Clifton Scannell Emerson Associates

Section 38 Report

Mahon Cycling Scheme

Comhairle Cathrach Chorcaí
Cork City Council

NTA
Údarás Náisiúnta Iompair
National Transport Authority

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1 Introduction & Background

Clifton Scannell Emerson Associates (CSEA) were engaged by Cork City Council (CCC) to carry out consultancy services and PSDP role for the design of approximately 5.3km in length of cycle infrastructure along Ringmahon Road, Skehard Road, Avenue De Rennes, Castle Road and Ballinure Avenue as well as providing a tie-in with the adjacent Passage Greenway at Ballinsheen Road and providing a pedestrian-cyclist link from Ashwood to Castle Park.

The overall aspiration of the scheme is to deliver a high quality, safe, coherent, direct, and attractive cycle network. The delivery of this infrastructure will provide opportunities to upgrade and enhance the identity of localities along the route, assisting in providing inherent orientation, and enhancing the physical presentation and appeal of localities so as to encourage more walking and more cycling for trips to destinations along and within the lateral catchment of the route.

The proposed solution, which emerged as the preferred option from an options study, involves the provision of dedicated cycle facilities, the installation of zebra crossings with raised platforms at suitable locations, buildouts to reduce road width to 6m for full length, add trees/grass verges where possible, and signalised junctions at Ringmahon Road West and Skehard Road, at Avenue De Rennes and Skehard Road and at Avenue De Rennes and Ringmahon Road. The preliminary layout is shown in in Appendix A. This solution will achieve the scheme objectives whilst providing the NTA and CCC with the best value-for-money design for the medium to long term.

1.1 Scheme Extents

The study area extends approximately 5.3 km and comprises links to key destinations. The scheme is divided into seven areas, with extents described as follows and shown in Figure 1-1 and Figure 1-2.

- **Area 1: Ringmahon Road (1,620m)**
  The area extends between the west and east junctions with Skehard Road. This link forms a semi-circular throughway, with a large primary school located immediately on Ringmahon Road, and a Gaelscoil and secondary school nearby;

- **Area 2: Avenue De Rennes (430m)**
  The area comprises a north-south link between Ringmahon Road and Skehard Road;

- **Area 3: Skehard Road (920m)**
  The area extends between Skehard Road junction with Blackrock Ave to the west and Ringmahon Road to the east;

- **Area 4: Castle Road Link (530m)**
  The area connects with Ringmahon Road (Area 1) to the south and extends north to Cork Harbour Greenway and several sports pitches.

- **Area 5: Ballinure Avenue (400m)**
  The area connects with Skehard Road (Area 3) to the north and extends south to St Michaels Drive (via the Maples). The link provides the access to the main entrance to St. Michael's Cemetery and to the pedestrian/cycle access to Mahon Point Shopping Centre.

- **Area 6: Passage Greenway Tie-In (280m)**
  The area connects with Ringmahon Road (Area 1) to the Passage Greenway via Sean Cronin Park and Ballinsheen Road.

- **Area 7: Mahon East/West Link(1,100m)**

The area connects with Ringmahon Road (Area 1) to the west and to the east and extends to Loughmahon Park Car Park. The link, which connects Mahon Drive with Lakeland Crescent and crosses Avenue De Rennes (Area 2), provides a permeability link to pedestrians and cyclists via Loughmahon Park. To the east, the link connects to several sports pitches on Ringmahon Road.

Figure 1-1: Scheme Extents

Figure 1-2: Area Extents

1.2 Project Background

Cork City is undergoing an exciting and continual process of change in order to adapt and anticipate the needs of its current and growing population. The Cork Metropolitan Area Transport Strategy 2040 (CMATS) proposes significant traffic management changes that will change the culture and expectation of mobility within the city. Such changes will contribute greatly to increased use of cycling and better utilisation of the public realm.

The scheme is located in the southeast of Cork City and encompasses a predominantly residential area with several schools, sports facilities and retail outlets. The catchment has no substantial length of dedicated cycle facilities. As such, the transport network is heavily focused on motor-based vehicles. The area has therefore been recognised as lacking quality cycle facilities, which discourages people from cycling within this area and to and from the city centre. Cyclists must share the road with the general traffic in traffic lanes that are wide enough to encourage unreasonably high speeds for the residential nature of these roads. The lack of proper cyclist facilities discourages some people from cycling even for short journey trips (e.g. less than 15minutes trips).

The proposed cycle network has the capacity to contribute positively to both the local area and to its residents through a combination of direct and indirect benefits. The modal shift from private car to walking or cycling, which is particularly feasible for short distance trips, is linked to a reduction in greenhouse gas emissions. This in turn lowers the level of harmful particulate matter in the ambient air.

Air quality is further improved upon through reduced vehicular noise and speed levels. Public health is also directly benefited through increased levels of physical activity in the population.

The provision of Active Travel infrastructure to provide a safe, coherent and functional network of cycle and pedestrian facilities encourages uptake through the phenomenon of 'numbers through safety'. Without designated infrastructure and traffic calming measures, the modal share of Active Travel methods for commuting will stagnate due to user hesitance arising from perception of the existing level of service provided to slow modes within a transport network that is dominated by motor vehicles. Increased provision of accessible Active Travel facilities can stimulate demand in vulnerable population cohorts which were previously uncatered for. Modal shift is best stimulated through initiatives which focus on both on both infrastructural and behavioural change intervention. There is also scope, through traffic calming and bus priority measures, to increase the modal share of public transport within the area.

Active Travel also provides numerous socio-economic benefits. The space and infrastructure required for large numbers of pedestrians and cyclists are often significantly more economical to provide when compared to the costs associated with new roads or railways. Active Travel trips are also generally short-distance trips and therefore increase the demand for local retailing. Low-income areas also have associated low levels of car ownership. The provision of Active Travel infrastructure can improve accessibility and mobility for lower income groups, as well as for people with mobility impairments or disabilities.

The challenge is to reconcile the complex and often competing demands for the available space through innovative design and engineering, and to secure stakeholder buy-in through robust analysis, effective communications, and certainty of quality of delivery. Traffic management type solutions on some mature residential roads, combined with segregated facilities on wider busier carriageways, will lead to the development of a cycle network in a manner that best suits the competing community needs.

The area typifies both the opportunity and the challenges of urban cycling in Cork City. At present, there is latent demand for good cycle facilities in the southeast of Cork City as it is a largely residential area within a short distance of trip attractors including several primary and secondary schools, sport facilities and clubs, the Passage Greenway, Blackrock Castle and Pairc Uí Chaoimh.

There is a need to provide high-quality facilities for pedestrians, cyclists and public transport in order to encourage people to switch to sustainable modes of transport and to provide safe and efficient movement of people within Cork City. This provision would be an investment in Cork City and County, its economy, environment and its public realm. The proposed scheme would create a better quality public realm with visual enhancement of the area. This investment would facilitate increased pedestrian and cycle movement across the city improving connectivity between businesses, schools, housing, places of worship, etc creating more attractive and vibrant streets. It would also reduce dependence on the use of cars for short and short to medium trips reducing carbon footprint.

There is opportunity with this scheme to reward the cycling and walking culture by delivering a high-quality pedestrian and cycling facility along these popular routes and, in doing so, to reinforce the qualities and successes of the places through which it passes. The proposed scheme will not only increase accessibility and permeability within the study area but will also provide enhanced and safer connectivity with other areas and routes. Ultimately, the route should be delivered to improve safety, reduce journey times, and contribute towards increased numbers of trips being made by bicycle and by foot in the local catchment.

2 Project Concept

The main aim of the scheme is to deliver the on-street infrastructure necessary to provide continuous cycle infrastructure along the route..

2.1 Aims

The aims of the Mahon Cycling Scheme are;

- to provide a safe, direct, cohesive, comfortable and attractive walking and cycling route;
- To increase mode share for public transport, walking and cycling for those living, working and availing of services along the corridor;
- to support increased accessibility and permeability on foot/ by bike, along, and through, the route – enhancing connections to homes, workplaces, schools, leisure facilities, public transport and services nearby; and
- To fully integrate any potential new system with existing and future planned public transport investments in the area.

2.2 Objectives

These aims will be achieved through delivery of the following scheme objectives:

- To provide safe, accessible and functional pedestrian and cycle network through improvement of footpath & crossing facilities for vulnerable road users and pedestrians, e.g. continuous and consistent pedestrian facilities; reduced crossing delays; and additional crossing locations for pedestrians;
- Reduced vehicle speeds and carriageway widths on self-enforcing traffic calmed roads where cycle facilities are on the carriageway;
- To provide a safe and legible route for commuter, leisure and delivery cyclists to access the retail and residential premises along the route;
- To provide a connection to the cycle facilities on Skehard Road and into Cork City Centre;
- To introduce traffic calming measures (tree lining, reduced carriageway width, toucan crossings etc) to enhance safety for vulnerable road users and reduce traffic speeds;
- To provide a route that can cater for demand - this route in particular has a large residential catchment, therefore users are likely to have a highly varied age, cycling ability and trip purpose; and
- To maintain, and enhance where possible, the residential identity of the street and corresponding visual cohesion to avoid a 'built-up' streetscape whilst giving public transport and active modes priority where practicable. i.e. bollards instead of guard rails, providing shelter from wind/rain where possible, provision of smooth surfaces that are free from obstructions, routes that minimise inclines, reducing conflict points for cyclists by providing cyclist priority, avoidance of street clutter, removal of on street parking.

2.3 Target Users

Local residents making walking and cycling trips as well as transit pedestrians, delivery cyclists, commuter cyclists and leisure cyclists.

The proposed solutions will achieve the above objectives, whilst providing the best value-for-money design for the medium to long-term.

A multi-disciplinary approach, reflecting the vision of the Design Manual for Urban Roads and Streets (DMURS) for an integrated design process and providing opportunities for improvement of the public realm for all, is being taken in the design of this cycle route.

3 Policy Context and Design Guidance

As the existing infrastructure within the study area is considered substandard for some road users, a review of current policy was undertaken so that necessary changes to comply with these current requirements can be proposed.

The following policy documents and relevant national design guidelines have been reviewed.

3.1 National Level

3.1.1 National Cycle Manual (NCM)

The National Cycle Manual (NCM) is a national guidance document to guide planners and engineers in their work to improve cycling provision in urban areas.

Cycling as a vulnerable mode of transport should be supported by a good design with principles of sustainable safety applied.

There are five principles, which should be followed in every design:

- Functionality – cycle facility design is fit for purpose and follows movement related functions and place related functions.
- Homogeneity – reduction in the relative speed, mass and directional differences of different road users sharing the same space.
- Legibility – self-evident, self-explanatory and self-enforcing road environment.
- Forgivingness
- Self-awareness

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

3.1.2 Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors

Published in April 2021 by the NTA, the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors (CBC) has the following Design Guidelines Objectives:

- Facilitate a modal shift from private vehicle use to public transport use and cycling;
- Improve public transport accessibility across the city;
- Deliver a more attractive, reliable and convenient bus system for Dublin; and
- Deliver safe, segregated cycling facilities along each corridor.

The CBC proposes to meet these objectives through the delivery of dedicated bus lanes and cycle tracks. Optimal cross-sections are central to the proposed designs to include footpaths, cycle tracks and bus lanes on both sides of the where feasible. However, the constraints of planning and designing within an existing city are recognised within the CBC and a flexible approach using engineering judgement to rationalise junction and link layouts to best serve the needs of the local catchment is required. In the approach to cycle infrastructure design, the CBC not only aims to cater for existing cyclists, but more particularly for younger and older cyclists, mobility impaired cyclists or new cyclists as well as those who currently do not cycle but would be prepared to, subject to improved safety and greater cycle infrastructure provision.

3.1.3 Design Manual for Urban Roads and Streets (DMURS)

DMURS provides guidance relating to the design of urban roads and streets. It outlines principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets. This Manual sets out an integrated design approach influenced by the type of place in which the street is located and balance the needs of all users. It also aims to put well designed streets at the heart of sustainable communities creating physical, social and transport networks that promote real alternatives to car journeys, namely walking, cycling and public transport. The manual key design principles are as follows:

- To support the creation of integrated street networks, which promote higher levels of permeability and legibility for all users, and in particular more sustainable forms of transport;
- The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment;
- The quality of the street is measured by the quality of the pedestrian environment; and
- Greater communication and co-operation between design professional through the promotion of a plan-led, multidisciplinary approach design.

3.1.4 National Planning Framework 2040 (NPF)

The NPF is the Government's high-level strategic plan to improve transport, tourism and sport infrastructure by 2040. This document supports an ambitious growth target to enable Cork City to grow by 125,000 residents by 2040.

Sub headed Project Ireland 2040, the framework seeks to achieve ten strategic outcomes, building around the overarching themes of wellbeing, equality and opportunity. Two of these ten shared priorities are Sustainable Mobility and Enhanced Amenity and Heritage. Sustainable Mobility's special focus is on the provision of safe alternative active travel options to alleviate congestion and help to meet climate action objectives, where Enhanced Amenity and Heritage aims to investment in high-quality infrastructure to create living space with defined character and attractiveness.

The key future growth enablers for Cork relevant to this scheme are:

- Delivery of large-scale regeneration projects for the provision of new employment, housing and supporting infrastructure in Cork Docklands (City Docks and Tivoli);
- Progressing sustainable development of new greenfield areas for housing on public transport corridors;
- Intensifying development in inner-city and inner suburban areas;
- Enhanced regional connectivity through improved average journey times by road; and
- Improved traffic flow around the City, which, subject to assessment, could include upgrades of the N40, and/or alternatives which may include enhanced public transport

3.1.5 National Development Plan 2018-2027 (NDP)

The NDP underpins the NPF by outlining the investment priorities for the framework do ensure successful implementation and value-for-money deliverables. The plan defines National Strategic Outcomes (NSO), with the relevant NSOs defines as;

- NSO 1 – Compact Growth;
- NSO 3 – Public Transport;
- NSO 4 - Sustainable Mobility;
- NSO 8 - Transition to a Low-Carbon and Climate Resilient Society.

3.1.6 Climate Action Plan 2021

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

Measures related to active travel include:

- Action 225: Continue the improvement and expansion of the Active Travel and Greenway Network
- Action 228: Encourage an increased level of modal shift towards Active Travel (walking and cycling) and away from private car use
- Action 249: Balance better movement priorities within urban areas so transition the built environment and public domain from one that is "vehicle centred" to being "people centred" to align with the goal of net zero by 2050

3.1.7 Smarter Travel – A Sustainable Transport Future

This policy document is A New Transport Policy for Ireland 2009-2020 and includes the following five key aims:

- 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,
- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks,
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions,
- Reduce overall travel demand and commuting distances travelled by the private car,
- Improve security of energy supply by reducing dependence on imported fossil fuels.

These aims are underpinned four principal themes:

1. Reduce distance travelled by private car by focusing population and employment growth in urban areas, combined with fiscal measures to encourage behavioural change;
2. Ensure alternatives to the car are more widely available, through improved public transport, cycling and walking;
3. Improve the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies; and
4. Strengthen institutional arrangements to deliver the Smarter Travel targets.

These four principal themes were supported by a total of 49 actions to be delivered over the lifetime of the policy and an overview of the current implementation status of those individual actions is being published alongside the nine background papers for public consultation.

Action 15 of Smarter Travel relates to cycling and commits toward the publication and implementation of a National Cycle Policy Framework (NCPF) that will address issues such as –

- The creation of traffic-free urban centres to facilitate cycling;
- Investment in a national cycle network with urban networks given priority;
- Cycle training for schoolchildren; and
- Integration of cycling with other transport modes, e.g. carriage of bicycles on public transport.

Action 16 relates to walking and outlines a number of proposed initiatives designed to create a culture of walking in Ireland. These include –

- The creation of larger traffic-free areas in urban centres;
- Providing safe pedestrian routes;
- Improving the surface quality of footpaths;
- Introducing 30 km/h zones in central urban areas where appropriate; and
- Publication of a national walking policy.

3.1.8 Sustainable Mobility Policy Review

The Sustainable Mobility Policy Review, Background Paper 2, Active Travel was published by the Department of Transport, Tourism and Sport to inform public consultation on Ireland's sustainable mobility policy. The purpose of the paper is to provide an opportunity to review public transport policy 'to ensure services are sustainable into the future and area meeting the needs of a modern economy' and by reviewing the role of Active Travel modes in the context of the wider transport network while raising some issues for consideration in developing future policy.

The five benefits of Active Travel that can be capitalised on are identified as:

- Environmental - reduced levels of carbon emissions and greenhouse gases;
- Health - improved levels of fitness and public health generally from increased activity;
- Safety - increased levels of active travel can stimulate the increased provision of quality footpaths and cycle paths by public authorities;
- Economic - increased active travel usage can lead to reduced congestion levels and improved accessibility in urban areas; and
- Social - increased provision for active travel modes can drive improved transport equity.

3.2 Regional Level

3.2.1 Regional Spatial and Economic Strategy for the Southern Region (RSES)

The RSES is a strategic development framework published by the Southern Regional Assembly and sets out a vision for the sustainable physical, economic and social development of the Southern Region and provide guidance for local level policies. The relevant Transport Priorities for the Cork Metropolitan Area from the RSES are;

- The development of a metropolitan cycle network focused on the City, its environs and metropolitan area towns, and connectivity between the City and its metropolitan area towns, catering for a range of journey purposes; and
- The improvement of accessibility to the City Centre through effective traffic management, reduced congestion and the improvement of modal choice;
    - Support the provision of segregated walkways and cycleways;
    - Support the delivery of east-west greenway through the city centre, connecting major employment/ education hubs to large commuter towns like Ballincollig and Carrigaline (Lee to Sea Greenway);
    - Support walking and cycle connectivity and infrastructure to amenities such as Ballincollig Regional Park from the city centre;
    - Support walking and cycling connectivity and infrastructure connecting the Cork Docklands and Tivoli regeneration areas to the city centre and other strategic employment locations.

3.3 Local Level

3.3.1 Cork Cycle Network Plan

The Cork Cycle Network Plan was commissioned by CCC 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 for trips to work, school, recreation and leisure. The plan outlines key routes that are targeted for development and proposes infrastructure to develop a city wide urban cycle network with categorised routes (Figure 3-1 and Table 3-1).

Key priorities of the plan include:

- Designating a coherent network of east-west and north-south cycle routes across the area which will provide access to all major trip generators;
- The first priority in terms of access will be employment areas and third level education followed by schools. These priorities have been established to support proposed modal shift targets. Cycle links to new development areas have also been prioritised;
- Providing the highest possible Level of Service on identified corridors of high demand;
- Identifying and maximising opportunities for high quality greenways; and
- Responding to feedback from key stakeholders and the public.

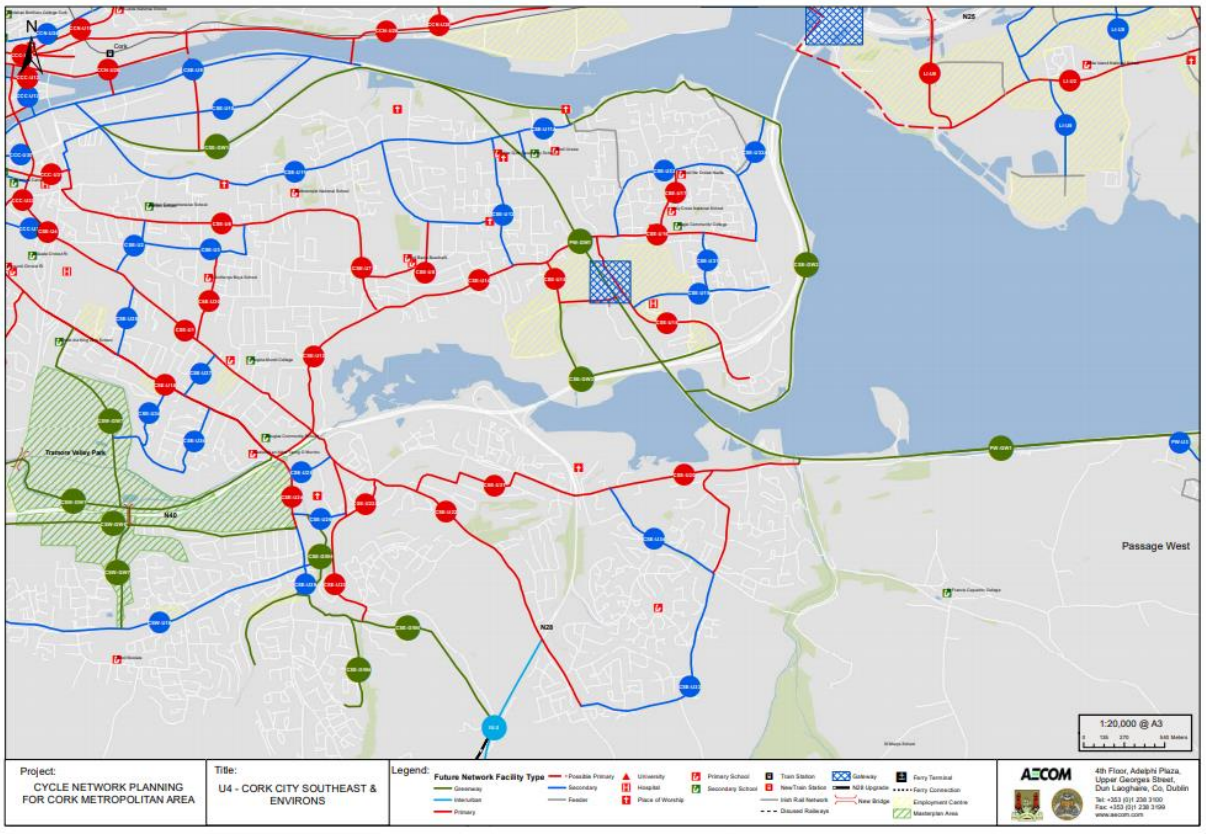


Figure 3-1: Proposed Future Cycle Network (Source: Map U4 – Cork City & Southeast Environs - of the Cork Cycle Network Plan)

*Table 3-1 Proposed Future Cycle Network (Cork Cycle Network Plan) (*Note that Area 7 - Mahon East/West Linkis not proposed as part of the CCN)*

Area	Link	Route Code	Route Category	Proposed Infrastructure
1	Ringmahon Road	CSE-U32	Secondary	2m wide bi-directional segregated cycle tracks are provided on the road with 3m traffic lanes maintained in each direction. It is proposed that informal parking is banned on the road although some form of set down / collection arrangement may need to be maintained at the primary school on the road.
2	Avenue De Rennes	CSE-U17	Primary	two-way segregated cycle track on the west side of the carriageway where sufficient space is available to provide this facility without the need for road widening.
3	Skehard Road	CSE-U16	Primary	the existing segregated cycle track maintained and extended where possible. Extension of the segregated cycle track may be facilitated in a two-way track on the southern edge of this carriageway where substantial green verge space exists.
4	Castle Road Link	CSE-GW2	Greenway	It is proposed to maintain existing facilities that provides a shared walking and cycling path along the water front. Castle Road and The Marina form part of this route, which are sufficiently traffic calmed to facilitate cyclists in a mixed street environment.
5	Ballinure Avenue	CSE-U31	Secondary	*No Route Proposed* - The CSE-U31 link is shown on the Cycle Network Plan, but a description of this proposal is not included in the report.
6	Passage Greenway Tie-In	PW-GW1	Greenway	It is proposed to maintain the existing facilities* and provide additional/upgraded access ramps at Blackrock Road and Mahon Link Road/City Gate. It is also proposed to provide the missing c.200m link of this Greenway at Rochestown. The possibility of continuing this link along the waterfront should be investigated. ***(*Note that the CCN does not include a tie-in from Ringmahon Road to the Passage Greenway, which is the proposal for the Mahon Cycling Scheme.)***

3.3.2 Cork City Development Plan 2015-2021

The Cork City Development Plan 2015-2021 sets out strategic objectives to help the development of an integrated transport system that supports economic growth, provides all sections of the community with access to transport systems, fosters a high-quality built environment, and reduces emissions in order to combat climate change**.** The key objectives relating to the city's cycle network are:

- Objective 5.1.a - Provide for the greater consolidation of development within the City Centre, Docklands, Key Development Areas and Strategic Corridors, facilitated through the integration of landuse and transport planning, investment and service provision;
- Objective 5.1.b - To reduce the percentage of persons who drive to work to 60% by 2021;

- Objective 5.1.c - To invest in transport infrastructure based on the transport user hierarchy: pedestrians, cyclists, public transport users, freight, delivery and waste vehicles; private vehicle users;
- Objective 5.1.d - To encourage and facilitate cycling and walking for short/local trips by providing appropriate infrastructure, promoting “soft-measures” that influence change in transport behaviour, and by encouraging proximate, compact landuses;
- Objective 5.6 - To develop landuse strategies that provide for the consolidation of development at higher densities along key public transport corridors. This includes recognising walking and cycling as modes of transport offer several personal and societal benefits, including zero emissions in respect of climate change and air and noise pollution affordability; increased physical activity that supports better health and greater social interaction that contributes to strong neighbourhoods;
- Objective 5.7 - Cork City Council will develop a Cycling Strategy during the lifetime of the Development Plan to address supporting measures required to increase cycling uptake; and
- Objective 5.10 - The design of pedestrian and cycling infrastructure will be in accordance with the principles, approaches, and standards set out in the National Cycle Manual, the Design Manual for Urban Roads and Streets and international best practice.

3.3.3 Draft Cork City Development Plan 2022-2028

The Draft Cork City Development Plan 2022-2028 presents a vision for the growth of Cork City into a world-class 15 minute city. The plan is based on strategic principles, with the relevant ones being:

- Compact Growth;
- A city of neighbourhoods and communities;
- Sustainable and active travel;
- A resilient City;
- A healthy, inclusive and diverse city;
- A connected City.

Chapter 4 presents Transport and Mobility as a Strategic Objective, In particular, Objective 4.4 supports the promotion of Active Travel.

Objective 4.4, Active Travel:

> *“To actively promote walking and cycling as efficient, healthy, and environmentally friendly modes of transport by securing the development of a network of direct, comfortable, convenient, and safe cycle routes and footpaths across the city.*
>
> *To support the expansion of the Cork Bikes scheme.*
>
> *To accommodate other innovations such as electronic bikes, public car hire, and other solutions that will encourage active travel.*
>
> *To support the rollout of the NTA 5 Year Cycle Plan.*
>
> *To support and engage with the Safe Routes to School programme.”*

3.3.4 Cork Metropolitan Transport Strategy 2040 (CMATS)

The CMATS sets out a response strategy to cater for the areas predicted growth with the overall aim to provide a sustainable, flexible, diverse and fit-for-purpose transport network. The strategy sets out six guiding principles 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 six guiding principles are as follow:

- Principle 01 - To support the future growth of the CMA through the provision of an efficient and safe transport network;
- Principle 02 - To prioritise sustainable and active travel and reduce car dependency within the CMA;
- Principle 03 - To provide a high level of public transport connectivity to key destinations within high demand corridors;
- Principle 04 - To identify and protect key strategic routes for the movement of freight and services including the provision of a high level of freight access to the Port of Cork;
- Principle 05 - To enhance the public realm through traffic management and transport interventions; and
- Principle 06 - To increase public transport capacity and frequencies where needed to achieve the strategy outcomes.

4 Proposed Works

The route provides for pedestrians and cyclists, with vehicular access to private properties and on-street parking facilities. The proposed scheme involves the provision of dedicated cycle facilities, the installation of zebra crossings with raised platforms at suitable locations, buildouts to reduce road width to 6m for full length, add trees/grass verges where possible, and a signalised junctions at Ringmahon Road West and Skehard Road, at Avenue De Rennes and Skehard Road and at Avenue De Rennes and Ringmahon Road.

The route can be broken into five areas to illustrate the traffic arrangements, as described in Sections 4.1 – 1.1 and shown in Appendix A.

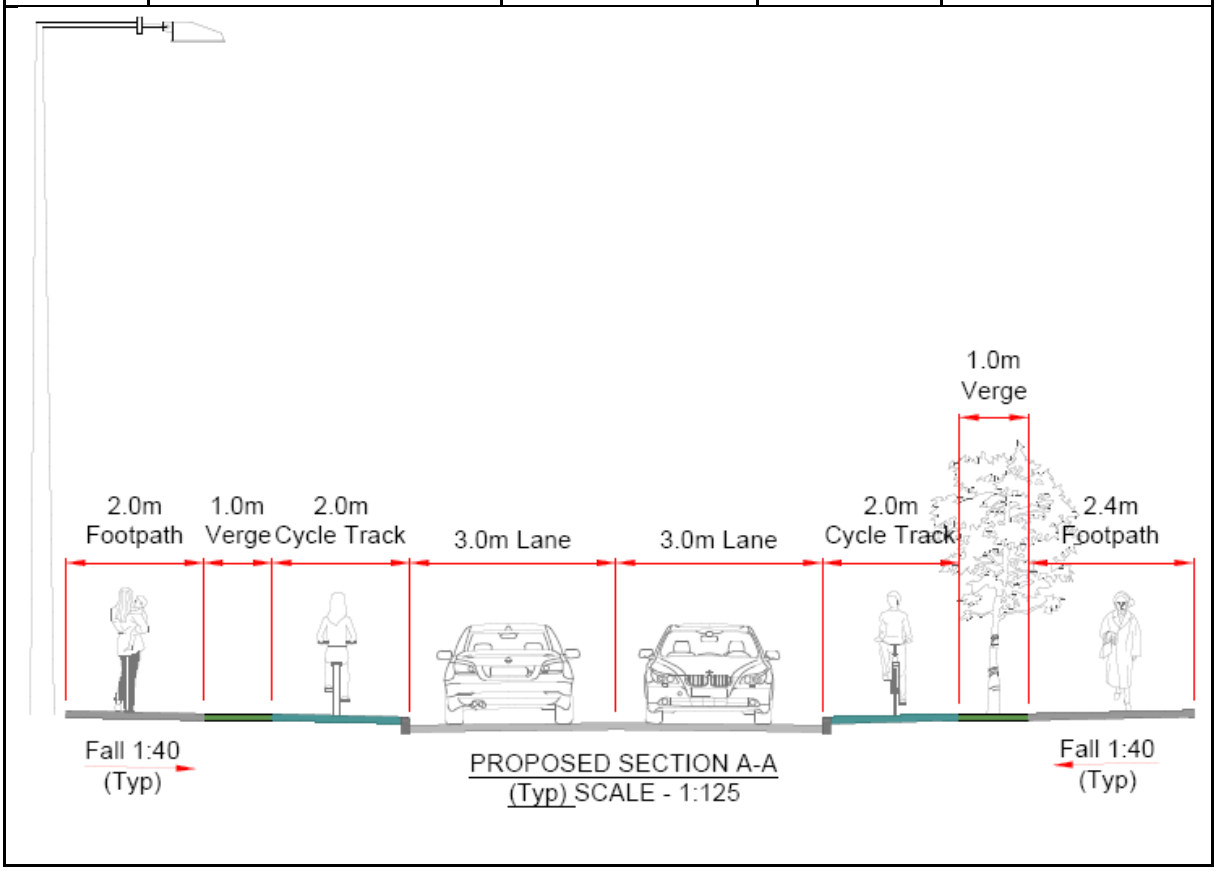
4.1 Area 1: Ringmahon Road

The route can be broken into six sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-1 and Table 4-1.

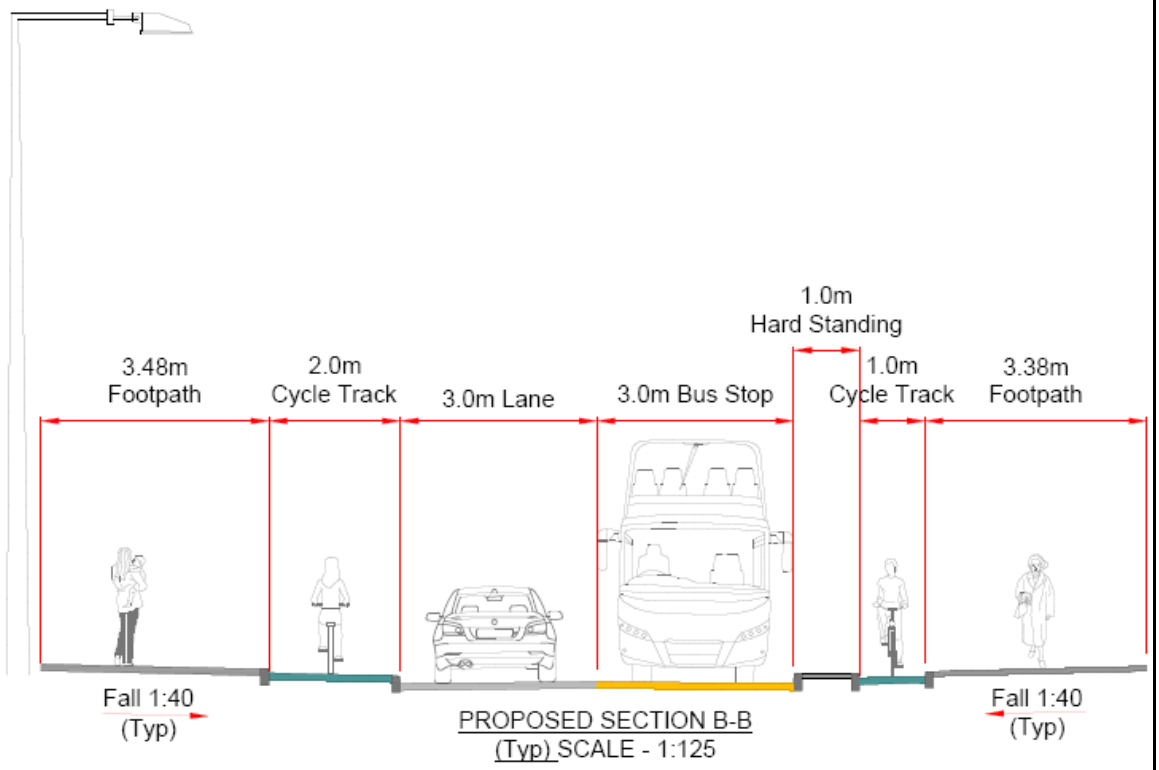
Figure 4-1 Cross Section Locations - Area 1: Ringmahon Road

Table 4-1 Proposed Cross Sections - Area 1: Ringmahon Road

Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
AA	Area 1 Ringmahon Road	Ringmahon Road West (From Skehard Road to Convent Road)	325m	Two-way vehicular access on a carriageway of width 3.0m. 2.4m parking lane with 0.5m buffer zone on the northern extent. 1.5m cycle track on the each extent. 2.3m footpath on the north side and 1.8m footpath on the south side



BB	Area 1 Ringmahon Road	Ringmahon Road West (Convent Road Bus Stop)	85m	Two-way vehicular access on a carriageway of width 3.0m. Bus stop, 1m hard stand and 1m cycle track on the east side. 2.0m cycle track on the west side. 3.48m on the west side and 3.38m verge on the east side.



PROPOSED SECTION B-B
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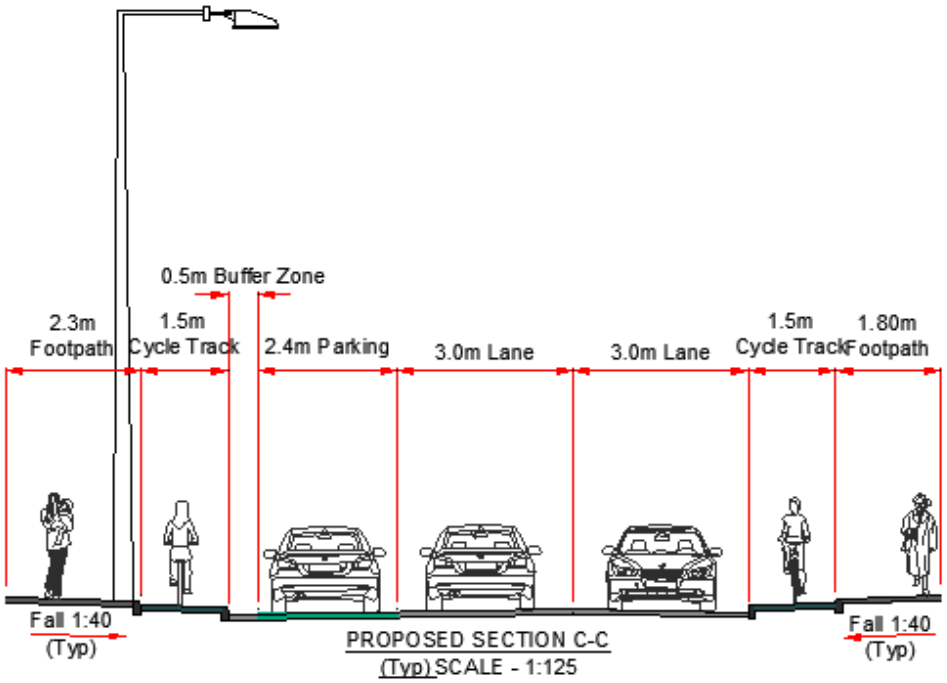
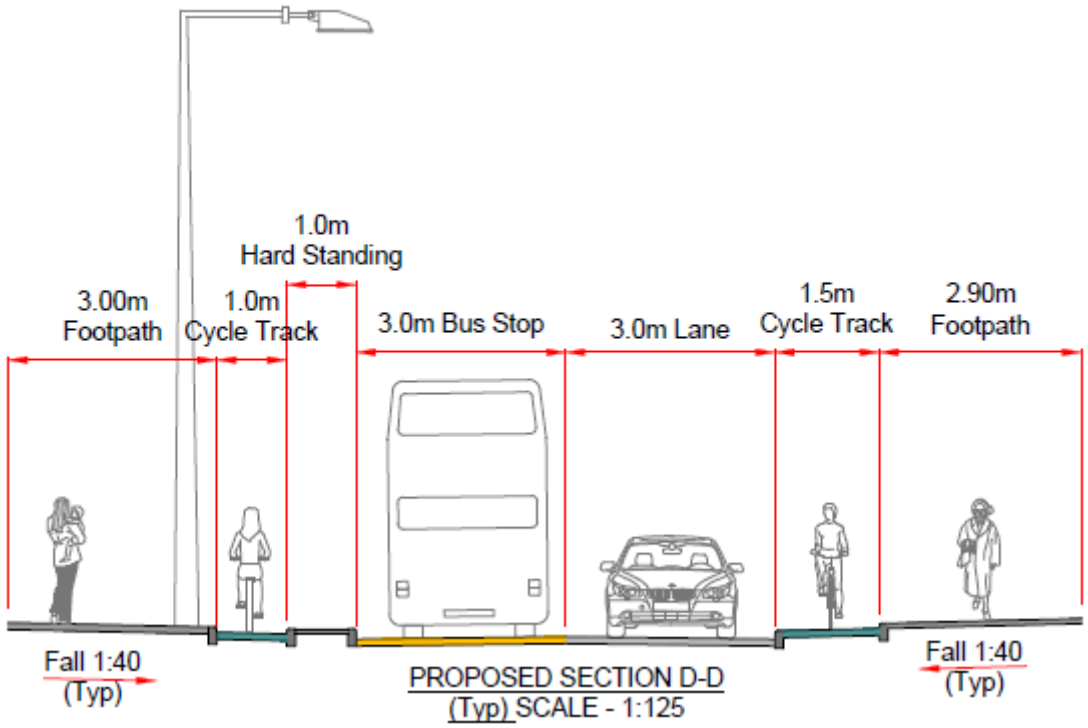
CC	Area 1 Ringmahon Road	Ringmahon Road North-West (Meadowgrove Convenience Store)	75m	Two-way vehicular access on a carriageway of width 3.0m. 2.4m parking lane with 0.5m buffer zone provided on the northern extent. 1.5m cycle lane each extent 2.3m footpath on the north side and 1.8m footpath on the south side.

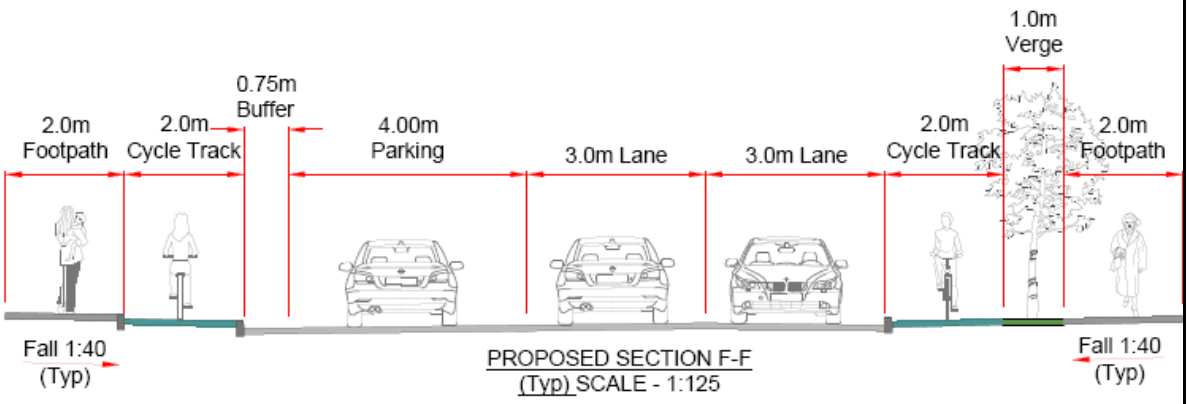


DD	Area 1 Ringmahon Road	Ringmahon Road North (From Meadowgrove Convenience Store to Mahon Rugby Grounds)	710m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m cycle track on each side. 1m verge on each side. 2.0m on the west side and 2.4m verge on the east side.

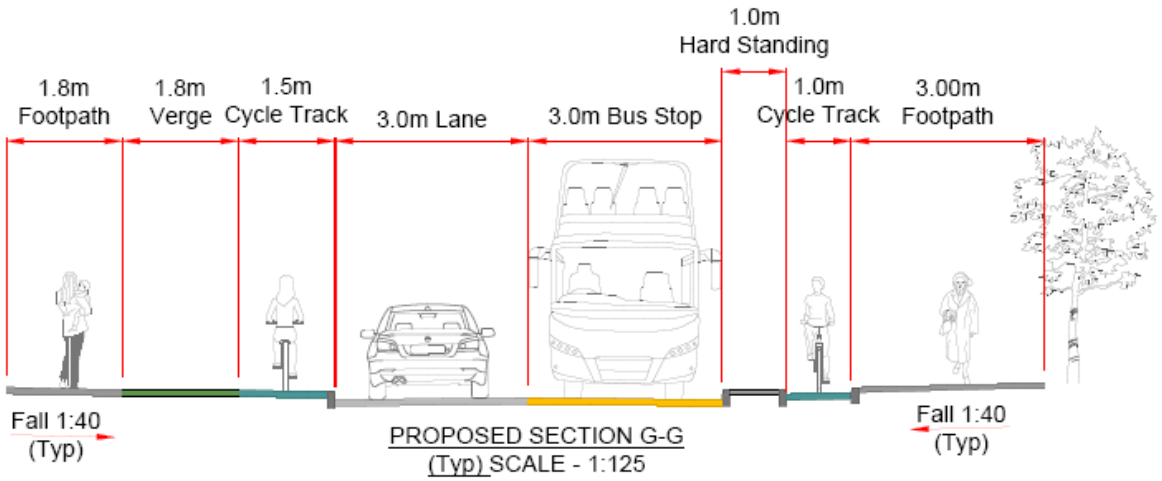


PROPOSED SECTION D-D
(Typ) SCALE - 1:125

FF	Area 1 Ringmahon Road	Ringmahon Road East (Mahon Rugby Grounds)	105m	Two-way vehicular access on a carriageway of width 3.0m. 4m designated parking and 0.75m buffer to the east side. 2.0m cycle track on each side. 1.0m verge on the west side. 2.0m footpath on each side.



GG	Area 1 Ringmahon Road	Ringmahon Road West (From Mahon Rugby Grounds to Skehard Road)	320m	Two-way vehicular access on a carriageway of width 3.0m. Cycle track on each side varying from 2m to 1m to facilitate pinchpoints and bus stops as required (with hard stand). 1.8m verge on the west side. 1.8m verge on the west side and 3.00m footpath on the east side.



PROPOSED SECTION G-G
(Typ) SCALE - 1:125

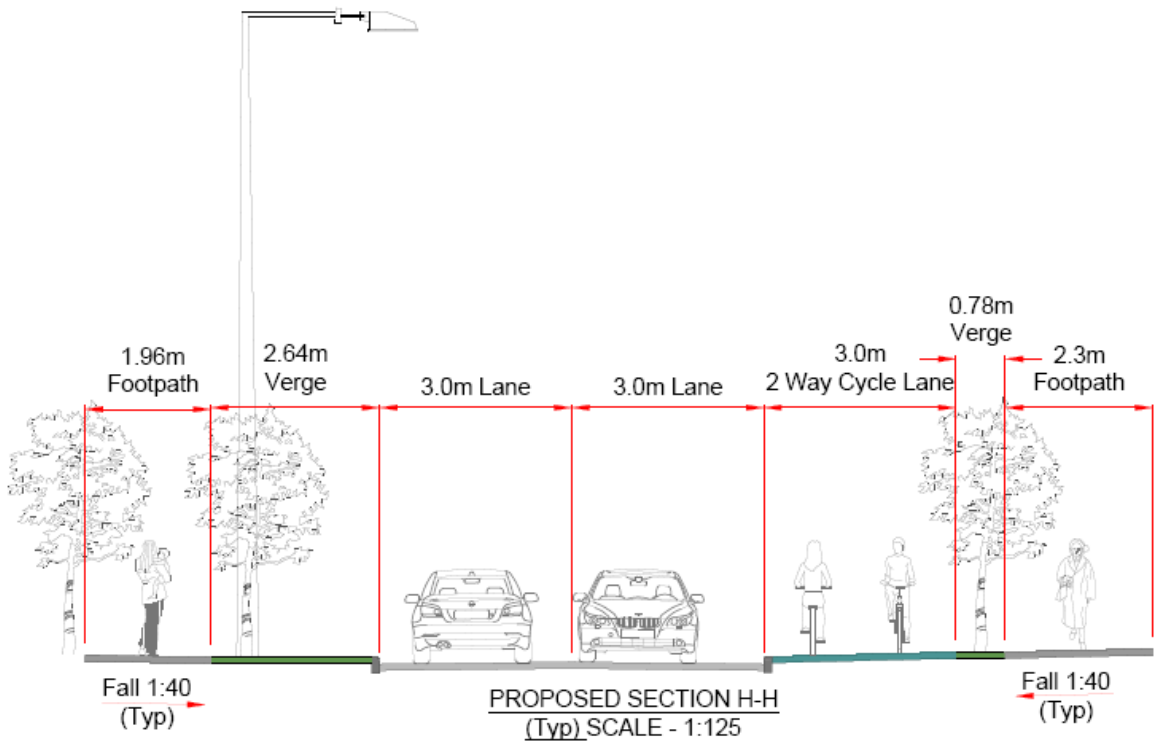
4.2 Area 2: Avenue De Rennes

The route can be broken into four sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-2 and Table 4-2.

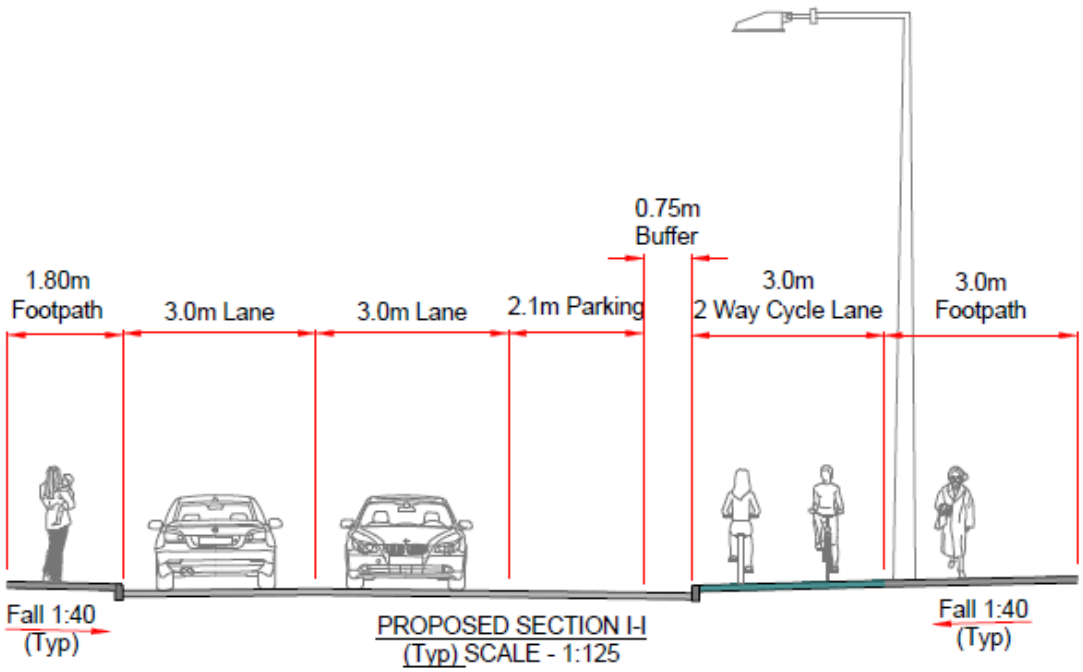
Figure 4-2 Cross Section Locations - Area 2: Avenue De Rennes

Table 4-2 Proposed Cross Sections - Area 2: Avenue De Rennes

Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
HH	Area 2 Avenue De Rennes	Avenue De Rennes South (From Holy Cross Church to Lakeland Crescent)	210m	Two-way vehicular access on a carriageway of width 3.0m. 3.0m two-way cycle track on the east side. 0.78m verge on the east side and 2.64m verge on the west side. 2.3m footpath on the east side and 1.96m footpath on the west side.

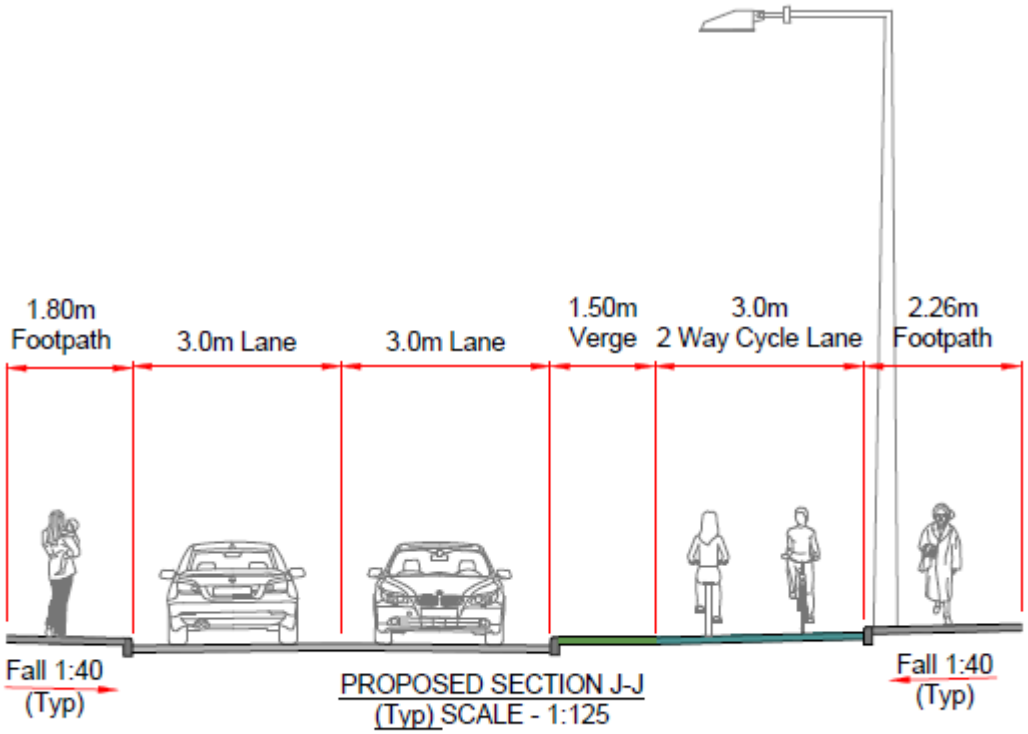


II	Area 2 Avenue De Rennes	Avenue De Rennes (From Lakeland Crescent to the south of the Retail Outlet)	45m	Two-way vehicular access on a carriageway of width 3.0m. 2.1m designated parking to the east side (with current disabled bays provided for). 3.0m two-way cycle track on the east side. 3.0m footpath on the east side and 1.8m footpath on the west side.

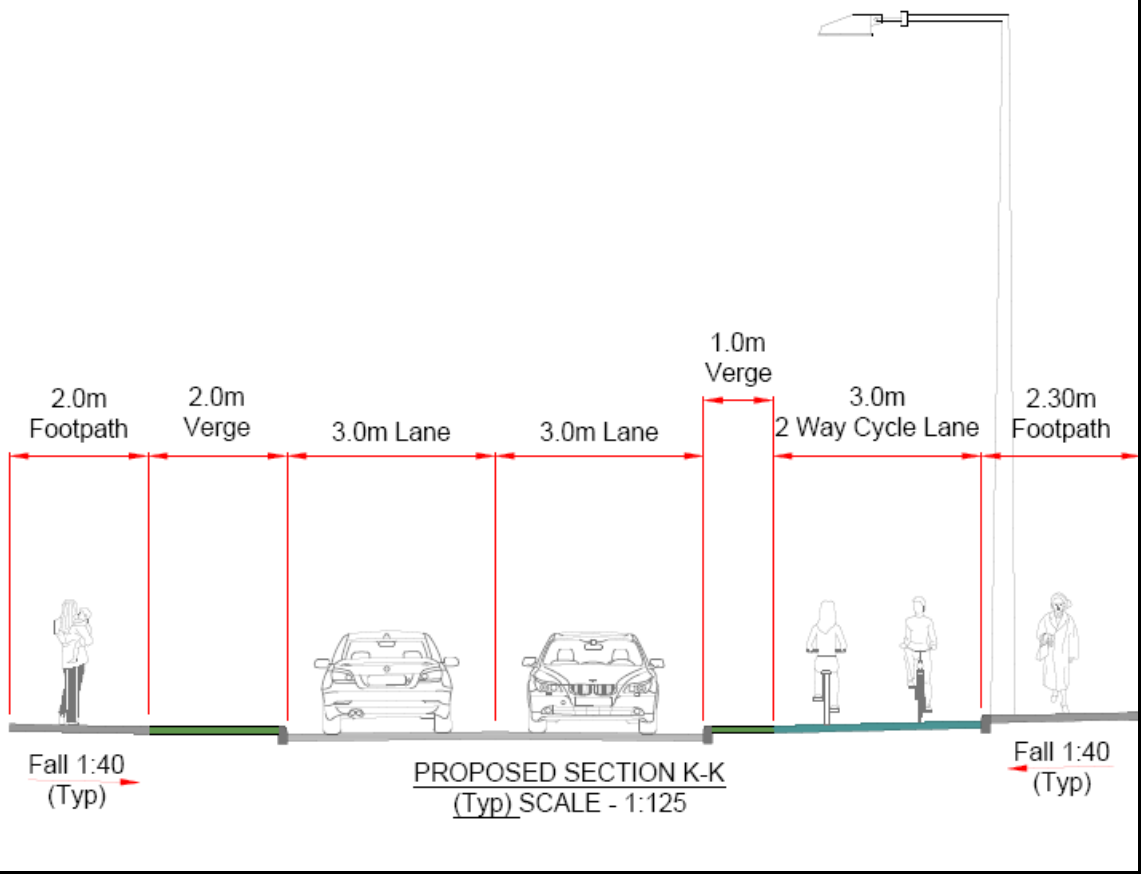


PROPOSED SECTION I-I
(Typ) SCALE - 1:125

JJ	Area 2 Avenue De Rennes	Avenue De Rennes (From the south of the Retail Outlet to the north of the Retail Outlet)	100m	Two-way vehicular access on a carriageway of width 3.0m. 1.5m verge on the east side. 3.0m two-way cycle track on the east side. 2.26m footpath on the east side and 1.80m footpath on the west side.



K K	Area 2 Avenue De Rennes	Avenue De Rennes North (From the north of the Retail Outlet to Ringmahon Road)	75 m	Two-way vehicular access on a carriageway of width 3.0m. 1.0m verge on the east side and 2.0m verge on the west side. 3.0m two-way cycle track on the east side. 2.30m footpath on the east side and 2.0m footpath on the west side.



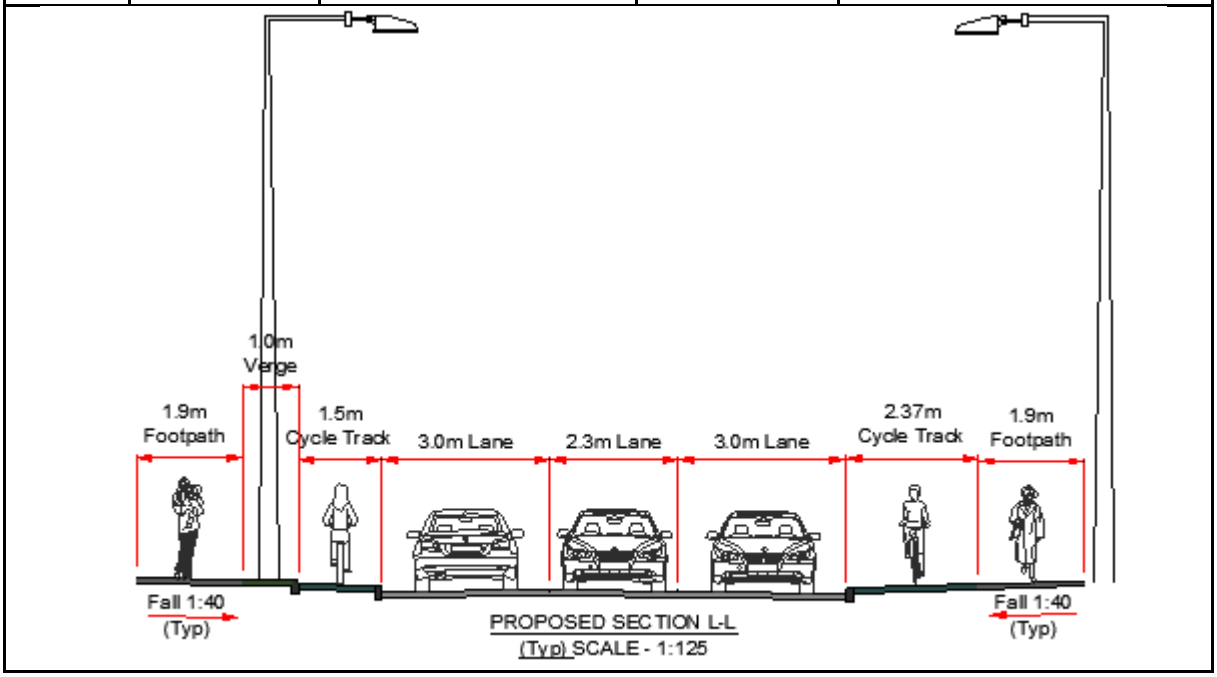
PROPOSED SECTION K-K
(Typ) SCALE - 1:125

4.3 Area 3: Skehard Road

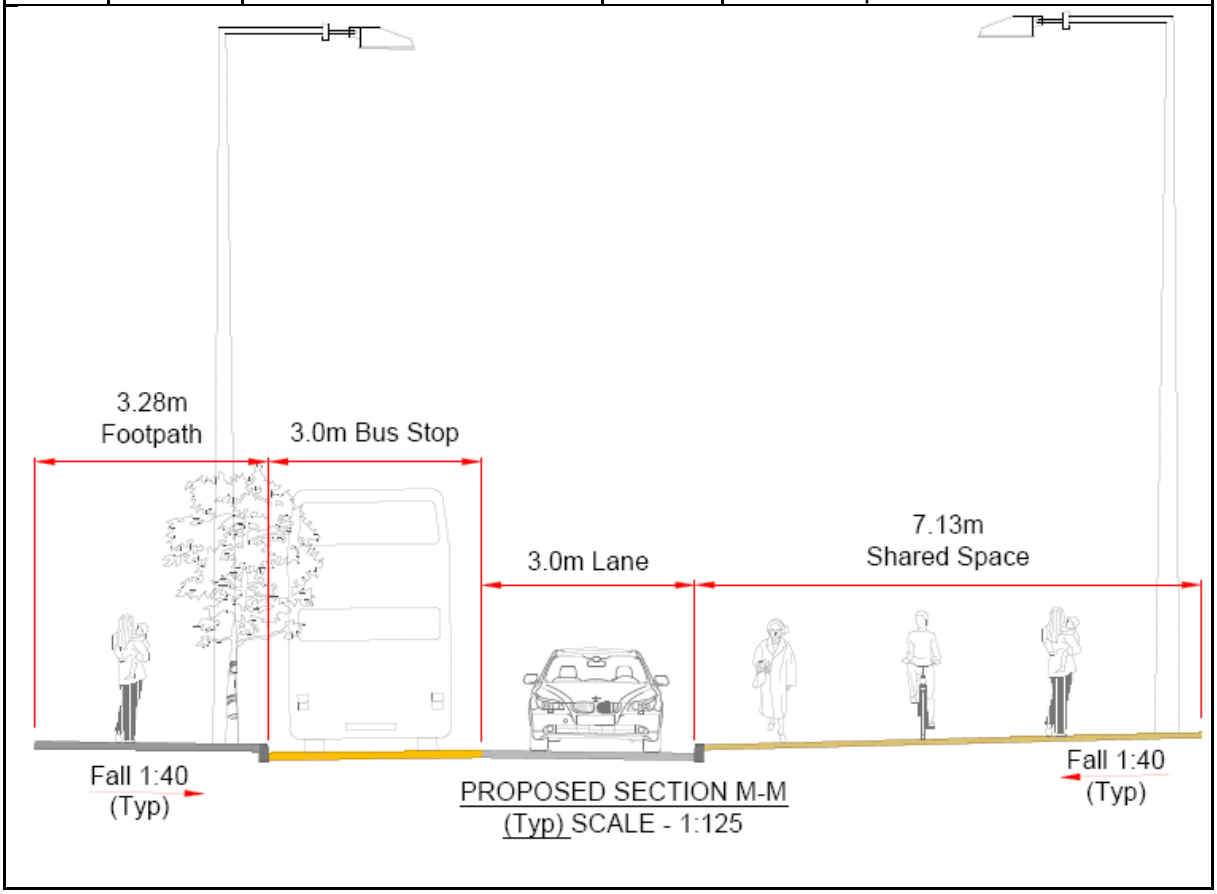
The route can be broken into four sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-3 and Table 4-3.

Figure 4-3 Cross Section Locations - Area 3: Skehard Road

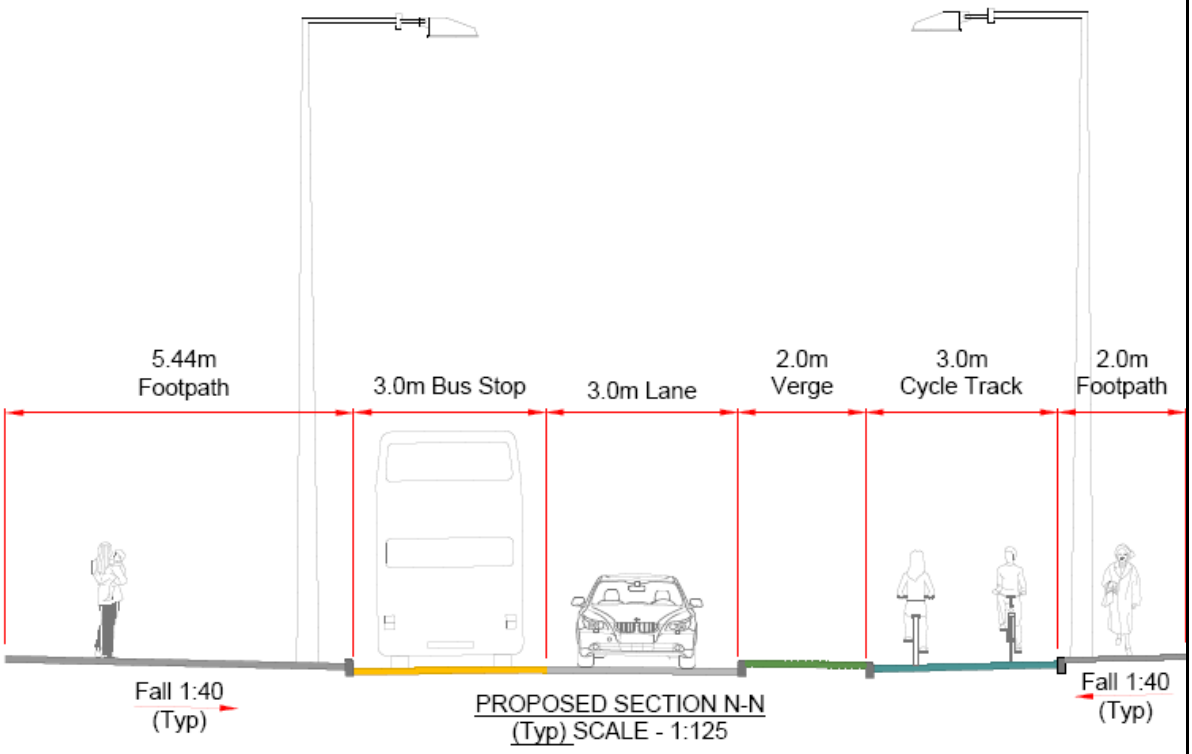
Table 4-3 Proposed Cross Sections - Area 3: Skehard Road

Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
LL	Area 3 Skehard Road	Skehard Road West (From Ringmahon Road West to Avenue De Rennes)	280m	Two-way vehicular access on a carriageway of width 3.00m for westbound eastbound traffic. 2.3 right turn lane maintained at the junction with Ringmahon Road. 1.5m cycle track on the northern extent and 2.37m cycle track on the southern extent. 1.0m verge on the north side. 1.9m footpath on the north side and 1.9m footpath on the southside.
				

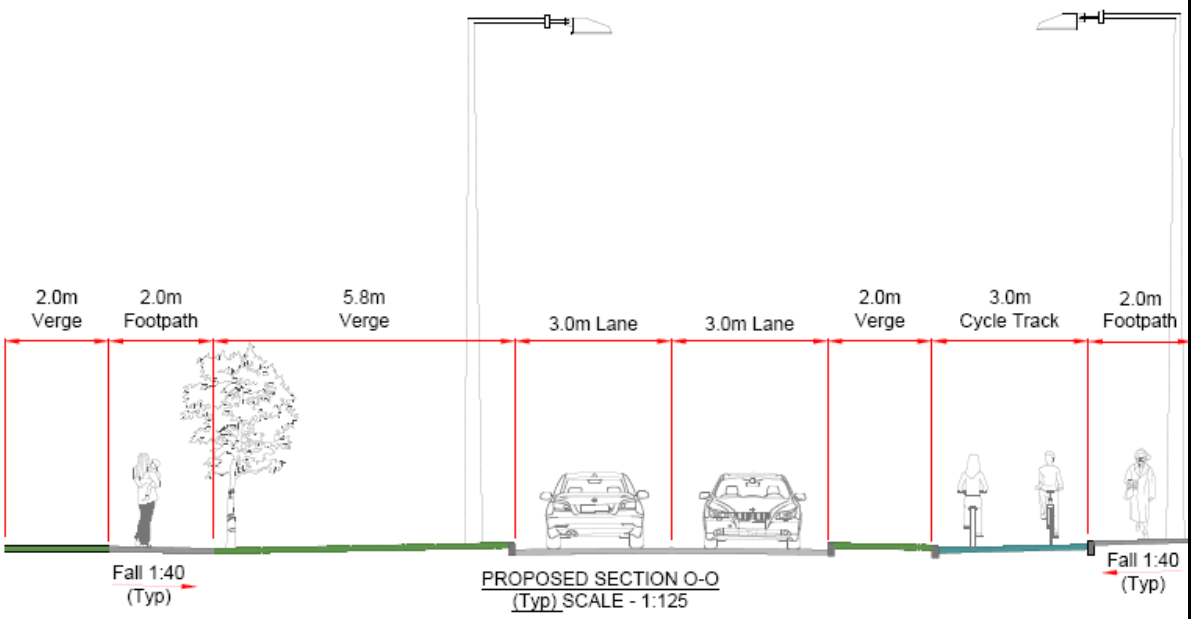
MM	Area 3 Skehard Road	Skehard Road (Junction with Avenue De Rennes)	30m	Two-way vehicular access on a carriageway of width 3.0m. 7.13m two-way cycle track and pedestrian footpath (shared space) on the south side. 3.28m footpath on the north side.



NN	Area 3 Skehard Road	Skehard Road (From junction with Avenue De Rennes to Castle Meadows)	440m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m verge on the south side. 3.0m two-way cycle track on the south side. 2.0m footpath on the south side and 5.44m footpath on the north side.



OO	Area 3 Skehard Road	Skehard Road East (From Castle Meadows to Ringmahon Road East)	70m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m verge on the south side and 5.8m verge on the north side. 3.0m two-way cycle track on the south side. 2.0m footpath on the south side and 2.0m footpath on the north side. 2.0m verge on the north side.



PROPOSED SECTION O-O (Typ) SCALE - 1:125

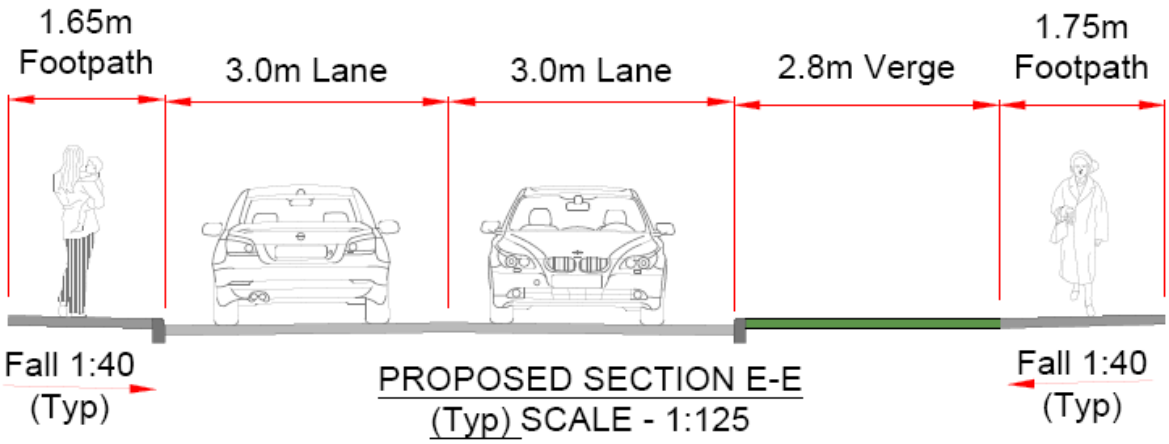
4.4 Area 4: Castle Road

Castle Road has a uniform width and no pinchpoints, therefore the route can be broken into one no. sections to illustrate the traffic arrangements and constraints, as shown Figure 4-6 in and Table 4-4.

Figure 4-4 Cross Section Locations - Area 4: Castle Road

Table 4-4 Proposed Cross Sections - Area 4: Castle Road

Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
EE	Area 4 Castle Road	Castle Road (From Ringmahon Road to Harbour Greenway Car Park)	530m	Two-way vehicular access on a carriageway of width 3.0m. Shared carriageway for cyclists. 2.8m verge to the east side. 2.65m footpath on the west side and 1.75m footpath on the east side.



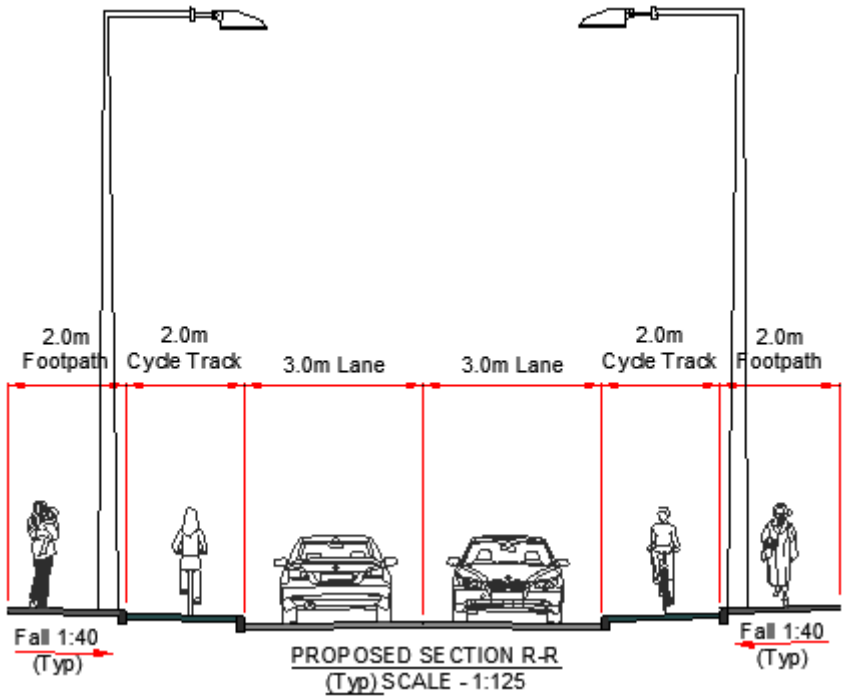
4.5 Area 5: Ballinure Avenue

The route can be broken into four sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-2 and Table 4-2.

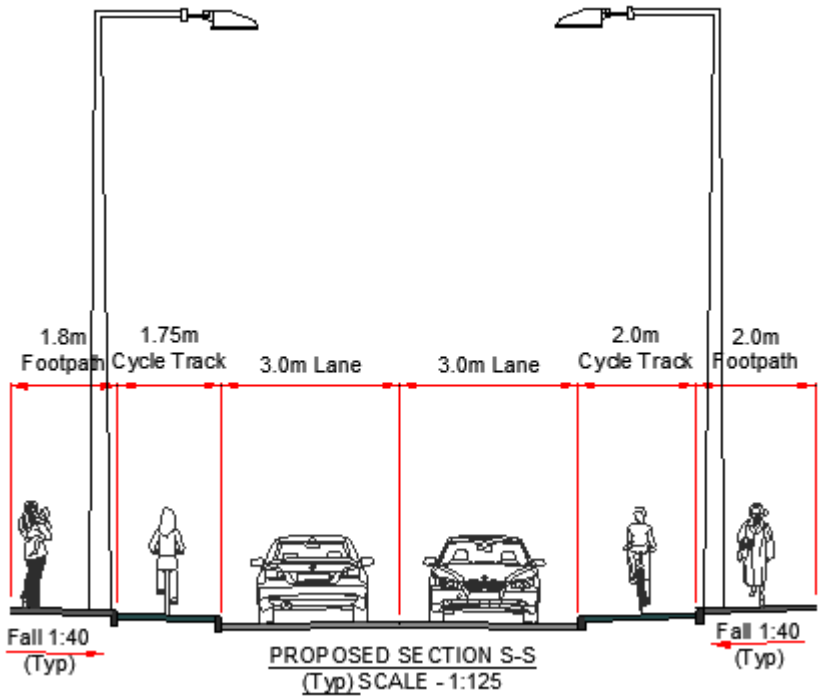
Figure 4-5 Cross Section Locations - Area 5: Ballinure Avenue

Table 4-5 Proposed Cross Sections - Area 5: Ballinure Avenue

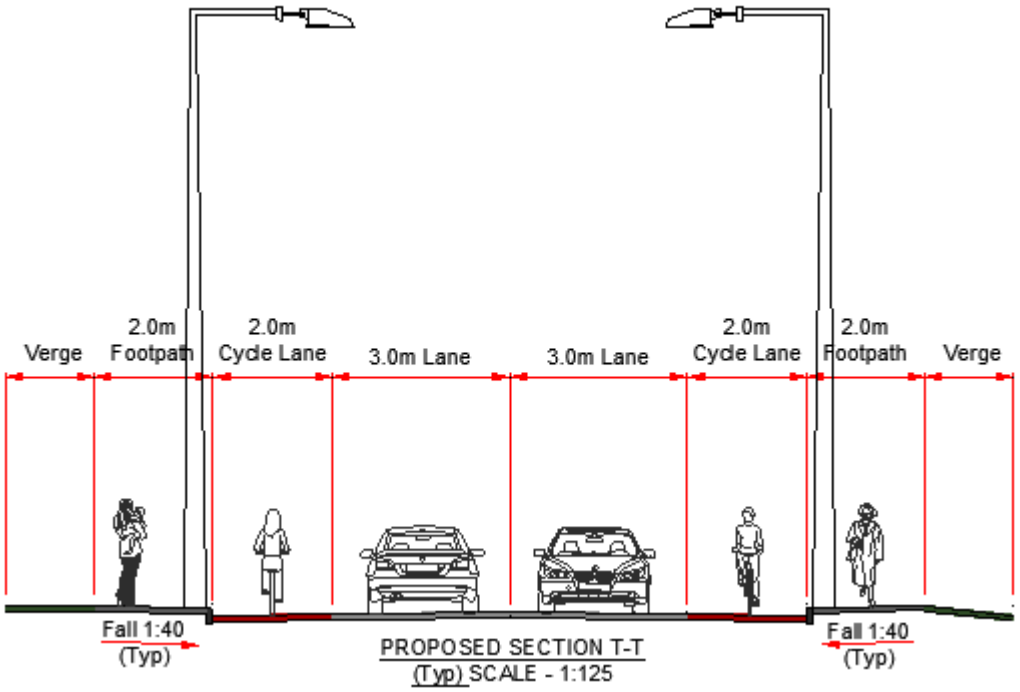
Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
RR	Area 5 Ballinure Avenue	Ballinure Avenue South (From St Michaels Drive to Existing Ramp No. 16 The Maples)	75m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m cycle track on the each side. 2.0m footpath on each side.



SS	Area 5 Ballinure Avenue	Ballinure Avenue (From Existing Ramp No. 16 The Maples to St Michaels Lawn)	150m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m cycle track on the east side, cycle track reduced to 1.75m on the west side to facilitate pinch point. 2.0m footpath on the east side, footpath reduced to 1.75m on the west side to facilitate pinch point.



TT	Area 5 Ballinure Avenue	Ballinure Avenue (From St Michaels Lawn to XL St Michaels Stores)	55m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m cycle lane on the each side. 2.0m footpath on each side. Existing verge to remain on each side.



PROPOSED SECTION T-T
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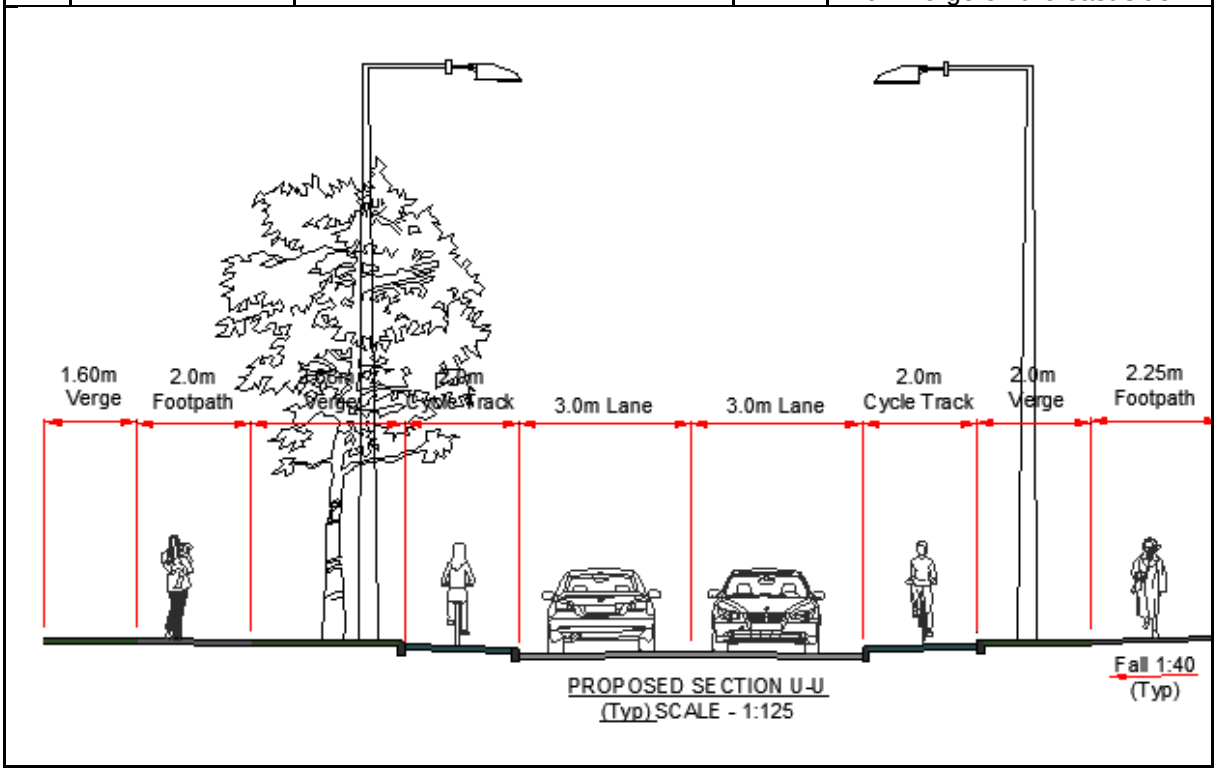
U U	Area 5 Ballinure Avenue	Ballinure Avenue (From XL St Michaels Stores to Skehard Road)	120 m	Two-way vehicular access on a carriageway of width 3.0m. 2.0m cycle lane on each side. 3.66m verge on the west side ans2.0m verge on the east side. 2.0m footpath on each side. 1.6m verge on the east side.



4.7 Area 6: Passage Greenway Tie-In

The route can be broken into two no. sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-6. Throughout the route, the path will be resurfaced and widened where possible to improve the quality of service.

Sean Cronin Park (cross section PP) is a shared-surface track linking Ringmahon Road to Blackrock Avenue via Sean Cronin Park (190m).

Ballinsheen Road (cross section QQ) is a pedestrianised path linking Blackrock Avenue to Passage Greenway via Ballinsheen Road (100m)

Figure 4-6 Cross Section Locations – Passage Greenway Tie-In

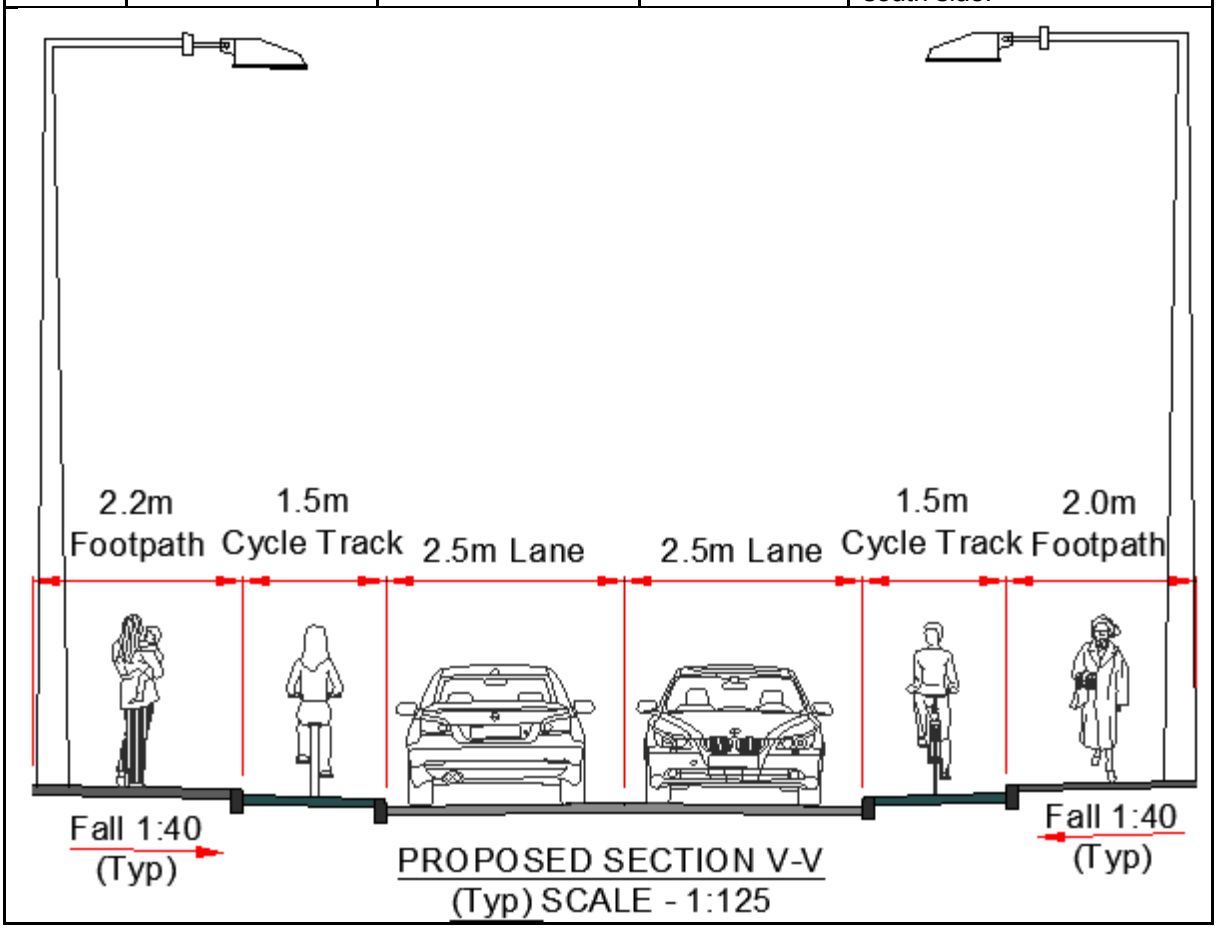
4.8 Area 7: Mahon East/West Link

The route can be broken into six sections to illustrate the traffic arrangements and constraints, as shown in Figure 4-2 and Table 4-2.

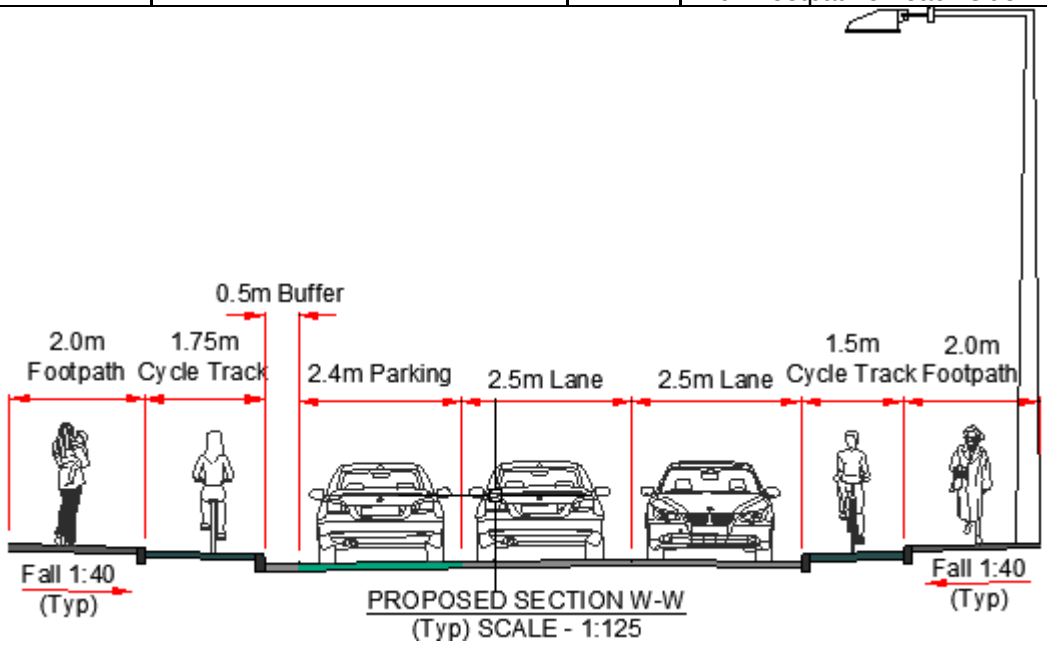
Figure 4-7 Cross Section Locations - Area 7: Ashwood to Castle Park Link

Table 4-6 Proposed Cross Sections - Area 2: Avenue De Rennes

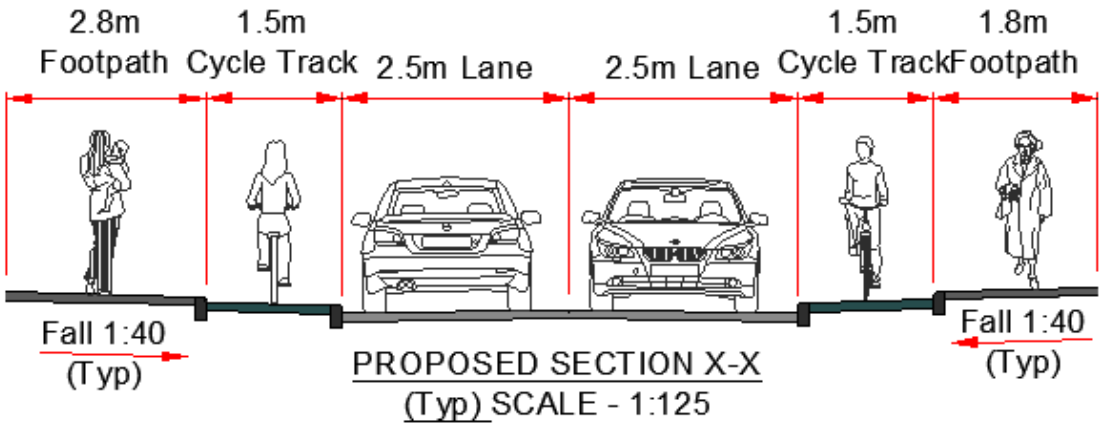
Section	Area	Location (approx.)	Length (approx.)	Proposed Cross Section
	Area 7 Ashwood to Castle Park Link	Ringmahon Road to Mahon Drive	140m	Shared carriageway provided on Ashwood (connecting to Ringmahon Road at Convent Road) to access 3 no. properties to the north of Ashwood. 4m shared surface to be provided through the existing greenspace at Ashwood to connect to Mahon Drive.
VV	Area 7 Ashwood to Castle Park Link	Ashwood to Mahon Crescent	70m	Two-way vehicular access on a carriageway of width 2.5m. 1.5m cycle track on each side. 2.2m footpath on the north side and 2.0m footpath the south side.



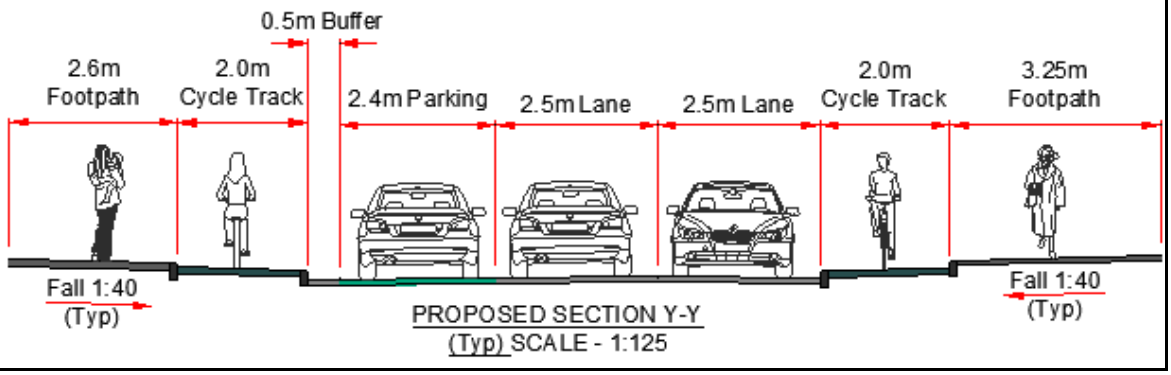
WW	Area 7 Ashwood to Castle Park Link	Early Intervention Services	50m	Two-way vehicular access on a carriageway of width 2.5m. 2.4m parking with 0.5m buffer on the northern extent. 1.75m cycle track on the northern extent and 1.5m cycle track on the southern extent.de. 2.0m footpath on each side.



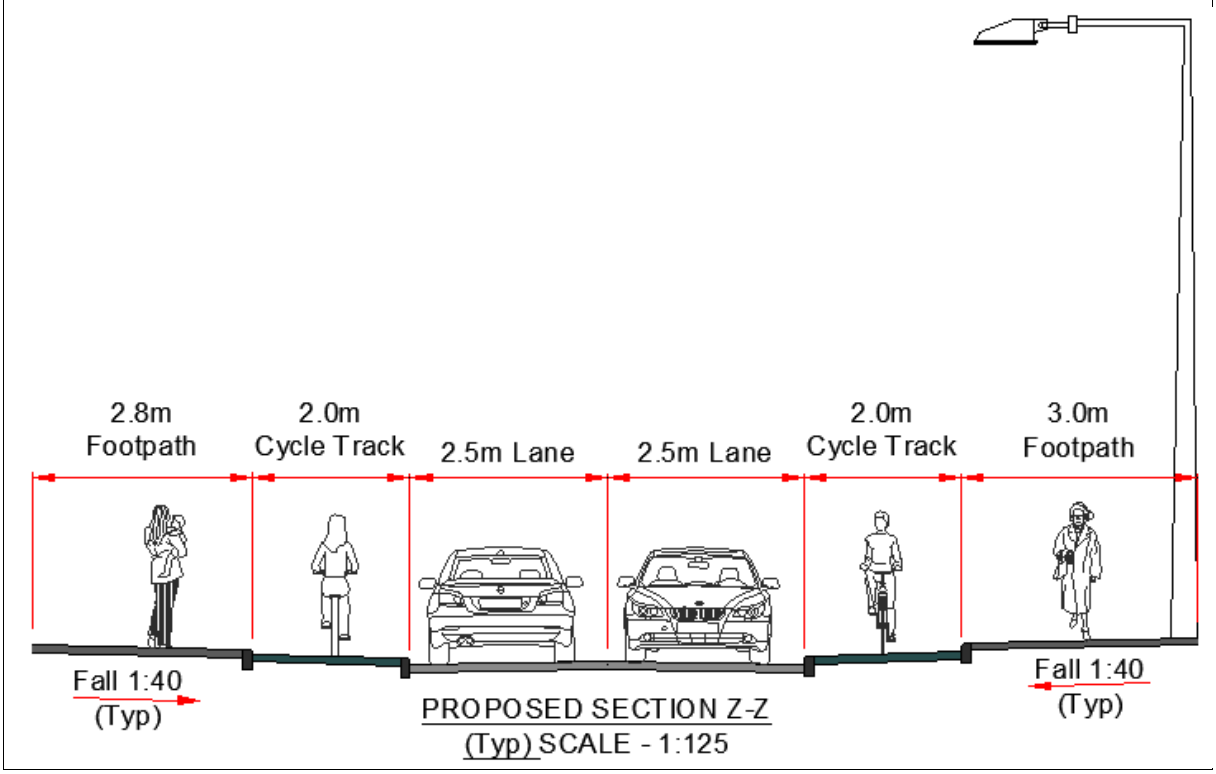
XX	Area 7 Ashwood to Castle Park Link	Early Intervention Services to Avenue De Rennes	65m	Two-way vehicular access on a carriageway of width 2.5m. 1.5m cycle track on each side. 2.8m footpath on the north side and 1.8m footpath the south side.



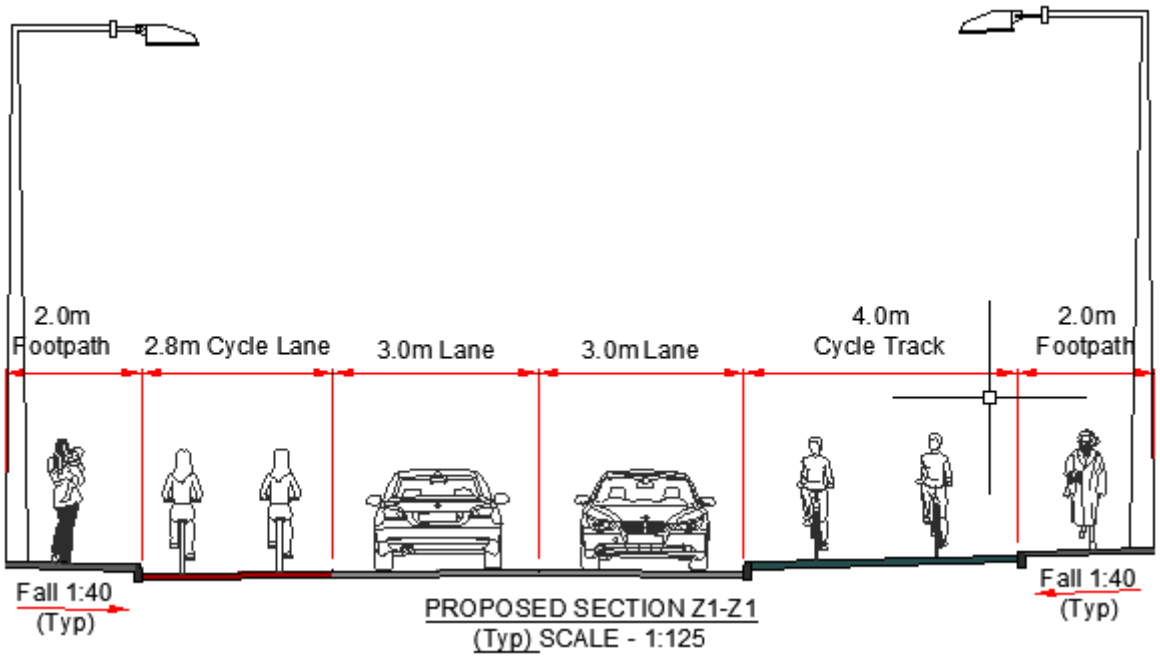
YY	Area 7 Ashwood to Castle Park Link	Nagle College (Avenue De Rennes to Lakeland Avenue)	50m	Two-way vehicular access on a carriageway of width 2.5m. 2.4m parking with 0.5m buffer on the northern extent. 2.0m cycle track on the northern and southern extents. 2.6m footpath on the northern extent and 3.25m footpath on the southern extent.



ZZ	Area 7 Ashwood to Castle Park Link	Lakeland Crescent (Lakeland Avenue to Loughmahon Road)	105m	Two-way vehicular access on a carriageway of width 2.5m. 2.0m cycle track on the northern and southern extents. 2.8m footpath on the northern extent and 3.0m footpath on the southern extent.



	Area 7 Ashwood to Castle Park Link	Loughmahon Park	500m	4m shared surface (*Note that it is proposed to realign the shared surface in Loughmahon Car park to the east to tie in with the existing pedestrian crossing on Skehard Road. Refer to Appendix A))
Z1Z1	Area 7 Ashwood to Castle Park Link	Castle Park	45m	Two-way vehicular access on a carriageway of width 3.0m. 2.8m cycle lane on the northern extent and 4.0 two-way cycle track on the southern extent. 2.0m footpath on each side.



5 Impact of the Proposed Works

5.1 Environmental Assessment

A Draft Screening Report for Appropriate Assessment (Draft AA) and Draft Environmental Impact Assessment (Draft EIA) Screening Report have been prepared, and are given in support of the proposal.

The scheme extents are not within any Special Area of Conservation (SAC) or Special Protection Area (SPA). The nearest SAC is Great Island Channel, with a distance of 4.25km from the nearest point to the scheme. The nearest SPA is Cork Harbour SPA, with a direct distance of 350m from the nearest point to the scheme.

The AA and EIA Screening Reports have concluded that the project is not likely, alone or in-combination with other plans or projects, to have a significant effect on any European Sites.

5.2 Flood Risk Assessment

A preliminary flood risk assessment has been undertaken by reviewing information from the Office of Public Works (OPW) Natural Flood Hazard Mapping (www.floodinfo.ie). The scheme extents are not subject fluvial (river) or coastal flooding.

The fluvial flooding map is shown in Figure 5-1 and the coastal flooding map is shown in Figure 5-2.

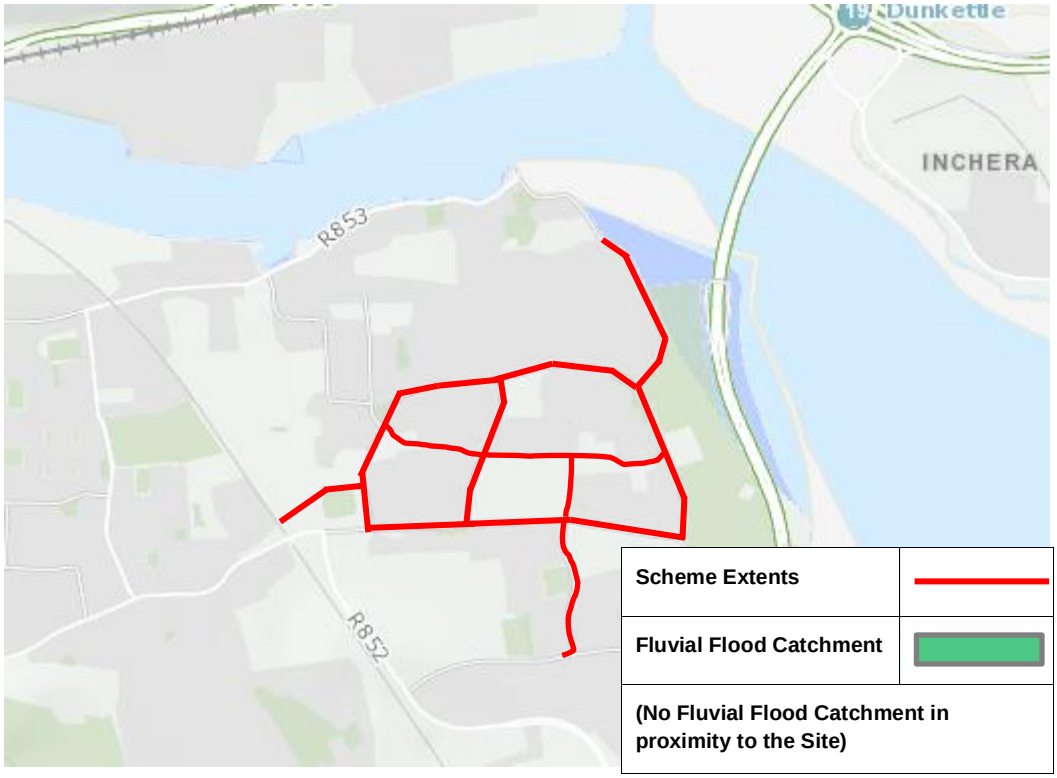


Figure 5-1 Fluvial Risk Assessment Map (Source: https://www.floodinfo.ie/map/floodmaps/)

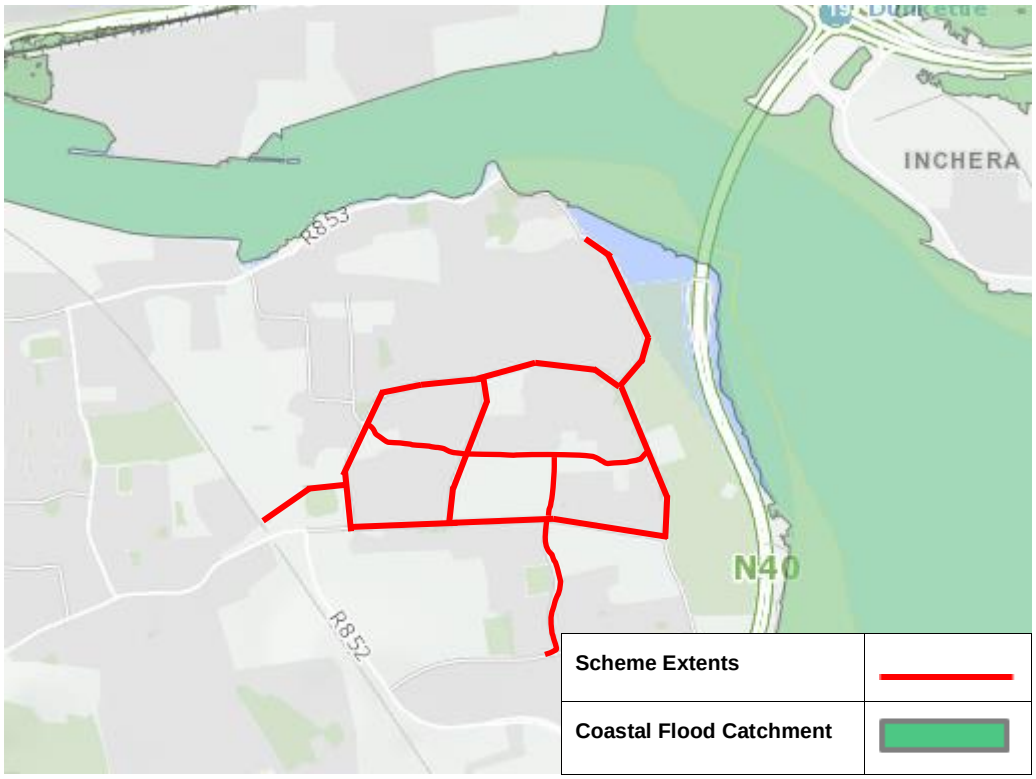


Figure 5-2 Coastal Risk Assessment Map (Source: https://www.floodinfo.ie/map/floodmaps/)

6 Conclusion

From an economic, safety, physical activity, environmental, accessibility and social inclusion and integration perspective, the proposed works are an important development for the Mahon area to promote and encourage Active Travel. Following a review of constraints, alternatives, and environmental impacts, the emerging preferred option from the options assessment, shown in Appendix A is to be progressed.

There is an opportunity with this scheme to support a walking and cycling culture by delivering a high-quality pedestrian and cycling facility along this popular route and, in doing so, to reinforce the qualities and successes of the places through which it passes. The proposed scheme will not only increase accessibility and permeability within the study area but will also provide enhanced and safer connectivity with other areas and routes. Ultimately, the route when delivered will improve safety, reduce journey times, and contribute towards increased numbers of trips being made by active travel modes in the local catchment.

This project provides improved safety by delivering a facility to current design standards and best practice, and will provide high quality infrastructure for all active transport users including the mobility impaired and those with other disabilities.

The proposed scheme will provide increased opportunity for the residents of Mahon and Cork City to engage in physical activity through the provision of high quality pedestrian and cycle facilities. This will assist in encouraging modal shift from vehicular traffic to healthier and sustainable modes of travel such as walking and cycling.

7 Legislation

CCC is now submitting the proposed scheme for public consultation in accordance with the requirements of Section 38 of the Road Traffic Act 1994 (as amended),

The following extract is taken from the Road Traffic Act 1994 2001:

38. -

(1) A road authority may, in the interest of the safety and convenience of road users, provide such traffic calming measures as they consider desirable in respect of public roads in their charge.

(2) A road authority may remove any traffic calming measures provided by them under this section.

(3) Before providing or removing traffic calming measures under this section of such class or classes as may be prescribed, a road authority shall

(a) consult with the Commissioner;

(b) publish a notice in one or more newspapers circulating in the functional area of the authority—

(i) indicating that it is proposed to provide or remove the measures, and

(ii) stating that representations in relation to the proposal may be made in writing to the road authority before a specified date (which shall be not less than one month after the publication of the notice);

(c) consider any observations made by the Commissioner or any representations made pursuant to paragraph (b) (ii).

(4) The making of a decision to provide or remove traffic calming measures of a class prescribed under subsection (3) and the consideration of observations or representations under paragraph (c) of that subsection shall be reserved functions.

(5) Traffic calming measures shall not be provided or removed in respect of a national road without the prior consent of the National Roads Authority.

(6) The Minister may issue general guidelines to road authorities relating to traffic calming measures under this section and may amend or cancel any such guidelines and, where any such guidelines are, for the time being, in force, road authorities shall have regard to such guidelines when performing functions under this section.

(7) A traffic calming measure provided under this section shall be deemed to be a structure forming part of the public road concerned and necessary for the safety of road users.

(8)

(a) A person who, without lawful authority, removes or damages or attempts to remove or damage a traffic calming measure provided under this section shall be guilty of an offence.

(b) An offence under this subsection may be prosecuted by the road authority in whose functional area the acts constituting the offence were done.

(9) In this section—

"provide" includes erect or place, maintain and (in the case of an instrument for giving signals by mechanical means) operate and cognate words shall be construed accordingly; and

"traffic calming measures" means measures which restrict or control the speed or movement of, or which prevent, restrict or control access to a public road or roads by, mechanically propelled vehicles (whether generally or of a particular class) and measures which facilitate the safe use of public roads by different classes of traffic (including pedestrians and cyclists) and includes the provision of traffic signs, road markings, bollards, posts, poles, chicanes, rumble areas, raised, lowered or modified road surfaces, ramps, speed cushions, speed tables or other similar works or devices, islands or central reservations, roundabouts, modified junctions, works to reduce or modify the width of the roadway and landscaping, planting or other similar works.

Appendix A

CSEA Drawing No.'s:

21_036-CSE-GEN-XX-DR-C-2106 – Ringmahon Road West and Passage Greenway Tie-In

21_036-CSE-GEN-XX-DR-C-2107– Ringmahon Road North and Castle Road

21_036-CSE-GEN-XX-DR-C-2108– Ringmahon Road East

21_036-CSE-GEN-XX-DR-C-2112– Avenue de Rennes

21_036-CSE-GEN-XX-DR-C-2126 – Skehard Road West

21_036-CSE-GEN-XX-DR-C-2127 – Skehard Road East

21_036-CSE-GEN-XX-DR-C-2130 – Ballinure Avenue

21_036-CSE-GEN-XX-DR-C-2140 – Mahon East – West Link

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