

Carrigtwohill to Midleton Inter-Urban Cycleway Phase 2

Part 8 Planning Application Report

Cork County Council

December 2023



Notice

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1. Introduction

1.1. Objective of Report and Scheme Overview

This document has been prepared in compliance with Section 179 of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended).

The scheme proposal involves the development of Phase 2 of the Carrigtwohill to Midleton Inter-Urban Cycle Route which provides an off-road, safe cycling and walking facility between the towns of Carrigtwohill and Midleton.

The Carrigtwohill to Midleton Inter-Urban Cycle Route is a section within the planned Midleton to Dunkettle IU-1 inter-urban cycle network connecting Midleton to Dunkettle. The IU-1 is included in the wider East Cork Sustainability Corridor that will connect Cork to Waterford. The East Cork Sustainability Corridor is part of government's National Pathfinder Programme that will ultimately provide a sustainable means of transport between the cities of Cork and Waterford, connecting several towns and settlements along the way.

The Midleton to Dunkettle Inter-Urban Route (IU-1) is a proposed cycle route in the Cork Metropolitan Area Transport Strategy 2040 (CMATS) and is consistent with policies and objectives set out in the National Planning Framework 2040, the Regional Spatial and Economic Strategy for the Southern Region Development Plan, the Climate Action Plan and the National Sustainable Mobility Policy. The route, which is currently being implemented in stages, will connect major employment centres such as Little Island (10,000+ employees) and Carrigtwohill IDA Business Park (3,800 employees) with existing and proposed residential areas including Carrigtwohill, Midleton, Glanmire and Glounthaune.

The Carrigtwohill to Midleton route, which is a section of the IU-1, will connect local towns and villages including new Urban Expansion Area (UEA) lands between Carrigtwohill and Midleton. The route is currently being implemented by Cork County Council in a phased approach. Phase 1 of the route, will run to the north of Carrigtwohill connecting the IDA Business Park in the west with lands zoned for Industry to the south of Carrigane Road in the east, received Part 8 Planning Approval from Cork County Council in 2022. This route also has connections to the new Carrigtwohill Schools Campus and Carrigtwohill Train Station. Phase 2 is the next section in the delivery of the route and will connect to Phase 1 on the eastern side, just north of the Cork to Midleton Railway Line. The route will link to zoned development lands within the Carrigtwohill UEA before connecting to new road and cycle infrastructure currently under construction as part of the Water Rock UEA in Midleton. Phase 2 of the route is approximately 3.7km in length and follows an east-west alignment, running predominantly parallel to the Cork to Midleton Railway Line.

The combined Phase 1 and 2 routes will thus expand on existing and planned cycle and pedestrian provision in East Cork, providing a seamless, coherent route between urban expansion areas in Carrigtwohill and Water Rock, Midleton while also linking to existing and future employment centres in Carrigtwohill. The route will facilitate important intermodal connection at the Carrigtwohill Train Station, the future Water Rock Station and the Midleton Train Station, boosting sustainable travel and safe commuter cycling.

As part of the Midleton to Dunkettle IU-1 the corridor will also provide sustainable transport connectivity from Carrigtwohill and Water Rock to the major employment centre in Little Island, with ultimate connection to employment areas in Cork City Centre through the Dunkettle to Cork City Route.

Phase 2 of the route is described in more detail in Section 4 of this report.

1.2. Part 8 Documents

The following is a list of documents and drawings contained in the Part 8 planning application for the Carrigtwohill to Midleton Inter-Urban Cycle-Route Phase 1.

- Part 8 Planning Application Report (this document);
- Ecological Impact Assessment;
- Flood Risk Assessment;
- Environmental Impact Assessment Screening Report;
- Environmental Impact Assessment Screening Determination Report;
- Report on Screening for Appropriate Assessment;
- Appropriate Assessment Screening Determination Report;
- Part 8 Drawings.

- Site notice.

1.3. Inspection of Plans and Particulars

Plans and particulars of the proposed development are available for inspection, or to purchase for a fee of €15 per set, during the timelines indicated on the site notice between the hours of 09:00 to 16:00 in the following ways:

- Online Inspection - Drawings and documentation will be available to view online on the Cork County Council website. The link for the drawings and documentation is:
<https://www.corkcoco.ie/en/resident/planning-and-development/public-consultations/activepart-8-development-consultation>
- Physical Inspection, by appointment only subject to Covid-19 control measures in place at the time at:
 - Planning Counter, Ground Floor, County Hall, Cork.
 - Cobh Municipal District Offices, Carrig House, Cobh, Co. Cork & Ballinglanna, Glanmire, Co. Cork
 - East Cork Municipal District Offices, Midleton Lodge, Youghal Road, Park South, Midleton, Co. Cork

1.4. Submissions and Observations

Submissions and observations with respect to the proposed development may be made within the timelines noted on the site notice as follows:

- Online at Cork County Council's website at <https://yourcouncil.ie> or

In writing clearly marked: 'Part 8 – Carrigtwohill to Midleton Inter-Urban Cycleway Phase 2, Senior Engineer, Traffic and Transport, Cork County Council, County Hall, Carrigrohane Road, Cork, T12 R2NC

2. Project Background

2.1. Overview

The Carrigtwohill to Midleton Inter-Urban Cycle Route is planned as part of the Dunkettle to Midleton IU 1 which is part of a wider cycle network known as the East Cork Sustainability Corridor. The corridor, that links Cork City with Waterford, is on the National Pathfinder Programme and is targeted for delivery by 2025. The route will connect Cork City to Waterford via the local towns and villages of Glanmire, Glounthaune, Little Island and Midleton before continuing to Youghal, Dungarvan and Waterford. The network of cycle routes has the potential to transform the region, encouraging a modal shift to more sustainable modes of walking and cycling for work, education and recreational trips. An important objective of the route is to encourage cycle tourism in the region which will have important economic benefits to towns and villages along the way.

The Carrigtwohill to Midleton Inter-Urban cycle route will form part of this larger strategic cycle network, while being designed to have the greatest impact and benefit on the local communities and towns that it connects. The local route will connect planned urban expansion areas in Carrigtwohill and Midleton, ensuring sustainable transport modes (walking, cycling and train use in particular) at an early stage in the development of the new residential areas, while also linking the UEA's to economic centres in Little Island, Carrigtwohill and Midleton. The route further provides permeability links off the main route to existing town centres and villages, public transport facilities (existing and planned) and education centres. The route will provide high-quality pedestrian and cycling infrastructure and will be predominantly off-road, encouraging users of all abilities to cycle, thereby contributing to a greater reduction in car dependence.

2.2. Regeneration and Growth of Carrigtwohill and Midleton

2.2.1. Carrigtwohill

Carrigtwohill is a Metropolitan Town within the County Metropolitan Strategic Planning Area. The town is located in East Cork approximately 12 kilometres east of Cork City and approximately 5 kilometres west of Midleton. It is located to the north of the N25 national road which connects Cork City to Rosslare Europort. The Cork to Midleton railway line, which was re-opened relatively recently, runs through the north of Carrigtwohill and Carrigtwohill Train Station is located to the north of the town.

Carrigtwohill historically functioned as a small rural village with limited residential and retail functions. Since the latter decades of the 20th century Carrigtwohill has been an important economic location, designated as a Strategic Employment Area in the 2014 Cork County Development Plan. With reference to the Cobh Municipal District Local Area Plan (MDLAP, 2017) the re-opening of the railway line has resulted in significant population and employment growth in the town since 2002 and Carrigtwohill has experienced the most growth in percentage terms of any towns in Co. Cork. The growth in population was catered for by a rapid expansion of the town's housing stock and the development of new retail and commercial facilities on the outskirts of the town. Significant regeneration of the town centre itself has however yet to take place.

There are limited segregated cycle routes in Carrigtwohill and these are generally limited to newer residential developments. The town does however have potential for increased levels of cycling due to the largely flat terrain. The Cobh MDLAP notes that there is a problem with traffic congestion in Carrigtwohill. Traffic congestion is a particular problem during school drop-off and pick up times.

2.2.2. Future Growth and the Carrigtwohill UEA

In continuation of the Cobh MDLP 2017, the Cork County Development Plan 2022 envisages significant population growth in Carrigtwohill and intensification of employment provision, due to the availability of a strong supply of housing and business land. The Carrigtwohill North Urban Expansion Area (UEA) has been identified by Cork County Council as an area capable of delivering significant residential development in a new residential neighbourhood. The UEA is located to the north of Carrigtwohill, within the catchment area of the Carrigtwohill Station and the Cork to Midleton railway line. The availability of a commuter rail service will make this a particularly sustainable settlement. Lands within the UEA have been zoned to allow for the provision of up to 2,747 housing units, two new primary schools and one new post-primary school, a small park to the west and a large linear park to the east linked with a segregated inter-urban greenway (IU-1) and biodiverse green network. The plan includes for a Station Quarter area adjacent to the existing Carrigtwohill Train Station which will include convenience retailing, professional services and leisure facilities as well as residential development above commercial premises. The proposed growth of the node as a whole will maximise the value of the

suburban rail project which includes an increase in the train service to Cork and a potential double track between Glounthaune and Midleton.

The CCDP 2022 notes that it is essential for the UEA to be integrated with the Main Town of Carrigtwohill via high quality sustainable transport linkages. The development of a network of sustainable routes throughout Carrigtwohill is a critical factor in making the town an attractive, liveable place. Much of the existing built up area of Carrigtwohill is within a convenient walking or cycling distance from the town's new station and the town centre itself. The CCDP also states that in order to make the most advantageous use of the new railway service it is important to encourage the provision of safe, convenient and pleasant access to the station area for walkers and cyclists. The development of this network will also facilitate better access to the town centre and, ultimately, between the main residential areas. The CCDP further notes that a small scale neighbourhood centre may be provided for within the UEA in order to support the 10 minute neighbourhood concept.

2.2.3. Midleton

Midleton is the largest town in the East Cork Municipal District and falls within the Metropolitan Strategic Planning Area. The town is located approximately 23km east of Cork City (by road) and approximately 5km east of Carrigtwohill. Like Carrigtwohill, the town lies on the East Cork Rail Corridor, and thus benefits from an established high quality rail service, while also supported by good road connectivity via the N25.

In recent years Midleton has undergone a transition from an established small market town to a major growth node for Metropolitan Cork. The town has also become a popular residential location for commuters working in or near Cork City, made convenient by the current rail service which provides a 23-minute journey into Cork City.

The town itself is relatively compact, with a population of 12,496 occurring predominantly between the village of Ballinacurra to the south and the recently developed Broomfield village to the north. The town currently has a strong retail, commercial and employment base and maintains a significant manufacturing and services sector with the presence of Irish Distillers in the town centre. The town also benefits from a number of tourism assets including the Jameson Experience and natural amenities such as the Dungourney and Owenacurra Rivers and open spaces including parks, woods and several developed amenity walks such as the Pontoon Walkway and the Ballyannan Woods Walkway.

The Cork County Development Plan 2022 provides for the population to grow to 19,423 by 2028. The planning strategy for Midleton thus targets significant future population growth, closely followed by growth in employment and services and community facilities, supported by the integrated development of public transport connections. To facilitate this growth, the County is progressing the development of a new urban expansion area in Water Rock and other sites served by high quality public transport services, notwithstanding implementation of sustainable transport measures such as walking and cycling connecting with and within Midleton. The CCDP 2022 thus prioritises enhancements of the commuter rail service, by double tracking the line and including a new railway station at Water Rock to support the planned urban expansion and strategic development of this node.

2.2.4. Future Growth and the Water Rock UEA

The East Cork Local Area Plan 2017 (LAP) and subsequently the CCDP 2022 aims to expand the economic base of Midleton to enhance local employment opportunities and to underpin population growth. The priority area identified for population growth in that document in the future is the Water Rock UEA. The UEA area, which is shown in **Figure 2-1** was chosen to form the basis of a major urban expansion of the town of Midleton because of its proximity to the Cork to Midleton railway line.

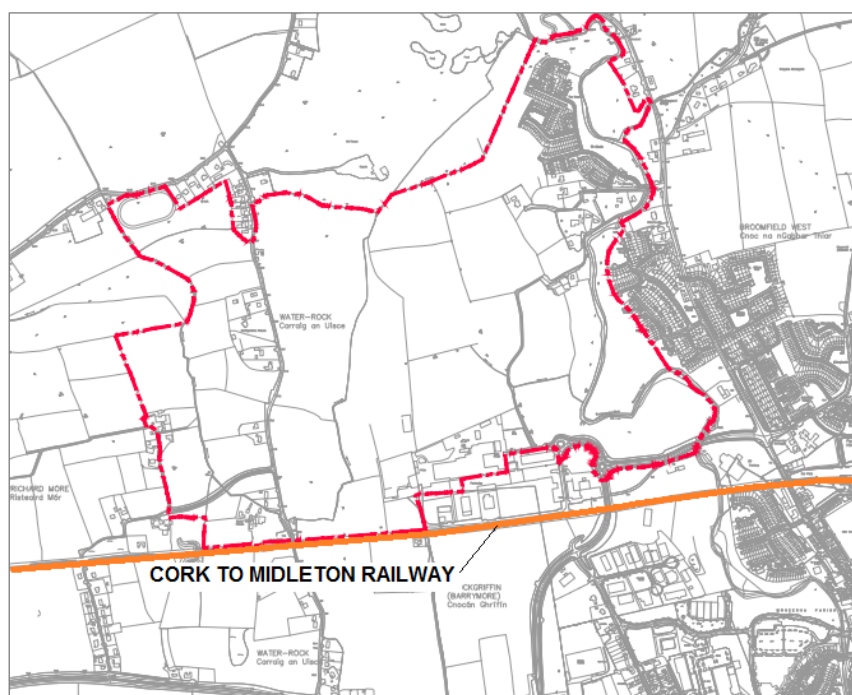


Figure 2-1 - Water Rock Urban Expansion Area

Within the CCDP 2022 provision is made for the development of the UEA for a range of uses including 2,500 houses, 40,000m² of community floorspace including 3 schools, 50,000m² of high-quality enterprise and employment floorspace, a new rail-stop and biodiverse green network across the UEA and along the River Owenacurra.

The development of the Water Rock UEA will be implemented across three phases. As part of Phase 1 up to 1,000 houses will be completed, 1,800 houses will be completed by the end of Phase 2 and by the completion of the UEA development in Phase 3 a total of approximately 2,500 houses will have been completed. Other developments such as school and parks will be developed over the three phases.

2.3. Other Future Infrastructure Projects

2.3.1. Carrigtwohill UEA Infrastructure

The Carrigtwohill Urban Expansion Area (UEA also known as Carrigtwohill North) is located to the north of Carrigtwohill as shown in **Figure 2-2**. It covers an area of approximately 100 hectares of zoned lands which are mainly just north of the Cork to Midleton railway line. It is bounded by Wisers Road to the west and Ballyadam Road to the east.

With reference to **Figure 2-2** the infrastructure which makes up the Carrigtwohill URDF Initiative UEA Infrastructure, which received planning approval from Cork County Council in September 2023, is described as follows:

- A. Western (A1) and Eastern (A2) Services Corridor Link Roads connecting Wise's Road (L3616-0) on the western side of the UEA with Carrigane Road (L3617-25) on the eastern side of the UEA. The roads will also provide connectivity to Station Road (L3603-0), Leamlara Road (L3607-37) and the Ballyadam Road (L7640-0) and includes the realignment of the Carrigane Road near Ballyadam Bridge;

- B. Northern Services Corridor Link Road connecting the Western Services Corridor Link Road with the new Northern Schools Link Road via an existing vehicular underpass below the Cork to Midleton railway line;
- C. Upgrade/ re-alignment of Wises Road (C1) from north of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge (C2) across the railway line providing connectivity to Wises Road south of the railway;
- D. Upgrade/ re-alignment of Station Road (D1) from south of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge (D2) across the railway line providing connectivity to Station Road south of the railway line;
- E. Upgrade/ re-alignment of Leamlara Road from its junction with Station Road to its new western junction with the Eastern Services Corridor Link Road and from north of the UEA to its new eastern junction with the Eastern Services Corridor Link Road;
- F. Upgrade/ re-alignment of Ballyadam Road from its new junction with the Eastern Services Corridor Link Road to the L7639-0 north of the UEA including the permanent closure of the existing Ballyadam Road between the Eastern Services Corridor Link Road and Carrigane Road to vehicular traffic including the junction of the existing Ballyadam Road and Carrigane Road;

The infrastructure will also include shared cycling/pedestrian paths connecting the new road network with the planned Carrigtwohill to Midleton Inter-urban Cycle Route, areas of green open space, underground services including surface water drainage networks including detention ponds and attenuation, foul water networks, electrical and fibre optic/ telecoms ducting and water and gas supply. Services will be connected to existing services/ infrastructure in Carrigtwohill as required.

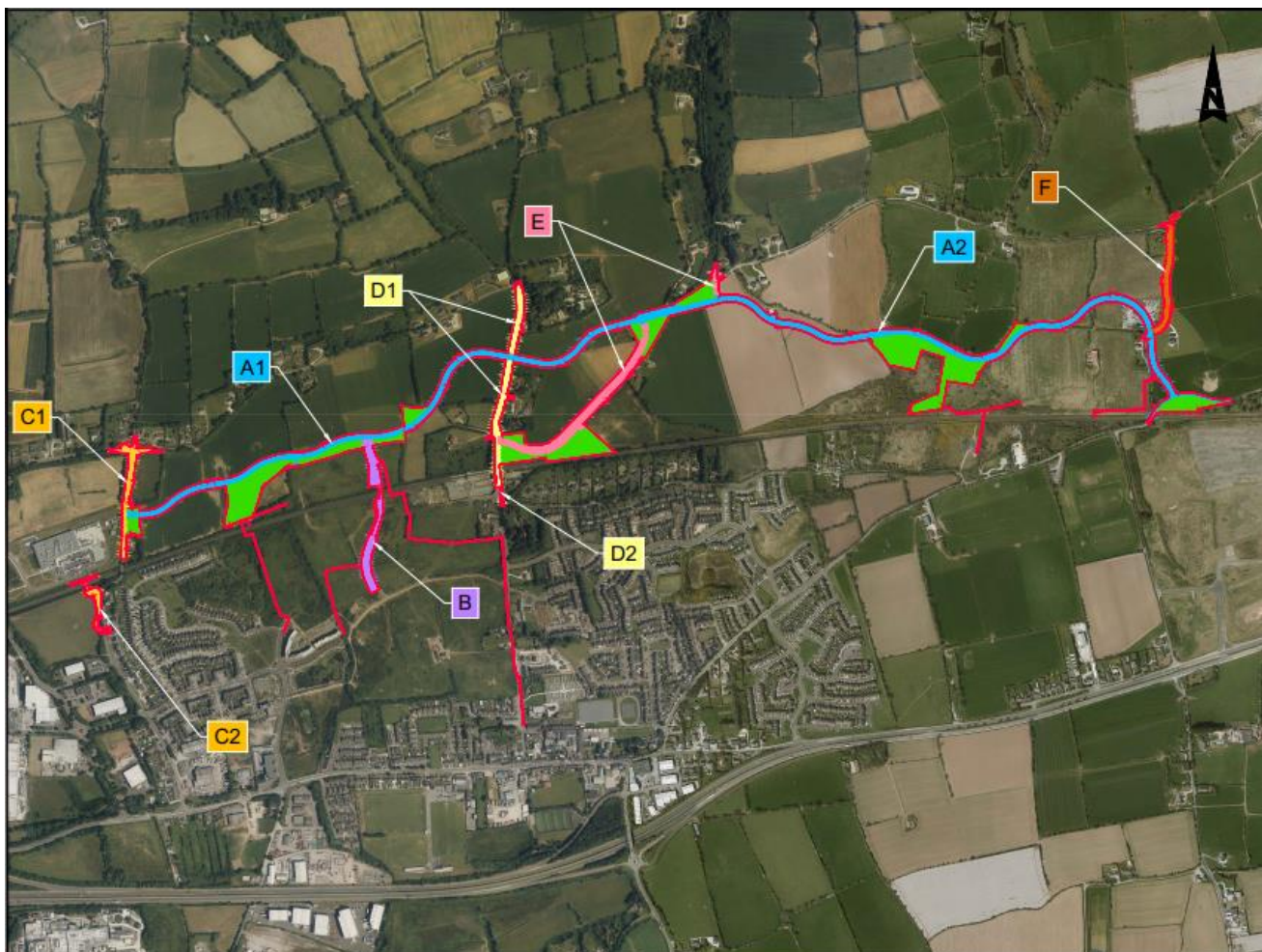


Figure 2-2 - Carrigtwohill URDF Initiative – UEA Infrastructure

2.3.2. Carrigtwohill URDF Initiative – Public Realm Infrastructure Bundle

Cork County Council approved Part 8 planning for the Carrigtwohill URDF Initiative – Public Realm Infrastructure Bundle on 27th June 2022. The project included:

- Carrigtwohill Main Street and Station Road public realm works enhancement, shown in **Figure 2-3** below including new link roads, road junction upgrades, footpath widening, provision of off-road cycling facilities, road re-alignment, resurfacing, signalisation, traffic calming measures, street lighting, demolition of buildings at the junction of Main Street and Station Road along with other small-scale demolition works and provision of new public spaces;
- Upgrade of junctions on Wises Road;
- Additional interim capacity upgrade measures at N25 Junction 3 (Cobh Cross) including widening and realignment of approach roads to the roundabout.

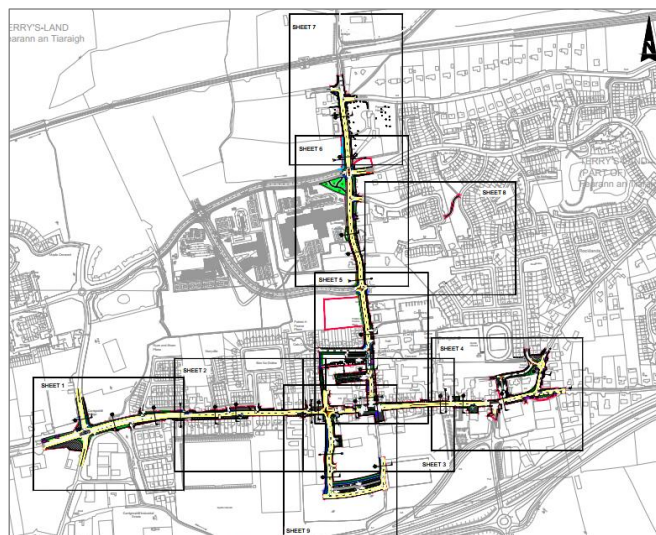


Figure 2-3 - Main Street and Station Road Public Realm Works

2.3.3. Station Road Schools Campus in Carrigtwohill

Cork County Council granted planning permission to the Department of Education (Planning reference: 19/5707) for a new school's campus on Station Road. This campus includes two new link roads connecting Station Road and Castlelake which have been completed, and comprises two primary schools and one post-primary school which are currently under construction. An extract of the site layout plan from the planning application is shown in **Figure 2-4** below.



Figure 2-4 - Main Street and Station Road Public Realm Works

2.3.4. Midleton to Dunkettle Inter-urban Cycle Route

The Midleton to Dunkettle Inter-urban Cycle Route (IU-1) is proposed in the Cork Metropolitan Area Transport Strategy 2040. This cycle route will connect major employment centres such as Little Island (10,000+ employees) and Carrigtwohill IDA Business Park (3,800 employees) with existing and proposed residential areas including Carrigtwohill, Midleton, Glanmire and Glounthaune. The Midleton to Dunkettle route will form

part of the Cork to Waterford Inter-urban Demonstrator which is included in the Department of Transport Pathfinder Programme.

Sections of this route which will connect to the Carrigtwohill to Midleton IUCR Phase 2 are described below.

2.3.4.1. Bury's Bridge/Dunkettle Cycleway

Cork County Council granted Part 8 planning permission for a strategic cycleway scheme connecting Bury's Bridge at Dunkettle outside Cork City with Carrigtwohill. This scheme, part of which has now been constructed, provides approximately 7.7 kilometres of pedestrian and cycle path segregated from vehicular traffic. The indicative route of the cycleway, as extracted from the Preliminary Design Report included with the planning submission, is shown in **Figure 2-5** below. The cycleway enters the east side of Carrigtwohill to the north of Cobh Cross (N25 Junction 3). It runs parallel to Carrigtwohill Main Street before turning north and running along the Castlake Access Road. It then joins the link roads associated with the new schools' campus as described above.



Figure 2-5 - Main Street and Station Road Public Realm Works

2.3.4.2. Carrigtwohill to Midleton Inter-Urban Cycle Route Phase 1

Phase 1 of the Carrigtwohill to Midleton Inter-urban Cycle Route received Part 8 Planning Approval from Cork County Council in 2022. This section of the route, shown in **Figure 2-6** below, runs west to east to the north of Carrigtwohill, primarily through the Carrigtwohill UEA, connecting the IDA Business Park in the west with lands zoned for Industry to the south of Carrigane Road in the east. It will provide a sustainable transport link between Carrigtwohill UEA lands and existing and future employment centres, Carrigtwohill Train Station, the new school's campus on Station Road and all existing and planned residential developments south of the railway line.

Phase 2 of the project, which is the subject of this Part 8 report, will connect to Phase 1 on the northern side of the railway line, on the eastern extent.

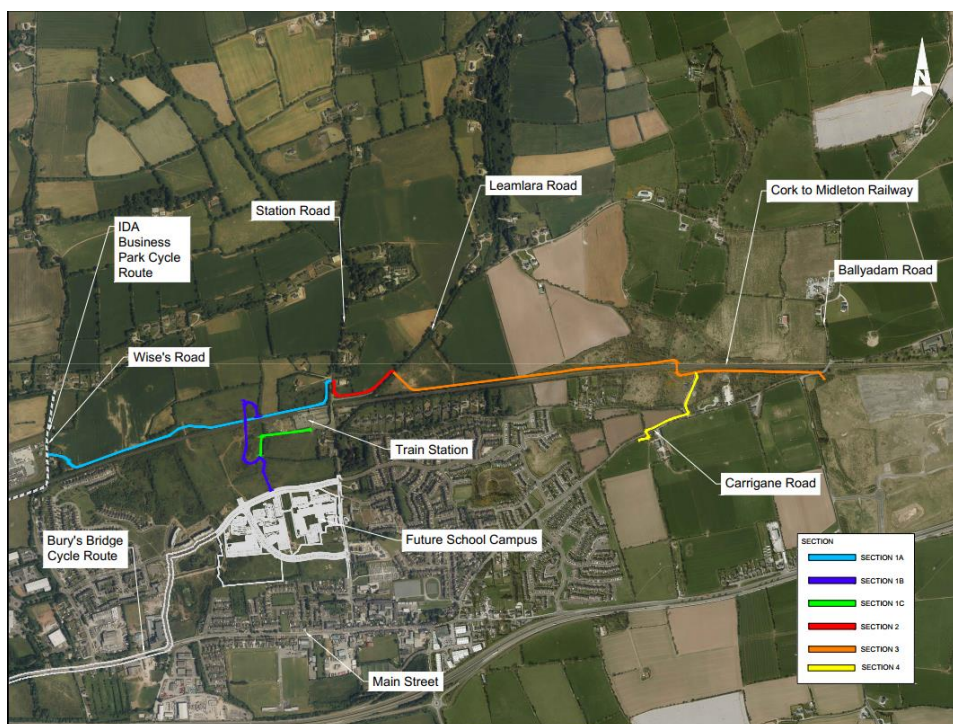


Figure 2-6 - Carrigtwohill to Midleton Inter-Urban Cycle Route Phase 1

2.3.5. Water Rock LIHAF Initiative – UEA Infrastructure

To support the development of the Water Rock UEA lands, Cork County Council proposed, within the East Cork LAP, three 'bundles' of core infrastructure to be developed. This approach enabled the development of individual and privately owned parcels of zoned lands within the UEA to be developed independently of each other but in accordance with the LAP. The infrastructure bundles are to be delivered to facilitate the development of individual phases of the UEA construction. The first bundle 'A' would be constructed to facilitate the development of Phase 1 of the UEA which includes the development of up to 1000 houses. Bundles B and C would be delivered to facilitate subsequent development.

The East Cork LAP identified eight projects which comprise the 'Water Rock UEA Infrastructure Works' required to facilitate the development of Phase 1, which included a number of key pieces of infrastructure required for later phases. The eight projects include and are referenced in **Figure 2-7** below:

1. Services Corridor Link Road - connecting the Northern Relief Road to Water Rock Road;
2. Surface Water Drainage System - for new/ upgraded roads and to allow for attenuated flows from future UEA development;
3. Junction Upgrade of Cork/ Midleton Road and Midleton Northern Relief Road;
4. Traffic Management Measures for Water Rock Road - to protect the N25 national road traffic from any increased turning movements at the Water Rock Road/ N25 Junction;
5. Bridge over Railway and Extension to Services Corridor Link Road;
6. Railway Stop - along existing Cork-Midleton Railway;
7. Upgrade/ Realignment of Water Rock Road - between Water Rock Road Level Crossing and the Carrigane Road;
8. Wastewater Pumping Station - to Pump Wastewater from Future UEA Development to the Existing Carrigtwohill Wastewater Treatment Plant.

Cork County Council were awarded Local Infrastructure Housing Activation Fund (LIHAF) funding by the Department of to the value of €5.5 million for the first four projects. These projects are currently under construction and due for substantial completion by November 2023.

Phase 2 of the Midleton to Carrigtwohill Urban Cycle Route will connect to Project No. 1, the Services Corridor Link Road. The new road will have full cycle and pedestrian provision and will connect to the Northern Relief Road which has existing segregated pedestrian and cycle lanes. From this route, the Midleton Train Station and Town Centre can be accessed via existing active travel infrastructure with further improvements to the network being conducted by Cork County Council under the 'Ballinacurra to Midleton and Water Rock Pedestrian and Cycle Scheme', described in more detail below.



Figure 2-7 – Water Rock UEA Infrastructure Works

2.3.6. Ballinacurra to Midleton and Water Rock Pedestrian and Cycle Scheme

Cork County Council are currently developing a network of cycle routes for the Midleton and Ballinacurra urban area. The route will connect Ballinacurra and its residential areas along the R630 and future residential development in Water Rock under the zoned UEA lands (as described in the section above) with the Midleton Town Centre. The scheme also connects to the Midleton Train Station and the Midleton to Youghal Greenway which is described in more detail below.

The 6.5km route proposed for development and shown in **Figure 2-8** below, runs from Ballinacurra to Midleton Train Station and follows along the R630 from Ballinacurra to Lakeview Roundabout on the L3621 Bailick Road, the Dark Road, the L3621 Riverside Way to the Midleton Gyrotory, through Market Green to the Northern Relief Road and on to the Midleton Railway Station and also from Bailick Road to Gaelscoil Mhainistir Na Corann. New footpaths, controlled crossings, bus stop upgrades and LED public lighting are included in the project scope. The route will eventually be extended westwards to connect to the Dunkettle to Carrigtwohill Pedestrian and Cycle Route via the Northern Relief Road while also connecting into the Midleton to Youghal Greenway at the Midleton Train Station. The scheme is being implemented in 5 phases, with Phase 1 along Bailick Avenue and Broderick Street currently under construction and due for completion in 2024/Q2.

The cycle network, providing convenient and safe linkage into the Midleton Town Centre, will connect to the Carrigtwohill to Midleton IU Cycle Route through a common connection point at the Water Rock Development, via Northern Relief Road. The network of high quality shared-use links will allow pedestrians and cyclists on the Carrigtwohill to Midleton IUCR to connect not only to employment areas but also the attractive town centre, several tourism facilities, restaurants and natural amenities that are all in close proximity.

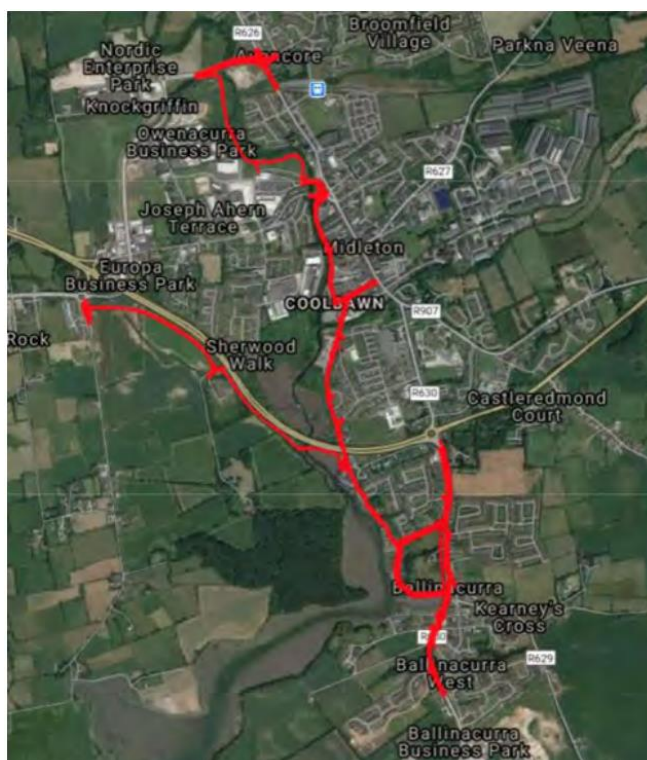


Figure 2-8 - Midleton to Ballinacurra Pedestrian and Cycle Scheme

2.3.7. Midleton to Youghal Cycle Route

The Midleton to Youghal Cycle Route is a 23km long greenway that runs along the disused Midleton to Youghal Railway Line. The greenway is an east-west cycle route that starts at the Midleton Train Station, with stop off points at the former train stations located in Mogeely and Killeagh, before terminating at the seaside town of Youghal. The greenway is currently under construction with the Midleton-Mogeely section expected to open shortly.

When finished the new greenway will provide a level gradient suitable for all ages and abilities as a safe, accessible and attractive route for cycling and walking and could attract 250,000 visitors annually. The development of the disused railway line is expected to create jobs and opportunities locally in towns, villages and communities. The route will link to the Dunkettle to Midleton IU-1 providing connectivity between Midleton and Cork City via Tivoli, Glanmire, Little Island and Carrigtwohill. The study also identifies a potential Midleton-Ballinacurra-Whitegate Greenway route. Work has commenced on the development of upgraded pedestrian and cycle routes from Ballinacurra to Midleton Train Station as referenced above.

2.3.8. Glounthaune to Midleton Twin Track Project

Iarnród Éireann are in the process of upgrading the existing rail line between Glounthaune and Midleton to include a second rail track that will enhance commuter services into and out of Cork city. The Glounthaune to Midleton Twin Track project covers the area of the network from Cobh Junction to Midleton Station, a total distance of approximately 10km, and will see the upgrading of the existing line to twin track over its entire length. As indicated by Iarnród Éireann *the project, along with the completion of the Kent Station Through Platform, the proposed Signalling and Communications upgrades and delivery of a new fleet will facilitate:*

- *Operation of a higher frequency service up to a 10-minute service from the current 30-minute service*
- *Increased capacity, better connectivity, and enhanced reliability of the suburban rail network*
- *Shorter wait times*

The project works will largely be contained within the existing railway corridor and will include the following:

- Addition of 2nd track over the full extent of the line;
- Addition of sidings/turn back facilities at Midleton;
- Modification/replacement of bridges and level crossings to facilitate the twin tracking
- Associated signalling upgrades and alterations;

- All associated civil works (retaining walls, boundary treatments, etc.).

A Railway Order application was granted by An Bord Pleanála in November 2023 to construct the scheme. Commencement of construction is planned for summer 2024.

2.3.9. Celtic Interconnector Project

The Celtic or Eirgrid Interconnector Project involves the construction of an electrical circuit between Ireland and France. The interconnector will have a capacity of 700MW and measure approximately 575km in length. A section of the High Voltage Direct Current (HVDC) and High Voltage Alternating Current (HVAC) underground land circuit is within the Phase 2 study area, in the vicinity of Carrigane Road, Ballyadam Road and the field next to Ballyadam House, as shown in **Figure 2-9** below.

The design of the Phase 2 Cycle Route will be compatible with the requirements of the Celtic Interconnector to ensure no adverse impacts to the construction of the cable.

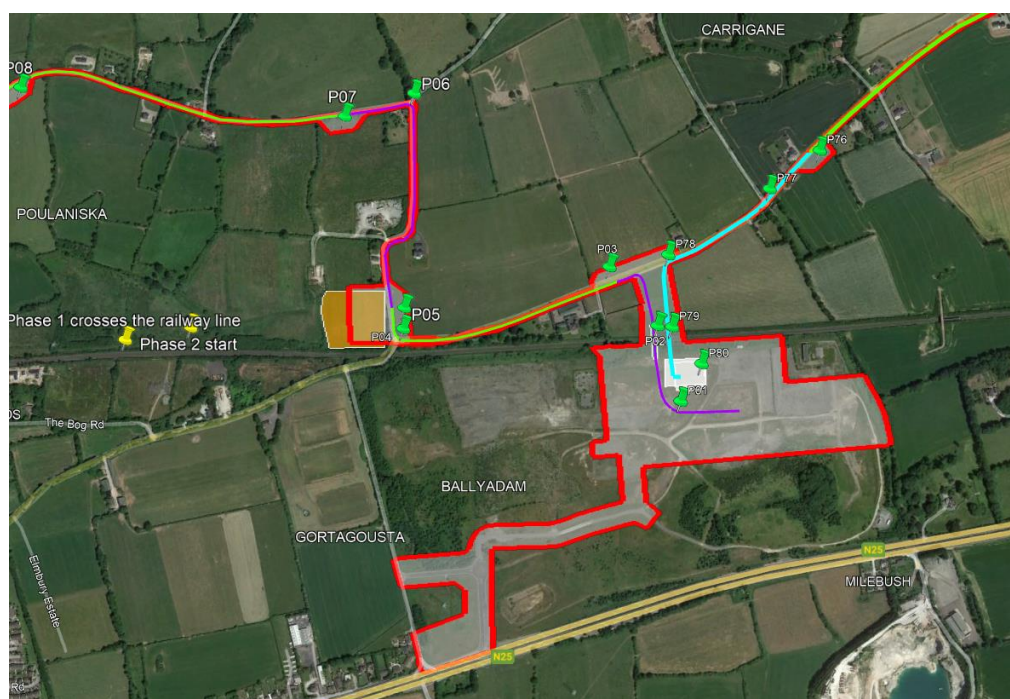


Figure 2-9 - Celtic Interconnector Project - Section of Electric Circuit within the Study Area

2.4. Scheme Extents

The proposed cycle route will be a continuation of the route set out in Phase 1 of the scheme, with the proposed Phase 2 route and study area generally located parallel to the Cork to Midleton Railway line and running in an easterly direction towards Midleton.

The Phase 2 study area starts just north of the railway line, at the termination point of Phase 1 and from there following an easterly direction through open agricultural lands that will be developed as part of the Carrigtwohill UEA. The route passes over several roads including Carrigane Road, Castle Rock Avenue and Ballyrichard More and crossing over the Water Rock Stream. The scheme will connect to the local community in Ballyrichard More before crossing Castle Rock Avenue and emerging into the Water Rock UEA development lands. From here the route will connect to proposed new road and cycle infrastructure that will be developed as part of the Water Rock UEA. The scheme extents is shown in **Figure 2-10** below.

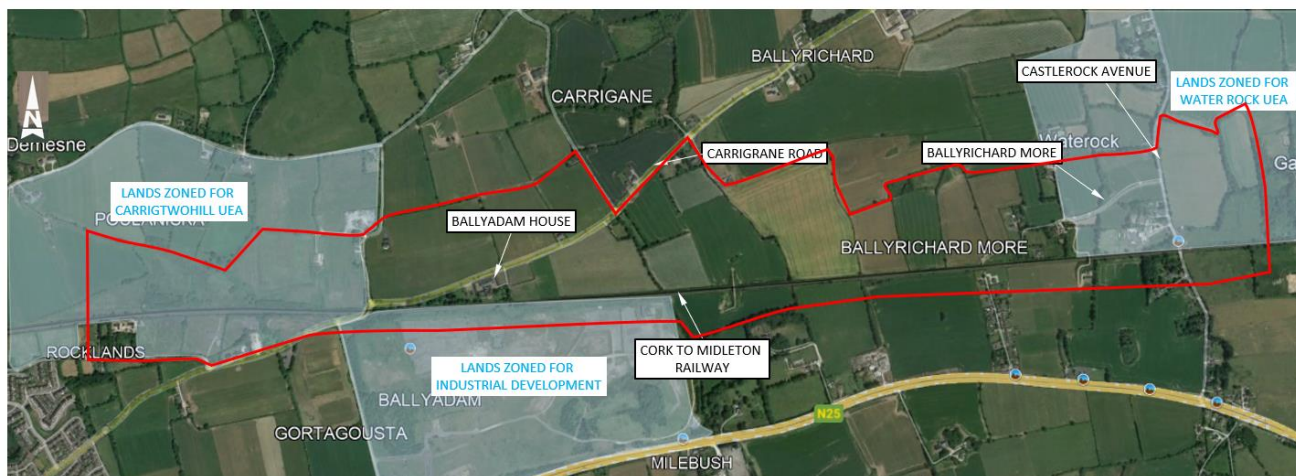


Figure 2-10 – Study Area for Scheme including Zoned Development Lands

2.5. Scheme Objectives

The objectives of the scheme are as follows:

Criteria	Objectives
Economy	<ul style="list-style-type: none"> To provide connectivity between key existing and proposed employment centres in Carrigtwohill, Little Island and Midleton with Carrigtwohill UEA and Water Rock UEA, residential areas in Carrigtwohill, Glounthaune, Glanmire and Midleton, Carrigtwohill Train Station, Midleton Train Station and the proposed Water Rock Station, commercial premises and other sustainable transport infrastructure in Carrigtwohill and Midleton in order to aid sustainable economic development in both towns; To facilitate the promotion and branding of Carrigtwohill and Midleton as places to visit; To form part of a strategic network of scenic greenways and cycle routes, encouraging cycle tourism and boosting the local economy of towns and cities; To minimise economic impact to landowners; To deliver a project which is cost effective through its whole life cycle.
Environment	<ul style="list-style-type: none"> To provide a route that is sympathetic to ecological habitats, designated sites and heritage sites; To ensure that the end product has taken due consideration of climate change including ensuring that the cycleway does not increase the risk of flooding elsewhere; To promote sustainable transport modes (walking, cycling and train use in particular) at an early stage in the development of Carrigtwohill UEA, the Water Rock UEA, the Carrigtwohill School Campus and new employment centres in Carrigtwohill and Midleton in order to reduce dependence on less sustainable and more polluting modes of transport i.e. private cars; To help reduce vehicle emissions by 50% in the Transport Sector by 2030 as part of the Pathfinder Programme of projects.
Safety	<ul style="list-style-type: none"> To ensure that the scheme aligns with the hierarchy of users wherein the needs of pedestrians are considered first, followed by the cyclist; To maximise user safety by providing a traffic free route that is segregated from vehicles wherever practicable; To consider users perception of safety and implement measures that enhance the sense of safety along the route;

Criteria	Objectives
Accessibility and Social Inclusion	<ul style="list-style-type: none"> • To ensure that due consideration is given to the rural context of the route and that relevant measures are reasonably implemented to protect the safety of users; • To ensure that the scheme design takes into account full consideration of safety towards both residents and landowners.
Integration	<ul style="list-style-type: none"> • To ensure that the scheme aligns with key national, regional and local policy; • To facilitate wayfinding for the scheme to Carrigtwohill Train Station, Carrigtwohill Town Centre, the planned Water Rock Train Station, Midleton Train Station, Midleton Town Centre, the Midleton to Youghal Greenway and other amenities; • To integrate the proposed route with other existing/ proposed cycleways in Carrigtwohill and Midleton i.e. Dunkettle to Carrigtwohill Pedestrian and Cycle Route, IDA Business Park cycleway west of Wisers Road, pedestrian/ cycle routes under construction in Water Rock UEA, Midleton Train Station, Midleton to Youghal Greenway and pedestrian/cycle routes under construction in Midleton Town.
Physical Activity	<ul style="list-style-type: none"> • To improve the health and general wellbeing of users; • To promote active lifestyles through provision of a convenient and high-quality facility which will encourage cycling and walking rather than car trips; • To support other health initiatives in Carrigtwohill and Midleton such as the Safe Routes to Schools projects.

3. Project Related Policies

The following National, Regional and Local policies are considered relevant to the project, with the most applicable sections summarised below.

3.1. National Planning and Transport Policy

3.1.1. National Planning Framework

The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of Ireland to 2040.

By 2040 there will be roughly an extra one million people living in Ireland. It is imperative that the NPF is able to manage such growth to ensure that the population increase enhances the entire country. The NPF has been developed to guide public and private investment, to create and promote opportunities for people across the country, and to protect and enhance the environment - from villages to cities.

As the NPF states, it is important that communities are designed to encourage active travel which supports improved public health, creating a variety of economic and social benefits.

"Communities that are designed in a way that supports physical activity, e.g. generously sized footpaths, safe cycle lanes, safe attractive stairways and accessible recreation areas, all encourage residents to make healthy choices and live healthier lives.

Countries with extensive cycle infrastructure report higher levels of cycling and lower rates of obesity. Healthy places in turn create economic value by appealing to a skilled workforce and attracting innovative companies"

The NPF has a variety of national objectives presented below which have been considered during the design of the Carrigtwohill to Midleton Inter-Urban Cycleway Phase 1 and 2:

- National Policy Objective 4 - Ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.
- National Policy Objective 6 - Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets, that can accommodate changing roles and functions, increased residential population and employment activity and enhanced levels of amenity and design quality, in order to sustainably influence and support their surrounding area.
- National Policy Objective 22 - Facilitate tourism development and, in particular, a National Greenways, Blueways and Peatways Strategy, which prioritises projects on the basis of achieving maximum impact and connectivity at national and regional level.
- 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.

3.1.2. National Development Plan 2021 - 2030

The National Development Plan (NDP) sets out the investment priorities that will underpin the successful implementation of the NPF. The NDP will steer planning policy as well as guide investment decisions at a national, regional and local level.

As stated in the NDP, the Irish economy's ability to realise its full growth potential in a sustainable way are all inextricably linked with and critically dependent on the quality of spatial planning. A key aspect of spatial planning is sustainable mobility. Providing sustainable transport options will enable growth by facilitating the increasing demand on the transport network, allowing for further development.

Active travel also contributes to Ireland's low-carbon economy aspirations. The NDP affirms the government's commitment to encouraging the use of walking, cycling and other active travel measures. It is providing significant funding for active travel measures, the aim of which is *'to provide a safe and connected network to those who wish to commute to work or school or make other journeys through healthy and sustainable means'*.

The NDP and the NPF outline the importance of compact growth, where more compact urban and rural settlements are supported by jobs, houses and local services. Compact settlements will increase the amount of short distance journeys where travelling by active modes is the most convenient form of travel if the provision is suitable.

The Carrigtwohill to Midleton Inter-Urban Cycleway Phase 1 has the opportunity to support more compact development, by linking existing and proposed development and by encouraging active travel journeys. The

scheme will offer an opportunity to provide additional transport options for commuters and visitors to the area. It will also provide exciting opportunities for businesses, the local community and tourists, providing a real benefit to the local economy.

3.1.3. Climate Action Plan 2023

The Climate Action Plan 2023 is a key component of the National Development Plan 2021-2030 and outlines co-ordinated changes across all sectors for halving Ireland's greenhouse gas emissions by 2030 and placing Ireland on course to becoming carbon neutral by 2050.

The transport sector was considered a 'Vital High Impact Sector' that could play a significant role in the move to a low carbon society and calls for a 50% reduction in emissions in this sector by 2030. The Climate Action Plan aims to achieve this by enacting policies that will reduce transport emissions by improving town, cities and rural planning, and by adopting the Avoid-Shift-Improve approach to travel needs. The Avoid-Shift-Improve approach is based on reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles. In support of the Avoid-Shift-Improve strategy, the Climate Action Plan notes that the main objectives to transform the transport sector are to:

- Change the way we use our road space to accommodate more sustainable modes;
- Reduce the total distance driven across all car journeys by 20%;
- Walking, cycling and public transport to account for 50% of our journeys;
- Nearly 1 in 3 cars will be an electric vehicle;
- Increase walking and cycling networks;
- 70% of people in rural Ireland will have buses that provide at least 3 trips to the nearby town daily by 2030.

One of the key actions towards achieving the above goals and the emissions ceilings set for the transport sector is the integration of land use planning with sustainable mobility at all stages of planning and development. The Plan recognises the importance of compact cities, towns and villages and prioritises the work under the Urban Regeneration Development Fund that supports more compact and sustainable development in Ireland's five cities and other large towns. The plan importantly states that the interaction between URDF funding and active travel funding, along with other relevant funding programmes, presents an opportunity to maximise the overall well-being benefits of communities as well as managing travel demand in a sustainable manner.

The plan acknowledges that safe and high-quality active travel infrastructure can significantly increase the scope for active travel to become a default mode of mobility. The plan actions the advanced roll out of 1000km of walking/cycling infrastructure in the short to medium term (2023-2025). The plan includes for the widespread and consistent application of the NCM and DMURS and the inclusion of safety improvements for sustainable mobility users within the existing road infrastructure.

The Climate Action Plan highlights the work conducted under the National Pathfinder Programme, which is key to implementing the National Sustainable Mobility Policy (SMP). The Plan supports this programme by advocating for improved training and capacity building within Local Authorities such that they are able to deliver the strategic, network based active travel projects that support the objectives of the Pathfinder Programme.

The Carrigtwohill to Midleton Inter-Urban Cycleway Phase 2 route supports several cross-cutting policies and objectives detailed in the Climate Action Plan. The route supports land use and transport integration and the development of compact cities through the connection of the URDF funded Carrigtwohill and Midleton Urban Expansion Areas through a high-quality pedestrian and cycle link. The route not only connects the UEA's but also provides vital links to key employment centres in Little Island, Carrigtwohill and Midleton, including new employment and residential areas and schools in Carrigtwohill. The route also provides important connectivity to the Carrigtwohill Train Station and new Water Rock Train Station facilitating intermodal transfer to further destinations.

The Carrigtwohill to Midleton Inter-Urban Cycleway is a section within the strategic cycle network between Cork and Waterford (the East Cork Sustainability Corridor) that is an Inter-Urban Demonstrator Project within the National Pathfinder Programme, thus supporting objectives within both the SMP and the Climate Action Plan.

3.1.4. Smarter Travel – A Sustainable Transport Future

As the population increases, it is imperative that the dominance of the motorised vehicle is reduced to ensure more sustainable journeys are undertaken. Increasing the number of sustainable journeys will ensure that the

increasing population does not have a detrimental impact on the potential for economic growth as well as air quality.

The Smarter Travel publication acknowledges the wide-ranging benefits that can be realised including the potential for cycling to contribute to the economy including to tourism in Ireland. National policy also acknowledges the benefits of developing a culture of walking in Ireland with walking a key tourism asset:

“The bicycle will be the transport mode of choice for all ages and will both improve the health, and reduce obesity levels, of the general population and build social capital. We will gain economically as cycling helps in easing congestion and providing us with a fitter and more alert workforce. The cycling culture will also enhance our tourism industry by attracting many visitors to cycle in Ireland.”

As part of consultation undertaken as part of Smarter Travel, there was significant interest in making cycling a more popular travel option and the need for investment, included safe cycleways, secure parking facilities and public bike rental schemes. For pedestrians, the need to ensure safe and well-lit walking routes attracted most attention. Through consultation, key trends have been grouped into five key policy goals which form the basis of the Smarter Travel policy document.

A number of the policy goals are supported by the Carrigtwohill to Midleton Inter-Urban Cycleway (Phase 1 & 2). Table 3-1 presents how the Carrigtwohill to Midleton Inter-Urban Cycleway will support Smarter Travel policy.

Table 3-1 - Smarter Travel Policy

Smarter Travel Policy	How the Carrigtwohill to Midleton Inter-Urban Cycleway (Phase 1 & 2) will Support Policy
<p>Improve quality of life and accessibility to transport for all and, in particular, for people with reduced mobility and those who may experience isolation due to lack of transport.</p>	<p>The Carrigtwohill to Midleton Inter-urban Cycleway has the opportunity to provide significant accessibility benefits, providing increased transport options for all. Improving the provision of cycling and walking, and improving connectivity to Carrigtwohill and Midleton Train Stations, can benefit those who do not have access to a car, reducing the potential for social isolation and improving access to employment and other key services.</p>
<p>Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks.</p>	<p>The scheme has the opportunity to create significant economic benefits including</p> <ul style="list-style-type: none"> • Providing the choice of a high-quality sustainable transport mode to existing and future employment centres in Carrigtwohill and Midleton. • Encouraging use of the railway line by provision of safe and high quality pedestrian and cyclist connectivity to stations. • Potential for increased tourism to the towns, supporting local businesses • Reducing congestion in peak periods as commuters have increased transport options. Journey reliability will be improved therefore creating economic benefits.
<p>Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions.</p>	<p>Increasing the amount of cycle and walking journeys is anticipated to reduce the demand on the motorised vehicle. Active travel is the cleanest form of travel therefore, improving cycle and walking provision will support national and international policy to reduce air pollutants including carbon dioxide.</p>
<p>Reduce overall travel demand and commuting distances travelled by the private car.</p>	<p>Providing a network of high-quality cycle and pedestrian routes with safe links to key destinations (schools, employment centres, residential developments) and to public transport will provide a viable alternative to car trips and will reduce commuting distances by private car.</p>

3.1.5. National Cycle Policy Framework

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

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

Other interventions include the following:

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

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

3.1.6. Get Ireland Active

Healthy Ireland, A Framework for Improved Health and Wellbeing 2013-2051 is the national framework for seeking to improve the health and wellbeing of people living in Ireland. The Framework identifies a number of broad inter-sectoral actions, one of which commits to the development of a plan to promote increased physical activity levels.

Get Ireland Active's aim is to increase physical activity levels across the entire population, thereby helping to improve health and wellbeing. Get Ireland Active has developed a plan which will seek to ensure that no group is disadvantaged and recognises that targeted interventions are required to address and overcome barriers to participation which are experienced by some people.

Get Ireland Active acknowledges the role that cycling and walking can play in achieving physical activity targets. The plan highlights the importance of good planning to promote the use of cycling and walking, stating that the layout of the environment has a significant impact on the levels of physical activity undertaken across age groups.

"The built environment is an important determinant of physical activity behaviour. The way the built environment is designed, planned and built can also act as a barrier to being active and can reinforce sedentary behaviour and car dependence.

Walking or cycling for transport or leisure is a form of physical activity that can easily be incorporated into the daily activities for many people. Supportive environments for walking, cycling and recreational and outdoor physical activity have many benefits beyond the immediate physical activity gains"

The Carrigtwohill to Midleton Inter-Urban Cycleway Phase 1 can be a positive example of how the built environment can be developed to promote physical activity, improving the health and wellbeing of those that choose to travel by bike or on foot. The Carrigtwohill to Midleton Inter-Urban Cycleway Phase 1 will be used for a variety of journey purposes including travelling to work (directly or via the train) and travelling to school. Travelling to work or school on foot or bike is an ideal opportunity to increase physical activity through everyday journeys.

3.2. Regional and Local Policy

3.2.1. Cork County Development Plan 2022-2028

3.2.1.1. Main Policy Material

The Cork County Development Plan 2022 (CCDP 2022) is a six-year plan that sets out the planning policy for the county up to the horizon year of 2028. The Cork County Development Plan sets out detailed objectives for land use and transport integration under Objective TM 12-1 and active travel under Objective TM12-2, including other key supporting policy areas which are relevant to the Carrigtwohill to Midleton Inter-Urban Cycleway Phase 1. These objectives are as follows:

Ref.	Objective
EC 8-5	<p>Connectivity</p> <p>Prioritise infrastructure delivery across the County to enhance connectivity (multi-modal transport and digital) with the wider southern region as supported in Chapter 12 Transport and Mobility and Chapter 13 Energy and Telecommunications.</p>
TO 10-8	<p>Walking / Cycling and Greenway</p> <p>Promote the development of greenways, walking and cycling routes throughout the County as an activity for both international visitors and local tourists in a manner that is compatible with nature conservation and other environmental policies.</p>
WM 11-10	<p>Surface Water, SuDS and Water Sensitive Urban Design</p> <ul style="list-style-type: none"> Optimise and maximise the application of Sustainable Urban Drainage Systems (SuDS) to mitigate flood risk, enhance biodiversity, protect and enhance visual and recreational amenity; all in the most innovative and creative manner appropriate and in accordance with best practices. Proposals should demonstrate that due consideration has been given to nature-based solutions in the first instance in arriving at the preferred SuDS solution for any development.
TM 12-1	<p>Integration of Land Use and Transport</p> <p>Support and facilitate the integration of land use with transportation infrastructure, through the development of diverse, sustainable, compact settlements, to achieve sustainable transport outcomes, with the pattern, location and design of new development in the County to support existing and planned well-functioning, integrated public transport, walking and cycling transport modes.</p> <ul style="list-style-type: none"> Residential development will, where possible, be carried out sequentially, whereby lands which are within or contiguous with the existing urban areas, and which are, or will be, most accessible by walking cycling or public transport - including infill and brownfield sites – are prioritised. Future developments will be planned and designed to maximise their accessibility by public transport, walking and cycling and in particular, larger scale, trip intensive developments, such as offices and retail, will generally be focused into central locations highly accessible by sustainable transport modes; New employment and residential development will be consolidated and intensified in a manner which renders it serviceable by public transport and ensures that it is highly accessible, by walking, cycling and public transport. Within Metropolitan Cork, trip intensive developments or significant levels of development will occur in locations which are well served by existing or proposed high capacity public transport; The integration of land use and transport is fundamental to delivering the Avoid-Shift-Improve approach to reduce both the need to travel, and promote the use of sustainable travel modes particularly walking and cycling (consistent with policy objectives in the Climate Action Plan) (12.5); The integration of land use and transport planning, particularly sustainable modes of walking and cycling is integral to realising the 10-minute town concept whereby a large proportion of the population may choose to walk to access many of their everyday needs within a safe, attractive and convenient 10-minute walk from their home. The preparation of Local Transport Plans will include a detailed analysis of permeability to facilitate the

delivery of the 10-minute town concept optimising the potential for climate change mitigation and adaptation, providing protection for biodiversity and enhancing public realm.

<p>TM12-2-1</p>	<p>Active Travel</p> <p>Deliver a high level of priority and permeability for walking and cycling to promote accessible, attractive, liveable, vibrant and safe settlements to work, live, shop and engage in community life, within a ten minute walk of one’s home. Prioritise development in our settlements that is well located and designed to facilitate walking, cycling and public transport trips. Promote equal access for all through the adherence to universal design in the external built environment to facilitate greater use of public transport, walking and cycling.</p> <ul style="list-style-type: none"> • New development areas will be permeable for walking and cycling, via safe, convenient and enjoyable routes, and the retrospective implementation of walking and cycling facilities shall be undertaken where practicable in existing neighbourhoods, to give competitive advantage to these modes. • Walkability and accessibility by walking mode will be a central objective in the planning and design of all new transport infrastructure and public transport services. • Support delivery of cycle routes, Greenway and Blueway corridor projects subject to appropriate site selection and environmental assessment processes • Support the development of a safe, coherent and continuous cycling infrastructure to cater for the needs of all groups of cyclists, especially new cyclists, school children and the elderly and support safe walking and cycle routes particularly in the approach to schools. • Engage with other agencies to explore the potential for the designation of cycling corridors, such as grey lanes, on particular routes within the existing road network • Promote sustainable pedestrian and cyclist greenway initiatives, maximising the potential for inter connections between greenways, and connections from residential and employment areas to greenways, subject to robust site selection processes and environmental assessment processes. • Seek to improve connectivity within the County and region for walking routes and commuter cycling routes and recreational amenity functions. • Deliver Inter-Urban Cycle Route IU-1 (CMATS), high-quality pedestrian cycle connectivity between Dunkettle and Midleton, ultimately connecting to the Midleton-Youghal Greenway (TM12-2-4)
<p>BE 15-6</p>	<p>Biodiversity and New Development</p> <p>Provide for the protection and enhancement of biodiversity in the development management process and when licensing or permitting other activities by:</p> <ul style="list-style-type: none"> • Encouraging the retention and integration of existing trees, hedgerows and other features of high natural value within new developments; • Requiring the incorporation of primarily native tree and other plant species, particularly pollinator friendly species in the landscaping of new developments; • Fulfilling Appropriate Assessment and Environmental Impact Assessment obligations and carrying out Ecological Impact Assessment in relation to development and activities, as appropriate; • Ensuring that the implementation of appropriate mitigation (including habitat enhancement, new planting or other habitat creation initiatives) is incorporated into new development, where the implementation of such development would result in unavoidable impacts on biodiversity - supporting the principle of biodiversity net gain.
<p>CA 17-2</p>	<p>Climate Action</p> <ul style="list-style-type: none"> • The CCDP supports the Climate Action Plan and Low Carbon Development Act 2021 which requires us in law to achieve no later than 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. The CCDP aims to reduce greenhouse gas emissions and energy use, especially in the transport sector which has the highest energy use by sector and, in terms of emissions, is second only to agriculture. Mitigatory measures in the CCDP include: <ul style="list-style-type: none"> ○ Integrating land use and transport planning; ○ Delivering compact growth;

- Implementing the avoid shift improve approach to transport policy;
- Delivering the 10-minute town concept;
- Promoting energy efficiency;
- Under Project Ireland 2040, the Government will commit to an allocation of 10% of the total transport capital budget for cycling projects and an allocation of 10% of the total capital budget for pedestrian infrastructure. The Government's commitment to cycling and pedestrian projects will be set at 20% of the 2020 capital budget (€360 million) per year for the lifetime of the Government.

Importantly, the CCDP 2022 highlights as one of its objectives under **TM12-2-1**, the delivery of the Dunkettle to Midleton Interurban Route IU-1 (as identified in Cork Cycle Network Plan – see below) as a high quality pedestrian and cycle facility.

3.2.1.2. Carrigtwohill

General Objectives:

The CDP 2022 outlines a number of general objectives which apply to all development proposals in Carrigtwohill. Those that applicable are to the Carrigtwohill to Midleton Inter Urban Cycle Route are included below:

- CT-GO-03: The green infrastructure, biodiversity and landscape assets of Carrigtwohill include its hedgerows, mature trees, woodlands, wetlands (adjoining Cork Harbour Special Protection Area and Great Island Chanel Special Area of Conservation), and other habitats. New development should be sensitively designed and planned to provide for the protection of these features and will only be permitted where it is shown that it is compatible with the requirements of nature conservation directives and with environmental, biodiversity and landscape protection policies.
- CT-GO-05: Support the implementation of the Carrigtwohill North Urban Expansion Area.
- CT-GO-07: Reserve land on either side of the railway route to facilitate the possible future upgrading of the route to double track standard. This objective applies to all land within 5m of the perimeter fence on either side of the railway. Open land uses, such as open space, surface car parking and agriculture will normally be permitted subject to the proper planning and sustainable development of the area.
- CT-GO-08: A network of designated walking and cycling routes shall be established to provide safe, convenient and pleasant routes between the town's main residential areas, schools, the town centre and the railway station complex, in accordance with the CMATS and the Cork Cycle Network Plan 2017 and supporting the implementation of the 10-minute town/neighbourhood concept
- CT-GO-09: Ensure that provision is made in proposals for new development, particularly for housing, employment, retail, and educational uses to provide safe, convenient and pleasant routes for walkers and cyclists linking the development to the railway station, town centre and the other principal areas of the town for walkers and cyclists. Any such provision must have regard to the existing deficiencies in infrastructure and the requirement to ensure the delivery of adequate infrastructure ahead of or in tandem with the new development. In achieving this objective, special attention will be paid to the layout of the development, to latest DMURS standards, to ensure that appropriate measures are taken to establish a walking and cycling friendly environment.
- CT-GO-12: Provide direct high quality segregated links for pedestrians and cyclists from Inter-Urban Cycle route / Greenway IU-1 (see CMATS) to Carrigtwohill Town centre, the IDA Business and Technology Park, the permitted Carrigtwohill Schools' Campus, and existing and future residential areas.
- CT-GO-16: All new development will need to make provision for Sustainable Urban Drainage Systems (SuDS) and provide adequate storm water infrastructure. Surface water management and disposal should be planned in an integrated way in consideration with land use, water quality, amenity and habitat enhancements as appropriate.

Carrigtwohill Urban Expansion Area

This area was first identified in the Cork County Council's 2005 Special Local Area Plan for Carrigtwohill and again in the 2011 Midleton Electoral Area Local Area Plan as an area capable of delivering significant residential development in tandem with the reopening of the suburban railway line. The Carrigtwohill North Framework Master Plan study was completed in 2015 and comprises a set of land use proposals for the development of the UEA. This approach was reflected in the 2017 Cobh Municipal District Local Area Plan (MDLAP) and is continued in the Cork County Development Plan 2022.

As per the CDP 2022 the 'vision for the Carrigtwohill North UEA when fully developed is the delivery of 2747 homes, 3 schools, a mixed use station quarter, a small park to the west and a large linear park to the east linked with a segregated inter-urban greenway and biodiverse green network, all integrated with the Main Town of Carrigtwohill via high quality sustainable transport linkages.' Development in this area is hoped to facilitate a significant modal shift to more sustainable transport modes due to the proximity of the railway line and existing/planned cycling and walking infrastructure.

The CCDP 2022 identifies significant onsite and offsite infrastructure that is required to facilitate the delivery of housing in the UEA. This infrastructure includes the provision of a new Western and Eastern Spine Link Road (reference CT-U-02 in **Figure 3-1**) and the completion of a pedestrian and cycling bridge (reference CT-U-11 in) providing vehicular, pedestrian and cycle links to land south of the railway. It also identifies the provision of a greenway (reference CT-U-03 in **Figure 3-1**) to comprise a cycleway and pedestrian pathway designed in accordance with DMURS Guidance document to the approval of Cork County Council and constructed as part of the development and linked to other parts of the greenway on adjacent properties. The greenway is shown indicatively to run from Wisers Road on the western boundary of the UEA as far as Ballyadam Road on the eastern boundary of the UEA. The greenway is shown indicatively to run north of and parallel to the Cork to Midleton railway line with a number of segregated pedestrian and cycling bridge links and underpasses (references CT-U-07, CT-U-10 and CT-U-11 as shown in **Figure 3-1**) to lands south of the railway line. CT-U-09 includes for a new at-grade segregated pedestrian and cycle crossing at Ballyadam Road to facilitate the continuation of the greenway to the east.

The CCDP notes that Carrigtwohill has the potential to be a leading settlement with regard to sustainable transport due to its position on the rail corridor, its diverse mix of land uses, its relatively flat terrain, the opportunity to deliver a new sustainable neighbourhood presented by the UEA and the opportunity for enhanced public realm in the town centre. The town would benefit from a coherent pedestrian and cycle network for the town that makes public transport and active travel more attractive travel mode choices. The plan also notes that to make the most advantageous use of the new railway service it is important to encourage the provision of safe, convenient and pleasant access to the station area for walkers and cyclists. The development of this network will also facilitate better access to the town centre and, ultimately, between the main residential areas. A small scale neighbourhood centre may be provided for within the UEA in order to support the 10 minute neighbourhood concept.

Under **Section 2.4.64** it is a mapped objective of the Council to 'implement the Carrigtwohill to Midleton section of IU-1 as a high-quality pedestrian and cycle facility. Design of Phase 1, from Wise's Road Midleton to Ballyadam, has been progressed. This includes the objective of providing direct high quality segregated links for pedestrians and cyclists from IU-1 to Carrigtwohill Town centre, the IDA Business and Technology Park, the permitted Carrigtwohill Schools' Campus, and existing and future residential areas'.

3.2.1.3. Midleton

General Objectives:

The CCDP 2022 outlines a number of general objectives which apply to all development proposals in Midleton. Those that are applicable to the Carrigtwohill to Midleton Inter Urban Cycle Route:

- MD-GO-02: Secure the delivery of the Water Rock Urban Expansion Area and supporting infrastructure through a progressive implementation programme.
- MD-GO-10: Provide the planned sustainable local road improvements including the new roads necessary to achieve the proposals contained in this plan.
- MD-GO-12: Ensure that provision is made in proposals for new development, particularly for housing, office, retail, industrial and educational uses to provide safe, convenient and pleasant routes linking the development to the railway station and the other principal areas of the town for walkers and cyclists. In achieving this objective, special attention should be paid to the layout of development to ensure that appropriate measures are taken to establish a walking and cycling friendly environment in accordance with the Cork Cycle Network Plan (2017).

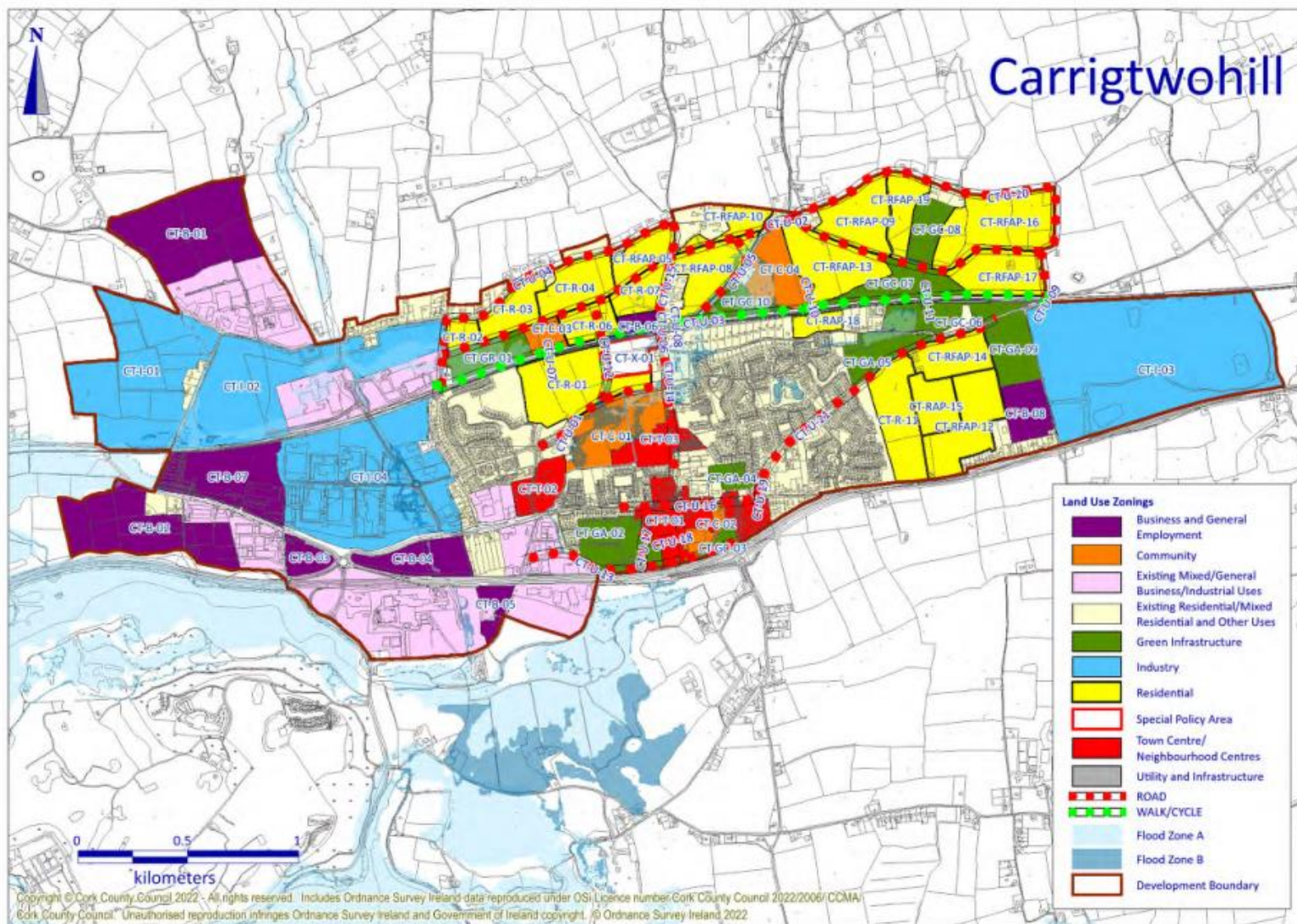


Figure 3-1 - Extract from Carrigtwohill Land Zoning Map taken from Cork County Development Plan (2022)

- MD-GO-13: Reserve land on either side of the railway route within 5m of the perimeter fence to facilitate the possible future upgrading of the route to double track standard from the City to Midleton Train Station.
- MD-GO-14: Complete the development of the Midleton to Youghal Greenway and identify and seek to develop suitable walking and cycle links to Midleton town centre to maximise access to and use of the Greenway where feasible.

Water Rock Urban Expansion Area

Water-Rock is an Urban Expansion Area (UEA) located to the northwest of Midleton and identified as a priority growth area in Metropolitan Cork for large-scale sustainable housing delivery along the Cork-Midleton Eastern Rail Corridor. The UEA has been identified as an opportunity site in the Special Local Area Plan in 2005 and was the basis for investment in the reopening of the rail-line to Midleton in 2009. A Water Rock Framework Masterplan was developed in 2015 which was then translated to specific planning policy in the MDLAP 2017. When fully developed, the Water-Rock UEA will accommodate approximately 2,500 houses, 40,000m² of community floorspace including 3 schools, 50,000m² of high-quality enterprise and employment floorspace, a new rail-stop and biodiverse green network across the UEA and along the River Owenacurra.

The site has received funding under the Local Infrastructure Housing Activation Fund (LIHAF) in 2017 for the delivery of strategic infrastructure that will enable the delivery of the various developments. This infrastructure includes the provision of a new Services Corridor Link Road (refer to MD-U-02 in **Figure 3-2**), from the Northern Relief Roundabout to the Water Rock Road, designed in accordance with DMURS guidance for a Link Street, providing public transport priority and pedestrian and cycle links. A new greenway (MD-U-06) running through the middle of the site, connecting to MD-U-07 Water Rock Road in the west with the proposed Water Rock Linear Park (MD-GR-08) in the east, has been identified as part of the infrastructure works, comprising a shared pedestrian/cycle route. The new linear park, MD-GR-08, spans both sides of the Owenacurra River and will include a pedestrian/cycle network with ancillary foot bridges. The Water Rock Road MD-U-07 (existing Castle Rock Road), will be upgraded to feeder route standard, and include sustainable pedestrian and cycle links. Existing trees and hedgerows should be retained where possible with replacement planting proposed where retention is not possible. A new feeder route, MD-U-08 including sections of the existing Ballyrichard More Road to be designed in accordance with DMURS with provision for pedestrian and cycle links.

The Water Rock UEA is organised around enhanced opportunities for walking, cycling and public transport use, with a key objective of building high quality, integrated communities in sustainable urban locations. The CCDP also notes that facilitating a modal shift to walking and cycling for local journeys within the town would help ease congestion. New cycle routes have been provided in the newer estates such as Broomfield and around the Northern Relief Road. A number of cycling and walking routes throughout the town centre have been developed with the Midleton to Ballinacurra active travel infrastructure currently under construction, with the aim of linking in to the Water Rock UEA on its northern extent. The CCDP also notes the development of the Greenway linking the City with Midleton via Tivoli, Glanmire, Little Island and Carrigtwohill under Section 3.3.74.

3.2.2. Cork Cycle Network Plan 2017

The Cork Cycle Network Plan was commissioned by Cork City Council and Cork County Council to provide a clear plan for the future development of the cycling network within the Metropolitan Area to encourage greater use of cycling trips to work, school, recreation and leisure. Inter-Urban cycle routes were proposed linking the Metropolitan towns and Cork City.

Route IU-1, shown in Figure 3-3, was proposed connecting Midleton to Dunkettle Roundabout/ Lower Glanmire Road, Cork City. The key locations served include Midleton, Carrigtwohill, Glounthaune, Little Island and Cork City. The proposed route is described as *'a fully segregated cycle track parallel to the rail line from Midleton to the west of Carrigtwohill village where it is proposed to provide a two way cycle track within the corridor of the N25'*.

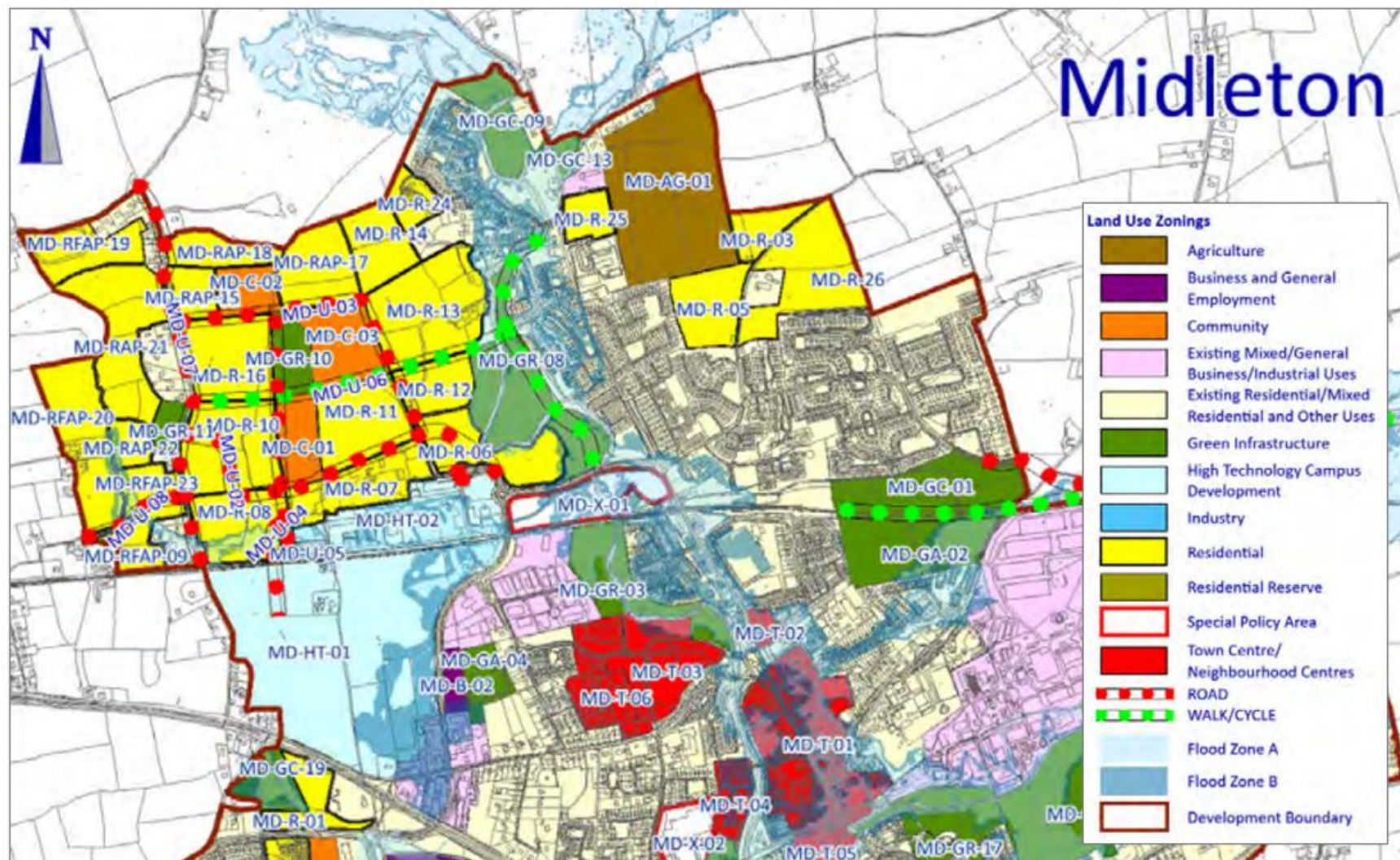


Figure 3-2 - Extract from Midleton Land Zoning Map taken from Cork County Development Plan (2022)

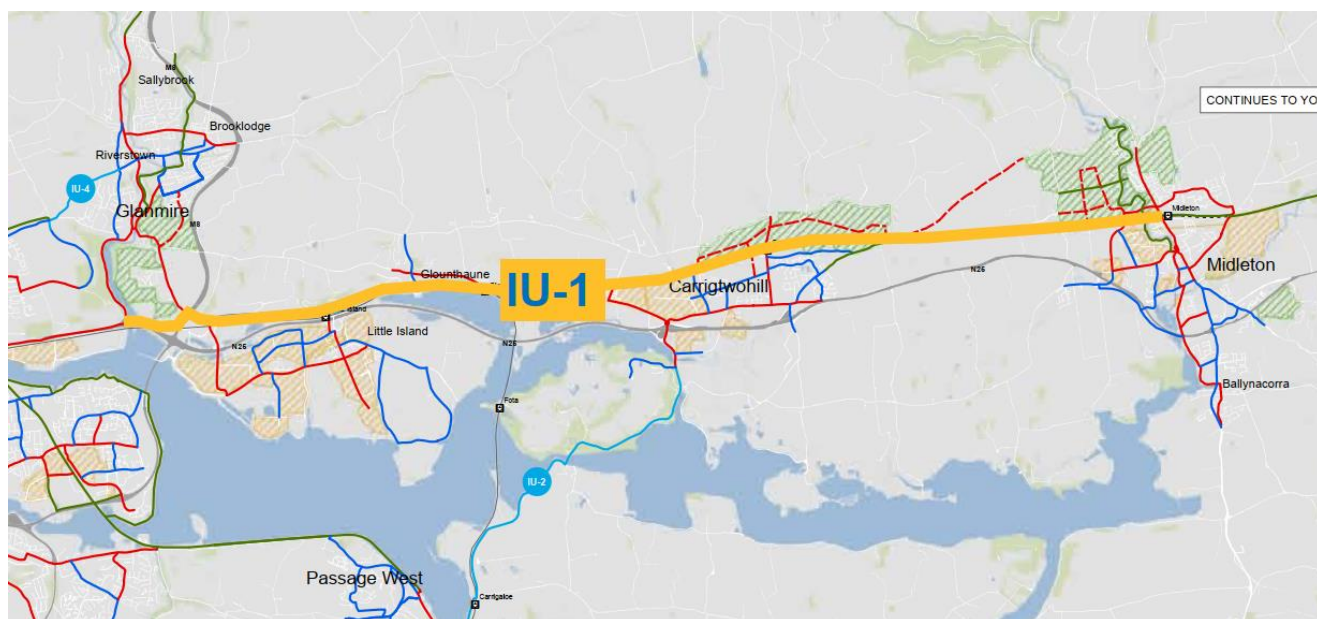


Figure 3-3 - Route IU-1 from Cork Cycle Network Plan

The Dunkettle to Carrigtwohill Pedestrian and Cycle Route and the Carrigtwohill to Midleton Phase 1 as described in Section 2 of this report forms part of this route connecting Dunkettle outside Cork City with Carrigtwohill. The Carrigtwohill to Midleton Inter-Urban Cycleway Phase 2 would form the next phase of this route with a connection between Carrigtwohill and Midleton.

3.2.3. Cork Metropolitan Area Transport Strategy 2040 (CMATS)

CMATS is a transport strategy that aims to deliver an accessible, integrated transport network that enables the sustainable growth of the Cork Metropolitan Area as a dynamic, connected and internationally competitive European city region as envisaged by the National Planning Framework 2040.

The Cork Cycle Network Plan 2017 (refer to **Section 3.2.2**) forms the basis of much of the strategy for cycling outlined in CMATS. The routes outlined in the Network Plan 2017 have largely been retained. The Inter-Urban cycle routes are described as routes which will comprise of low trafficked routes on selected minor or de-trunked roads, and in some cases, off road facilities. The Inter-Urban cycle route from Midleton to Dunkettle/ Lower Glanmire Road (parallel to the rail corridor) is identified as a key part of the inter-urban network.

4. Description of Proposed Cycleway

The Phase 2 Carrigtwohill to Midleton Inter-Urban Cycle Route is proposed as a high-quality, predominantly off-road cycling and walking facility that is approximately 3.7km long. The project location and red line boundary, as shown on the Locality Map provided with the Part 8 Drawings, covers an area of approximately 4.77 hectares. The route is designed to interface with and is compatible with new infrastructure planned in the Carrigtwohill UEA and the Water Rock UEA.

4.1. Cycle Route

The proposed Phase 2 cycle route is divided into a series of sections as shown in **Figure 4-1** below. These sections are described in summary below with further detail provided in the Part 8 drawings.

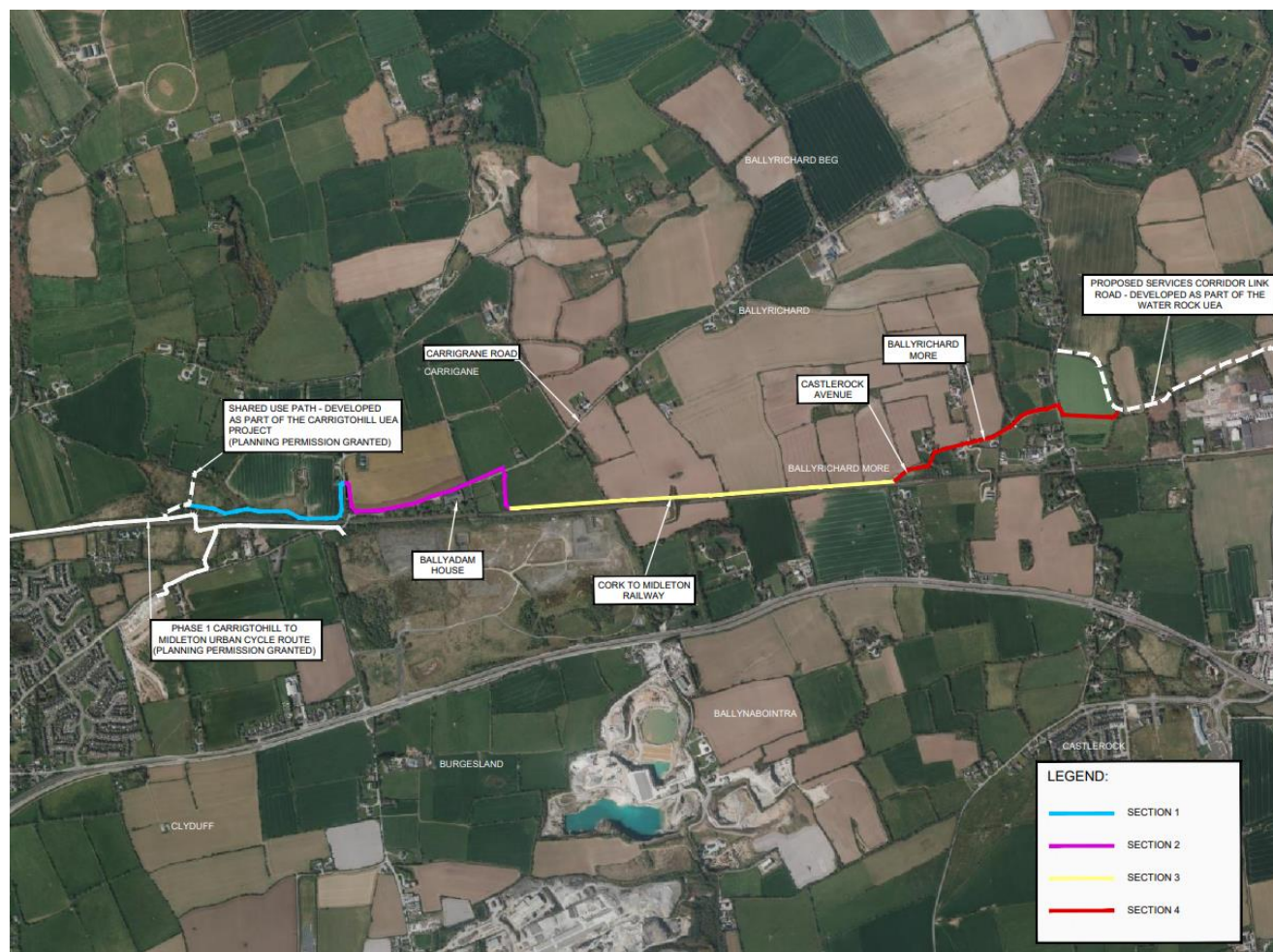


Figure 4-1 Phase 2 Route Sections

4.1.1. Section 1: Connection to Phase 1

The cycleway commences just north of the Cork to Midleton Railway Line within lands zoned for the Carrigtwohill Urban Expansion Area (UEA). The route connects to Phase 1 via a short link of active travel infrastructure being developed as part of the Carrigtwohill URDF Initiative – UEA Infrastructure. Part 8 planning for the UEA Infrastructure was approved by Cork County Council in September 2023. The connecting active travel link, being integral to the development of Phase 2, will thus be constructed in tandem with or ahead of the Phase 2 route.

The route will then be accessible from Phase 1 via the abovementioned link, before continuing in an easterly direction and running in parallel with the railway line. The alignment along this section is fairly straight, with minor changes in direction to avoid any impact to dense outcrops of vegetation while keeping to field boundary lines in general. The existing field boundaries along this section will be maintained with sections of hedgerow planted along a new fence line.

The route then turns northwards as it approaches Ballyadam Road Junction. The route continues northwards parallel to Ballyadam Road for a short section until adequate sight lines are achieved for a safe at-grade crossing. At this point, shown in **Figure 4-2** below, an uncontrolled raised table crossing will be provided, with a coloured surface texture. The proposed crossing point will include street lighting to improve visibility of pedestrians and cyclists, including traffic calming measures e.g. rumble strips and road signage to reduce the speed of approaching vehicles. The crossing point will require the removal of sections of existing hedges within the Ballyadam Road verge to provide adequate sight lines to cyclists and pedestrians, as indicated in the Part 8 Drawings.

New ducting will be provided to the road crossing on Ballyadam Road to facilitate connection of street lighting.



Figure 4-2 - Proposed location for raised table crossing on Carrigane Road (N)

A nature based surface water drainage system involving a combination of over the edge drainage and swales will be provided along Section 1. Surface water runoff will be directed to the grassed verge on one or both sides of the cycleway where water will infiltrate into the ground. This will be augmented by the provision of a linear planted swale in the northern verge. A collector pipe in the swale will convey excess water and discharge it to an existing drainage ditch. Discharge will be limited to greenfield run-off rates via check dams in the swale and a flow control device if required. The drainage ditch discharges to the Poulinska Stream north of the railway line.

Existing natural vegetation and trees that will be removed as part of the works will be replaced by similar or suitable native planting, semi-mature trees and shrubs.

4.1.2. Section 2: Carrigane Road

From its crossing point on Ballyadam Road (N), the cycleway continues its east-west alignment north of and parallel to the Carrigane Road with the existing hedgerow maintained as a buffer between the road and cycle route. The buffer area will also include a grassed verge of 3m. Agricultural lands form a boundary on the northern side of the route. A new hedge will be planted inside a new fenceline to screen these lands from the cycle route. This will also act as a wind break for cyclists.

The alignment then proceeds southwards with an at-grade road crossing proposed on Carrigane Road, provided to the east of Ballyadam House. The crossing location, as shown in **Figure 4-3**, will consist of a signalised toucan crossing with new street lighting to improve visibility of pedestrians and cyclists. The crossing location will include traffic calming measures in the form of rumble strips and road signage to reduce the speed of approaching vehicles. The crossing point will require the removal of the existing hedge line within the northern road verge, as indicated in the Part 8 Drawings, to facilitate adequate sight lines for cyclists and pedestrians. New ducting will be provided to facilitate connection of the street lights and signal infrastructure.

The southern alignment passes through a private agricultural field with an existing stone boundary wall. Approximately 10m of the wall will be demolished to allow the cycle lane to pass through. The route proceeds southwards through the field before re-joining the general railway line alignment, proceeding in an easterly direction.

To the north of Carrigane Road, a nature-based surface water drainage system involving a combination of over the edge drainage and swales will be provided. Surface water runoff will be directed to a grassed verge on one or both sides of the cycleway where water will infiltrate into the ground via a linear planted swale.

Over the edge drainage is proposed south of the crossing of Carrigane Road. Again, a planted swale with check dams will collect water in the verge and allow it to infiltrate to ground. Excess water will be conveyed to an additional SuDs feature such as a rain garden i.e. a planted depression provided at the lowest point on the field.



Figure 4-3 - Proposed location for raised table crossing on Carrigane Road

4.1.3. Section 3: North of Cork to Midleton Railway Line

In Section 3 the cycle route follows the railway line along an east-west axis keeping to agricultural field boundaries. Trees will be planted along the northern field boundary, while maintaining the hedgerow to the south along the railway line. Approximately halfway through Section 3, the route crosses an existing agricultural overpass which facilitates farm activity across the railway line. Given the proximity of the cycle route to the railway line at this point, it was necessary to create an underpass beneath the embankment of the overbridge to maintain a straight cycle route. A cross-sectional profile of the underpass is provided in **Figure 4-4** below. The proposed underpass will be a minimum of 10m from the existing overpass abutments.

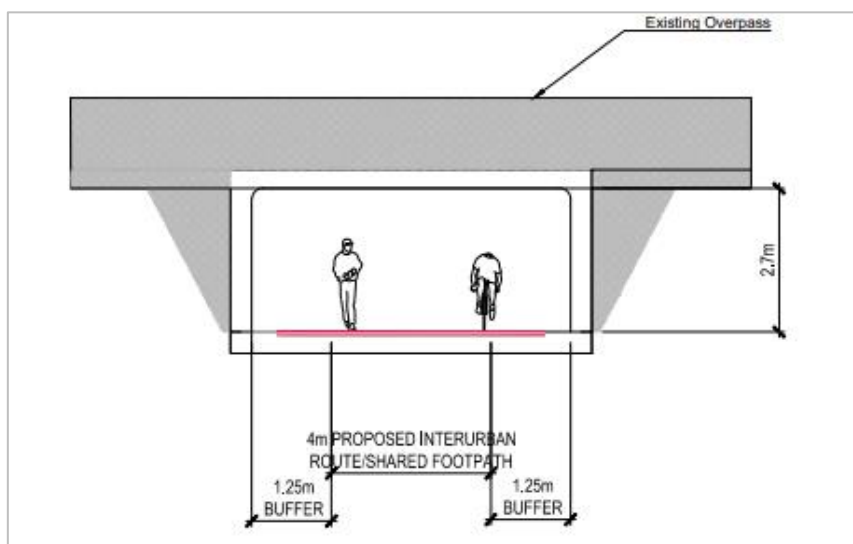


Figure 4-4 - Typical Cross-section through Underpass

Nature based over the edge drainage is again proposed along this section. Again, a planted swale with check dams will collect water in the verge and allow it to infiltrate to ground. Excess water will be conveyed to an additional SuDs feature such as a rain garden i.e. a planted depression provided at the lowest point on the field. The cycle route will be raised above existing ground levels as necessary and constructed to allow for existing north to south flows to be maintained below the route.

4.1.4. Section 4: Ballyrichard More Road

The cycle route deviates slightly from the railway line once it meets an existing access track to the west of the Ballyrichard More Road which accommodates minor farm movements. The route continues as a segregated cycle lane adjacent the farm track before proceeding northwards along Ballyrichard More Road. The short northern section of road that provides access to 3no. private properties will be re-surfaced and converted to a shared street, where cyclists will have priority over vehicle movements. The shared street will be denoted by road signage and road markings.

The cycle route will then continue off road, and to the north of Ballyrichard More Road following agricultural field boundaries. An at-grade raised crossing is proposed at the junction with Castle Rock Ave./Water Rock Road. The route then crosses the Water Rock Stream, above the existing culvert structure, thus removing the need for an additional water crossing or works within the stream. The route continues across Castle Rock Ave./Water Rock Road, with an at-grade crossing provided just north of its junction with Ballyrichard More Road, as shown in **Figure 4-5** below.



Figure 4-5 - Proposed location for raised table crossing on Castle Rock Avenue

An uncontrolled raised table crossing will be provided, with a coloured surface texture. The existing streetlights will be enhanced by new lighting columns provided at the junction, and may require additional ducting. Traffic calming measures in the form of rumble strips and road signage will be included to reduce the speed of approaching vehicles.

From this point, the route crosses through the hedge boundary, a section of which will be removed to ensure adequate sightlines are provided for pedestrians and cyclists crossing. The route then emerges at the Water Rock UEA where it joins the planned Services Corridor Link Road.

The route running parallel to the farm track will include a grassed verge allowing water to infiltrate to ground. Any excess surface water will be directed to the lowest point of the field on the adjacent Section 3 where various SuDS features including a rain garden are proposed. The existing over the edge drainage system will be retained along the shared use section. The detailed design will ensure there is no increased risk of flooding to adjacent properties. The cycleway running parallel to Ballyrichard More Road will be sloped towards the grassed verge on the southern side of the cycleway. A perforated large collector pipe will be provided in this verge. This will collect and attenuate excess run-off in the verge. This pipe will connect to the existing drainage system on Ballyrichard More Road. Discharge will be limited to greenfield run-off rates. The road drainage system connects to the Water Rock Stream. The section crossing over to the Water Rock UEA lands will comprise a grassed verge with filter drain on the northern side of the cycleway. This filter drain will discharge attenuated flows to the surface water drainage system delivered as part of the infrastructure for the Water Rock LIHAF Initiative.

4.2. Proposed Cross Section

The cross section of the cycleway as shown in **Figure 4-6** will be a minimum of 4 metres wide with a minimum planted verge of 3m on either side where this is achievable. The path will generally consist of an asphalt surface and will be constructed at-grade or slightly above existing ground levels. A new fenceline that is permeable to wildlife will be erected along the sections noted above.

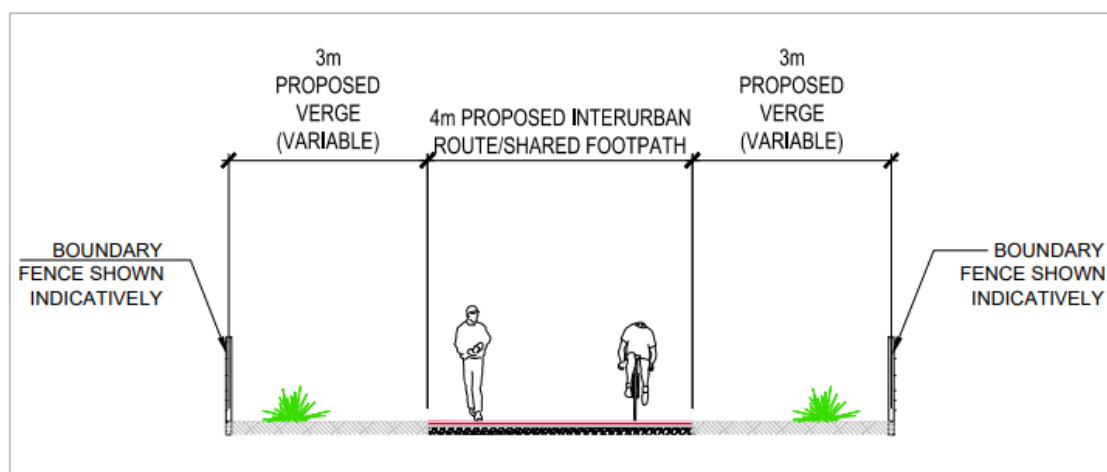


Figure 4-6 – Typical Cross Section of Phase 2 Cycle Route

4.3. Traffic Signs and Road Markings

Traffic signs and road markings will include shared use signage, traffic calming signage and associated road markings and cycle and pedestrian motifs on the shared use path. All signs and road markings will be designed in accordance with the DoT's Traffic Signs Manual.

4.4. Street Lighting

Public lighting will be provided along the full length of the route including at junction crossings to improve the safety and security of all users. The public lighting design will be undertaken in accordance with Cork County Council's Public Lighting Manual and Product Specification 2021 and will include the proposed layout and associated ducting and power supply details. The design of the lighting system will take into consideration the potential impacts of artificial lighting on bats and other wildlife occurring along the corridor. The design will also take into account the bat roost identified at Ballyadam House as well as foraging and commuting routes such as hedgerows and treelines present in the study area. The lighting design will include low-wattage, warm light

consisting of Light Emitting Diode (LED) luminaires and column heights shall be carefully considered to minimise light spill and glare visibility.

4.5. Proposed Landscape Strategy

Ecological considerations have been key factors in the route selection of the inter-urban cycle route. Where possible the route has been chosen to run parallel and offset from existing hedgerows and treelines so that they can be preserved. The route will only require existing hedgerows to be removed at road and field boundary crossings. In total, it will be necessary to remove approximately 891m of hedgerows/ treelines to construct the route. This will be mitigated by the replacement of this with a minimum of 2,281m of new hedgerows/treelines (an increase of 1,390m) aligned to the route as well as new areas of planting in SuDS features throughout.

Planting will be specified by a Landscape Architect under the advice of a suitably qualified and experienced ecologist to enhance local biodiversity value as appropriate for each section of the route. An objective of the planting strategy will also to provide amenity value to enhance the cycle route and to provide surface water pollution prevention measures.

5. Proposed Construction Methodology

The works will commence with site clearance and accommodation works. Temporary traffic management including measures for pedestrians and cyclists will be put in place. Trees/ vegetation to be retained will be marked and protected and the site boundary will be fenced off. Natural buffer areas on existing watercourses outside of the infrastructure area will be maintained and protected during the construction of the proposed infrastructure. The site will be cleared of redundant fencing and road signage, street lighting to be replaced and existing vegetation to be removed. Vegetation clearance will be done in the appropriate season, i.e. outside the bird nesting season (March 1st – August 31st inclusive).

Underground utilities that conflict with the main works will be uncovered using mechanical excavators and hand digging where appropriate. A utility survey, including slit trenches for verification, will be carried out during the detailed design stage to determine the location of services to the most accurate extent possible. Protection works or any service diversions that are required will be undertaken at this stage.

The route of the cycle/ pedestrian path will be excavated to formation/ sub-formation level. It is anticipated that generally the maximum excavation depth will be 500mm. Excavation of the top soil and road verge will largely be undertaken by mechanical means with any spoil arisings to be removed off site or reused locally where testing confirms its suitability. The path will be limited to a 4m wide asphalt path with concrete kerb restraints on either side of the pavement. The new path will be constructed using a bituminous pavement construction in accordance with the TII Specification for Road Works Series 900 – Road Pavements. A 150mm layer of imported stone will be placed and compacted followed by asphalt layers respectively.

As detailed in the project description, the route crosses an existing agricultural overpass that crosses the Cork to Middleton railway line. An underpass with a 6.5m wide clearance will be constructed through the embankment of the existing overbridge to facilitate the cycle route. This will require temporary closure of the overbridge. The area for the underpass will be excavated and a pre-cast concrete box culvert installed. Spoil arisings will be removed offsite or re-used locally where testing confirms its suitability. The overbridge and embankments will be reinstated and the bridge re-opened. Once installation is complete, lighting and surfacing will be installed in the underpass and it will be connected to the rest of the route.

The route passes through an existing stone wall of which approximately 10m will be demolished. Suitable hand tools, alternatively a jack hammer, will be used and the demolished material will be removed as soon as possible. A temporary fence and barricading of the area around the structure will be undertaken to ensure safety of the travelling public along the Carrigane Road.

Where the route crosses the Water Rock Stream, west of the Ballyrichard More/Castle Rock Ave Junction, the existing culvert structure will be used, thus eliminating the need for additional construction works or instream works associated with a new crossing. Drainage works will run in tandem with the route construction phase.

At grade road crossings of Ballyadam Road, Carrigane Road and Castle Rock Avenue will be constructed under temporary traffic management measures. New road signs, road markings, public lighting columns, traffic signals and bollards will be installed and commissioned where required. Temporary traffic management measures will be removed when appropriate.

Areas of soft landscaping along the route will be top-soiled, seeded and planted following specification by a Landscape Architect working with a suitably qualified and experienced ecologist. Maintenance of new planting will be undertaken by the Contractor for a minimum of two years following completion

6. Environmental Summary

6.1. Flood Risk Assessment

A flood risk assessment (FRA) for the Carrigtwohill to Middleton Inter-Urban Cycleway Phase 2 has been undertaken in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government & Office of Public Works, 2009). The FRA was completed to inform the proposed development of potential flood risk in the study area and is included as part of the Part 8 planning application.

The objectives of the FRA are to:

- Identify potential sources of flood risk;
- Confirm the level of flood risk and identify key hydraulic features;
- Assess the impact that the proposed development has on flood risk;
- Develop appropriate flood risk mitigation and management measures which will allow for the long-term development of the site.

The assessment included a review of the likely effects of climate change, and the long term impacts this may have on the development.

Having reviewed the available information there are a few historic flood event records in the area, however none of these are affecting the site itself. The nearest potential source of flooding has been identified as the Water Rock Stream which crosses the study area at Ballyrichard More Road. The stream crossing consists of a culvert structure. Review of predictive flood mapping identify that there is no overtopping of the bridge and the site resides in Flood Zone C with low probability of flooding, being outside of any fluvial and tidal flood source. The Climate Change scenario has been reviewed and there is no overtopping of the existing culvert during the 1% AEP Climate Change event.

There is no proposed works to the existing culvert structure, as it is wide enough to accommodate the width of the proposed cycleway. Hence the cycleway will not increase any flood risk at this point.

The Flood Risk Assessment concludes that the development is in agreement with the core principles contained within the Planning System and Flood Risk Management Guidelines.

6.2. Appropriate Assessment Screening

An Appropriate Assessment Screening Report in respect of the proposed development was prepared to assist Cork County Council, in its capacity as the competent authority, by providing it with sufficient evidence to make a properly informed determination as to whether or not Appropriate Assessment under Article 6(3) of the Habitats Directive (92/43/EEC) is required.

The AA screening was prepared in line with the Habitats Directive, as transposed into Irish law by the Habitats Regulations, relevant case law and guidance from the European Commission, the relevant Government Departments, and the Office of the Planning Regulator, on the basis of objective information and adhering to the precautionary principle.

Following the assessment the proposed development will not, either individually or in combination with other plans or projects, give rise to impacts which would constitute significant effects on the Great Island Channel SAC, Cork Harbour SPA or any other Natura 2000 site, in view of their conservation objectives. Therefore, it recommended that Cork County Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed development. Should any aspect of the design or construction methodology for the proposed development be materially changed, a new AA Screening Report would be required.

6.3. Environmental Impact Assessment Screening

An Environmental Impact Assessment screening report was carried out in accordance with the Planning and Development Regulations as amended 2001- 2023 (which give effect to the provisions of EU Directive 2014/52/EU), and the Roads Acts 1993-2022.

The report assessed the potential impact of the Carrigtwohill to Middleton Inter-Urban Cycleway Phase 2, in conjunction with committed developments in the surrounding area. The project is deemed a sub-threshold development; hence the potential for significant environmental effects arising as a result of the proposed project

has been evaluated, in accordance with the requirements of Schedule 7A and Schedule 7 of the Planning and Development Acts 2001-2023.

Based on all available information, and taking account of the scale, nature and location of the proposed project the authors of the EIAR screening report deemed that the preparation of an EIAR is not a mandatory requirement.

6.4. Ecological Impact Assessment

An Ecological Impact Assessment (EclA) Report has been prepared for the Carrigtwohill to Midleton Inter-Urban Cycleway Phase 2 in accordance with the CIEEM Guidelines (2018), as updated in April 2022. The report describes the biodiversity present within the footprint of the proposed development, evaluates the importance of ecological features on a geographic scale, assesses the likely effects of the proposed development on key ecological features and proposes appropriate measures to avoid or reduce those effects. Furthermore, this EclA proposes ecological enhancements of the proposed development, which have been taken into account in the preliminary design to ensure that it reflects the principle of Biodiversity Net Gain, in line with Cork County Council policy.

The EclA concludes that based on suitable measures proposed in the report being adopted the proposed scheme will not give rise to any significant negative effects on the biodiversity or ecology of the receiving environment and will be aligned with the principle of Biodiversity Net Gain.

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