliminary Design	1		€ 8,355.31	€ 8,355.31
1.16.4	Statutory Processes	1		€ 3,076.70	€ 3,076.70
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 479,861.66	€ 47,986.17
1.18	Land and Property Costs				
	Sub-Total B - Add-On Costs				**€ 73,227.34**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 553,089.01	€ 36,503.87
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 589,592.88	€ 226,403.67
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 589,592.88	€ 5,895.93
			Total Adjustments	**€ 268,803.47**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 821,892.47**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 796,651.30	**€ 107,547.93**
VAT *on Preparation and Administration Costs*	23%	%	€ 25,241.18	**€ 5,805.47**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 935,245.87**

Mainline Length	0.3719	Km	**Rate Per Km (Excluding VAT)**	**€ 2,209,982.45**
			Rate Per Km (Including VAT)	**€ 2,514,777.82**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 05		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	27/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 13,809.16	23.00	€ 3,176.11	€ 16,985.27
	1.3	Preliminary Design	1	Item	€ 8,355.31	23.00	€ 1,921.72	€ 10,277.04
	1.4	Statutory Processes	1	Item	€ 3,076.70	23.00	€ 707.64	€ 3,784.34
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 47,986.17	13.50	€ 6,478.13	€ 54,464.30
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 479,861.66	13.50	€ 64,781.32	€ 544,642.99
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 36,503.87	13.50	€ 4,928.02	€ 41,431.90
	1.12	Contingency Allowance	1	Item	€ 226,403.67	13.50	€ 30,564.49	€ 256,968.16
	1.13	Allowance for Arts (%)	1	Item	€ 5,895.93	13.50	€ 795.95	€ 6,691.88
				Sub-Total (Ex.VAT)	**€ 821,892.47**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 935,245.87**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 05
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1	**Construction Costs**
	1.1 - Site Clearance: Assumed 5% of construction cost. *1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.* *1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.* *1.8 - Signs and lines: Assumed 5% of construction cost.* *1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.* *1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and CDM roundabouts) + utiilities cost*.* *1.15 - Preliminaries: Assumed 15% of construction cost.* **Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*
2	**Delivery and Construction Programme**
	At this point in the scheme, it is assumed that the project will be built from the year 2024 after all the planned stages of study and approval of the project have been carried out.
3	**Preparation and Administration Costs**
	Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items. Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items
4	**Traffic Management Related Costs**
	1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.
5	**Land and Property Costs**
6	**Other Relevant Information**

Revision	Title	Prepared By	Checked By	Issue Date
0	Draft	TC	SW	29/03/2024
0	Draft	TC	SW	29/04/2024

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

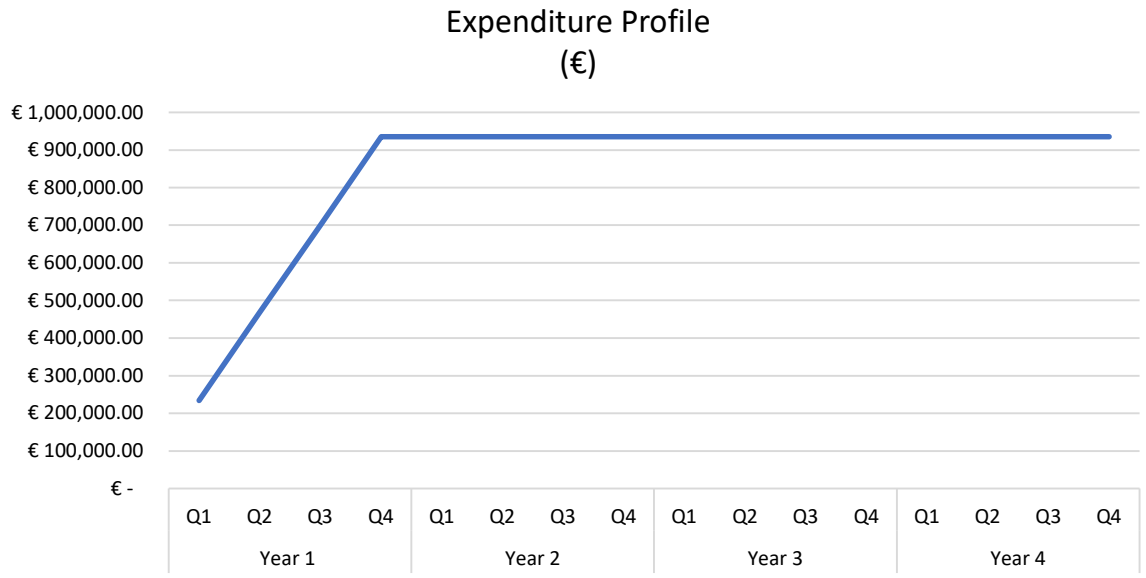
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
	2
	1
	3
	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 05	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 935,245.87	
Anticipated Programme Duration:	12	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 233,811.47	€ 233,811.47
	Q2	€ 233,811.47	€ 467,622.94
	Q3	€ 233,811.47	€ 701,434.40
	Q4	€ 233,811.47	€ 935,245.87
Year 2	Q1		€ 935,245.87
	Q2		€ 935,245.87
	Q3		€ 935,245.87
	Q4		€ 935,245.87
Year 3	Q1		€ 935,245.87
	Q2		€ 935,245.87
	Q3		€ 935,245.87
	Q4		€ 935,245.87
Year 4	Q1		€ 935,245.87
	Q2		€ 935,245.87
	Q3		€ 935,245.87
	Q4		€ 935,245.87



Revision	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 05
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance	
				€	%
1	Construction Costs	€ 479,861.66	€ 479,861.66	€ -	0%
2	Preparation and Administration Costs	€ 25,241.18	€ 25,241.18	€ -	0%
3	Traffic Management Related Costs	€ 47,986.17	€ 47,986.17	€ -	0%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 36,503.87	€ 36,503.87	€ -	0%
6	Contingency	€ 226,403.67	€ 226,403.67	€ -	0%
7	Per Cent for Art Scheme	€ 5,895.93	€ 5,895.93	€ -	0%
8	Total Costs (Cumulative)	€ 821,892.47	€ 821,892.47	€ -	0%
9	Add VAT @ 13.5%	€ 107,547.93	€ 107,547.93	€ -	0%
10	Add VAT @ 23%	€ 5,805.47	€ 5,805.47	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 935,245.87**	**€ 935,245.87**	**€ -**	0%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance	
				Months	%
1	Anticipated Programme Duration	4	12	8	200%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	29/03/2024
1	Draft	TC	SW	29/04/2024

Feasibility Working Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 06		
Project / Contract Code:		Prepared By (Individual/Organisation):	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	26/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Project Information

Mainline Cross-Section Type:	Footpath	Location:	Delvin Road		
Total Mainline Length (m):	133.8	Road Rating:			
Total Mainline Width (m):	11.5	Land take Required:	☐ Check Box If Yes		
Potential Construction Works Start Date:	Q4 2024	Anticipated Construction Works Duration:	12	Months	
Other Relevant Project Information:	Shared active travel path on the west side				

1 Construction Costs

Ref	Description	Total
1.1	Site Clearance	€ 4,952.66
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Earthworks	€ 33,069.72
1.5	Drainage	€ 16,457.28
1.6	Pavements	€ 20,872.64
1.7	Kerbing & Footways	€ 40,835.45
1.8	Traffic Signs & Road Marking	€ 4,952.66
1.9	Road Lighting	€ 2,675.98
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 990.53
1.14	Other Project Costs	€ -
1.15	Preliminaries Including Site Compounds (excluding traffic management)	€ 14,857.97
	Sub-Total A - Construction Costs	**€ 139,664.88**

Add-On Costs

Ref	Description	Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 9,081.05
1.16.1	Scope & Purpose				
1.16.2	Concept, Development & Option Selection	1		€ 4,968.14	€ 4,968.14
1.16.3	Preliminary Design	1		€ 3,006.00	€ 3,006.00
1.16.4	Statutory Processes	1		€ 1,106.91	€ 1,106.91
1.16.5	Detailed Design & Procurement				
1.16.6	Construction & Implementation				
1.16.7	Close Out & Review				
1.17	Traffic Management Related Costs	10%	%	€ 139,664.88	€ 13,966.49
1.18	Land and Property Costs		m2		
				Sub-Total B - Add-On Costs	**€ 23,047.54**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6%	%	€ 162,712.42	€ 10,739.02
Add Contingency *(001_B123_CC_CMG)*	38.4%	%	€ 173,451.44	€ 66,605.35
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1%	%	€ 173,451.44	€ 1,734.51
			Total Adjustments	**€ 79,078.89**

Total Feasibility Working Cost Estimate Exclusive of VAT				**€ 241,791.31**
VAT *on Construction Costs, TM and Associated Adjustment Costs*	13.5%	%	€ 232,710.26	**€ 31,415.88**
VAT *on Preparation and Administration Costs*	23%	%	€ 9,081.05	**€ 2,088.64**
VAT *on Land and Property* https://www.revenue.ie/en/vat/vat-on-property-and-construction/vat-and-the-supply-of-property/index.aspx		Item		€ -
Total Feasibility Working Cost Estimate Inclusive of VAT				**€ 275,295.84**

Mainline Length	**0.3673**	**Km**	**Rate Per Km (Excluding VAT)**	**€ 658,293.79**
			Rate Per Km (Including VAT)	**€ 749,512.22**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	TC	SW	27/06/2024

NOTE:
Costs are considered to include all allowances for overheads and profits.
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.

Project Control Document Summary

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 06		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRéalis
Approving Authority:	NTA	Date Estimate Prepared:	26/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
	1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
	1.2	Concept, Development & Option Selection	1	Item	€ 4,968.14	23.00	€ 1,142.67	€ 6,110.82
	1.3	Preliminary Design	1	Item	€ 3,006.00	23.00	€ 691.38	€ 3,697.38
	1.4	Statutory Processes	1	Item	€ 1,106.91	23.00	€ 254.59	€ 1,361.50
	1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
	1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
	1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
	1.8	Traffic Management	1	Item	€ 13,966.49	13.50	€ 1,885.48	€ 15,851.96
	1.9	Land & Property Costs	1	Item	€ -			€ -
	1.1	Construction Costs (Main Contractor)	1	Item	€ 139,664.88	13.50	€ 18,854.76	€ 158,519.64
	1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 10,739.02	13.50	€ 1,449.77	€ 12,188.79
	1.12	Contingency Allowance	1	Item	€ 66,605.35	13.50	€ 8,991.72	€ 75,597.08
	1.13	Allowance for Arts (%)	1	Item	€ 1,734.51	13.50	€ 234.16	€ 1,968.67
				Sub-Total (Ex.VAT)	**€ 241,791.31**			
							Add VAT on Land (If Applicable)	-
							Total Feasibility Working Cost Estimate (Including VAT)	**€ 275,295.84**

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

Estimate Assumptions, Exclusions and Inclusions

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 06
Project / Contract Code:	0
Approving Authority:	NTA
Sponsoring Agency:	Westmeath County Council
Prepared By (Individual/Organisation)	AtkinsRéalis

1	**Construction Costs**
	1.1 - Site Clearance: Assumed 5% of construction cost. *1.6 - Pavement: Assumed the construction cost of the Carriageway and cycletrack, excluding kerbs.* *1.7 - Kerbing & Footways: Assumed the construction cost of the footpath, kerbs and shared path.* *1.8 - Signs and lines: Assumed 5% of construction cost.* *1.13 - Landscaping & Ecology: Assumed 1% of construction cost + construction cost of the verge.* *1.14 - Other Project Cost: Assumed the construction cost of the junctions (protected signalised junctions and CDM roundabouts) + utiilities cost*.* *1.15 - Preliminaries: Assumed 15% of construction cost.* **Utilities Cost: Assumed 15% or 10% of construction cost for traditional and rapid buld construction respectively.*
2	**Delivery and Construction Programme**
	At this point in the scheme, it is assumed that the project will be built from the year 2024 after all the planned stages of study and approval of the project have been carried out.
3	**Preparation and Administration Costs**
	Due to the original breakdown of tender price requested by WCC, the amount entered in the Scope & Purpose item is the combined rates of the Scope & Purpose (1.16.1) and Concept , Development & Option Select (1.16.2) items. Similarly, the amount entered in the Preliminary Design item is the combined rates of the Preliminary Design (1.16.3) and Staturory Processes (1.16.4) items
4	**Traffic Management Related Costs**
	1.17 - Traffic Management Related Cost: Assumed 10% of construction cost.
5	**Land and Property Costs**
6	**Other Relevant Information**

Revision	Title	Prepared By	Checked By	Issue Date
0	Draft	TC	SW	27/06/2024

Project Risk

Risk

Please include details of known key project risks.
(Additional rows to be added as required)

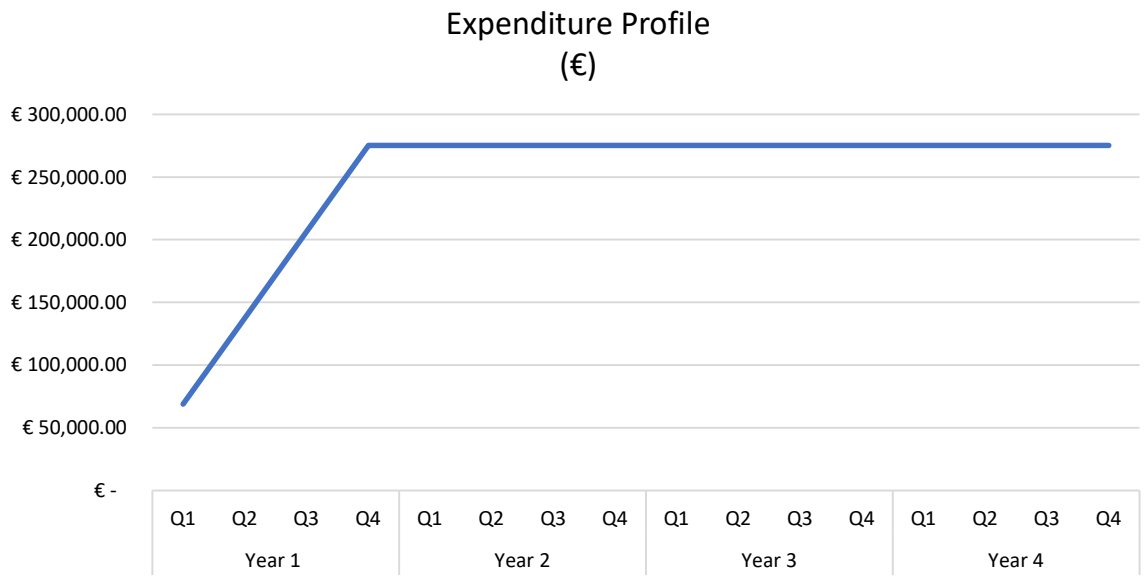
Please rank risks in order of severity with 5 being most severe.

Risk	Rank
	2
	1
	3
	4

Expenditure Profile

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 06	
Project / Contract Code:	0	
Total Feasibility Working Cost Estimate:	€ 275,295.84	
Anticipated Programme Duration:	12	Months

Year	Quarter	Total Quarterly Expenditure (€)	Cumulative Expenditure (€)
Year 1	Q1	€ 68,823.96	€ 68,823.96
	Q2	€ 68,823.96	€ 137,647.92
	Q3	€ 68,823.96	€ 206,471.88
	Q4	€ 68,823.96	€ 275,295.84
Year 2	Q1		€ 275,295.84
	Q2		€ 275,295.84
	Q3		€ 275,295.84
	Q4		€ 275,295.84
Year 3	Q1		€ 275,295.84
	Q2		€ 275,295.84
	Q3		€ 275,295.84
	Q4		€ 275,295.84
Year 4	Q1		€ 275,295.84
	Q2		€ 275,295.84
	Q3		€ 275,295.84
	Q4		€ 275,295.84



Revision	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	27/06/2024

Note:
Years and quarters stated are for illustrative purposes only. Please amend to suit the project duration.

Expenditure Profile must be demonstrated quarterly unless otherwise agreed with NTA.

Estimate Comparison

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 06
Project / Contract Code:	0

Estimate Comparison

Ref	Item	Option Comparison Cost Estimate	Feasibility Working Cost Estimate	Variance €	Variance %
1	Construction Costs	€ 139,664.88	€ 139,664.88	€ -	0%
2	Preparation and Administration Costs	€ 9,081.05	€ 9,081.05	€ -	0%
3	Traffic Management Related Costs	€ 13,966.49	€ 13,966.49	€ -	0%
4	Land and Property Costs	€ -	€ -	€ -	0%
5	Inflation	€ 10,739.02	€ 10,739.02	€ -	0%
6	Contingency	€ 66,605.35	€ 66,605.35	€ -	0%
7	Per Cent for Art Scheme	€ 1,734.51	€ 1,734.51	€ -	0%
8	Total Costs (Cumulative)	€ 241,791.31	€ 241,791.31	€ -	0%
9	Add VAT @ 13.5%	€ 31,415.88	€ 31,415.88	€ -	0%
10	Add VAT @ 23%	€ 2,088.64	€ 2,088.64	€ -	0%
11	Add VAT on Land (If Applicable)	€ -		€ -	0%
12	**Total Costs (Including VAT)**	**€ 275,295.84**	**€ 275,295.84**	**€ -**	0%

Programme Comparison

Ref	Item	Grant Application Cost Estimate	Feasibility Working Cost Estimate	Variance Months	Variance %
1	Anticipated Programme Duration	4	12	8	200%

Commentary on Variances

If costs vary more than 10% or a value advised by NTA from the last cost estimate please provide a commentary in the space below:

Rev	Title	Prepared by	Checked by	Issue Date
0	Draft	TC	SW	27/06/204

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 01				
Project / Contract Code:			Prepared By (Individual / Organisation):		AtkinsRealis
Approving Authority:	NTA		Date Estimate Prepared:		16/02/2024
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:		Q3 2023
Route Option Number / Reference:	2	3	4	5	#REF!
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	
Anticipated Programme Duration (Months):	6	6	6	6	
Location:	Dublin Road	Dublin Road	Dublin Road	Dublin Road	
Total Mainline Length (m):	777.621	777.621	777.621	777.621	
Other Relevant Project Information:	One-way cycle	Two-way cycle north	Two-way cycle south	Mixed Street	
Project Costs					
Option Construction Costs					
	€	€	€	€	€
Site Clearance	€ 41,893.89	€ 38,406.31	€ 38,406.31	€ 10,445.60	
Fencing	€ -	€ -	€ -	€ -	
Road Restraint Systems	€ -	€ -	€ -	€ -	
Drainage & Service Ducts	€ 220,382.77	€ 209,920.04	€ 209,920.04	€ 20,891.19	
Earthworks	€ 136,861.30	€ 137,621.99	€ 137,621.99	€ 34,215.32	
Pavements	€ 121,308.88	€ 121,308.88	€ 121,308.88	€ -	
Kerbing & Footways	€ 390,992.12	€ 320,479.94	€ 320,479.94	€ 158,444.20	
Traffic Signs & Road Marking	€ 41,893.89	€ 38,406.31	€ 38,406.31	€ 10,445.60	
Road Lighting	€ 94,014.38	€ 94,014.38	€ 94,014.38	€ 15,552.42	
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	
Accommodation Works	€ -	€ -	€ -	€ -	
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	
Landscaping & Ecology	€ 8,378.78	€ 7,681.26	€ 7,681.26	€ 2,089.12	
Other Project Costs	€ -	€ -	€ -	€ 700.00	
Preliminaries including Site Compounds (excluding traffic management)	€ 125,681.67	€ 115,218.94	€ 115,218.94	€ 31,336.79	
Sub-Total A - Construction Costs	**€ 1,181,407.66**	**€ 1,083,058.06**	**€ 1,083,058.06**	**€ 284,120.24**	
Option Add-On Costs					
	€	€	€	€	€
Preparation and Administration Costs	€ 52,777.81	€ 52,777.81	€ 52,777.81	€ 52,777.81	
Traffic Management Related Costs	€ 118,140.77	€ 108,305.81	€ 108,305.81	€ 28,412.02	
Land and Property Costs	€ -	€ -	€ -	€ -	
Sub-Total B - Add-On Costs	**€ 170,918.58**	**€ 161,083.62**	**€ 161,083.62**	**€ 81,189.84**	
Total Inflation Allowance	€ 89,253.53	€ 82,113.35	€ 82,113.35	€ 24,110.47	
Total Contingency Allowance	€ 553,566.63	€ 509,281.93	€ 509,281.93	€ 149,537.49	
Per Cent Art Scheme	€ 14,415.80	€ 13,262.55	€ 13,262.55	€ 3,894.21	
Sub-Total - Adjustments	**€ 657,235.96**	**€ 604,657.83**	**€ 604,657.83**	**€ 177,542.16**	
Total Option Comparison Cost Estimate (excluding VAT)	**€ 2,009,562.20**	**€ 1,848,799.51**	**€ 1,848,799.51**	**€ 542,852.24**	
Total Rate Per Km (excluding VAT)	**€ 2,584,243.74**	**€ 2,377,507.18**	**€ 2,377,507.18**	**€ 698,093.60**	

Rev	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project 2 Segment 01
Option 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	One-way Cycle			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	777.621	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	13.5	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	One-way cycle			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 41,893.89
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 220,382.77
1.5	Earthworks	€ 136,861.30
1.6	Pavements	€ 121,308.88
1.7	Kerbing & Footways	€ 390,992.12
1.8	Traffic Signs & Road Markings	€ 41,893.89
1.9	Road Lighting	€ 94,014.38
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 8,378.78
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 125,681.67
	Sub-Total A - Construction Costs	**€ 1,181,407.66**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 52,777.81
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 28,874.15	€ 28,874.15
1.16.3	Preliminary Design	1		€ 17,470.47	€ 17,470.47
1.16.4	Statutory Processes	1		€ 6,433.19	€ 6,433.19
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 1,181,407.66	€ 118,140.77
1.18	Land and Property Costs				€ -
				Sub-Total B - Add-On Costs	**€ 170,918.58**
				Total Project Base Costs (A+B)	**€ 1,352,326.24**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 1,352,326.24	€ 89,253.53
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 1,441,579.77	€ 553,566.63
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 1,441,579.77	€ 14,415.80
		Total Adjustments		**€ 657,235.96**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 2,009,562.20**
Mainline Length	0.777621	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,584,243.74**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 01
Option 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA123	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 28,874.15	23.00	€ 6,641.05	€ 35,515.20
1.3	Preliminary Design	1	Item	€ 17,470.47	23.00	€ 4,018.21	€ 21,488.68
1.4	Statutory Processes	1	Item	€ 6,433.19	23.00	€ 1,479.63	€ 7,912.83
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 118,140.77	13.50	€ 15,949.00	€ 134,089.77
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 1,181,407.66	13.50	€ 159,490.03	€ 1,340,897.70
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 89,253.53	13.50	€ 12,049.23	€ 101,302.76
1.12	Contingency Allowance	1	Item	€ 553,566.63	13.50	€ 74,731.50	€ 628,298.13
1.13	Allowance for Arts (%)	1	Item	€ 14,415.80	13.50	€ 1,946.13	€ 16,361.93
			Sub-Total (Ex.VAT)	**€ 2,009,562.20**			
						Total Option 1 Cost Estimate (Including VAT)	**€ 2,285,866.99**

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

Project 2 Segment 01
Option 3

NOTE: For Band 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.

Route Option Number / Reference:	3			
Route Description:	Two-way cycle track north			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	777.621	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	12.4	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle north			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 38,406.31
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 209,920.04
1.5	Earthworks	€ 137,621.99
1.6	Pavements	€ 121,308.88
1.7	Kerbing & Footways	€ 320,479.94
1.8	Traffic Signs & Road Markings	€ 38,406.31
1.9	Road Lighting	€ 94,014.38
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 7,681.26
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 115,218.94
	Sub-Total A - Construction Costs	**€ 1,083,058.06**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 52,777.81
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 28,874.15	€ 28,874.15
1.16.3	Preliminary Design	1		€ 17,470.47	€ 17,470.47
1.16.4	Statutory Processes	1		€ 6,433.19	€ 6,433.19
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 1,083,058.06	€ 108,305.81
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 161,083.62**
	Total Project Base Costs (A+B)				**€ 1,244,141.68**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 1,244,141.68	€ 82,113.35
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 1,326,255.03	€ 509,281.93
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 1,326,255.03	€ 13,262.55
Total Adjustments				**€ 604,657.83**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 1,848,799.51**

Mainline Length 0.777621 **Km** **Rate Per Km (Excluding VAT)** **€ 2,377,507.18**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 01
Option 3

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA123	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 28,874.15	23.00	€ 6,641.05	€ 35,515.20
1.3	Preliminary Design	1	Item	€ 17,470.47	23.00	€ 4,018.21	€ 21,488.68
1.4	Statutory Processes	1	Item	€ 6,433.19	23.00	€ 1,479.63	€ 7,912.83
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 108,305.81	13.50	€ 14,621.28	€ 122,927.09
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 1,083,058.06	13.50	€ 146,212.84	€ 1,229,270.90
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 82,113.35	13.50	€ 11,085.30	€ 93,198.65
1.12	Contingency Allowance	1	Item	€ 509,281.93	13.50	€ 68,753.06	€ 578,034.99
1.13	Allowance for Arts (%)	1	Item	€ 13,262.55	13.50	€ 1,790.44	€ 15,052.99
			Sub-Total (Ex.VAT)	**€ 1,848,799.51**			
						Total Option 2 Cost Estimate (Including VAT)	**€ 2,103,401.34**

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

Project 2 Segment 01
Option 4

NOTE: For Band 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.

Route Option Number / Reference:	4			
Route Description:	Two-way cycle track south			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	777.621	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	12.4	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle south			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 38,406.31
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 209,920.04
1.5	Earthworks	€ 137,621.99
1.6	Pavements	€ 121,308.88
1.7	Kerbing & Footways	€ 320,479.94
1.8	Traffic Signs & Road Markings	€ 38,406.31
1.9	Road Lighting	€ 94,014.38
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 7,681.26
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 115,218.94
	Sub-Total A - Construction Costs	**€ 1,083,058.06**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 52,777.81
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 28,874.15	€ 28,874.15
1.16.3	Preliminary Design	1		€ 17,470.47	€ 17,470.47
1.16.4	Statutory Processes	1		€ 6,433.19	€ 6,433.19
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 1,083,058.06	€ 108,305.81
1.18	Land and Property Costs				€ -
				Sub-Total B - Add-On Costs	**€ 161,083.62**
				Total Project Base Costs (A+B)	**€ 1,244,141.68**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 1,244,141.68	€ 82,113.35
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 1,326,255.03	€ 509,281.93
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 1,326,255.03	€ 13,262.55
			Total Adjustments	**€ 604,657.83**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 1,848,799.51**

Mainline Length	0.777621	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,377,507.18**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 01
Option 4

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA123	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 28,874.15	23.00	€ 6,641.05	€ 35,515.20
1.3	Preliminary Design	1	Item	€ 17,470.47	23.00	€ 4,018.21	€ 21,488.68
1.4	Statutory Processes	1	Item	€ 6,433.19	23.00	€ 1,479.63	€ 7,912.83
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 108,305.81	13.50	€ 14,621.28	€ 122,927.09
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 1,083,058.06	13.50	€ 146,212.84	€ 1,229,270.90
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 82,113.35	13.50	€ 11,085.30	€ 93,198.65
1.12	Contingency Allowance	1	Item	€ 509,281.93	13.50	€ 68,753.06	€ 578,034.99
1.13	Allowance for Arts (%)	1	Item	€ 13,262.55	13.50	€ 1,790.44	€ 15,052.99
			Sub-Total (Ex.VAT)	**€ 1,848,799.51**			
						Total Option 3 - Cost Estimate (Including VAT)	**€ 2,103,401.34**

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

Project 2 Segment 01
Option 5

NOTE: For Band 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.

Route Option Number / Reference:	5			
Route Description:	Mixed street			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	777.621	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	10.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Mixed Street			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 10,445.60
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 20,891.19
1.5	Earthworks	€ 34,215.32
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 158,444.20
1.8	Traffic Signs & Road Markings	€ 10,445.60
1.9	Road Lighting	€ 15,552.42
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,089.12
1.14	Other Project Costs	€ 700.00
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 31,336.79
	Sub-Total A - Construction Costs	**€ 284,120.24**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 52,777.81
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 28,874.15	€ 28,874.15
1.16.3	Preliminary Design	1		€ 17,470.47	€ 17,470.47
1.16.4	Statutory Processes	1		€ 6,433.19	€ 6,433.19
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 284,120.24	€ 28,412.02
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 81,189.84**
	Total Project Base Costs (A+B)				**€ 365,310.08**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 365,310.08	€ 24,110.47
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 389,420.55	€ 149,537.49
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 389,420.55	€ 3,894.21
Total Adjustments				**€ 177,542.16**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 542,852.24**

Mainline Length	0.777621 **Km**	**Rate Per Km (Excluding VAT)**	**€ 698,093.60**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 01
Option 5

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 01		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA123	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 28,874.15	23.00	€ 6,641.05	€ 35,515.20
1.3	Preliminary Design	1	Item	€ 17,470.47	23.00	€ 4,018.21	€ 21,488.68
1.4	Statutory Processes	1	Item	€ 6,433.19	23.00	€ 1,479.63	€ 7,912.83
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 28,412.02	13.50	€ 3,835.62	€ 32,247.65
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 284,120.24	13.50	€ 38,356.23	€ 322,476.48
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 24,110.47	13.50	€ 3,254.91	€ 27,365.38
1.12	Contingency Allowance	1	Item	€ 149,537.49	13.50	€ 20,187.56	€ 169,725.05
1.13	Allowance for Arts (%)	1	Item	€ 3,894.21	13.50	€ 525.72	€ 4,419.92
			Sub-Total (Ex.VAT)	**€ 542,852.24**			
						Total Option 4 - Cost Estimate (Including VAT)	**€ 621,151.18**

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

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 2				
Project / Contract Code:			Prepared By (Individual / Organisation):		AtkinsRealis
Approving Authority:	NTA		Date Estimate Prepared:		16/02/2024
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:		Q3 2023
Route Option Number / Reference:	2	3	4	5	6
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	6	6	6	6	6
Location:	Dublin Road	Dublin Road	Dublin Road	Dublin Road	Dublin Road
Total Mainline Length (m):	380.2	380.2	380.2	380.2	380.2
Other Relevant Project Information:	One-way cycle TB	Two-way cycle south TB	Two-way cycle north TB	One-way cycle RB	Two-way cycle south RB
Project Costs					
Option Construction Costs					
	€	€	€	€	€
Site Clearance	€ 23,682.43	€ 22,104.60	€ 22,104.60	€ 12,401.11	€ 11,355.56
Fencing	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 118,397.84	€ 113,664.35	€ 113,664.35	€ 24,802.23	€ 22,711.13
Earthworks	€ 97,863.48	€ 93,301.08	€ 93,301.08	€ 40,073.08	€ 40,073.08
Pavements	€ 59,311.20	€ 59,311.20	€ 59,311.20	€ -	€ -
Kerbing & Footways	€ 223,157.20	€ 196,163.00	€ 196,163.00	€ 200,345.20	€ 179,434.20
Traffic Signs & Road Marking	€ 23,682.43	€ 22,104.60	€ 22,104.60	€ 12,401.11	€ 11,355.56
Road Lighting	€ 45,966.18	€ 45,966.18	€ 45,966.18	€ 7,604.00	€ 7,604.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 4,736.49	€ 4,420.92	€ 4,420.92	€ 2,480.22	€ 2,271.11
Other Project Costs	€ -	€ -	€ -	€ -	€ -
Preliminaries including Site Compounds (excluding traffic management)	€ 71,047.29	€ 66,313.80	€ 66,313.80	€ 37,203.34	€ 34,066.69
Sub-Total A - Construction Costs	**€ 667,844.54**	**€ 623,349.74**	**€ 623,349.74**	**€ 337,310.30**	**€ 308,871.34**
Option Add-On Costs					
	€	€	€	€	€
Preparation and Administration Costs	€ 25,804.50	€ 25,804.50	€ 25,804.50	€ 25,804.50	€ 25,804.50
Traffic Management Related Costs	€ 66,784.45	€ 62,334.97	€ 62,334.97	€ 33,731.03	€ 30,887.13
Land and Property Costs	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 92,588.96**	**€ 88,139.48**	**€ 88,139.48**	**€ 59,535.53**	**€ 56,691.64**
Total Inflation Allowance	€ 50,188.61	€ 46,958.29	€ 46,958.29	€ 26,191.83	€ 24,127.16
Total Contingency Allowance	€ 311,278.89	€ 291,243.84	€ 291,243.84	€ 162,446.46	€ 149,641.01
Per Cent Art Scheme	€ 8,106.22	€ 7,584.48	€ 7,584.48	€ 4,230.38	€ 3,896.90
Sub-Total - Adjustments	**€ 369,573.72**	**€ 345,786.60**	**€ 345,786.60**	**€ 192,868.66**	**€ 177,665.07**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 1,130,007.22**	**€ 1,057,275.82**	**€ 1,057,275.82**	**€ 589,714.50**	**€ 543,228.05**
Total Rate Per Km (excluding VAT)	**€ 2,972,138.93**	**€ 2,780,841.18**	**€ 2,780,841.18**	**€ 1,551,063.91**	**€ 1,428,795.50**

Rev	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project 2 Segment 02
Option 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	One-way Cycle TB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	13.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	One-way cycle TB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 23,682.43
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 118,397.84
1.5	Earthworks	€ 97,863.48
1.6	Pavements	€ 59,311.20
1.7	Kerbing & Footways	€ 223,157.20
1.8	Traffic Signs & Road Markings	€ 23,682.43
1.9	Road Lighting	€ 45,966.18
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,736.49
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 71,047.29
	Sub-Total A - Construction Costs	**€ 667,844.54**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 667,844.54	€ 66,784.45
1.18	Land and Property Costs				€ -
				Sub-Total B - Add-On Costs	**€ 92,588.96**
				Total Project Base Costs (A+B)	**€ 760,433.50**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 760,433.50	€ 50,188.61
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 810,622.11	€ 311,278.89
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 810,622.11	€ 8,106.22
		Total Adjustments		**€ 369,573.72**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 1,130,007.22**
Mainline Length	0.3802	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,972,138.93**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 02
Option 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 2		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€	-
1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€	17,364.35
1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€	10,506.40
1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€	3,868.80
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€	-
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€	-
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€	-
1.8	Traffic Management	1	Item	€ 66,784.45	13.50	€ 9,015.90	€	75,800.36
1.9	Land & Property Costs	1	Item	€ -			€	-
1.10	Construction Costs (Main Contractor)	1	Item	€ 667,844.54	13.50	€ 90,159.01	€	758,003.55
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 50,188.61	13.50	€ 6,775.46	€	56,964.07
1.12	Contingency Allowance	1	Item	€ 311,278.89	13.50	€ 42,022.65	€	353,301.54
1.13	Allowance for Arts (%)	1	Item	€ 8,106.22	13.50	€ 1,094.34	€	9,200.56
			Sub-Total (Ex.VAT)	**€ 1,130,007.22**				
						Total Option 1 Cost Estimate (Including VAT)	**€**	**1,285,009.62**

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

Project 2 Segment 02
Option 3

NOTE: For Band 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.

Route Option Number / Reference:	3			
Route Description:	Two-way cycle track south TB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle south TB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 22,104.60
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 113,664.35
1.5	Earthworks	€ 93,301.08
1.6	Pavements	€ 59,311.20
1.7	Kerbing & Footways	€ 196,163.00
1.8	Traffic Signs & Road Markings	€ 22,104.60
1.9	Road Lighting	€ 45,966.18
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,420.92
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 66,313.80
	Sub-Total A - Construction Costs	**€ 623,349.74**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 623,349.74	€ 62,334.97
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 88,139.48**
	Total Project Base Costs (A+B)				**€ 711,489.21**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 711,489.21	€ 46,958.29
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 758,447.50	€ 291,243.84
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 758,447.50	€ 7,584.48
Total Adjustments				**€ 345,786.60**

Total Option Comparison Cost Estimate Exclusive of VAT **€ 1,057,275.82**

Mainline Length 0.3802 **Km** **Rate Per Km (Excluding VAT)** **€ 2,780,841.18**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 02
Option 3

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 2		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€ 17,364.35
1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€ 10,506.40
1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€ 3,868.80
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 62,334.97	13.50	€ 8,415.22	€ 70,750.19
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 623,349.74	13.50	€ 84,152.21	€ 707,501.95
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 46,958.29	13.50	€ 6,339.37	€ 53,297.66
1.12	Contingency Allowance	1	Item	€ 291,243.84	13.50	€ 39,317.92	€ 330,561.76
1.13	Allowance for Arts (%)	1	Item	€ 7,584.48	13.50	€ 1,023.90	€ 8,608.38
			Sub-Total (Ex.VAT)	**€ 1,057,275.82**			
						Total Option 2 Cost Estimate (Including VAT)	**€ 1,202,459.48**

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

Project 2 Segment 02
Option 4

NOTE: For Band 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.

Route Option Number / Reference:	4			
Route Description:	Two-way cycle track north TB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle north TB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 22,104.60
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 113,664.35
1.5	Earthworks	€ 93,301.08
1.6	Pavements	€ 59,311.20
1.7	Kerbing & Footways	€ 196,163.00
1.8	Traffic Signs & Road Markings	€ 22,104.60
1.9	Road Lighting	€ 45,966.18
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,420.92
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 66,313.80
	Sub-Total A - Construction Costs	**€ 623,349.74**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 623,349.74	€ 62,334.97
1.18	Land and Property Costs				€ -
				Sub-Total B - Add-On Costs	**€ 88,139.48**
				Total Project Base Costs (A+B)	**€ 711,489.21**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 711,489.21	€ 46,958.29
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 758,447.50	€ 291,243.84
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 758,447.50	€ 7,584.48
			Total Adjustments	**€ 345,786.60**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 1,057,275.82**

Mainline Length	0.3802	Km	**Rate Per Km (Excluding VAT)**	**€ 2,780,841.18**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 02
Option 4

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 2		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€ 17,364.35
1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€ 10,506.40
1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€ 3,868.80
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 62,334.97	13.50	€ 8,415.22	€ 70,750.19
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 623,349.74	13.50	€ 84,152.21	€ 707,501.95
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 46,958.29	13.50	€ 6,339.37	€ 53,297.66
1.12	Contingency Allowance	1	Item	€ 291,243.84	13.50	€ 39,317.92	€ 330,561.76
1.13	Allowance for Arts (%)	1	Item	€ 7,584.48	13.50	€ 1,023.90	€ 8,608.38
			Sub-Total (Ex.VAT)	**€ 1,057,275.82**			
						Total Option 3 - Cost Estimate (Including VAT)	**€ 1,202,459.48**

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

Project 2 Segment 02
Option 5

NOTE: For Band 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.

Route Option Number / Reference:	5			
Route Description:	One-way cycle track RB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14.3	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	One-way cycle RB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 12,401.11
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 24,802.23
1.5	Earthworks	€ 40,073.08
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 200,345.20
1.8	Traffic Signs & Road Markings	€ 12,401.11
1.9	Road Lighting	€ 7,604.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,480.22
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 37,203.34
	Sub-Total A - Construction Costs	**€ 337,310.30**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 337,310.30	€ 33,731.03
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 59,535.53**
	Total Project Base Costs (A+B)				**€ 396,845.83**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 396,845.83	€ 26,191.83
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 423,037.66	€ 162,446.46
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 423,037.66	€ 4,230.38
Total Adjustments				**€ 192,868.66**

Total Option Comparison Cost Estimate Exclusive of VAT **€ 589,714.50**

Mainline Length 0.3802 **Km** **Rate Per Km (Excluding VAT)** **€ 1,551,063.91**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 02
Option 5

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 2		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€ 17,364.35
1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€ 10,506.40
1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€ 3,868.80
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 33,731.03	13.50	€ 4,553.69	€ 38,284.72
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 337,310.30	13.50	€ 45,536.89	€ 382,847.19
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 26,191.83	13.50	€ 3,535.90	€ 29,727.72
1.12	Contingency Allowance	1	Item	€ 162,446.46	13.50	€ 21,930.27	€ 184,376.73
1.13	Allowance for Arts (%)	1	Item	€ 4,230.38	13.50	€ 571.10	€ 4,801.48
			Sub-Total (Ex.VAT)	**€ 589,714.50**			
						Total Option 4 - Cost Estimate (Including VAT)	**€ 671,777.38**

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

Project 2 Segment 02
Option 6

NOTE: For Band 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.

Route Option Number / Reference:	6			
Route Description:	Two-way cycle south RB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	380.2	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14.4	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle south RB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 11,355.56
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 22,711.13
1.5	Earthworks	€ 40,073.08
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 179,434.20
1.8	Traffic Signs & Road Markings	€ 11,355.56
1.9	Road Lighting	€ 7,604.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,271.11
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 34,066.69
	Sub-Total A - Construction Costs	**€ 308,871.34**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,804.50
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 14,117.35	€ 14,117.35
1.16.3	Preliminary Design	1		€ 8,541.79	€ 8,541.79
1.16.4	Statutory Processes	1		€ 3,145.36	€ 3,145.36
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 308,871.34	€ 30,887.13
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 56,691.64**
	Total Project Base Costs (A+B)				**€ 365,562.98**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 365,562.98	€ 24,127.16
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 389,690.14	€ 149,641.01
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 389,690.14	€ 3,896.90
Total Adjustments				**€ 177,665.07**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 543,228.05**

Mainline Length	0.3802	**Km**	**Rate Per Km (Excluding VAT)**	**€ 1,428,795.50**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 02
Option 6

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 2		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 14,117.35	23.00	€ 3,246.99	€ 17,364.35
1.3	Preliminary Design	1	Item	€ 8,541.79	23.00	€ 1,964.61	€ 10,506.40
1.4	Statutory Processes	1	Item	€ 3,145.36	23.00	€ 723.43	€ 3,868.80
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 30,887.13	13.50	€ 4,169.76	€ 35,056.90
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 308,871.34	13.50	€ 41,697.63	€ 350,568.97
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 24,127.16	13.50	€ 3,257.17	€ 27,384.32
1.12	Contingency Allowance	1	Item	€ 149,641.01	13.50	€ 20,201.54	€ 169,842.55
1.13	Allowance for Arts (%)	1	Item	€ 3,896.90	13.50	€ 526.08	€ 4,422.98
			Sub-Total (Ex.VAT)	**€ 543,228.05**			
						Total Option 5 - Cost Estimate (Including VAT)	**€ 619,015.26**

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

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 3				
Project / Contract Code:			Prepared By (Individual / Organisation):		AtkinsRealis
Approving Authority:	NTA		Date Estimate Prepared:		16/02/2024
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:		Q3 2023
Route Option Number / Reference:	2	3	4		
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single		
Anticipated Programme Duration (Months):	6	6	6		
Location:	Dublin Road	Dublin Road	Dublin Road		
Total Mainline Length (m):	417.6	417.6	417.6		
Other Relevant Project Information:	Two-way cycle north TB	One-way cycle RB	Two-way cycle south RB		
Project Costs					
Option Construction Costs					
	€	**€**	**€**		
Site Clearance	€ 23,344.81	€ 14,646.00	€ 12,507.89		
Fencing	€ -	€ -	€ -		
Road Restraint Systems	€ -	€ -	€ -		
Drainage & Service Ducts	€ 121,027.32	€ 29,292.00	€ 25,015.78		
Earthworks	€ 84,605.76	€ 33,408.00	€ 26,141.76		
Pavements	€ 65,145.60	€ -	€ -		
Kerbing & Footways	€ 215,664.00	€ 251,160.00	€ 215,664.00		
Traffic Signs & Road Marking	€ 23,344.81	€ 14,646.00	€ 12,507.89		
Road Lighting	€ 50,487.84	€ 8,352.00	€ 8,352.00		
Structural Concrete (including Structures Generally)	€ -	€ -	€ -		
Accommodation Works	€ -	€ -	€ -		
Works for Statutory Undertakers	€ -	€ -	€ -		
Landscaping & Ecology	€ 4,668.96	€ 2,929.20	€ 2,501.58		
Other Project Costs	€ -	€ -	€ -		
Preliminaries including Site Compounds (excluding traffic management)	€ 70,034.42	€ 43,938.00	€ 37,523.66		
Sub-Total A - Construction Costs	**€ 658,323.50**	**€ 398,371.20**	**€ 340,214.55**		
Option Add-On Costs					
	€	**€**	**€**		
Preparation and Administration Costs	€ 28,342.87	€ 28,342.87	€ 28,342.87		
Traffic Management Related Costs	€ 65,832.35	€ 39,837.12	€ 34,021.46		
Land and Property Costs	€ -	€ -	€ -		
Sub-Total B - Add-On Costs	**€ 94,175.22**	**€ 68,179.99**	**€ 62,364.33**		
Total Inflation Allowance	€ 49,664.92	€ 30,792.38	€ 26,570.21		
Total Contingency Allowance	€ 308,030.84	€ 190,979.93	€ 164,793.25		
Per Cent Art Scheme	€ 8,021.64	€ 4,973.44	€ 4,291.49		
Sub-Total - Adjustments	**€ 365,717.39**	**€ 226,745.75**	**€ 195,654.95**		
Total Option Comparison Cost Estimate (excluding VAT)	**€ 1,118,216.12**	**€ 693,296.94**	**€ 598,233.83**		
Total Rate Per Km (excluding VAT)	**€ 2,677,720.59**	**€ 1,660,193.82**	**€ 1,432,552.28**		

Rev	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project 2 Segment 03
Option 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	Two-way cyle track north TB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	417.6	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle north TB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 23,344.81
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 121,027.32
1.5	Earthworks	€ 84,605.76
1.6	Pavements	€ 65,145.60
1.7	Kerbing & Footways	€ 215,664.00
1.8	Traffic Signs & Road Markings	€ 23,344.81
1.9	Road Lighting	€ 50,487.84
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,668.96
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 70,034.42
	Sub-Total A - Construction Costs	**€ 658,323.50**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 28,342.87
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 15,506.07	€ 15,506.07
1.16.3	Preliminary Design	1		€ 9,382.04	€ 9,382.04
1.16.4	Statutory Processes	1		€ 3,454.77	€ 3,454.77
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 658,323.50	€ 65,832.35
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 94,175.22**
	Total Project Base Costs (A+B)				**€ 752,498.73**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 752,498.73	€ 49,664.92
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 802,163.64	€ 308,030.84
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 802,163.64	€ 8,021.64
Total Adjustments				**€ 365,717.39**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 1,118,216.12**
Mainline Length	0.4176	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,677,720.59**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 03
Option 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 3		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 15,506.07	23.00	€ 3,566.40	€ 19,072.46
1.3	Preliminary Design	1	Item	€ 9,382.04	23.00	€ 2,157.87	€ 11,539.90
1.4	Statutory Processes	1	Item	€ 3,454.77	23.00	€ 794.60	€ 4,249.37
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 65,832.35	13.50	€ 8,887.37	€ 74,719.72
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 658,323.50	13.50	€ 88,873.67	€ 747,197.18
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 49,664.92	13.50	€ 6,704.76	€ 56,369.68
1.12	Contingency Allowance	1	Item	€ 308,030.84	13.50	€ 41,584.16	€ 349,615.00
1.13	Allowance for Arts (%)	1	Item	€ 8,021.64	13.50	€ 1,082.92	€ 9,104.56
			Sub-Total (Ex.VAT)	**€ 1,118,216.12**			
						Total Option 1 Cost Estimate (Including VAT)	**€ 1,271,867.87**

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

Project 2 Segment 03
Option 3

NOTE: For Band 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.

Route Option Number / Reference:	3			
Route Description:	One-way cycle RB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	417.6	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	One-way cycle RB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 14,646.00
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 29,292.00
1.5	Earthworks	€ 33,408.00
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 251,160.00
1.8	Traffic Signs & Road Markings	€ 14,646.00
1.9	Road Lighting	€ 8,352.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,929.20
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 43,938.00
	Sub-Total A - Construction Costs	**€ 398,371.20**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 28,342.87
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 15,506.07	€ 15,506.07
1.16.3	Preliminary Design	1		€ 9,382.04	€ 9,382.04
1.16.4	Statutory Processes	1		€ 3,454.77	€ 3,454.77
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 398,371.20	€ 39,837.12
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 68,179.99**
	Total Project Base Costs (A+B)				**€ 466,551.19**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 466,551.19	€ 30,792.38
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 497,343.57	€ 190,979.93
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 497,343.57	€ 4,973.44
Total Adjustments				**€ 226,745.75**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 693,296.94**

Mainline Length	0.4176	**Km**	**Rate Per Km (Excluding VAT)**	**€ 1,660,193.82**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 03
Option 3

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 3		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 15,506.07	23.00	€ 3,566.40	€ 19,072.46
1.3	Preliminary Design	1	Item	€ 9,382.04	23.00	€ 2,157.87	€ 11,539.90
1.4	Statutory Processes	1	Item	€ 3,454.77	23.00	€ 794.60	€ 4,249.37
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 39,837.12	13.50	€ 5,378.01	€ 45,215.13
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 398,371.20	13.50	€ 53,780.11	€ 452,151.31
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 30,792.38	13.50	€ 4,156.97	€ 34,949.35
1.12	Contingency Allowance	1	Item	€ 190,979.93	13.50	€ 25,782.29	€ 216,762.22
1.13	Allowance for Arts (%)	1	Item	€ 4,973.44	13.50	€ 671.41	€ 5,644.85
			Sub-Total (Ex.VAT)	**€ 693,296.94**			
						Total Option 2 Cost Estimate (Including VAT)	**€ 789,584.60**

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

Project 2 Segment 03
Option 4

NOTE: For Band 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.

Route Option Number / Reference:	4			
Route Description:	Two-way cycle south RB			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	417.6	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	14.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle south RB			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 12,507.89
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 25,015.78
1.5	Earthworks	€ 26,141.76
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 215,664.00
1.8	Traffic Signs & Road Markings	€ 12,507.89
1.9	Road Lighting	€ 8,352.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,501.58
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 37,523.66
	Sub-Total A - Construction Costs	**€ 340,214.55**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 28,342.87
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 15,506.07	€ 15,506.07
1.16.3	Preliminary Design	1		€ 9,382.04	€ 9,382.04
1.16.4	Statutory Processes	1		€ 3,454.77	€ 3,454.77
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 340,214.55	€ 34,021.46
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 62,364.33**
	Total Project Base Costs (A+B)				**€ 402,578.88**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 402,578.88	€ 26,570.21
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 429,149.09	€ 164,793.25
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 429,149.09	€ 4,291.49
Total Adjustments				**€ 195,654.95**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 598,233.83**

Mainline Length	0.4176	**Km**	**Rate Per Km (Excluding VAT)**	**€ 1,432,552.28**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 03
Option 4

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 3		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 15,506.07	23.00	€ 3,566.40	€ 19,072.46
1.3	Preliminary Design	1	Item	€ 9,382.04	23.00	€ 2,157.87	€ 11,539.90
1.4	Statutory Processes	1	Item	€ 3,454.77	23.00	€ 794.60	€ 4,249.37
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 34,021.46	13.50	€ 4,592.90	€ 38,614.35
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 340,214.55	13.50	€ 45,928.96	€ 386,143.52
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 26,570.21	13.50	€ 3,586.98	€ 30,157.18
1.12	Contingency Allowance	1	Item	€ 164,793.25	13.50	€ 22,247.09	€ 187,040.34
1.13	Allowance for Arts (%)	1	Item	€ 4,291.49	13.50	€ 579.35	€ 4,870.84
			Sub-Total (Ex.VAT)	**€ 598,233.83**			
					Total Option 3 - Cost Estimate (Including VAT)		**€ 681,687.97**

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

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual / Organisation):	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Route Option Number / Reference:	2	3	4	5	6
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single	Single	Single
Anticipated Programme Duration (Months):	6	6	6	6	6
Location:	Dublin Road	Dublin Road	Dublin Road	Dublin Road	Dublin Road
Total Mainline Length (m):	453.1	453.1	453.1	453.1	453.1
Other Relevant Project Information:	One-way cycle	Two-way cycle south	Two-way cycle north	Shared Path	Mixed Street
Project Costs					
Option Construction Costs					
	€	€	€	€	€
Site Clearance	€ 22,020.05	€ 10,574.40	€ 22,835.63	€ 8,115.96	€ 7,682.35
Fencing	€ -	€ -	€ -	€ -	€ -
Road Restraint Systems	€ -	€ -	€ -	€ -	€ -
Drainage & Service Ducts	€ 124,337.76	€ 21,148.81	€ 126,784.50	€ 16,231.93	€ 15,364.71
Earthworks	€ 99,908.55	€ 84,050.05	€ 112,595.35	€ 52,333.05	€ 52,333.05
Pavements	€ 70,683.60	€ -	€ 70,683.60	€ -	€ -
Kerbing & Footways	€ 156,751.50	€ 118,238.00	€ 160,376.30	€ 100,924.20	€ 91,902.00
Traffic Signs & Road Marking	€ 22,020.05	€ 10,574.40	€ 22,835.63	€ 8,115.96	€ 7,682.35
Road Lighting	€ 54,779.79	€ 9,200.00	€ 54,779.79	€ 9,062.00	€ 9,062.00
Structural Concrete (including Structures Generally)	€ -	€ -	€ -	€ -	€ -
Accommodation Works	€ -	€ -	€ -	€ -	€ -
Works for Statutory Undertakers	€ -	€ -	€ -	€ -	€ -
Landscaping & Ecology	€ 4,404.01	€ 2,114.88	€ 4,567.13	€ 1,623.19	€ 1,536.47
Other Project Costs	€ -	€ -	€ -	€ -	€ 350.00
Preliminaries including Site Compounds (excluding traffic management)	€ 66,060.16	€ 31,723.21	€ 68,506.90	€ 24,347.89	€ 23,047.06
Sub-Total A - Construction Costs	**€ 620,965.47**	**€ 287,623.75**	**€ 643,964.82**	**€ 220,754.18**	**€ 208,959.99**
Option Add-On Costs					
	€	€	€	€	€
Preparation and Administration Costs	€ 30,752.29	€ 30,752.29	€ 30,752.29	€ 30,752.29	€ 30,752.29
Traffic Management Related Costs	€ 62,096.55	€ 28,762.37	€ 64,396.48	€ 22,075.42	€ 20,896.00
Land and Property Costs	€ -	€ -	€ -	€ -	€ -
Sub-Total B - Add-On Costs	**€ 92,848.84**	**€ 59,514.66**	**€ 95,148.77**	**€ 52,827.71**	**€ 51,648.29**
Total Inflation Allowance	€ 47,111.74	€ 22,911.14	€ 48,781.50	€ 18,056.40	€ 17,200.15
Total Contingency Allowance	€ 292,195.60	€ 142,099.03	€ 302,551.72	€ 111,989.10	€ 106,678.43
Per Cent Art Scheme	€ 7,609.26	€ 3,700.50	€ 7,878.95	€ 2,916.38	€ 2,778.08
Sub-Total - Adjustments	**€ 346,916.61**	**€ 168,710.66**	**€ 359,212.16**	**€ 132,961.89**	**€ 126,656.67**
Total Option Comparison Cost Estimate (excluding VAT)	**€ 1,060,730.91**	**€ 515,849.07**	**€ 1,098,325.76**	**€ 406,543.78**	**€ 387,264.94**
Total Rate Per Km (excluding VAT)	**€ 2,341,052.55**	**€ 1,138,488.35**	**€ 2,424,025.07**	**€ 897,249.57**	**€ 854,700.82**

Rev	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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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Project 2 Segment 04
Option 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	One-way Cycle			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	13.5	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	One-way cycle			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 22,020.05
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 124,337.76
1.5	Earthworks	€ 99,908.55
1.6	Pavements	€ 70,683.60
1.7	Kerbing & Footways	€ 156,751.50
1.8	Traffic Signs & Road Markings	€ 22,020.05
1.9	Road Lighting	€ 54,779.79
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,404.01
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 66,060.16
	Sub-Total A - Construction Costs	**€ 620,965.47**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 620,965.47	€ 62,096.55
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 92,848.84**
	Total Project Base Costs (A+B)				**€ 713,814.30**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 713,814.30	€ 47,111.74
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 760,926.05	€ 292,195.60
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 760,926.05	€ 7,609.26
			Total Adjustments	**€ 346,916.61**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 1,060,730.91**
Mainline Length	0.4531	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,341,052.55**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 04
Option 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 62,096.55	13.50	€ 8,383.03	€ 70,479.58
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 620,965.47	13.50	€ 83,830.34	€ 704,795.81
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 47,111.74	13.50	€ 6,360.09	€ 53,471.83
1.12	Contingency Allowance	1	Item	€ 292,195.60	13.50	€ 39,446.41	€ 331,642.01
1.13	Allowance for Arts (%)	1	Item	€ 7,609.26	13.50	€ 1,027.25	€ 8,636.51
			Sub-Total (Ex.VAT)	**€ 1,060,730.91**			
						Total Option 1 Cost Estimate (Including VAT)	**€ 1,206,851.05**

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

Project 2 Segment 04
Option 3

NOTE: For Band 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.

Route Option Number / Reference:	3			
Route Description:	Two-way cycle track south			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	12.4	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle south			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 10,574.40
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 21,148.81
1.5	Earthworks	€ 84,050.05
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 118,238.00
1.8	Traffic Signs & Road Markings	€ 10,574.40
1.9	Road Lighting	€ 9,200.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 2,114.88
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 31,723.21
	Sub-Total A - Construction Costs	**€ 287,623.75**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 287,623.75	€ 28,762.37
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 59,514.66**
	Total Project Base Costs (A+B)				**€ 347,138.41**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 347,138.41	€ 22,911.14
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 370,049.55	€ 142,099.03
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 370,049.55	€ 3,700.50
Total Adjustments				**€ 168,710.66**

Total Option Comparison Cost Estimate Exclusive of VAT **€ 515,849.07**

Mainline Length 0.4531 **Km** **Rate Per Km (Excluding VAT)** **€ 1,138,488.35**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 04
Option 3

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 28,762.37	13.50	€ 3,882.92	€ 32,645.30
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 287,623.75	13.50	€ 38,829.21	€ 326,452.95
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 22,911.14	13.50	€ 3,093.00	€ 26,004.14
1.12	Contingency Allowance	1	Item	€ 142,099.03	13.50	€ 19,183.37	€ 161,282.40
1.13	Allowance for Arts (%)	1	Item	€ 3,700.50	13.50	€ 499.57	€ 4,200.06
			Sub-Total (Ex.VAT)	**€ 515,849.07**			
						Total Option 2 Cost Estimate (Including VAT)	**€ 588,410.16**

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

Project 2 Segment 04
Option 4

NOTE: For Band 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.

Route Option Number / Reference:	4			
Route Description:	Two-way cycle track north			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	12.4	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle north			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 22,835.63
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 126,784.50
1.5	Earthworks	€ 112,595.35
1.6	Pavements	€ 70,683.60
1.7	Kerbing & Footways	€ 160,376.30
1.8	Traffic Signs & Road Markings	€ 22,835.63
1.9	Road Lighting	€ 54,779.79
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 4,567.13
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 68,506.90
	Sub-Total A - Construction Costs	**€ 643,964.82**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 643,964.82	€ 64,396.48
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 95,148.77**
	Total Project Base Costs (A+B)				**€ 739,113.60**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 739,113.60	€ 48,781.50
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 787,895.09	€ 302,551.72
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 787,895.09	€ 7,878.95
Total Adjustments				**€ 359,212.16**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 1,098,325.76**

Mainline Length	0.4531 **Km**	**Rate Per Km (Excluding VAT)**	**€ 2,424,025.07**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 04
Option 4

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 64,396.48	13.50	€ 8,693.53	€ 73,090.01
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 643,964.82	13.50	€ 86,935.25	€ 730,900.08
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 48,781.50	13.50	€ 6,585.50	€ 55,367.00
1.12	Contingency Allowance	1	Item	€ 302,551.72	13.50	€ 40,844.48	€ 343,396.20
1.13	Allowance for Arts (%)	1	Item	€ 7,878.95	13.50	€ 1,063.66	€ 8,942.61
			Sub-Total (Ex.VAT)	**€ 1,098,325.76**			
						Total Option 3 - Cost Estimate (Including VAT)	**€ 1,249,521.21**

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

Project 2 Segment 04
Option 5

NOTE: For Band 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.

Route Option Number / Reference:	5			
Route Description:	Shared Path			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	11	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Shared Path			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 8,115.96
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 16,231.93
1.5	Earthworks	€ 52,333.05
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 100,924.20
1.8	Traffic Signs & Road Markings	€ 8,115.96
1.9	Road Lighting	€ 9,062.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 1,623.19
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 24,347.89
	Sub-Total A - Construction Costs	**€ 220,754.18**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 220,754.18	€ 22,075.42
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 52,827.71**
	Total Project Base Costs (A+B)				**€ 273,581.89**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 273,581.89	€ 18,056.40
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 291,638.29	€ 111,989.10
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 291,638.29	€ 2,916.38
Total Adjustments				**€ 132,961.89**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 406,543.78**

Mainline Length	0.4531	**Km**	**Rate Per Km (Excluding VAT)**	**€ 897,249.57**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 04
Option 5

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 22,075.42	13.50	€ 2,980.18	€ 25,055.60
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 220,754.18	13.50	€ 29,801.81	€ 250,555.99
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 18,056.40	13.50	€ 2,437.61	€ 20,494.02
1.12	Contingency Allowance	1	Item	€ 111,989.10	13.50	€ 15,118.53	€ 127,107.63
1.13	Allowance for Arts (%)	1	Item	€ 2,916.38	13.50	€ 393.71	€ 3,310.09
			Sub-Total (Ex.VAT)	**€ 406,543.78**			
						Total Option 4 - Cost Estimate (Including VAT)	**€ 464,348.66**

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

Project 2 Segment 04
Option 6

NOTE: For Band 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.

Route Option Number / Reference:	6			
Route Description:	Mixed Street			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Dublin Road	
Total Mainline Length (m):	453.1	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	10.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Mixed Street			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 7,682.35
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 15,364.71
1.5	Earthworks	€ 52,333.05
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 91,902.00
1.8	Traffic Signs & Road Markings	€ 7,682.35
1.9	Road Lighting	€ 9,062.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 1,536.47
1.14	Other Project Costs	€ 350.00
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 23,047.06
	Sub-Total A - Construction Costs	**€ 208,959.99**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 30,752.29
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 16,824.23	€ 16,824.23
1.16.3	Preliminary Design	1		€ 10,179.60	€ 10,179.60
1.16.4	Statutory Processes	1		€ 3,748.46	€ 3,748.46
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 208,959.99	€ 20,896.00
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 51,648.29**
	Total Project Base Costs (A+B)				**€ 260,608.28**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 260,608.28	€ 17,200.15
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 277,808.42	€ 106,678.43
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 277,808.42	€ 2,778.08
Total Adjustments				**€ 126,656.67**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 387,264.94**

Mainline Length 0.4531 Km **Rate Per Km (Excluding VAT)** **€ 854,700.82**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 04
Option 6

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 4		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 16,824.23	23.00	€ 3,869.57	€ 20,693.81
1.3	Preliminary Design	1	Item	€ 10,179.60	23.00	€ 2,341.31	€ 12,520.91
1.4	Statutory Processes	1	Item	€ 3,748.46	23.00	€ 862.15	€ 4,610.60
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 20,896.00	13.50	€ 2,820.96	€ 23,716.96
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 208,959.99	13.50	€ 28,209.60	€ 237,169.59
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 17,200.15	13.50	€ 2,322.02	€ 19,522.17
1.12	Contingency Allowance	1	Item	€ 106,678.43	13.50	€ 14,401.59	€ 121,080.02
1.13	Allowance for Arts (%)	1	Item	€ 2,778.08	13.50	€ 375.04	€ 3,153.13
			Sub-Total (Ex.VAT)	**€ 387,264.94**			
						Total Option 5 - Cost Estimate (Including VAT)	**€ 442,467.18**

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

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 5				
Project / Contract Code:			Prepared By (Individual / Organisation):	AtkinsRealis	
Approving Authority:	NTA		Date Estimate Prepared:	16/02/2024	
Sponsoring Agency:	Westmeath County Council		Base Date of Estimate:	Q3 2023	
Route Option Number / Reference:	2	3	4		
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single	Single	Single		
Anticipated Programme Duration (Months):	6	6	6		
Location:	Ardmore Road	Ardmore Road	Ardmore Road		
Total Mainline Length (m):	371.9	371.9	371.9		
Other Relevant Project Information:	Two-way cycle	Shared Path	Mixed Street		
Project Costs					
Option Construction Costs					
	€	€	€		
Site Clearance	€ 17,016.37	€ 4,093.24	€ 2,429.50		
Fencing	€ -	€ -	€ -		
Road Restraint Systems	€ -	€ -	€ -		
Drainage & Service Ducts	€ 98,399.66	€ 8,186.49	€ 4,859.01		
Earthworks	€ 39,942.06	€ 2,752.06	€ 2,752.06		
Pavements	€ 53,553.60	€ -	€ -		
Kerbing & Footways	€ 154,518.50	€ 71,674.80	€ 38,050.00		
Traffic Signs & Road Marking	€ 17,016.37	€ 4,093.24	€ 2,429.50		
Road Lighting	€ 44,962.71	€ 7,438.00	€ 7,438.00		
Structural Concrete (including Structures Generally)	€ -	€ -	€ -		
Accommodation Works	€ -	€ -	€ -		
Works for Statutory Undertakers	€ -	€ -	€ -		
Landscaping & Ecology	€ 3,403.27	€ 818.65	€ 485.90		
Other Project Costs	€ -	€ -	€ 350.00		
Preliminaries including Site Compounds (excluding traffic management)	€ 51,049.11	€ 12,279.73	€ 7,288.51		
Sub-Total A - Construction Costs	**€ 479,861.66**	**€ 111,336.21**	**€ 66,082.48**		
Option Add-On Costs					
	€	€	€		
Preparation and Administration Costs	€ 25,241.18	€ 25,241.18	€ 25,241.18		
Traffic Management Related Costs	€ 47,986.17	€ 11,133.62	€ 6,608.25		
Land and Property Costs	€ -	€ -	€ -		
Sub-Total B - Add-On Costs	**€ 73,227.34**	**€ 36,374.80**	**€ 31,849.42**		
Total Inflation Allowance	€ 36,503.87	€ 9,748.93	€ 6,463.51		
Total Contingency Allowance	€ 226,403.67	€ 60,464.61	€ 40,087.84		
Per Cent Art Scheme	€ 5,895.93	€ 1,574.60	€ 1,043.95		
Sub-Total - Adjustments	**€ 268,803.47**	**€ 71,788.14**	**€ 47,595.30**		
Total Option Comparison Cost Estimate (excluding VAT)	**€ 821,892.47**	**€ 219,499.15**	**€ 145,527.20**		
Total Rate Per Km (excluding VAT)	**€ 2,209,982.45**	**€ 590,210.13**	**€ 391,307.35**		

Rev	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project 2 Segment 05
Option 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	Two-way cyle track			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Ardmore Road	
Total Mainline Length (m):	371.9	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	10.3	Land take Required:	☑ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Two-way cycle			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 17,016.37
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 98,399.66
1.5	Earthworks	€ 39,942.06
1.6	Pavements	€ 53,553.60
1.7	Kerbing & Footways	€ 154,518.50
1.8	Traffic Signs & Road Markings	€ 17,016.37
1.9	Road Lighting	€ 44,962.71
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 3,403.27
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 51,049.11
	Sub-Total A - Construction Costs	**€ 479,861.66**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,241.18
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 13,809.16	€ 13,809.16
1.16.3	Preliminary Design	1		€ 8,355.31	€ 8,355.31
1.16.4	Statutory Processes	1		€ 3,076.70	€ 3,076.70
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 479,861.66	€ 47,986.17
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 73,227.34**
	Total Project Base Costs (A+B)				**€ 553,089.01**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 553,089.01	€ 36,503.87
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 589,592.88	€ 226,403.67
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 589,592.88	€ 5,895.93
Total Adjustments				**€ 268,803.47**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 821,892.47**
Mainline Length	0.3719	**Km**	**Rate Per Km (Excluding VAT)**	**€ 2,209,982.45**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 05
Option 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 5		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 13,809.16	23.00	€ 3,176.11	€ 16,985.27
1.3	Preliminary Design	1	Item	€ 8,355.31	23.00	€ 1,921.72	€ 10,277.04
1.4	Statutory Processes	1	Item	€ 3,076.70	23.00	€ 707.64	€ 3,784.34
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 47,986.17	13.50	€ 6,478.13	€ 54,464.30
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 479,861.66	13.50	€ 64,781.32	€ 544,642.99
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 36,503.87	13.50	€ 4,928.02	€ 41,431.90
1.12	Contingency Allowance	1	Item	€ 226,403.67	13.50	€ 30,564.49	€ 256,968.16
1.13	Allowance for Arts (%)	1	Item	€ 5,895.93	13.50	€ 795.95	€ 6,691.88
			Sub-Total (Ex.VAT)	**€ 821,892.47**			
						Total Option 1 Cost Estimate (Including VAT)	**€ 935,245.87**

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

Project 2 Segment 05
Option 3

NOTE: For Band 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.

Route Option Number / Reference:	3			
Route Description:	Shared Path			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Ardmore Road	
Total Mainline Length (m):	371.9	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	9.3	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Shared Path			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 4,093.24
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 8,186.49
1.5	Earthworks	€ 2,752.06
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 71,674.80
1.8	Traffic Signs & Road Markings	€ 4,093.24
1.9	Road Lighting	€ 7,438.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 818.65
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 12,279.73
	Sub-Total A - Construction Costs	**€ 111,336.21**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,241.18
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 13,809.16	€ 13,809.16
1.16.3	Preliminary Design	1		€ 8,355.31	€ 8,355.31
1.16.4	Statutory Processes	1		€ 3,076.70	€ 3,076.70
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 111,336.21	€ 11,133.62
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 36,374.80**
	Total Project Base Costs (A+B)				**€ 147,711.01**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 147,711.01	€ 9,748.93
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 157,459.93	€ 60,464.61
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 157,459.93	€ 1,574.60
Total Adjustments				**€ 71,788.14**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 219,499.15**

Mainline Length 0.3719 **Km** **Rate Per Km (Excluding VAT)** **€ 590,210.13**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 05
Option 3

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 5		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 13,809.16	23.00	€ 3,176.11	€ 16,985.27
1.3	Preliminary Design	1	Item	€ 8,355.31	23.00	€ 1,921.72	€ 10,277.04
1.4	Statutory Processes	1	Item	€ 3,076.70	23.00	€ 707.64	€ 3,784.34
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 11,133.62	13.50	€ 1,503.04	€ 12,636.66
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 111,336.21	13.50	€ 15,030.39	€ 126,366.60
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 9,748.93	13.50	€ 1,316.11	€ 11,065.03
1.12	Contingency Allowance	1	Item	€ 60,464.61	13.50	€ 8,162.72	€ 68,627.34
1.13	Allowance for Arts (%)	1	Item	€ 1,574.60	13.50	€ 212.57	€ 1,787.17
			Sub-Total (Ex.VAT)	**€ 219,499.15**			
						Total Option 2 Cost Estimate (Including VAT)	**€ 251,529.44**

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

Project 2 Segment 05
Option 4

NOTE: For Band 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.

Route Option Number / Reference:	4			
Route Description:	Mixed Street			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Ardmore Road	
Total Mainline Length (m):	371.9	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	8.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Mixed Street			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 2,429.50
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 4,859.01
1.5	Earthworks	€ 2,752.06
1.6	Pavements	€ -
1.7	Kerbing & Footways	€ 38,050.00
1.8	Traffic Signs & Road Markings	€ 2,429.50
1.9	Road Lighting	€ 7,438.00
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 485.90
1.14	Other Project Costs	€ 350.00
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 7,288.51
	Sub-Total A - Construction Costs	**€ 66,082.48**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 25,241.18
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 13,809.16	€ 13,809.16
1.16.3	Preliminary Design	1		€ 8,355.31	€ 8,355.31
1.16.4	Statutory Processes	1		€ 3,076.70	€ 3,076.70
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 66,082.48	€ 6,608.25
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 31,849.42**
	Total Project Base Costs (A+B)				**€ 97,931.91**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 97,931.91	€ 6,463.51
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 104,395.41	€ 40,087.84
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1	%	€ 104,395.41	€ 1,043.95
Total Adjustments				**€ 47,595.30**

Total Option Comparison Cost Estimate Exclusive of VAT	**€ 145,527.20**

Mainline Length	0.3719	**Km**	**Rate Per Km (Excluding VAT)**	**€ 391,307.35**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
1	Draft	Thais Cortes	Stephen Wyse	29/04/2024
2	Draft	Daragh Scanlan	Stephen Wyse	24/06/2024

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.

Project Control Document Summary
Project 2 Segment 05
Option 4

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 5		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 13,809.16	23.00	€ 3,176.11	€ 16,985.27
1.3	Preliminary Design	1	Item	€ 8,355.31	23.00	€ 1,921.72	€ 10,277.04
1.4	Statutory Processes	1	Item	€ 3,076.70	23.00	€ 707.64	€ 3,784.34
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 6,608.25	13.50	€ 892.11	€ 7,500.36
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 66,082.48	13.50	€ 8,921.14	€ 75,003.62
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 6,463.51	13.50	€ 872.57	€ 7,336.08
1.12	Contingency Allowance	1	Item	€ 40,087.84	13.50	€ 5,411.86	€ 45,499.70
1.13	Allowance for Arts (%)	1	Item	€ 1,043.95	13.50	€ 140.93	€ 1,184.89
			Sub-Total (Ex.VAT)	**€ 145,527.20**			
						Total Option 3 - Cost Estimate (Including VAT)	**€ 167,571.29**

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

Option Comparison Cost Estimate Template

NOTE: For Band 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 Title:	Mullingar Active Travel Bundle - Project 2 Segment 06		
Project / Contract Code:		Prepared By (Individual / Organisation):	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

Route Option Number / Reference:	2				
Project Information					
Mainline Cross-Section Type (Single/Dual):	Single				
Anticipated Programme Duration (Months):	6				
Location:	Delvin Road				
Total Mainline Length (m):	133.8				
Other Relevant Project Information:	Mixed traffic				

Project Costs

Option Construction Costs

	€	€	€	€	€
Site Clearance	€ 4,952.66				
Fencing	€ -				
Road Restraint Systems	€ -				
Drainage & Service Ducts	€ 33,069.72				
Earthworks	€ 16,457.28				
Pavements	€ 20,872.64				
Kerbing & Footways	€ 40,835.45				
Traffic Signs & Road Marking	€ 4,952.66				
Road Lighting	€ 2,675.98				
Structural Concrete (including Structures Generally)	€ -				
Accommodation Works	€ -				
Works for Statutory Undertakers	€ -				
Landscaping & Ecology	€ 990.53				
Other Project Costs	€ -				
Preliminaries including Site Compounds (excluding traffic management)	€ 14,857.97				
Sub-Total A - Construction Costs	**€ 139,664.88**				

Option Add-On Costs

	€	€	€	€	€
Preparation and Administration Costs	€ 9,081.05				
Traffic Management Related Costs	€ 13,966.49				
Land and Property Costs	€ -				
Sub-Total B - Add-On Costs	**€ 23,047.54**				
Total Inflation Allowance	€ 10,739.02				
Total Contingency Allowance	€ 66,605.35				
Per Cent Art Scheme	€ 1,734.51				
Sub-Total - Adjustments	**€ 79,078.89**				
Total Option Comparison Cost Estimate (excluding VAT)	**€ 241,791.31**				
Total Rate Per Km (excluding VAT)	**€ 1,807,109.94**				

Rev	Title	Prepared By	Checked By	Issue Date
	Draft	Thais Cortes	Stephen Wyse	27/06/2024

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.

Project 1 Segment 06
Option Number 2

NOTE: For Band 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.

Route Option Number / Reference:	2			
Route Description:	Mixed traffic			
Project Information				
Mainline Cross-Section Type:	Single	Location:	Delvin Road	
Total Mainline Length (m):	133.8	Traffic Impact Rating (DCC Only):		
Total Mainline Width (m):	11.5	Land take Required:	☐ Check Box If Yes	
Potential Start Date:	Q4 2024	Anticipated Duration:	6	Months
Other Relevant Project Information:	Mixed traffic			

1 Option Comparison Cost Estimate

Ref	Description	Total
Construction Costs *(Please provide supplementary information giving detail of costs)*		
1.1	Site Clearance	€ 4,952.66
1.2	Fencing	€ -
1.3	Road Restraint Systems	€ -
1.4	Drainage & Service Ducts	€ 33,069.72
1.5	Earthworks	€ 16,457.28
1.6	Pavements	€ 20,872.64
1.7	Kerbing & Footways	€ 40,835.45
1.8	Traffic Signs & Road Markings	€ 4,952.66
1.9	Road Lighting	€ 2,675.98
1.10	Structural Concrete (Including Structures Generally)	€ -
1.11	Accommodation Works	€ -
1.12	Works for Statutory Undertakers	€ -
1.13	Landscaping & Ecology	€ 990.53
1.14	Other Project Costs	€ -
1.15	Preliminaries including Site Compounds (excluding traffic management)	€ 14,857.97
	Sub-Total A - Construction Costs	**€ 139,664.88**

Add-On Costs

Description		Quantity	Unit	Rate	Total
1.16	Preparation and Administration Costs				€ 9,081.05
1.16.1	Scope & Purpose				€ -
1.16.2	Concept, Development & Option Selection	1		€ 4,968.14	€ 4,968.14
1.16.3	Preliminary Design	1		€ 3,006.00	€ 3,006.00
1.16.4	Statutory Processes	1		€ 1,106.91	€ 1,106.91
1.16.5	Detailed Design & Procurement				€ -
1.16.6	Construction & Implementation				€ -
1.16.7	Close Out & Review				€ -
1.17	Traffic Management Related Costs	10	%	€ 139,664.88	€ 13,966.49
1.18	Land and Property Costs				€ -
	Sub-Total B - Add-On Costs				**€ 23,047.54**
	Total Project Base Costs (A+B)				**€ 162,712.42**

2 Adjustments

Description	Quantity	Unit	Rate	Total
Add Inflation	6.6	%	€ 162,712.42	€ 10,739.02
Add Contingency *(001_B123_CC_CMG)*	38.4	%	€ 173,451.44	€ 66,605.35
Per Cent for Art Scheme https://publicart.ie/main/commissioning/funding/per-cent-for-art-scheme/	1.0	%	€ 173,451.44	€ 1,734.51
Total Adjustments				**€ 79,078.89**

Total Option Comparison Cost Estimate Exclusive of VAT				**€ 241,791.31**
Mainline Length	**0.1338**	**Km**	**Rate Per Km (Excluding VAT)**	**€ 1,807,109.94**

Source of Cost Data *(Please provide a brief narrative on the source of cost data in the box below)*

Revision	Title	Prepared By	Checked By	Issue Date
	Draft	Thais Cortes	Stephen Wyse	27/06/2024

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.

Project Control Document Summary
Project 2 Segment 06
Option Number 2

NOTE: The information below will be auto-generated from the main cost estimate template to obtain the relevant totals in line with the seven costs heads required for inclusion within the project control document.

Project Title:	Mullingar Active Travel Bundle - Project 2 Segment 06		
Project / Contract Code:		Prepared By (Individual & Organisation)	AtkinsRealis
Approving Authority:	NTA	Date Estimate Prepared:	16/02/2024
Sponsoring Agency:	Westmeath County Council	Base Date of Estimate:	Q3 2023

1	PCD Summary				Sub-Total	VAT %	VAT Amount	Total Incl. VAT
1.1	Scope & Purpose	1	Item	€ -	23.00	€ -	€ -
1.2	Concept, Development & Option Selection	1	Item	€ 4,968.14	23.00	€ 1,142.67	€ 6,110.82
1.3	Preliminary Design	1	Item	€ 3,006.00	23.00	€ 691.38	€ 3,697.38
1.4	Statutory Processes	1	Item	€ 1,106.91	23.00	€ 254.59	€ 1,361.50
1.5	Detailed Design & Procurement	1	Item	€ -	23.00	€ -	€ -
1.6	Construction & Implementation	1	Item	€ -	23.00	€ -	€ -
1.7	Close Out & Review	1	Item	€ -	23.00	€ -	€ -
1.8	Traffic Management	1	Item	€ 13,966.49	13.50	€ 1,885.48	€ 15,851.96
1.9	Land & Property Costs	1	Item	€ -			€ -
1.10	Construction Costs (Main Contractor)	1	Item	€ 139,664.88	13.50	€ 18,854.76	€ 158,519.64
1.11	Inflation Allowance (Band 2/3 Only)	1	Item	€ 10,739.02	13.50	€ 1,449.77	€ 12,188.79
1.12	Contingency Allowance	1	Item	€ 66,605.35	13.50	€ 8,991.72	€ 75,597.08
1.13	Allowance for Arts (%)	1	Item	€ 1,734.51	13.50	€ 234.16	€ 1,968.67
			Sub-Total (Ex.VAT)	**€ 241,791.31**			
						Total Option 1 Cost Estimate (Including VAT)	**€ 275,295.84**

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

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