

Project

Deansgrange Cycle Route

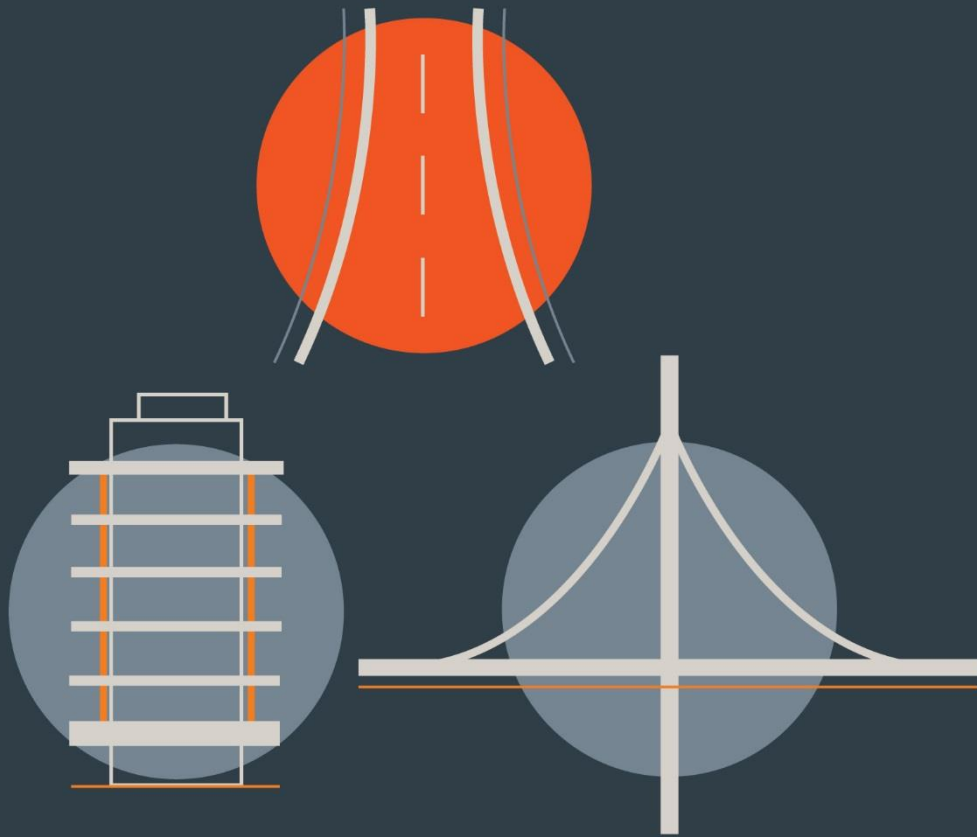
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Part 8 Report

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EXECUTIVE SUMMARY

DBFL Consulting Engineers (DBFL) have been commissioned by Dun Laoghaire Rathdown County Council (DLRCC) to provide consulting engineering services for the design and development of the Deansgrange Cycle Route Scheme.

The overall scheme aims to deliver a high quality, safe walking and cycling route that will meet the current school and commuting demand within the Deansgrange area for all cycle users.

The cycle route proceeds along a section of Kill Lane, providing access to and from Clonkeen Park, before travelling along the Deansgrange Road, terminating south of the Deansgrange Road/Brookville Park signalised junction.

Deansgrange Road is defined as a proposed secondary cycle route within both the 2013 GDA Cycle Network Plan and the Draft 2021 GDA Cycle Network Plan guidance documents. Deansgrange Road is also highlighted as an objective to provide cycle facilities as part of the Active School Travel project being undertaken by DLRCC.

As part of a previous options assessment for the route, a number of options were considered with extensive consultation and engagement undertaken with the public. A preferred option emerged from this assessment which has now been progressed, as part of this scheme and part 8 application, to preliminary design.

The preferred route for the cycle scheme provides for a section of the route to progress through the Deansgrange Cemetery. A separate options assessment was undertaken as part of the preliminary design stage for routing options within the cemetery. A Multi Criteria Analysis (MCA) was undertaken with the preferred option determined as routing cyclists along existing paths within the cemetery. Public lighting will be provided within the cemetery. The existing cemetery boundary wall will be reduced in height in order to allow for passive surveillance.

A conflict assessment undertaken along Kill Lane determined a number of interactions/conflicts occurring at the priority crossing adjacent to the Clonkeen Park entrance. As part of this preliminary design, it was recommended to signalise this crossing in order to improve safety for vulnerable road users in this area.

The preliminary design for the scheme includes a cycle track both sides of Kill Lane which proceeds from the entrance to Clonkeen Park to the Deansgrange Road/Kill Lane signalised

junction. Pedestrian and cycle crossings are provided on two arms of the junction which will allow cyclists to travel between Kill Lane and Deansgrange Road. On Deansgrange Road, it is proposed to provide a two-way cycle track on the western side of the road. The cycle facility will progress within the Deansgrange Cemetery where cyclists will use the existing paths with public lighting proposed along these paths. At the northern side of the cemetery, the two-way cycle track will resume on the western side of Deansgrange Road and will continue to the Deansgrange Road / Brookville Park signalised junction where it will tie in with proposals outlined here as part of the Dundrum to Dun Laoghaire Active Travel Scheme (the DLR Connector).

An AA and EIAR Screening assessment has been undertaken as part of this scheme design. In terms of the EIAR screening, the report recommended that an EIAR is not required. In terms of the AA screening, the report concludes that an Appropriate Assessment is not required.

An Ecological Impact Assessment Report has been undertaken as part of this scheme design. The results of this report outline that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance.

An Archaeological and Heritage assessment was undertaken within the cemetery. The report concluded that all ground disturbances associated with the proposed development be monitored by a suitably qualified archaeologist.

1.0 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 DBFL Consulting Engineers (DBFL) have been commissioned by Dun Laoghaire Rathdown County Council (DLRCC) to provide consulting engineering services for the design and development of the Deansgrange Cycle Route Scheme. This scheme forms part of the Active School Travel project currently being run by DLRCC Active Travel Sector.
- 1.1.2 The DLRCC Active School Travel project is centred on the concept of providing a connected and safe network of walking and cycling routes to schools across the county.
- 1.1.3 The overall scheme aims to deliver a high quality, safe walking and cycling route that will meet the current school and commuting demand within the Deansgrange area for all cycle users. The scheme will provide an important connection between two of the proposed routes within the Active School Travel project, the “Park to Park” route and the “Mountains to Metals” route, as illustrated in Figure 1-1 below.

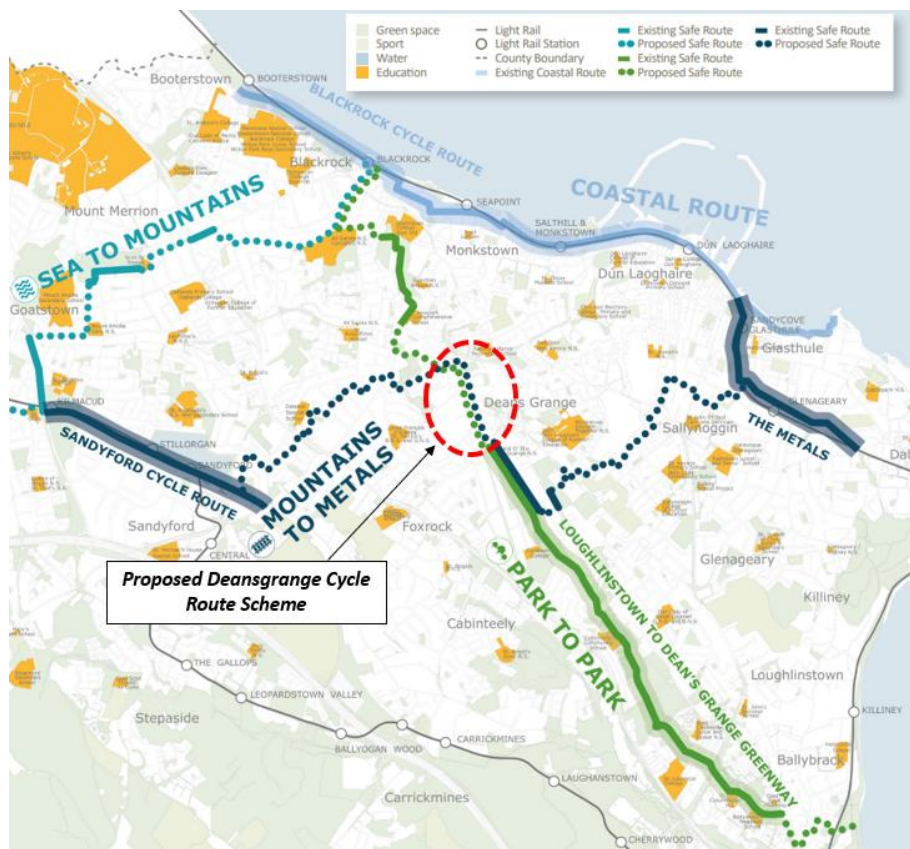


Figure 1-1: DLRCC Active School Travel Routes

1.2 STUDY AREA

- 1.2.1 The study area for the scheme is shown in Figure 1-2 below. The cycle route proceeds along a section of Kill Lane, providing access to and from Clonkeen Park, before travelling along the Deansgrange Road, terminating south of the Deansgrange Road/Brookville Park signalised junction.
- 1.2.2 A previous public engagement process was completed in 2021, details of this are available at <https://www.dlrco.ie/en/active-travel/active-school-travel>. This process included extensive consultation and assessment of many different configurations and options for this section of Active School Travel. The preferred option in the multi-criterial analysis was to provide for two way cycling on Deansgrange Road and to utilise a section of Deansgrange Cemetery. This allowed for two way traffic to be maintained on Deansgrange Road. This option was welcomed by those that were involved in the engagement process.

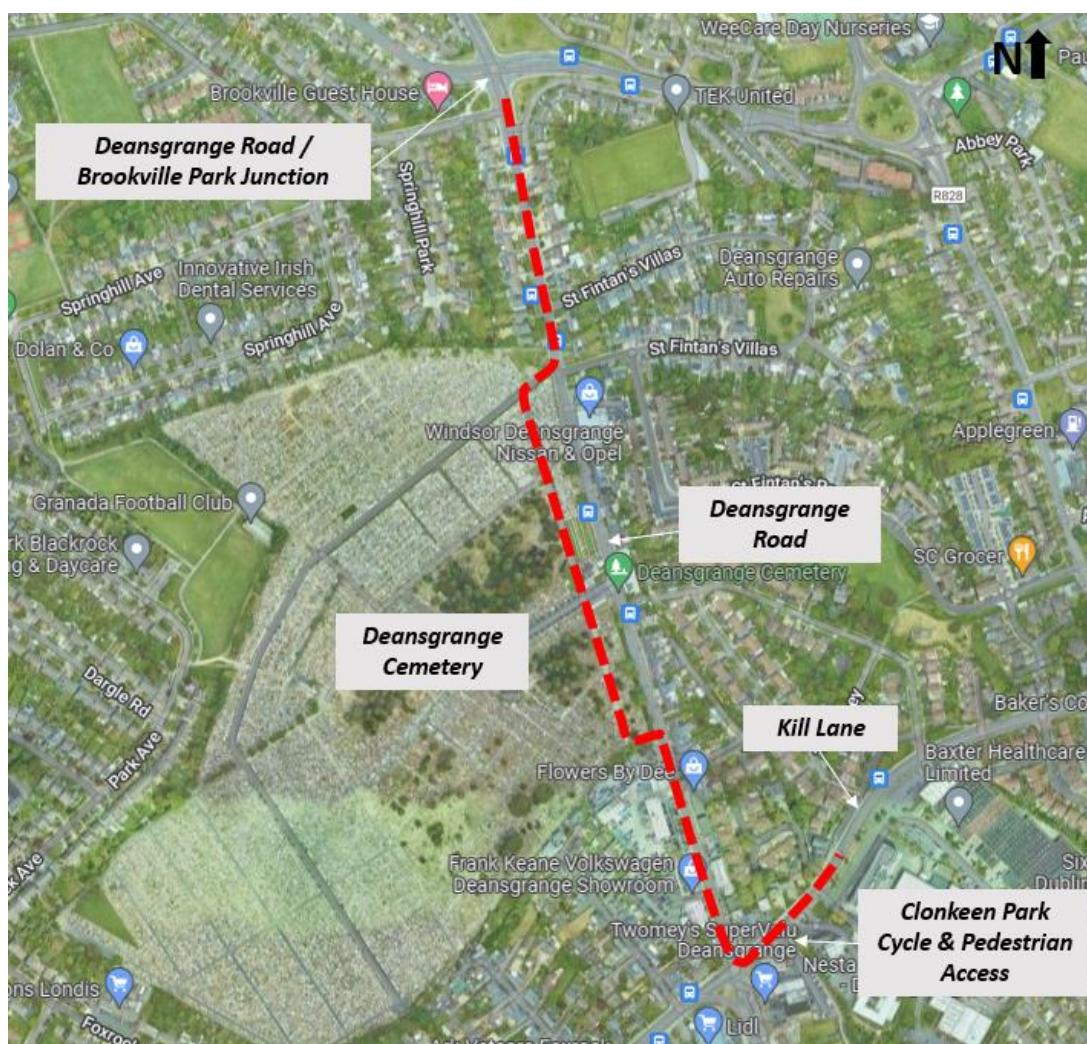


Figure 1-2: Study Area for the Deansgrange Cycle Route

1.3 NEED FOR THE SCHEME

- 1.3.1 As outlined above, this scheme forms part of the Active School Travel project being run by DLRCC that aims to encourage increased walking and cycling to schools.
- 1.3.2 Deansgrange Road is defined as a proposed secondary cycle route within both the 2013 GDA Cycle Network Plan and the Draft 2021 GDA Cycle Network Plan guidance documents. Deansgrange Road is also highlighted as an objective to provide cycle facilities as part of the Active School Travel project being undertaken by DLRCC.
- 1.3.3 The Deansgrange Cycle Route scheme will provide a key connection between the "Park to Park" Route and the "Mountains to Metals" Route proposed as part of the overall Active School Travel Project.
- 1.3.4 This scheme will improve pedestrian and cycle facilities within the Deansgrange area that will serve both local residents and businesses and will also provide recreational opportunities within the area.

1.4 PRE-PLANNING CONSULTATION

- 1.4.1 Pre-Planning consultation was undertaken internally within the various relevant sections of Dun Laoghaire Rathdown County Council (DLRCC) as well as the National Transport Authority (NTA).
- 1.4.2 The proposals were circulated to internal departments and the comments from departments are included in this report.

1.5 STRUCTURE OF THE REPORT

- 1.5.1 The following outlines the structure of the remainder of this report:
- Section 2 – Planning Policy & Design Guidance – This section outlines the various planning policies and design guidance relevant to the proposed scheme.
 - Section 3 – Existing Conditions – This section details the existing conditions along the proposed scheme route including the existing road, traffic, pedestrian and cycle conditions for the external road network and internal road network within the Deansgrange Cemetery.

- Section 4 – Option Development for Deansgrange Cemetery – This section outlines route options considered for the cycle facilities within the Deansgrange Cemetery section of the scheme. These options are assessed using MCA analysis.
- Section 5 – Deansgrange Cemetery Proposals – This section outlines the measures being proposed within the Deansgrange Cemetery that will provide a safe and well maintained facility within the grounds of the cemetery.
- Section 6 – Preliminary Design – This section details the preliminary design for the scheme.
- Section 7 – Environmental Constraints – This section provides a summary of the EIA and AA Screening reports undertaken separately for this scheme. This section also provides a summary of the heritage assessment report undertaken separately as part of this scheme.
- Section 8 – Summary of Report.

2.0 PLANNING POLICY & DESIGN GUIDANCE

2.1 INTRODUCTION

2.1.1 It is important that a review of current Policy is undertaken and used to inform the development of the Deansgrange Cycle Route Scheme.

2.1.2 The following policy documents and design guidance have been reviewed.

2.2 NATIONAL DEVELOPMENT PLAN (2021-2030)

2.2.1 As part of Project Ireland 2040 the National Development Plan sets out the Government's overarching investment strategy and budget for the period 2021-2030. It is an ambitious plan that balances the significant demand for public investment across all sectors and regions of Ireland with a major focus on improving the delivery of infrastructure projects to ensure speed of delivery and value for money.



2.2.2 The NDP sets out a significant level of investment, almost €165 billion, which will underpin the NPF and drive its implementation over the next nine years. The scale of the Transport-related requirements under the revised NDP amounts to c. €35 billion in total over 2021- 2030.

2.2.3 The National Planning Framework (NPF) recognises the importance of significant investment in sustainable mobility (active travel and public transport) networks if the NPF population growth targets are to be achieved. Investing in high-quality sustainable mobility will improve citizens' quality of life, support our transition to a low-carbon society and enhance our economic competitiveness.

2.2.4 With regard to Ireland's greenhouse gas emissions, the transport sector has been determined as a key contributor to this and is responsible for 20%. The NDP sets out an entire National Strategic Objective that is dedicated to "Sustainable Mobility" and has a range of policies and measures to promote the achievement of sustainable mobility. The following definitions of Sustainable Mobility have been outlined in the NDP:

- Comfortable and affordable journeys to and from work, home, school, college, shops and leisure;

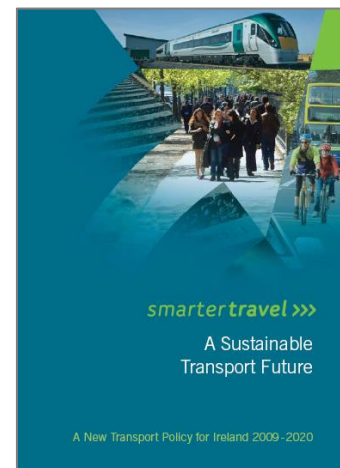
- Travelling by cleaner and greener transport; and
- A shift away from the private car to greater use of active travel (walking and cycling) and public transport.

2.2.5 The Government is firmly committed to encouraging the use of walking, cycling and other active travel methods, and this has been signalled by the recent increase in the active travel budget. Whole-of Government funding equivalent to 20% of the 2020 transport capital budget, or €360 million, has been committed annually for the period 2021-2025. In 2021, the NTA allocated just over €240 million to active travel infrastructure projects in Dublin, the Greater Dublin Area and regional cities.

2.2.6 This investment will help support the delivery of significant levels of new and improved walking and cycling infrastructure by 2025, as well as additional investment in Greenways. Successful delivery of planned projects and programmes should serve to encourage a shift in the population towards walking, cycling and scooting as transport modes as the decade progresses.

2.3 SMARTER TRAVEL – A SUSTAINABLE TRANSPORT FUTURE 2009 - 2020

2.3.1 Smarter Travel - A Sustainable Transport Future, was published in February 2009, and represents a new transport policy for Ireland for the period 2009-2020. The policy recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport.



2.3.2 The policy is a direct response to the fact that continued growth in demand for road transport is not sustainable due to the resulting adverse impacts of increasing congestion levels, local air pollution, contribution to global warming, and the additional negative impacts to health through promoting increasingly sedentary lifestyles.

2.3.3 The following five key goals form the basis of the Smarter Travel policy document:

- 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 dependency on imported fossil fuels.

2.3.4 These aims will be achieved through 49 specific actions listed within the Smarter Travel Policy, which can be broadly grouped into 4 key areas:

- Actions to reduce distance travelled by private car and encourage smarter travel,
- Actions aimed at ensuring that alternatives to the private car are more widely available,
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies, and
- Actions aimed at strengthening institutional arrangements.

2.3.5 The Smarter Travel policy also includes for a comprehensive range of supporting 'actions' including mode specific (e.g. walking, cycling and public transport etc.) and behaviour change initiatives which both encourage and provide for sustainable travel practices for all journeys.

2.4 CLIMATE ACTION PLAN (2021)

2.4.1 The Climate Action Plan 2021 sets out a major programme for change in response to reducing Ireland's greenhouse gas emissions. The proposals outlined in the Plan are aimed at achieving a net zero carbon energy system within Ireland and it is envisaged that these proposals will also have associated positive economic and societal benefits, including cleaner air, warmer homes and a more sustainable economy in the longer term.



2.4.2 Ireland's transport system plays a critical role in realising the ambitious targets of the Climate Action Plan. Consequently, to make growth less transport intensive a number of key policies are identified, including the expansion of walking, cycling and public transport to promote modal shift. The measures to deliver on the transport related targets set out in the Climate Action Plan cover the following:

- Sustainability;
- System Efficiency and Demand Management;
- Fleet Electrification;
- Renewable and Alternative Transport Fuels for Freight;
- Use of Green Hydrogen and other Emerging Technologies.

2.5 NATIONAL CYCLE MANUAL - 2011

2.5.1 The National Cycle Manual is a national guidance document that details the principles of sustainable safety that offers a safe traffic environment for all road users including cyclists. The manual provides guidance on integrating the bicycle in to the design of urban areas. The manual sets out five principles of Sustainable Safety:



1. **Functionality:** The principle of functionality is that the design which is fit for purpose is safer. Urban streets, roads and spaces are always multi – functional.
 2. **Homogeneity:** The principle of Homogeneity is that reducing the relative speed, mass and directional differences of different road users sharing the same space increases safety.
 3. **Legibility:** The principle of Legibility is that a road environment that all road users can read and understand is safer. A legible design will be self-evident, self-explanatory and self-enforcing.
 4. **Forgivingness:** The principle of Forgivingness (Passive Safety) is that environments that contribute to benign outcomes of accidents are safer.
 5. **Self-Awareness:** The principle of Self-Awareness is that where road users are aware of their own abilities and limitations to negotiate a road environment, the environment is safer.
- 2.5.2 The width of a cycle facility as well as the type of facility proposed (Integrated or Segregated) are two key factors for providing adequate, safe facilities and a sub-standard cycle lane/track is never recommended.
- 2.5.3 The designed width of a cycle facility is comprised of the effective width as well as clearances that are required in different circumstances. The Width Calculator table provides details for determining the actual width required for cycle lanes and tracks. It comprises of three main factors, A,B and C, as well as an additional factor, D, which is only relevant in certain circumstances. The width calculator table is illustrated in Figure 2-1.



A Inside Edge	B Cycling Regime	C Outside Edge	D Additional Features
Kerb 0.25m	Single File 0.75m	30kph, 3.0m wide lane 0.50m	Uphill 0.25m Sharp bends 0.25m
Channel Gully 0.25m	Single File + Overtaking, Partially using next lane 1.25m	50kph, 3.0m wide lane 0.75m	Cyclist stacking, Stopping and starting 0.50m
Wall, Fence or Crash Barrier 0.65m	Basic Two-Way 1.75m	Raised kerb, dropped Kerb or physical barrier 0.50m	Around primary schools, Interchanges, or for larger tourist bikes 0.25m
Poles or Bollards 0.50m	Single File + Overtaking, Partially using next lane 2.00m	Kerb to vegetation etc. (ie. cycleway) 0.25m	Taxi ranks, loading, line of parked cars 1.00m (min 0.8m)
	2 Abreast + overtaking (tracks and cycleways) 2.50m		Turning pocket cyclists 0.50m

Figure 2-1: Cycle width calculator – National Cycle Manual (Source: NCM)

2.5.4 In terms of the type of facility proposed, integrated or segregated, there are a number of factors considered for determining the type of facility most appropriate. Segregated facilities are recommended in the following circumstances:

- The traffic regime cannot be rendered suitable for integrated cycling;
- To preclude traffic from queuing or parking on the facility;
- To confer an advantage on cyclists.

2.5.5 A guidance graph is illustrated in Figure 2-2 that sets out relevant factors for determining the type of facility to provide.

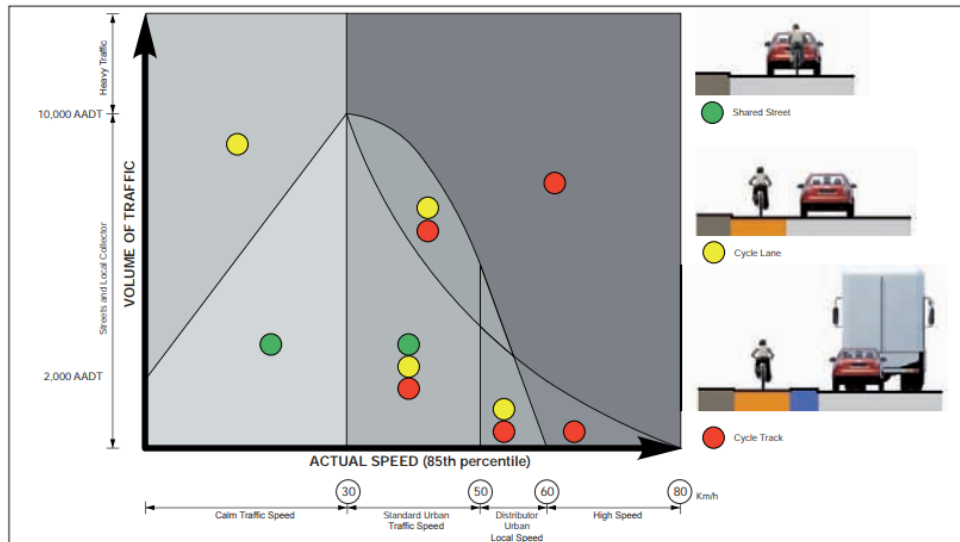
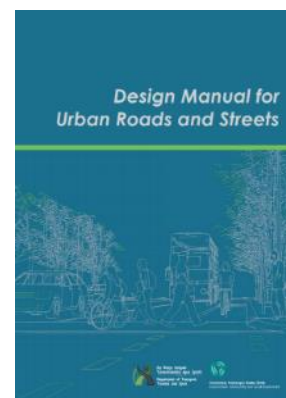


Figure 2-2: Guidance graph for determining type of cycle facility (Source: NCM)

- 2.5.6 The graph determines the type of facility necessary, whether the facility is shared, cycle lane or cycle track, based on vehicle speed and AADT of the road.
- 2.5.7 In terms of allocating cyclists along Deansgrange Road, the posted speed limit is 50kph and the AADT along the road is approximately 9,000AADT. Therefore, an off-road cycle track is required. In terms of allocating cyclists within Deansgrange Cemetery, the AADT for the paths within the cemetery is low, at 431AADT and the general speeds of vehicles is also low considering the location and nature of the surrounding area. Therefore, a shared street is applicable for cyclists within the cemetery paths.

2.6 DESIGN MANUAL FOR URBAN ROADS AND STREETS

- 2.6.1 DMURS provides guidance relating to the design of urban roads and streets. It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets.
- 2.6.2 The manual places a significant emphasis on car dominance in Ireland and the implications this has had regarding the pedestrian and cycle environment. The document encourages more sustainable travel patterns and safer streets by proposing a hierarchy for user



regarding the pedestrian and cycle environment. The document encourages more sustainable travel patterns and safer streets by proposing a hierarchy for user

priorities. This hierarchy places pedestrians at the top, indicating that walking is the most sustainable form of transport and that by prioritising pedestrians first, the number of short car journeys can be reduced and public transport made more accessible.

2.6.3 Second in the hierarchy are cyclists with public transport third in the hierarchy and private motor vehicles at the bottom. By placing private vehicles at the bottom of the hierarchy, the document indicates that there should be a balance on street networks and cars should no longer take priority over the needs of other users.

2.6.4 The manual emphasises that narrow carriageways are one of the most effective design measures that calm traffic. Standard width of an arterial and link street is 3.25m, however, this may be reduced to 3m where lower design speeds are being applied. Desirable footpath widths are between 2m – 4m. The 2m width should be implemented to allow for low to moderate pedestrian activity. A 3m – 4m footpath should be implemented to allow for moderate to high pedestrian activity.

2.6.5 The focus of the manual is to create a place – based sustainable street network that balances the pedestrian and vehicle movements. The manual references the different types of street networks, including arterial streets, link streets, local streets, and highlights the importance of movement.

2.7 TRANSPORT STRATEGY FOR THE GREATER DUBLIN AREA 2016-2035

2.7.1 The purpose of this strategy is 'to contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods.'

2.7.2 This transport strategy provides a framework for the planning and delivery of transport infrastructure and services in the Greater Dublin Area (GDA).

2.7.3 There is an onus on the Authority to take full account of current prevailing policies and plans made at central government level, in transport, planning and in other



sectors as well as other regional level plans. On review of these policies, the following key messages have emerged:

- Transport must be a key consideration in land use planning;
- In the short term, funding for large scale transport projects will be limited;
- Addressing urban congestion is a priority;
- The capacity of the strategic road network must be protected;
- A significant reduction in the share of trips undertaken by car is required, particularly in relation to short trips and commuter trips;
- An associated increase in walking, cycling and public transport is also required;
- A safe cycling network, with extensive coverage in metropolitan Dublin and in other towns, is needed to cater for the increased use of cycling that is already occurring and to reduce the dominance of the private car in meeting travel needs;
- The enhancement of the pedestrian environment, including measures to overcome severance and to increase permeability, is a priority.

2.7.4 In terms of cycle infrastructure, the GDA cycle network plan propose to expand the urban cycle network to over 1,485km in length and will provide over 1,300km of new connections between towns in the rural areas of the GDA. Recognising the need for a safe cycling network, it is intended that many of the key cycling route will be developed as segregated facilities, with cyclists separated from vehicular traffic through the use of kerb separators or by having the cycleway at a higher level than the road carriageway.

2.7.5 In terms of walking and issues raised relating to provision for pedestrians, it is intended to:

- Provide a safer, more comfortable and more convenient walking environment for those with mobility, visual and hearing impairments, and for those using buggies and prams;
- Enhance pedestrian movement along the strategic pedestrian routes by widening footpaths where appropriate, providing better surfacing and by

removing unnecessary poles, signs, street cabinets, advertising and other street clutter;

- Revise road junction layouts, where appropriate, to provide dedicated pedestrian crossings, reduce pedestrian crossing distances, provide more direct pedestrian route and reduce the speed of turning traffic;
- Cooperate with other agencies in the enforcement of laws in relation to parking on footpaths;
- Ensure that permeability and accessibility of public transport stops and stations for local communities is maintained and enhanced.

2.8 DRAFT TRANSPORT STRATEGY FOR THE GREATER DUBLIN AREA 2022-2042

2.8.1 The Draft Greater Dublin Area Transport Strategy 2022-2042 has arisen from a review of the original 2016 strategy. The updated document *"sets out the framework for investment in transport infrastructure and services over the next twenty years"*.



2.8.2 The overall aim of the Transport Strategy is *"To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth"*.

2.8.3 Four primary objectives have been identified as part of the Draft Greater Dublin Area Transport Strategy 2022-2028. These are:

- **An Enhanced Natural and Built Environment** - To Create a better environment and meet our environmental obligations by transitioning to a clean, low emission transport system, reducing car dependency, and increasing walking, cycling and public transport use.
- **Connected Communities and a Better Quality of Life** – To enhance the health and quality of life of our society by improving

connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for walking and cycling.

- **A Strong Sustainable Economy** – To support economic activity and growth by improving the opportunity for people to travel for work or business where and when they need to, and facilitating the efficient movement of goods.
- **An Inclusive Transport System** – To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.

2.8.4 With regards to cycling, the Strategy acknowledges the growth in cycling in the Greater Dublin Area since the mid-2000s and the need to provide a coherent network of cycle facilities linking origins and destinations to cater for trips within communities. Measures for cycling outlined in the Strategy of particular relevance to this scheme include:

- **Measure CYC1 – GDA Cycle Network** It is the intention of the NTA and the local authorities to deliver a safe, comprehensive, attractive and legible cycle network in accordance with the updated Greater Dublin Area Cycle Network.
- **Measure CYC2 – Cycle Infrastructure Design** It is the intention of the NTA to ensure that cycle infrastructure in the GDA provides an appropriate quality of service for all users, through the implementation of the design guidance contained in the latest version of the National Cycle Manual.

2.8.5 In terms of walking, the Strategy highlights the importance of good quality pedestrian facilities while recognising that walking forms some part of most journeys. Plans to provide a better walking environment include:

- Improving footpaths to ensure they are of sufficient width, adequately lit, serve both sides of the road in most urban areas, have good quality surfacing and are free of unnecessary clutter.
- Improving junctions to reduce the distance pedestrians have to cross and the number of times they must stop and wait during a crossing.
- Optimising crossing times for pedestrians at signalised junctions.
- Installing additional pedestrian crossing points where requirements are identified.

- Expanding and improving wayfinding systems.

2.9 GDA CYCLE NETWORK PLAN – DECEMBER 2013

2.9.1 The GDA Cycle Network Plan is a document, prepared on behalf of the National Transport Authority, that identifies and determines a consistent, clear and logical cycle network within the Greater Dublin Area.



2.9.2 The plan aims to ensure that cycling as a transport mode is supported, enhanced and exploited in order to achieve strategic objectives and reach national goals. The steps undertaken within the plan include the following:

1. Collate existing and planned network information;
2. Undertake quality of service review;
3. Identify gaps in existing network;
4. Cycle travel demand assessment;
5. Develop cycle network plan;
6. Target quality of service for routes;
7. Develop design concepts.

2.9.3 These seven steps proposed are in line with the National Cycle Manual methods for designing a Cycle Network.

2.9.4 The GDA Cycle Network map, shown in Figure 2-3, outlines the proposals for the Deansgrange area, with a Secondary Cycle route proposed along the Deansgrange Road.

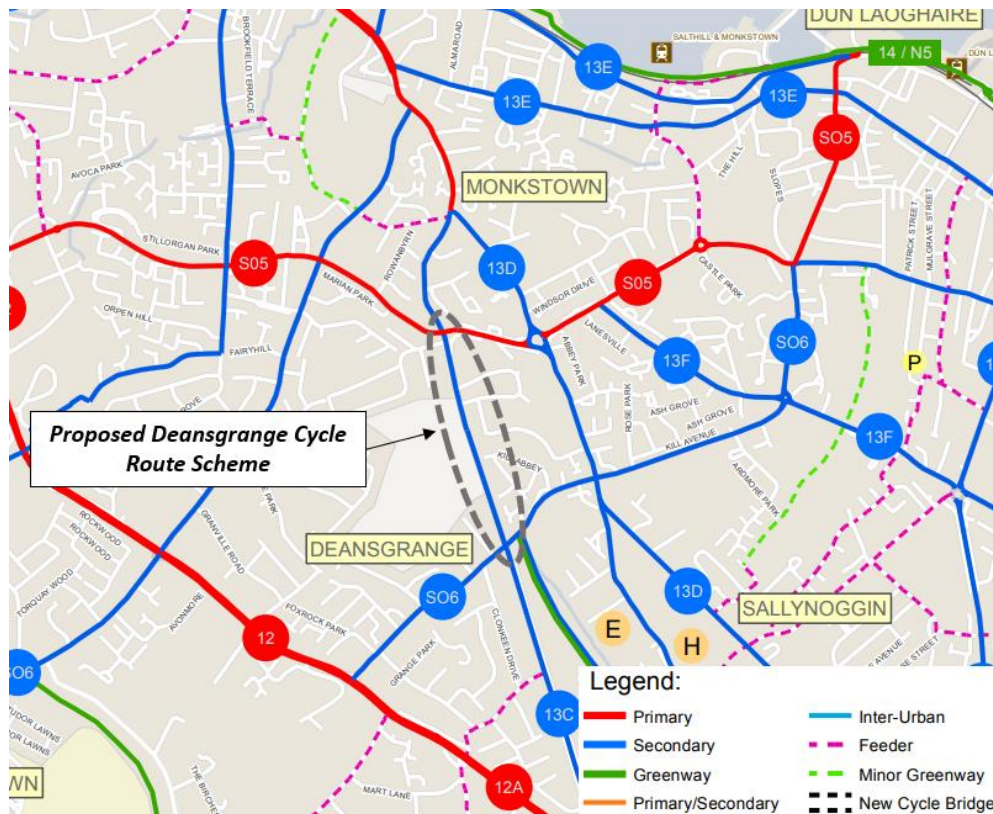


Figure 2-3: GDA Cycle Network Plan for Wellington Lane Scheme (Source: GDA Cycle Network Plan)

2.10 DRAFT GDA CYCLE NETWORK PLAN 2021

2.10.1 The Draft Greater Dublin Area Cycle Network Plan 2021 has arisen as an update to the original 2013 plan, with input from local authorities within the GDA.

2.10.2 While the original 2013 GDA Cycle Network Plan focuses on identifying the routes required to provide an adequate network for cyclists, the updated 2021 plan seeks to enhance and strengthen local accessibility and permeability.



2.10.3 As part of the updated Plan, four manageable goals have been identified to create and improved and inclusive cycle network. These goals are as follows:

- Increase participation;
- Improve safety and accessibility;
- Improve connectivity;

- Create a navigable and coherent network.

2.10.4 The GDA Cycle Network map, shown in Figure 2-4, outlines the proposals for the Deansgrange Road, with a Secondary Cycle Route proposed along Deansgrange Road.

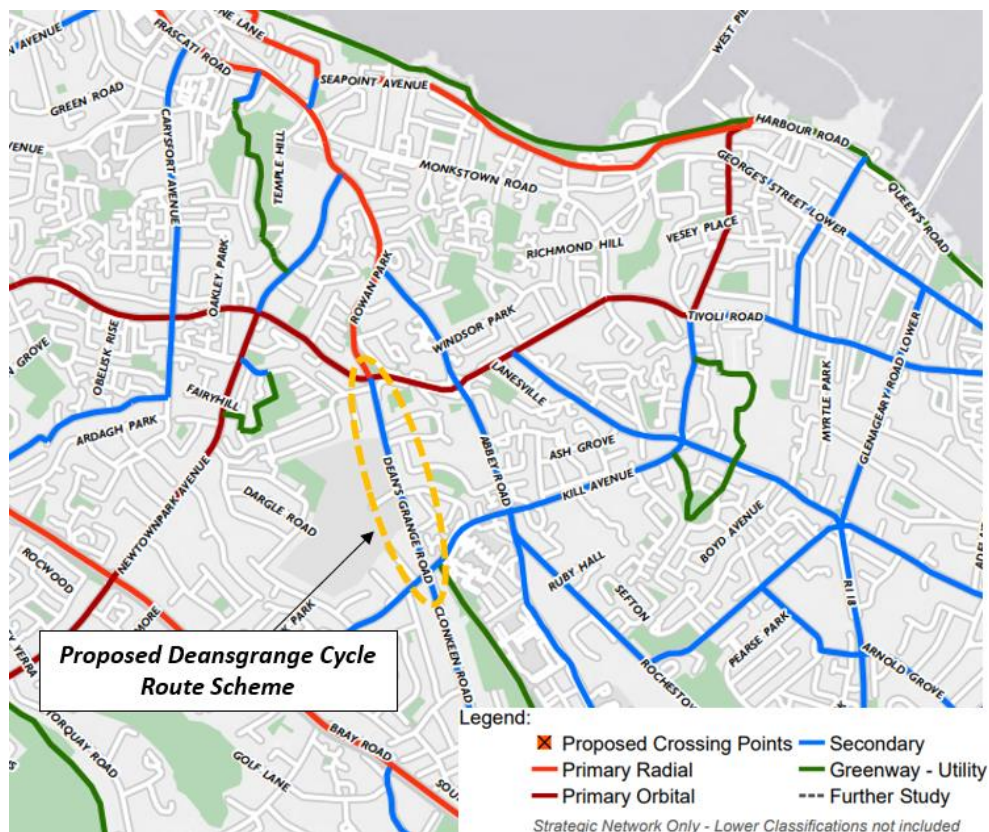


Figure 2-4: Draft 2021 GDA Cycle Network Plan for Wellington Lane Scheme (Source: Draft GDA Cycle Network Plan 2021)

2.11 DLRCC COUNTY DEVELOPMENT PLAN (2022-2028)

2.11.1 Dún Laoghaire-Rathdown County Council commenced pre-draft public consultation of the 2022-2028 Draft County Development Plan in January 2020. A Chief Executive’s Draft Plan was circulated to members in October 2020 and this was considered and amended by the 40 elected members at a series of Special County Development Plan meetings.



- 2.11.2 By December 2020, this version was considered to be the Draft Plan with the public consultation period ending in April 2021. The Plan has now been adopted by the elected members and came into effect on the 21st April 2022.
- 2.11.3 The overall vision for this Plan is to embrace inclusiveness, champion quality of life through healthy placemaking, grow and attract a diverse innovative economy and deliver this in a manner that enhances our environment for future generations.
- 2.11.4 The County Development Plan guides future growth and development in the County. The new DLR County Development Plan sets out the policy objectives and the overall strategy for the proper planning and sustainable development of the County over the plan period from 2022 to 2028. The Plan sets out an approach centred on the core principle of sustainability with a focus on creating vibrant, liveable, climate resistant communities.
- 2.11.5 In the context of the subject scheme, the following are the relevant transport and development objectives set out within the 2022-2028 Plan:

"Policy Objective T3: Delivery of Enabling Transport Infrastructure – It is a Policy Objective to support the delivery of enabling transport infrastructure so as to allow development take place in accordance with the Core Strategy of this Plan"

"Policy Objective T4: Development of Sustainable Travel and Transport - It is a Policy Objective to promote, facilitate and cooperate with other transport agencies in securing the implementation of the transport strategy for the County and the wider Metropolitan Area as set out in Department of Transport's 'Smarter Travel, A Sustainable Transport Future 2009 –2020' and subsequent updates and the NTA's Transport Strategy for the Greater Dublin Area 2016-2035 and subsequent updates, the RSES and the MASP'..."

"Policy Objective T5: Public Transport Improvements - It is a Policy Objective to expand attractive public transport alternatives to car transport as set out in 'Smarter Travel, A Sustainable Transport Future 2009-2020' and subsequent updates; the NTA's 'Transport Strategy for the Greater Dublin Area 2016-2035' and the NTAs 'Integrated Implementation Plan 2019-2024' and subsequent updates by optimising existing or proposed transport corridors,

interchanges, developing new park and rides, taxi ranks and cycling network facilities at appropriate locations.”

“Policy Objective T11: Walking and Cycling - *It is a Policy Objective to secure the development of a high quality, fully connected and inclusive walking and cycling network across the County and the integration of walking, cycling and physical activity with placemaking including public realm permeability improvements.”*

“Policy Objective T12: Footways and Pedestrian Routes - *It is a Policy Objective to maintain and expand the footway and pedestrian route network to provide for accessible, safe pedestrian routes within the County in accordance with best accessibility practice.”*

“Policy Objective T13: County Cycle Network - *It is a Policy Objective to secure improvements to the County Cycle Network in accordance with the Dún Laoghaire-Rathdown Cycle Network Review whilst supporting the NTA on the development and implementation of the Greater Dublin Area Cycle Network Plan 2013 and subsequent revisions, subject to environmental assessment and route feasibility.”*

“Policy Objective T23: Roads and Streets - *It is a Policy Objective, in conjunction and co-operation with other transport bodies and authorities such as the TII and the NTA, to secure improvements to the County road network – including improved pedestrian and cycle facilities, subject to the outcome of environmental assessment (SEA, EIA and AA), flood risk assessment and the planning process.”*

“Policy Objective T31: Accessibility - *It is a Policy Objective to support suitable access for people with disabilities, including improvements to transport, streets and public spaces. Accessibility primarily concerns people with reduced mobility, persons with disabilities, older persons and children.”*

“Policy Objective PHP40: Shared Space Layouts - *It is a Policy Objective to promote safer and more attractive streets and public realm for all road users throughout the County by proactively engaging with, and adhering to, the ‘shared space’ concept and guidance set out in the ‘Design Manual for Urban Roads and Streets’ (2013).”*

“Policy Objective MFC2: Accessible and Inclusive Multifunctional Centres - It is a Policy Objective of the Council to promote accessibility to Major Town Centres, District Centres and Neighbourhood Centres by sustainable modes of transportation in order to encourage multi-purpose shopping, business and leisure trips as part of the same journey.”

“Policy Objective PHP37: Public Realm Design - It is a Policy Objective that all development proposals, whether in established areas or in new growth nodes, should contribute positively to an enhanced public realm and should demonstrate that the highest quality in public realm design is achieved.”

“Policy Objective OSR5: Public Health, Open Space and Healthy Placemaking - It is a Policy Objective to support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan (NPAP) 2016, to increase physical activity levels across the whole population thus creating a society, which facilitates people whether at home, at work or at play to lead a more active way of life.”

2.12 DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL CLIMATE CHANGE ACTION PLAN (2019-2024)

2.12.1 This Plan sets out DLRCC’s process to improve energy efficiency and reduce greenhouse gas emissions, while making the County a more climate-resilient region. This will be achieved by a range of ongoing and planned actions in five key areas, which will be continuously monitored, evaluated and updated to 2030 and beyond. The key targets the Council will be aiming for are as follows;



- 33% improvement in the Council’s energy efficiency by 2020
- 40 reduction in the Council’s greenhouse gas emissions by 2030
- Make Dublin a climate-resilient region by reducing the impacts of future climate change-related events
- Actively engage and inform our citizens on climate change

- 2.12.2 One of the main actions of the Plan in terms of cycling is to implement / support cycling campaigns, construct segregated cycling routes and expand the County's bike sharing facilities. The Council aims to promote and provide for the development of cycling and walking as healthy sustainable attractive transport modes for short utility trips, recreational trips and trips to school / college.
- 2.12.3 The Council is *"actively working to secure the development of a high quality walking and cycling network across the County to prioritise the safety of pedestrians and cyclists. Routes are being retrofitted on all key nodes in the County to enhance pedestrian and cyclists' facilities. Village improvement schemes are also being developed to enrich the public realm and enhance the pedestrian and cyclist environment. Furthermore, DLRCC is actively increasing the availability of cycle parking county-wide, including at public transportation stations, in order to add to the existing 2,000 bicycle parking spaces."*

2.13 ACTIVE SCHOOL TRAVEL – SAFE WALKING AND CYCLING ROUTES

- 2.13.1 Dún Laoghaire-Rathdown-County Council's main aims of the active school travel scheme is to provide students and parents with safe, direct and comfortable walking and cycling routes to schools. The project aims to also to provide an alternative for families who do not or cannot drive, may not be able to avail of public transport or who wish to travel to school on foot or by bike. The COVID-19 pandemic has in part initiated this project and was first proposed in August 2020.
- 2.13.2 The plan can help avoid traffic congestion at school entrances, as well as encouraging a shift away from the use of the private car, particularly for short journeys up to approximately 4 km in length. This initiative is also aligned with the Council's wider climate action agenda, including objectives of the County Development Plan and the Council's Climate Change Action Plan, and is in line with national policy on enabling and promoting sustainable transport. Three routes have been proposed and have been summarised below:
- **Sea to Mountains:** *"will link east to west across the County. Starting at Blackrock Dart Station, crossing the N11 to Deerpark. It will then continue south linking to the Sandyford Cycle Route and Kilmacud Luas Stop and on to the Slang River Greenway and Wicklow Way."*

- **Park to Park:** *"will link north to south across the county. Starting at the coast at Blackrock Dart Station then joining to the existing pathways in Rockfield Park. From there it will continue south along Deansgrange Road linking to the Loughlinstown to Deansgrange Greenway and ending by linking south to the coast."*
- **Mountains to Metals:** *"will link east west across the county. Starting at the Sandyford Cycle Route, linking to the Sea to Mountains Route, the route also links up to the Park to Park route, north through residential areas and new developments and on to the Metals."*

2.14 OBJECTIVES OF THE SCHEME

2.14.1 The overall objectives of the proposed scheme, which have been developed following consideration of the above relevant policy documentation, include the following:

- Align with relevant Policy Documents including the DLRCC County Development Plan (2016 – 2022) as well as the Draft DLRCC County Development Plan (2022 – 2028);
- Improve the pedestrian and cycling environment within Deansgrange and provide a key connection link that will cater for school and commuting travel demand as well as recreational demand use;
- Provide a safer environment for all road users;
- Promote sustainable transport;

3.0 EXISTING CONDITIONS

3.1 EXISTING ROADS

3.1.1 Shown below in Figure 3-1 is the overall roads layout for Deansgrange in proximity to the proposed scheme route.

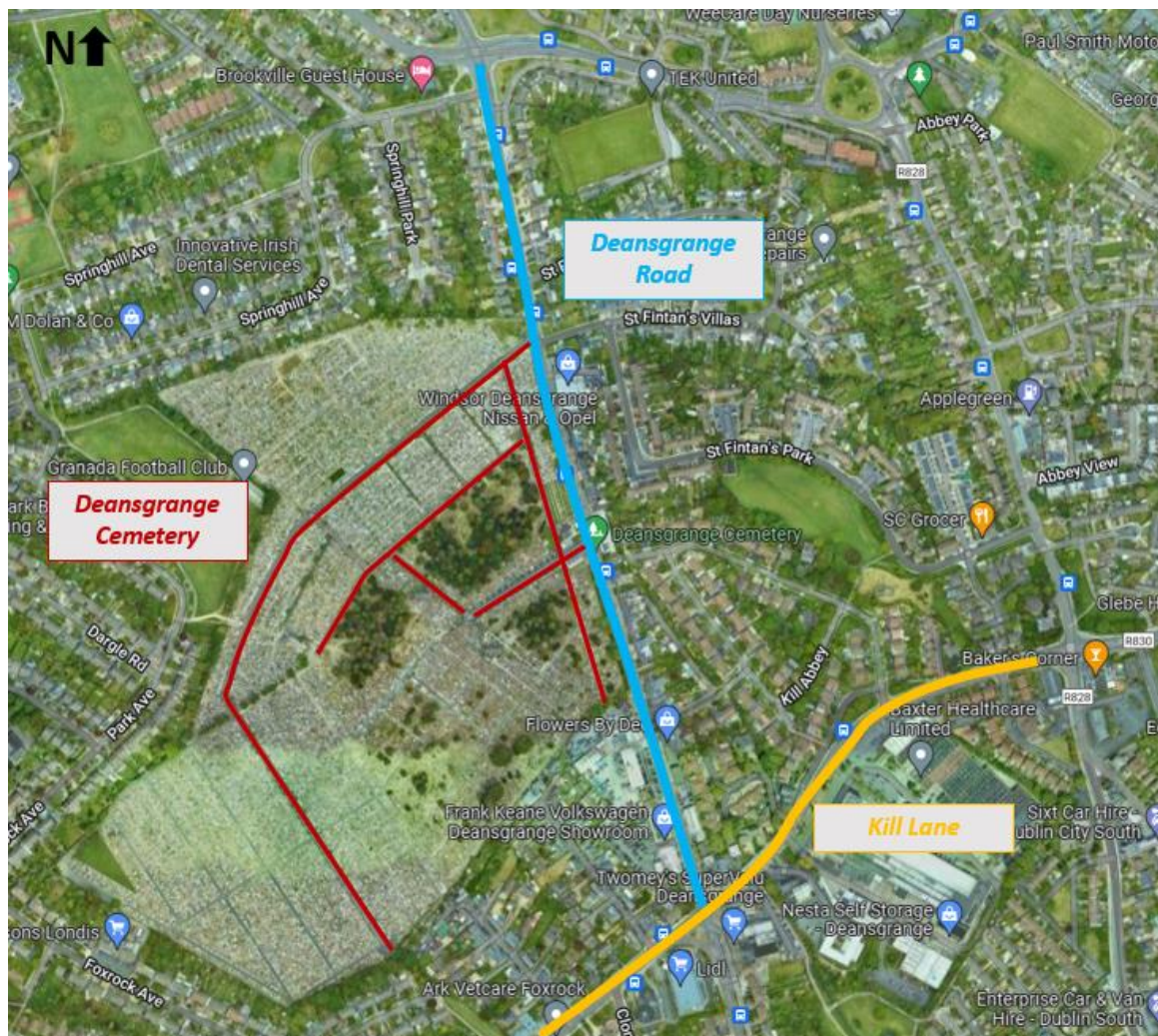


Figure 3-1: Road Layout in Deansgrange

R830 Kill Lane

3.1.2 The R830 (Kill Lane) is a single carriageway regional road that extends from the junction off the N11 and travels in a north easterly direction. The road carriageway is approximately 9m wide with advisory cycle lanes both sides of the road.

3.1.3 The speed limit on the road is 50kph.

- 3.1.4 It is noted that within the vicinity of the proposed scheme route, the advisory cycle lanes have been temporarily accommodated with light forms of segregation as part of the Covid-19 safety response by DLRCC as shown in Figure 3-2.

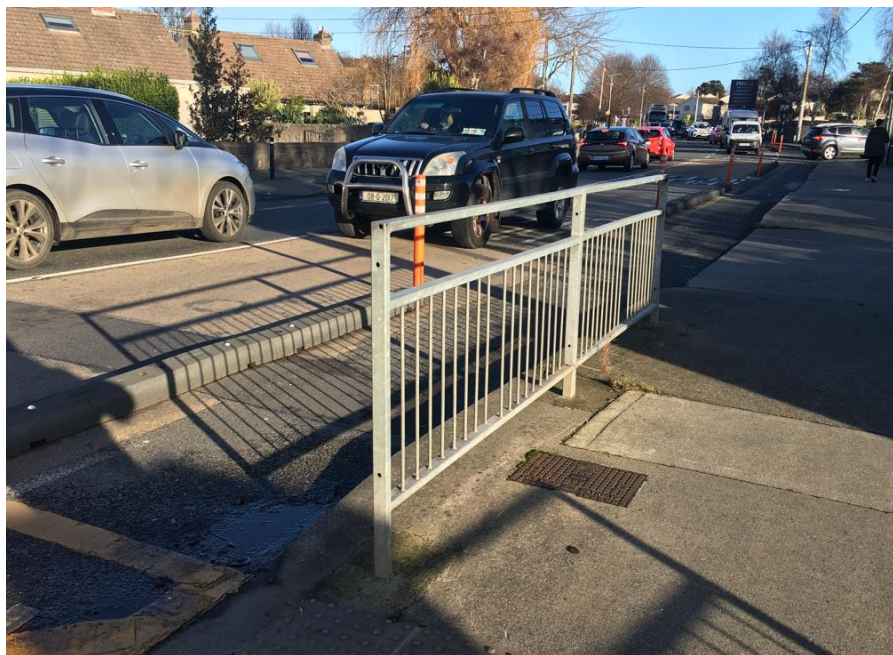


Figure 3-2: Temporary segregated cycle lanes along Kill Lane

- 3.1.5 Footpaths are provided both sides of the road. The footpaths in the vicinity of the scheme route are in good condition with an approximate width of 2m – 3m. This width increases outside the local shops and cafes to a maximum width of 5.5m.
- 3.1.6 There is no on street parking along Kill Lane in the vicinity of the proposed scheme. Off street parking is located in the local retail and shops area at SuperValu on Kill Lane.
- 3.1.7 Signalised pedestrian crossing facilities are provided on all arms of the R830 / R827 (Deansgrange) junction. There is also an uncontrolled crossing located along Kill Lane at the entrance to the Clonkeen Park, as shown in Figure 3-3. This crossing has a high demand for both pedestrians and cyclists due to the location of a number of trip attractors on the southern side of Kill Lane including Clonkeen Park, SuperValu & local shops, as well as a primary school Kill O’The Grange National School. It is noted that a number of conflicts (between pedestrians, cyclists and vehicles) have been identified at this crossing point as part of the assessment for this scheme.



Figure 3-3: Uncontrolled priority crossing on Kill Lane at Clonkeen Park entrance

Deansgrange Road

- 3.1.8 Deansgrange Road is a single carriageway regional road (R827) that runs in a north to south direction. Along the scheme route, the road carriageway varies in width between 8m – 10m with an element of on street parking, both regulated pay and display and residential disk parking as well as unregulated parking that takes places outside the cemetery.
- 3.1.9 The speed limit along the road is 50kph.
- 3.1.10 Footpaths are located on both sides of the road, these are in good condition and vary in width along the road from 1.5m up to 3m in some locations.
- 3.1.11 At present, there are no cycle facilities in place along the road.



Figure 3-4: Deansgrange Road

Deansgrange Cemetery

- 3.1.12 The roads and paths within Deansgrange Cemetery are quiet low trafficked routes. Widths vary, however, are approximately 3m – 5m for trafficked routes and 1.5m – 2m for paths.
- 3.1.13 The cemetery has two main vehicular access points as well as three pedestrian and cycle access points, all from Deansgrange Road. It is noted that an additional pedestrian and cycle access has recently been provided on the western side of the cemetery to accommodate a pedestrian and cycle demand for the Holly Park residents and St Patricks Boys and Girls National School.
- 3.1.14 The cemetery provides access for recreational use, ie, walking, cycling, jogging etc. and also provides for cross connectivity between residential estates and amenities within Deansgrange.
- 3.1.15 The pedestrian/cycle accesses are open 24 hours a day with the vehicular accesses open from 08:00 in the morning until 16:00 in the evening. It is noted that there is currently no public lighting along the cemetery paths or roads.



Path within the Deansgrange Cemetery



Road within the Deansgrange Cemetery

Figure 3-5: Paths and Roads within Deansgrange Cemetery

3.2 EXISTING TRAFFIC CONDITIONS

3.2.1 Traffic surveys were undertaken within Deansgrange as part of this scheme in order to determine the traffic levels within the area. Surveys were carried out over a 7 day period between 27/01/22 and 02/02/22 which included both weekdays and weekend days. Surveys were undertaken for a 14 hour time period from 07:00 – 21:00. The following surveys were commissioned and undertaken by IDASO:

- Junction Turning Counts (JTC);
- Pedestrian Crossing Counts (PCC);
- Pedestrian/Cyclist Origin Destination Movement Surveys (PCOD); and
- Conflict Movement Assessment Surveys

Junction Turning Counts

3.2.2 A total of 7 junctions were surveyed for the junction turning counts. These junctions are detailed as follows and are shown in the map in Figure 3-6:

- Site 1: St Fintan's Villas/Deansrange Rd/Deansgrange Cemetery junction;
- Site 2: Deansgrange Cemetery (adjacent to north east vehicle entrance) junction;
- Site 3: Deansgrange Cemetery (adjacent to north-east pedestrian entrance) junction;
- Site 4: Dean's Grange Road/Deansgrange Cemetery Main Entrance junction;
- Site 5: Deansgrange Cemetery (adjacent to main entrance) junction;
- Site 6: Dean's Grange Rd/Clonkeen Rd/Kill Ln R830 junction;

- Site 7: Kill Ln/SuperValu Car Park junction.

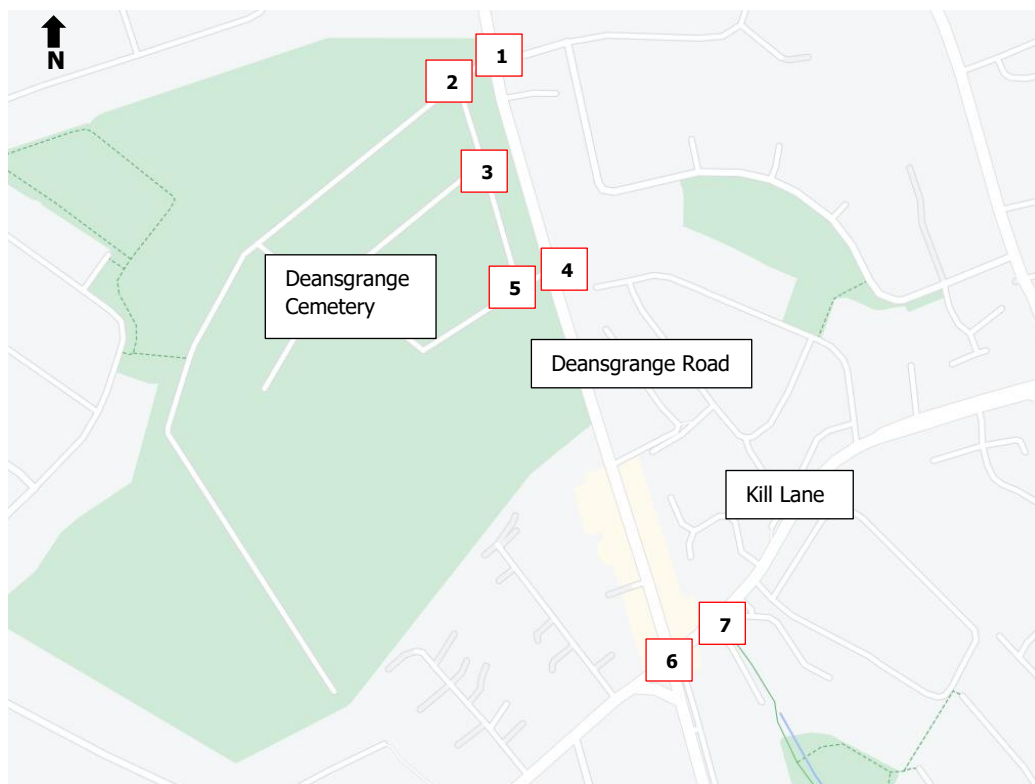


Figure 3-6: JTC locations for Deansgrange

- 3.2.3 A traffic model was developed for these turning counts for the AM (08:00 – 09:00) and PM (15:15 – 16:15) peak hours. This model is shown in **Appendix A** of this report. The junction turning counts show that the busiest junction within the study area for both peak hours over the 7 day survey was Junction 6: Deansgrange Rd/Clonkeen Rd/Kill Ln R830. This junction shows 1,978 vehicles through the junction during the AM peak hour and 1,945 vehicles through the junction during the PM peak hour.
- 3.2.4 Results within the cemetery outline the traffic volumes during weekdays are low, with the highest traffic flow of 26pcus (passenger car units) recorded in the AM peak hour at the northern side of the cemetery. The northern side of the cemetery route is used as a link between Deansgrange Road and Holly Park where two national schools are located.
- 3.2.5 Results within the cemetery for the weekend days showed a slight increase in vehicular activity. Vehicular levels were still low at approximately 1 vehicle per minute recorded at the northern side of the cemetery. The increase is due to the

nature of the area with funerals occurring on weekend days as well as an increase in visitor numbers at the weekend.

Pedestrian Crossing Counts (PCC)

3.2.6 Pedestrian crossing count surveys were undertaken as part of this assessment. These surveys were conducted in order to gauge the current pedestrian activity along Deansgrange Road and within proximity to the main cemetery entrance. These surveys were also undertaken as a comparative study to surveys previously conducted in February 20220, prior to the Covid-19 Pandemic.

3.2.7 Pedestrian crossing counts (PCC) were surveyed at Junction 4, Deansgrange Road/Deansgrange Cemetery Main Entrance junction with six movements recorded, as illustrated in **Figure 3-7**.

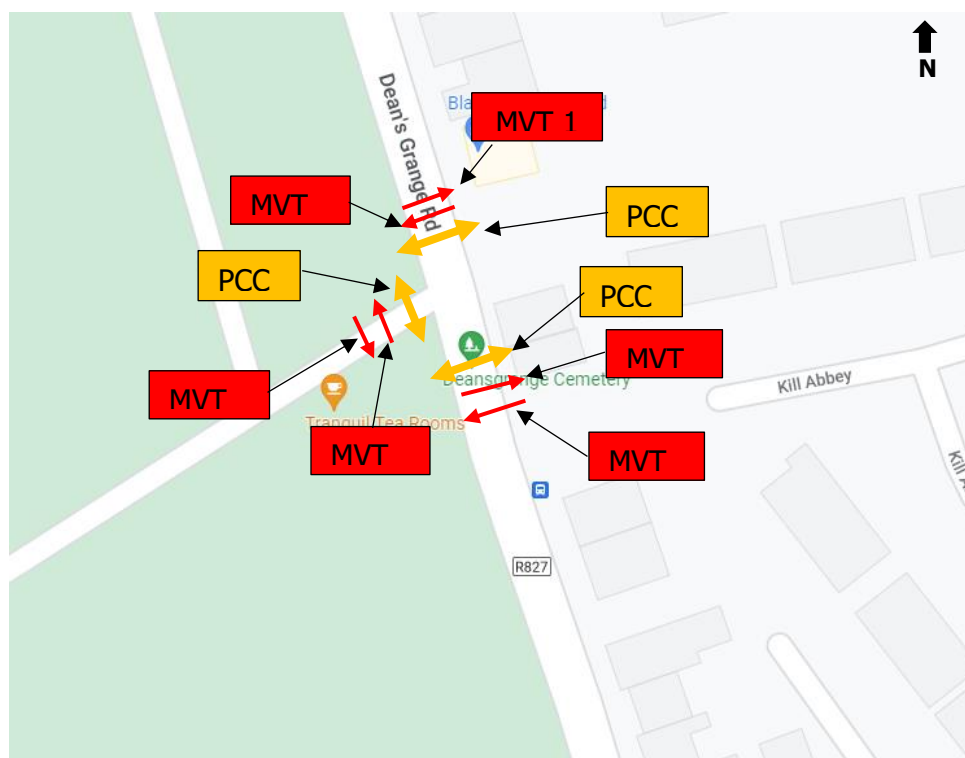


Figure 3-7: Pedestrian Crossing Count Survey at Junction 4

	Direction	Day							Total
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	
PCC 1	MVT 1	25	33	19	32	22	27	22	180
	MVT 2	17	37	22	31	26	21	27	181
PCC 2	MVT 3	13	16	16	17	16	21	16	115
	MVT 4	23	20	19	29	22	22	24	159
PCC 3	MVT 5	167	147	123	91	136	140	162	966
	MVT 6	144	129	109	99	136	116	136	869
	Total	389	382	308	299	358	347	387	

Table 3-1: Pedestrian Crossing Count Survey Results

- 3.2.8 The pedestrian crossing count surveys as illustrated in Table 3-1 show that both movements 5 and 6, North/South at the entrance to Deansgrange Cemetery, were used by considerably more pedestrians than any of the other movements at Junction 4. It can also be seen that the numbers of pedestrians at Junction 4 decreases at the weekend, Saturday and Sunday. The pedestrian crossing count surveys showed that 92% of users were adults, 5% were cyclists and 2% were children between the ages of 5 and 16. The remaining 1% consist of children under the age of 5, the elderly, the mobility impaired and motorcycles.
- 3.2.9 It is noted that pedestrian crossing counts were previously conducted in February 2020, prior to the Covid-19 Pandemic. These surveys were undertaken for a Friday and Saturday period for the same movements outlined in Figure 3-7. A comparison between the total results of 2020 and 2022 surveys for both days are outlined in Table 3-2 below.

Total Two Way Pedestrian Movement		
	2020 (February)	2022 (January)
Friday	620	350
Saturday	280	277

Table 3-2: Comparison of 2020 and 2022 Total Pedestrian Movements at Crossings on Deansgrange Road

- 3.2.10 Results show that there is a significant difference in pedestrian movements for the survey conducted on the Friday with a total of 620 pedestrians recorded during the 2020 survey and 350 pedestrians recorded during the 2022 survey. The survey undertaken in 2022 was during the Covid-19 pandemic when a large portion of the population were still working from home rather than commuting into offices. Therefore, the difference in numbers most likely relate to this.
- 3.2.11 Results for the Saturday survey outline very similar pedestrian volumes between the 2020 and 2022 surveys.

Pedestrian/Cyclist OD Movement Surveys

3.2.12 Pedestrian/Cyclist OD movement (PCOD) surveys were undertaken as part of this assessment, as illustrated in

3.2.13 Figure 3-8. These surveys were undertaken in order to gauge the existing pedestrian and cycle activity along the paths within the southern section of the cemetery.



Figure 3-8: Pedestrian/Cyclist OD Movement Surveys

3.2.14 Results of the Pedestrian and Cycle OD Movement Survey are outlined in Table 3-3 and Table 3-4 respectively.

	Direction	Day							Total
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	
PCOD 1	MVT 1	6	13	14	23	4	2	17	79
	MVT 2	16	10	15	35	7	3	16	102
PCOD 2	MVT 3	31	33	77	44	79	34	36	334
	MVT 4	56	45	48	61	91	63	52	416
PCOD 3	MVT 5	17	25	32	26	23	12	25	160
	MVT 6	50	38	32	54	37	34	39	284
	Total	176	164	218	243	241	148	185	1375

Table 3-3: Pedestrian Origin/Destination Movement Survey Results

	Direction	Day							Total
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	
PCOD 1	MVT 1	1	0	0	1	0	0	1	3
	MVT 2	1	0	0	0	1	0	1	3
PCOD 2	MVT 3	0	0	1	4	1	3	0	9
	MVT 4	0	1	0	3	1	4	0	9
PCOD 3	MVT 5	0	0	0	0	1	0	0	1
	MVT 6	0	0	1	2	1	2	0	6
	Total	2	1	2	10	5	9	2	31

Table 3-4: Cycle Origin/Destination Movement Survey Results

- 3.2.15 The southern section of the cemetery is considered as a more established area than other sections in terms of gravesides and funerals within this section are rare. Therefore, pedestrian activity through this area would indicate that these routes are being used for amenity use as well as by visitors to the cemetery.
- 3.2.16 The survey results show low cycling levels currently in this section. The results, however, do indicate that cycling does take place within the cemetery which are most likely all for amenity use.
- 3.2.17 Pedestrian and cycle counts were also recorded at the northern side of the cemetery. The northern side of the cemetery, in particular, at the main vehicular entrance, showed a higher level of pedestrian and cycle activity than the southern side of the cemetery. Results of the pedestrian and cycle volumes through the northern internal junction are shown in Figure 3-9 below.
- 3.2.18 It is noted that a recent link has been opened, as shown in Figure 3-9, between the Holly Park residential estate and the cemetery in order to accommodate pedestrians and cyclists travelling between the Holly Park estate and the

Deansgrange Road. This access and route within the cemetery has provided a key link between these two areas and also accommodates pupils travelling to and from the two schools located within the Holly Park estate.

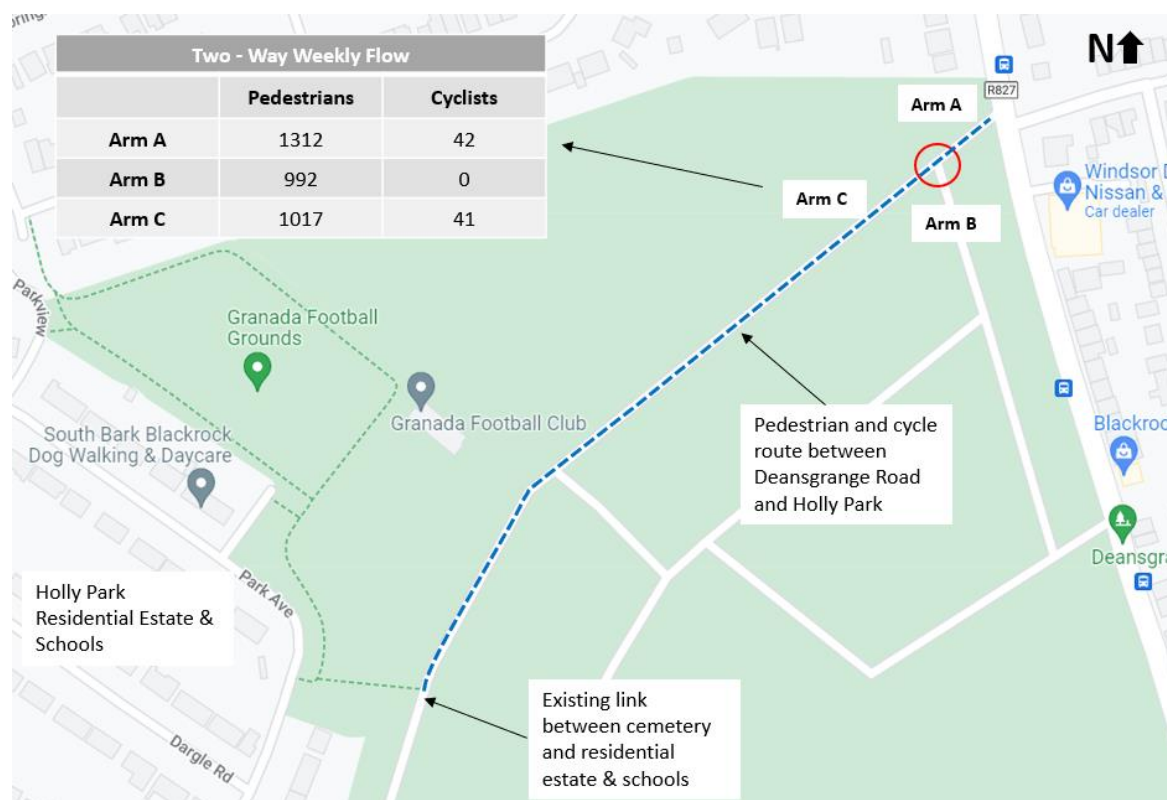


Figure 3-9: Pedestrian and Cycle volumes for northern side of cemetery

3.2.19 The weekly pedestrian and cycle volumes utilising this link within the cemetery show that there are just over 1,000 pedestrians and 40 cyclists every week travelling along this route.

3.2.20 It is noted that walking within the cemetery is an established use with the cemetery being used on a daily basis for commuting trips as well as amenity trips.

Conflict Movement Assessment Surveys

3.2.21 Conflict Movement Assessment surveys were undertaken at two locations within the scheme extents. These are illustrated in Figure 3-10 below and are as follows:

- Junction 1: Internal Deansgrange Cemetery, adjacent to main entrance;
- Junction 2: Kill Lane / Super Valu Car Park / Clonkeen Park Access



Figure 3-10: Conflict Movement Assessment Surveys

- 3.2.22 The surveys were required for a 7 day period from 07:00 – 21:00. The surveys were undertaken in order to gauge the interactions between the different modes of travel in these areas. It was apparent during the initial site visit that these two locations had high activity levels in terms of pedestrians, cyclists and vehicular traffic with many interactions noted.
- 3.2.23 Results of the conflict assessment outlined that no conflicts/interactions were apparent at Junction 1 of the survey. This area is situated within the internal grounds of the cemetery and although there is high activity noted, pedestrians, cyclists and vehicles interact well here with no conflicts apparent during the week long survey. This area is also lightly trafficked in terms of vehicle activity.
- 3.2.24 With regard to Junction 2, a total of 190 interactions were noted during the 7 day survey. These ranged from a severity level of 2 (most severe) to 5 (least severe). Table 3-5 outlined the number of conflicts noted for each level of severity as well as the types of conflicts noted.

	Severity Level of Interactions				Total
	2 (Most Severe)	3	4	5 (Least Severe)	
Vehicle / Vehicle	7	16	37	28	88
Pedestrian / Vehicle	4	16	15	32	67
Cyclist / Vehicle	10	5	7	4	26
Not Stopping				7	7
Pedestrian / Motorcycle				1	1
Vehicle / Motorcycle			1		1
Total	21	37	60	72	190

Table 3-5: Conflict Assessment Survey Results

3.2.25 Table 3-5 outlines that there was a total of 21 conflicts noted at a severity level of 2. Of these, there were 10 cyclist/vehicle conflicts as well as 4 pedestrian/vehicle conflicts. There was a total of 37 conflicts noted at severity level 3 with 5 of these relating to cyclist/vehicle conflicts and 16 relating to pedestrian/vehicle conflicts in this section. Severity levels 4 and 5 noted a total of 132 conflicts between them with 11 of these relating to cycle/vehicle conflicts and 47 relating to pedestrian/vehicle conflicts.

3.2.26 It is noted that there were a number of conflicts apparent at the priority crossing on Kill Lane. A separate technical note has been prepared in relation to conflicts noted at this crossing, this note is appended to this report.

3.2.27 The conflict assessment concludes that movements between modes at the crossing in this area should be segregated and controlled via signals.

4.0 OPTION DEVELOPMENT FOR DEANSGRANGE CEMETERY

4.1 INTRODUCTION

- 4.1.1 The road carriageway width along the majority of Deansgrange Road allows for a two way cycle facility to be located on the western side of the road, as per the previous options report undertaken for this scheme.
- 4.1.2 It was noted, however, during the previous options assessment, that a section along Deansgrange Road, in the vicinity of the Deansgrange Cemetery, did not have sufficient width to accommodate a cycle facility along the road. The previous options assessment considered a number of options for this section, including converting Deansgrange Road to a one way operation. After consultation undertaken by DLRCC with members of the public, the preferred option was determined to route cyclists through the cemetery grounds and utilise the existing paths and roads and retain the Deansgrange Road as a two way operation.
- 4.1.3 A second options assessment was undertaken as part of the preliminary design for the scheme. The options assessment considered the possibilities of different routes within the cemetery itself as well as the feasibility of setting the cemetery boundary wall back into the cemetery in order to increase the road carriageway width along Deansgrange Road.
- 4.1.4 An options assessment has been undertaken as well as Multi-Criteria Analysis (MCA) in order to determine the preferred option along this section of the proposed route.

4.2 MCA ASSESSMENT

- 4.2.1 In order to determine a preferable design option for a scheme, an MCA (Multi-Criteria Analysis) is carried out. This appraisal is based on a number of criteria as set out within the Common Appraisal Framework for Transport Projects and Programmes (Department of Transport). An MCA is used to describe any structured approach to determine overall preferences among alternative options, where the options should accomplish multiple objectives.
- 4.2.2 The 'Guidelines on a Common Appraisal Framework for Transport Projects and Programmes' published by the Department of Transport, March 2016 (updated October 2021), requires schemes to undergo a Multi-Criteria Analysis under the following criteria:

Economy	The impacts of a transport investment on economic growth and competitiveness are assessed under the economic impact and economic efficiency criteria
Safety	Safety is concerned with the impact of the investment on the number of transport related accidents
Physical Activity	This relates to the health benefits derived from using different transport modes
Environment	Environment embraces a range of impacts, such as emissions to air, noise and ecological and architectural (incl heritage) impacts
Accessibility and Social Inclusion	This embraces the notion that some priority should be given to benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation
Integration	Integration considers the extent to which the project being evaluated promotes Integration of transport networks and is compatible with a range of Government policies, including national and spatial planning policy

- 4.2.3 These appraisal criteria have been assessed with regard to the Deansgrange Cycle Route scheme. It was considered that 'Physical Activity' and 'Accessibility and Social Inclusion' criteria would provide commonality between the options, therefore, these were not included within the MCA assessment.
- 4.2.4 It was considered that criteria related specifically to the design of cycle facilities was an important aspect within the MCA criteria for assessment due to the nature of the scheme. Therefore, the National Cycle Manual was referenced to provide criteria with regard to 'Cycle Infrastructure'.
- 4.2.5 Table 4-1 below outlines the MCA criteria and sub-criteria used for this assessment.

Assessment Criteria	Assessment Sub-Criteria	
1. Economy	1a. Capital Cost	Estimates the Capital Cost of both indicative infrastructure and land acquisition.
	1b. Constructability	Feasibility of a route option and potential barriers apparent to developing an option
2. Integration	2a. Cycle Network Integration	Assesses option for the practicality of achieving high quality cycle facilities
	2b. Pedestrian Network Integration	Assesses options for the practicality of achieving high quality pedestrian facilities
	2c. Traffic Network Integration	Assesses options for the practicality of achieving design layouts that balance the requirements of vehicular traffic and the needs of vulnerable road users.
3. Cycle Infrastructure	3a. Functionality	Proposes that a design which is fit for purpose is safer.
	3b. Homogeneity	Specifies that reducing the relative speed, mass and directional differences of different road users sharing the same space increases safety.
	3c. Legibility	A road environment that all users can read and understand is safer.
	3d. Forgivingness	Environments that contribute to benign outcomes of accidents are safer.
	3e. Self-Awareness	Where road users are aware of their own abilities and limitations to negotiate a road is safer.
4. Accessibility	4a. Traffic management	How is traffic management achieved and its adaptability to changing traffic demands as required.
	4b. Universal Access	Can the option provide accessible, high quality facilities for all users, in particular vulnerable users, which are attractive and provide appropriate levels of comfort.
5. Safety	5a. Pedestrian Safety	Does the option provide for safe pedestrian facilities
	5b. Road Safety	Does the option provide for safe road conditions for all, including vehicular traffic
	5c. Cycle Safety	Does the option provide for safe cycle facilities
6. Environment	6a. Flora & Fauna	Assesses the impact on flora and fauna or defined habitats should the construction or operation of the option impact on this.
	6b. Soils, Geology & Hydrology	Assesses the impact of the options on soil and geology as a result of land take and possible ground excavation.
	6c. Landscape & Visual	Assesses the potential impact on townscape/streetscape quality.
	6d. Air Quality, Noise & Vibration	Assesses the impact of a route in terms of its proximity to quality of air and noise environment.

	6e. Land Use Character	Assesses each option in terms of the impact on the character of the street and existing land uses.
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Table 4-1: MCA Criteria and Sub Criteria

4.2.6 For each assessment criterion considered, options have been relatively compared against each other based on a five point scale, ranging from having significant advantages to having significant disadvantages over other options. For illustrative purposes, this five point scale is colour coded as presented in Table 4-2, with advantageous options graded to 'dark green' and disadvantageous options graded to 'red'.

Colour	Description
Dark Green	Significant advantages over other options
Light Green	Some advantages over other options
Yellow	Neutral compared to other options
Orange	Some disadvantages compared to other options
Red	Significant disadvantages compared to other options

Table 4-2: MCA Colour Coded Ranking Scale

4.3 OPTION DEVELOPMENT

4.3.1 In terms of option development within the cemetery, the cemetery was separated into two areas, as illustrated in Figure 4-1 below. Area 1 considers the southern section of the cemetery with two options provided within this area. Area 2 considers the northern section of the cemetery with three options provided.

4.3.2 Options considered for Area 1 and Area 2 are detailed in Table 4-3. Area 1 considers two options.

- Option A runs the cycle facility along Deansgrange Road. Due to width restrictions, this requires the boundary wall for the cemetery to be set back into the cemetery.
- Option B accommodates cyclists within the paths of the cemetery grounds.

Area 2 considers three options. Option A and Option B provide the same options as per Area 1. Option C consists of a combination of routing cyclists within the cemetery grounds before routing them through the existing pedestrian access and out of the cemetery on to Deansgrange Road. Deansgrange Road in this section has sufficient width to accommodate a two way cycle facility.



Figure 4-1: Areas assessed for Option Development in Cemetery

Area	Options
Area 1	Option A – Cycle facility along Deansgrange Road Option B – Cycle facility within cemetery grounds
Area 2	Option A – Cycle facility along Deansgrange Road Option B – Cycle facility within cemetery grounds

Option C – Cycle facility within cemetery and along Deansgrange Road

Table 4-3: Options considered within Cemetery

4.3.3 Do nothing options were not considered as part of the MCA as they do not meet the scheme objectives.

Area 1 Option Assessment

4.3.4 Shown below in Figure 4-2 are the two options considered for Area 1. The opportunities and constraints for each option are outlined in Table 4-4.



Figure 4-2: Options for Area 1

	Option A (Deansgrange Rd)	Option B (Cemetery)
Opportunities	Provides increased road reserve to facilitate two way cycle facility	Provides off road path for cyclists to travel along within the cemetery
	Provides a continuous route along Deansgrange Road	Cyclists are fully separated away from vehicular traffic
		Does not require any significant changes to the cemetery
Constraints	Requires boundary wall to be set back	Requires cyclists to detour off main road into cemetery

	Moving boundary wall may impact on ground conditions and disturb cemetery grounds	
	Requires large trees to be removed	

Table 4-4: Opportunities and Constraints for Area 1 Options

4.3.5 An MCA was undertaken for Area 1 with Table 4-5 outlining the results for this.

	<i>Option A - Deansgrange Rd</i>	<i>Option B - Cemetery</i>
Economy		
1a) Capital Cost		
1b) Constructability		
Overall Economy		
Integration		
2a) Cycle Network Integration		
2b) Pedestrian Network Integration		
2c) Traffic Network Integration		
Overall Integration		
Cycle Infrastructure		
3a) Functionality		
3b) Homogeneity		
3c) Legibility		
3d) Forgivingness		
3e) Self-Awareness		
Overall Cycle Infrastructure		
Accessibility		
4a) Traffic management		
4b) Universal Access		
Overall Accessibility		
Safety		
5a) Pedestrian Safety		
5b) Road Safety		
5c) Cycle Safety		
Overall Safety		
Environment		
6a) Flora & Fauna		
6b) Soils, Geology & Hydrology		
6c) Landscape & Visual		
6d) Air Quality, Noise & Vibration		
6e) Land Use Character		
Overall Environment		

Table 4-5: MCA Table for Area 1

4.3.6 With regard to 'Economy', Option B (Cemetery) emerges the preferable option. Option A (Deansgrange Road) shows considerable disadvantages for both Capital Cost and Constructability in comparison to Option B. This is due to the requirement to move the boundary wall into the cemetery and construct a two

way cycle facility. Moving the boundary wall is not considered a feasible option due to the possibility of disturbing burial grounds within the cemetery.

- 4.3.7 With regard to 'Integration', Option A (Deansgrange) emerges with some advantages over Option B (Cemetery). Option A, which provides a two way segregated cycle facility along Deansgrange Road, aligns with the GDA Cycle Network Plan and integrates well into the surrounding road environment.
- 4.3.8 With regard to 'Cycle Infrastructure', both options provide advantages for this criteria. Both options provide cyclists with safe, coherent and functional facilities that would cater for all cycle users. Option B (Cemetery) shows some disadvantages in terms of 'legibility' due to the requirement to divert off the Deansgrange Road. Option A (Deansgrange Road) shows some disadvantages in terms of 'forgivingness' due to the location of the cycle facility adjacent to the main traffic road, in comparison to within the cemetery.
- 4.3.9 With regard to 'Accessibility', Option B (Cemetery) emerges as the preferred option. The main difference for this criteria is 'traffic management'. Option B does not require any vehicle parking spaces to be removed as part of this option, which Option A (Deansgrange Road) would require.
- 4.3.10 With regard to 'Safety', both options show advantages. Options A (Deansgrange Road) shows advantages in terms of pedestrian safety due to pedestrians being kept separate from cyclists. Option A (Deansgrange Road), scores with some disadvantages in terms of 'road safety' due to the location of cyclists in close proximity to the main vehicular traffic on Deansgrange Road. This is compared with Option B (Cemetery) which removes cyclists from the main trafficked road, resulting in complete segregation from main traffic for this option with less possibility of conflict overall.
- 4.3.11 With regard to 'Environment', Option B (Cemetery) emerges as the preferred option. This option scores higher in terms of 'Soils, geology and hydrology' due to the requirement of land take for Option A (Deansgrange Road). Option B also scores higher in 'Landscape & visual' as well as 'Air Quality, noise and vibration' due to the route running through the cemetery (quiet paths, large trees, benches etc) as opposed to a busy regional road which is not as appealing visually and would provide a louder environment for cyclists as compared with the cemetery option. In terms of Flora and Fauna, both options are showing neutral scores. This is due to both options having some disadvantages. Option A (Deansgrange Road) would require large trees to be removed whereas Option B may impact on

the existing fauna within the cemetery, in particular, the bat population. Option B scores with significant disadvantages in terms of Soils, Geology & Hydrology as well as Land Use Character due to the requirement for this option to impede into the cemetery boundary wall, resulting in possible disturbance of burial plots and grounds.

4.3.12 A summary table of the MCA results is shown in Table 4-6 below. This outlines that Option B (Cemetery) provides the option with the most advantages in comparison to Option A (Deansgrange Road).

	<i>Option A - Deansgrange Rd</i>	<i>Option B - Cemetery</i>
Overall Economy		
Overall Integration		
Overall Cycle Infrastructure		
Overall Accessibility		
Overall Safety		
Overall Environment		

Table 4-6: MCA Summary Table for Area 1

Area 2 Option Assessment

4.3.13 Shown below in Figure 4-3 are the three options considered for Area 2. The opportunities and constraints for each option are outlined in Table 4-4.



Figure 4-3: Options for Area 2

	Option A (Deansgrange Rd)	Option B (Cemetery)	Option C (Deansgrange & Cemetery)
Opportunities	Provides increased road reserve to facilitate two way cycle facility	Provides off road path for cyclists to travel along within the cemetery	Provides off road path for cyclists within cemetery for a section
		Cyclists are fully separated away from vehicular traffic	Width is available to allocate cycle facilities along Deansgrange Road for northern section
		Does not require any significant changes to the cemetery	
		Opportunity to link to the proposed public realm space at northern side of cemetery.	
Constraints	Requires boundary wall to be set back	Requires cyclists to detour off main road into cemetery	On street unregulated parking would be required to be removed
	Moving boundary wall will impact on burial plots in this location		
	Facility will not link to the proposed public realm space at the northern side of the cemetery.		

Table 4-7: Opportunities and Constraints for Area 2 Options

4.3.14 An MCA was undertaken for Area 2 with Table 4-8 outlining the results for this.

	Option A - Deansgrange Rd	Option B - Cemetery	Option C - Cemetery & Deansgrange Rd
Economy			
1a) Capital Cost	Red	Green	Yellow
1b) Constructability	Red	Green	Green
Overall Economy	Red	Green	Green
Integration			
2a) Cycle Network Integration	Green	Yellow	Yellow
2b) Pedestrian Network Integration	Green	Yellow	Yellow
2c) Traffic Network Integration	Yellow	Green	Yellow
Overall Integration	Green	Yellow	Yellow
Cycle Infrastructure			
3a) Functionality	Yellow	Yellow	Yellow
3b) Homogeneity	Yellow	Yellow	Yellow
3c) Legibility	Green	Yellow	Yellow
3d) Forgivingness	Yellow	Green	Green
3e) Self-Awareness	Yellow	Yellow	Yellow
Overall Cycle Infrastructure	Green	Green	Green
Accessibility			
4a) Traffic management	Red	Green	Yellow
4b) Universal Access	Yellow	Yellow	Yellow
Overall Accessibility	Yellow	Green	Green
Safety			
5a) Pedestrian Safety	Green	Yellow	Green
5b) Road Safety	Yellow	Green	Yellow
5c) Cycle Safety	Yellow	Yellow	Yellow
Overall Safety	Green	Green	Green
Environment			
6a) Flora & Fauna	Red	Yellow	Yellow
6b) Soils, Geology & Hydrology	Red	Green	Green
6c) Landscape & Visual	Yellow	Green	Green
6d) Air Quality, Noise & Vibration	Yellow	Green	Green
6e) Land Use Character	Red	Yellow	Yellow
Overall Environment	Red	Green	Green

Table 4-8: MCA Table for Area 2

4.3.15 With regard to 'Economy', Option B (Cemetery) emerges as the preferred option. This option shows significant advantages over Option A (Deansgrange) for both Capital Cost as well as Constructability due to the requirement of Option A to move the boundary wall and disturb existing burial plots within the cemetery, which is not considered feasible. Option C shows some advantages in terms of constructability as there is no requirement for this option to move the boundary wall.

4.3.16 With regard to 'Integration', Option A (Deansgrange Road) shows some advantages over other options. This option would align with the GDA Cycle Network Plan which outlines a secondary cycle route along Deansgrange Road. In terms of 'traffic network' integration, Option B (Cemetery) shows more advantages over Option A and Option C (Cemetery & Deansgrange Road) due to the cycle facilities being located off the main traffic network.

- 4.3.17 With regard to 'Cycle Infrastructure', all options show advantages with regard to Functionality, homogeneity and self awareness. Option B (Cemetery) shows significant advantages for 'Forgivingness' due to this option being located along quiet, low trafficked paths.
- 4.3.18 With regard to 'Accessibility', Option A (Deansgrange Road) shows significant disadvantages over other options. This is due to the requirement to remove a number of on street regulated and unregulated parking spaces.
- 4.3.19 With regard to 'Safety', all options show advantages in terms of cycle safety and therefore all given neutral colour ratings. In terms of pedestrian safety, Option A (Deansgrange Road) shows advantages over other options due to pedestrians being fully segregated from cyclists. Option B (Cemetery) shows some disadvantages for this as pedestrians are required to share the path facility with cyclists. In terms of 'Road Safety', Option B (Cemetery) shows some advantages over other options due to cyclists being located away from the main vehicular traffic which reduces the possibility of conflict overall.
- 4.3.20 With regard to 'Environment', Option A (Deansgrange Road) shows significant disadvantages over options. This option requires moving the cemetery boundary wall and the relocation of some burial plots within a section of the cemetery, which would severely impact on the environment within the cemetery. Option B and Option C show some advantages in terms of 'air quality', 'landscape and visual' and 'soil, geology & hydrology', however, both options show some disadvantages in terms of 'flora & fauna' and 'land use character'. These options may impact on the surrounding bat population within the cemetery, however, mitigation measures could be implemented to reduce this impact such as the use of a bat friendly lighting regime.
- 4.3.21 A summary table of the MCA results is shown in Table 4-9 below. This outlines that Option B (Cemetery) provides the option with the most advantages in comparison to Option A (Deansgrange Road) and Option C (Cemetery & Deansgrange Road).

	Option A - Deansgrange Rd	Option B - Cemetery	Option C - Cemetery & Deansgrange Rd
Overall Economy	Red	Green	Green
Overall Integration	Green	Yellow	Yellow
Overall Cycle Infrastructure	Green	Green	Green
Overall Accessibility	Yellow	Green	Green
Overall Safety	Green	Green	Green
Overall Environment	Red	Green	Green

Table 4-9: MCA Summary Table for Area 2

5.0 DEANSGRANGE CEMETERY PROPOSALS

5.1 INTRODUCTION

5.1.1 This section of the report details the proposals within the Deansgrange Cemetery. Providing a safe facility that is fit for purpose for pedestrians and cyclists within the cemetery is of the utmost importance. It is noted that the successful design of these facilities will depend on a number of key factors and measures being implemented that will provide a safe area for people to walk or cycle through.

5.1.2 These key factors and measures are outlined as follows and are discussed in detail in this section of the report;

- Consultation;
- Public Lighting;
- Natural Surveillance;
- CCTV Surveillance;
- Accessibility;
- Maintenance; and
- Management

5.2 CONSULTATION

5.2.1 Consultation is a key element of consideration prior to the implementation of any pedestrian / cycle scheme. This section of the scheme, in particular, will require consultation with a number of public interest groups that will include An Garda Síochána as well as cycling users within the area and residents groups.

5.2.2 It will be imperative to gauge the requirements of all groups as well as any concerns regarding the proposals outlined. The final design of the scheme route within the cemetery will take account of outcomes from these consultations with measures implemented along this section of the route that will improve safety within the cemetery and allow for an attractive route for people to walk and cycle along.

5.2.3 It is proposed to set up a focus group during the consultation phase to engage with the end users of the route.

5.3 PUBLIC LIGHTING

5.3.1 Public lighting will be a key element for providing improved safety along the route, both within the cemetery and along the main Deansgrange Road. Public lighting provides users with a sense of place and allows users to navigate a route in darker

conditions. It allows users to identify potential hazards ahead, it discourages crime and increases a sense of personal security.

- 5.3.2 Public lighting will be located within the cemetery as well as along Deansgrange Road.
- 5.3.3 The lighting within the cemetery will be designed to provide minimum impact to the sensitive surrounding landscape and will be designed for minimal impact to the flora and fauna located within the cemetery, with particular focus on the existing bat population.
- 5.3.4 Further details of the proposed public lighting for the scheme is outlined in **Section 6.3** of this report.

5.4 PASSIVE SURVEILLANCE

- 5.4.1 A pedestrian and cycle area that is in full view of its surroundings provides a safer environment for all users. Surveillance in an area increases the perception that people can be seen and fosters positive social interactions. It is important, therefore, to provide a facility within the cemetery that has the greatest level of passive surveillance possible.
- 5.4.2 At present the cemetery boundary wall and railings are high, at approximately 1.57m and 760mm respectively, which equates to a total wall and railing height of 2.33m. Considering the nature of the surrounding area, it is appropriate to maintain a level of height along the boundary to the cemetery. In order to improve passive surveillance, it is proposed to lower the boundary wall to 900mm and increase the height of the railings to 1100mm. This will reduce the original height of the wall and railings from 2.330m to 2m, however, will allow for the paths within the cemetery to have full visual access to the external Deansgrange Road which will provide for passive surveillance of the route. Further details on the design of the cemetery boundary wall are outlined in **Section 6.6** of this report.

5.5 CCTV SURVEILLANCE

- 5.5.1 Following on from passive surveillance, another important element in the design of a safe pedestrian and cycle facility, is the implementation of CCTV surveillance.

CCTV provides 24 hour video surveillance that is used to detect and deter criminal activity.

- 5.5.2 CCTV is currently present within the cemetery grounds, this can be extended to cover the paths allocated for this proposed scheme.

5.6 ACCESSIBILITY

- 5.6.1 Providing access points to and from the cemetery along this section of the route will be key to reducing the perception of isolation within the cemetery.
- 5.6.2 At present, there are two main vehicular access points and three pedestrian/cycle access points from Deansgrange Road to the cemetery.
- 5.6.3 It is proposed, as part of this scheme, to provide two additional pedestrian/cycle entrances, one being at the southern end of the cemetery and the other being located at the northern end of the cemetery. The cycle facility will start and terminate on Deansgrange Road at these entrance points.
- 5.6.4 The overall length of the proposed route within the cemetery is approximately 400m. The average distance between access points for the cemetery is 122m.
- 5.6.5 The image in Figure 5-1 illustrates the existing and proposed access points to the cemetery from Deansgrange Road for all modes of travel.

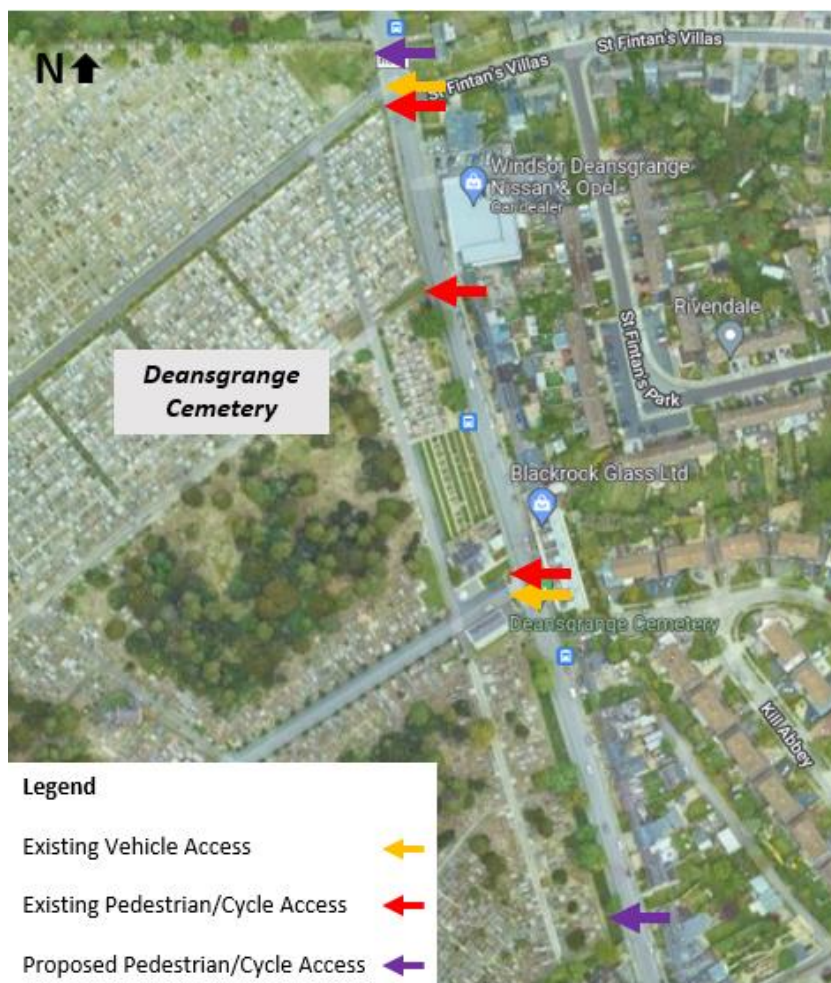


Figure 5-1: Existing and Proposed Access Points to Deansgrange Cemetery from Deansgrange Road

5.7 MAINTENANCE

- 5.7.1 An area that is well maintained will encourage higher usage of the area and will deter anti social activity.
- 5.7.2 The Deansgrange Cemetery is well maintained at present. The proposed paths and features, including public lighting, seating areas and any landscape areas will continue to be maintained in order to provide an attractive, safe route for pedestrians and cyclists through the cemetery grounds.

5.8 MANAGEMENT

- 5.8.1 It is noted that Deansgrange Cemetery is a working cemetery with funerals taking place on an ongoing weekly basis. The majority of funerals take place in the

northern section of the cemetery with the main funeral procession accessing through the northern vehicular entrance.

- 5.8.2 For this section of the route, pedestrians and cyclists will be accommodated within a 3m wide shared path and will not share the road with vehicles.
- 5.8.3 A separate pedestrian and cycle entrance is also proposed at the northern section of the cemetery in order to provide a segregated access away from vehicular traffic.
- 5.8.4 The operations within the cemetery is managed and will continue to be managed on a daily basis in order to allow for the full movement and operation of all modes of travel within the cemetery grounds.

6.0 PRELIMINARY DESIGN

6.1 THE PROPOSED SCHEME

6.1.1 For the purpose of this report, the study area was divided into three sections for ease of reference, these are illustrated in the image in Figure 6-1 and are as follows:

Section 1: Kill Lane (Clonkeen Park Entrance) to Deansgrange Road (Deansgrange Cemetery Entrance;

Section 2: Deansgrange Cemetery

Section 3: Deansgrange Road (Deansgrange Cemetery Entrance to South of Brookville Park Junction).

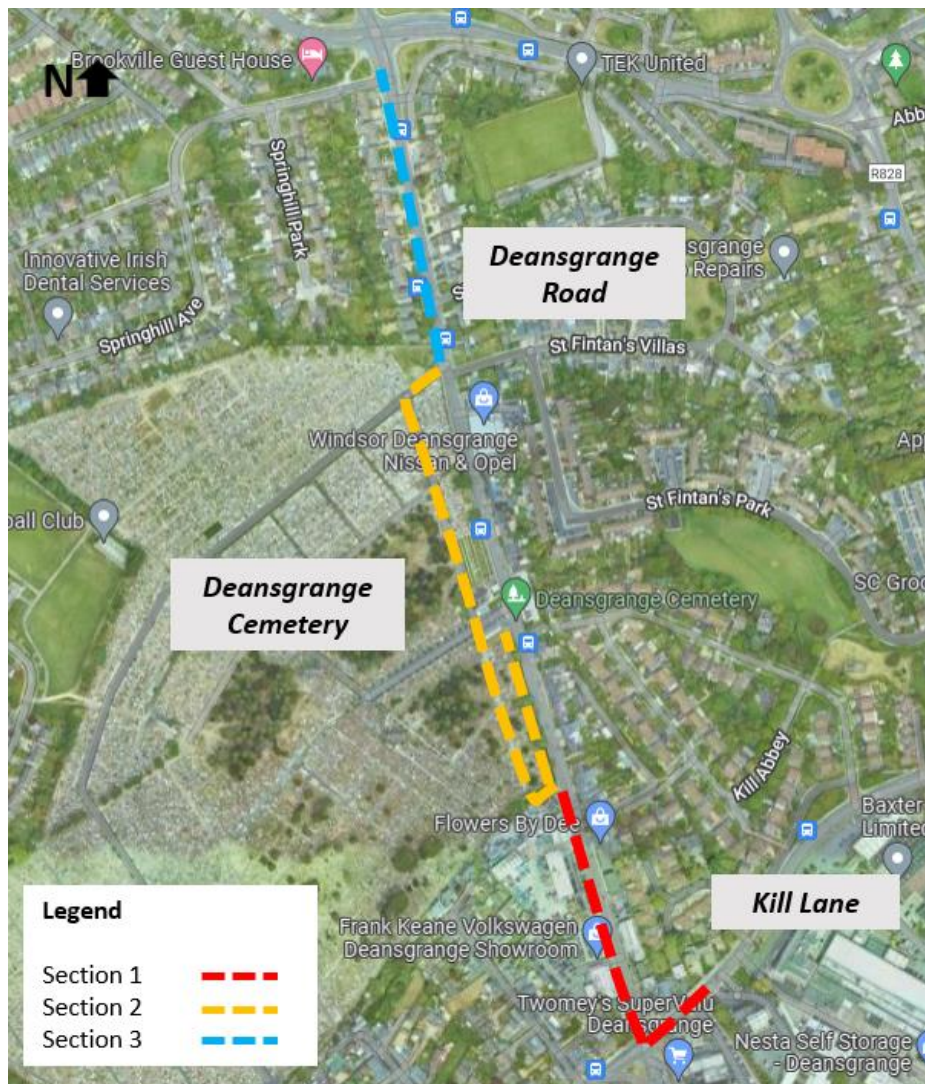


Figure 6-1: Sections of Proposed Route

Section 1: Kill Lane to Deansgrange Road

- 6.1.2 The proposed scheme starts from the existing pedestrian/cycle entrance of Clonkeen Park. This entrance connects to Clonkeen Park and south to Johnstown Road in Cabinteely. Cycle tracks are proposed along both sides of Kill Lane, as shown below in Figure 6-2.
- 6.1.3 It is proposed to signalise the existing priority crossing along Kill Lane, directly adjacent to the Clonkeen Park Entrance due to the high level of demand at this crossing. Further information on this is detailed in the Technical Note “Deansgrange TRANSYT Assessment & Pedestrian Crossing” in **Appendix B** of this report. The findings from this report outline that a conflict assessment survey undertaken as part of this scheme, showed a high proportion of conflicts between pedestrians / cyclists and vehicular traffic at this crossing location with vulnerable road users at risk while crossing this priority crossing. Therefore, the recommendation that emerged from this Note is for the signalisation of the priority crossing on Kill Lane in order to improve safety at this location.
- 6.1.4 Cyclists travelling eastbound along Kill Lane, wishing to access Clonkeen Park, will utilise the upgraded signalised crossing on Kill Lane. Cyclists travelling westbound on Kill Lane, wishing to travel to Deansgrange Road, will utilise the signalised crossings at the Deansgrange Junction, which are to be upgraded as part of this scheme to include for separate cycle crossings.
- 6.1.5 Along Deansgrange Road, a two-way cycle track is proposed on the western side of the road. The existing bus stop as well as the existing parking bays along Deansgrange Road will be retained in this section.

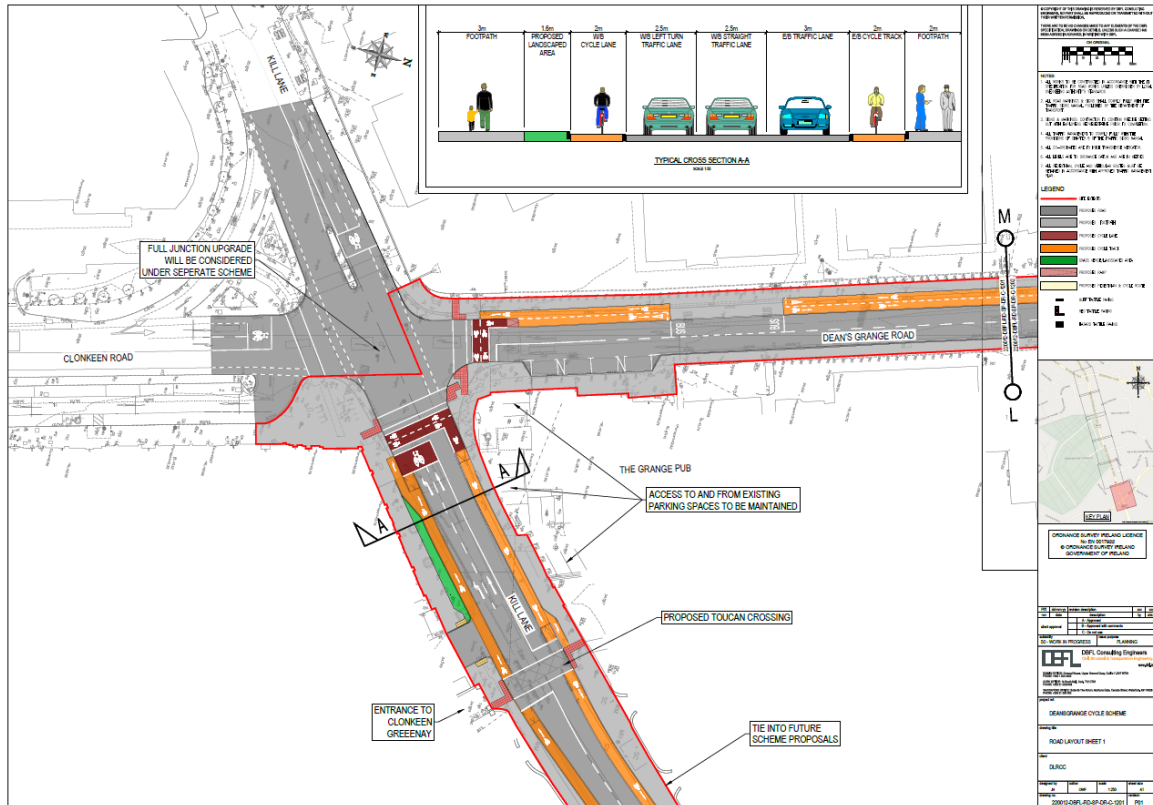


Figure 6-2: Preliminary Design for Kill Lane and Deansgrange Road (Southern Section)

6.1.6 A typical cross section for Kill Lane on approach to the Deansgrange Junction is shown in Figure 6-3 and illustrated in Figure 6-4.

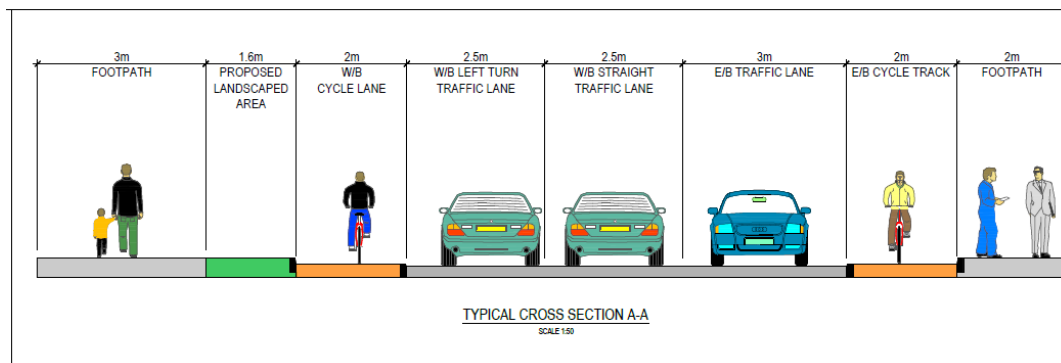


Figure 6-3: Cross Section for Kill Lane



Figure 6-4: Proposals along Kill Lane on approach to Deansgrange Junction

- 6.1.7 At the R830 Kill Lane/R827 Deansgrange Road signalised junction, it is proposed to upgrade two arms within the junction, as illustrated in Figure 6-2 and provide upgraded pedestrian crossings and new separate cycle crossings on both the Kill Lane and Deansgrange Road arms of the junction. Cyclists will use these crossings, which will be segregated from pedestrians, to continue along the proposed route.
- 6.1.8 For Deansgrange Road, the two-way cycle track will continue on the western side of the road, as illustrated in Figure 6-5 below.

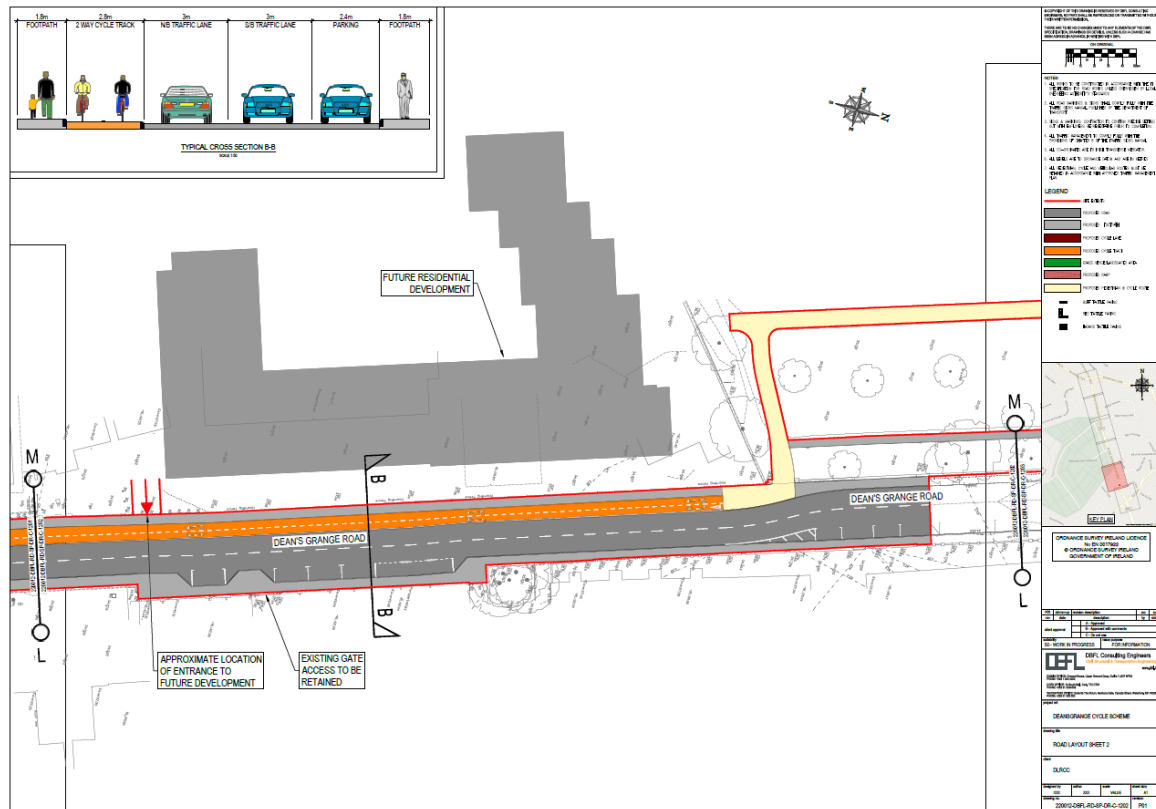


Figure 6-5: Preliminary Design for Deansgrange Road

6.1.9 It is noted that the footpath outside the local shops area along the southern section of Deansgrange Road has been reduced from the existing width of 4.5m to a proposed width of 1.8m in order to facilitate the two-way cycle track and maintain the existing on street parking spaces in this section. The maintenance of a maximum number of parking spaces was requested from the businesses in this area. A cross section of this area is shown in Figure 6-6 below and illustrated in Figure 6-7.

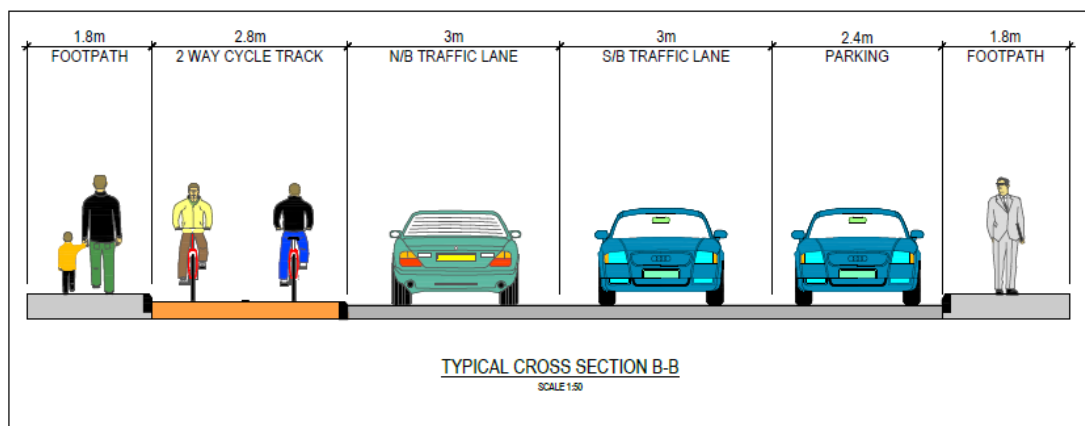


Figure 6-6: Cross Section for Proposals on Deansgrange Road outside Local Shops Area



Figure 6-7: Proposals along Deansgrange Road at local shops area

- 6.1.10 The existing number of on street parking spaces outside the shops area has also reduced slightly from six vehicle spaces and one loading bay to four vehicle spaces and one loading bay in order to retain the existing boundary wall at the barbers and to retain the existing ESB pole and access to the existing gate in this location.
- 6.1.11 The two-way cycle track terminates at the southern entrance to the cemetery. A new pedestrian/cycle entrance (4m width) is provided to the cemetery at this location (illustrated in Figure 6-8 below) where the route will continue using the existing paths within the cemetery, which are to be upgraded as part of this scheme. The width of these paths is 3m and will accommodate both pedestrians and cyclists.



Figure 6-8: Proposed pedestrian/cycle southern entrance

Section 2: Deansgrange Cemetery

6.1.12 The proposals within the cemetery are detailed below and illustrated in Figure 6-9.

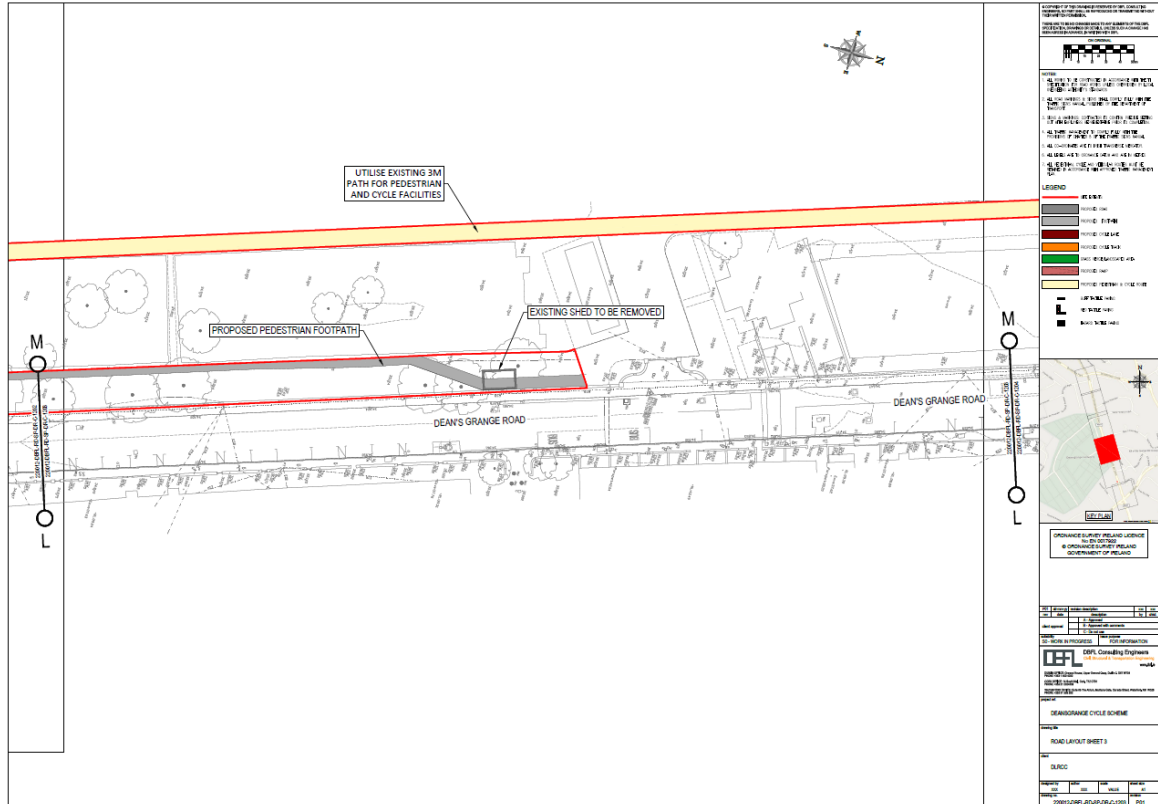


Figure 6-9: Walking and Cycling Facilities at Southern Side of Cemetery

6.1.13 On entering the cemetery, cyclists will be allocated within the existing paths that run parallel to the main road, as illustrated in Figure 6-10. These paths will be maintained as part of this scheme and will be 3m wide with public lighting located along the length of the proposed route.



Figure 6-10: Proposals within the Deansgrange Cemetery along existing paths

6.1.14 The existing track on the southern side of the cemetery, shown in Figure 6-9, is to be upgraded to a footpath of 2m width. The footpath will provide adequate access for visitors to the graves located along here and will also provide pedestrians with an option to walk this section of the cemetery away from cyclists. In order to avoid tree removal in one section, the footpath will divert slightly off track through an existing shed on the cemetery grounds, which is to be demolished as part of this scheme.

6.1.15 The main pedestrian and cycle route will continue to the northern side of the cemetery, as illustrated in Figure 6-11.

6.1.16 It is noted that the northern entrance to the cemetery is the main vehicular access for funeral processions. Cyclists and pedestrians will not share the road with vehicles at this entrance and will be accommodated with a 3m wide path adjacent to the internal cemetery road. A separate pedestrian and cycle entrance is also proposed at the northern access for the cemetery. This will segregate vulnerable road users away from vehicular traffic entering and exiting the cemetery in this location. This is illustrated in Figure 6-12.

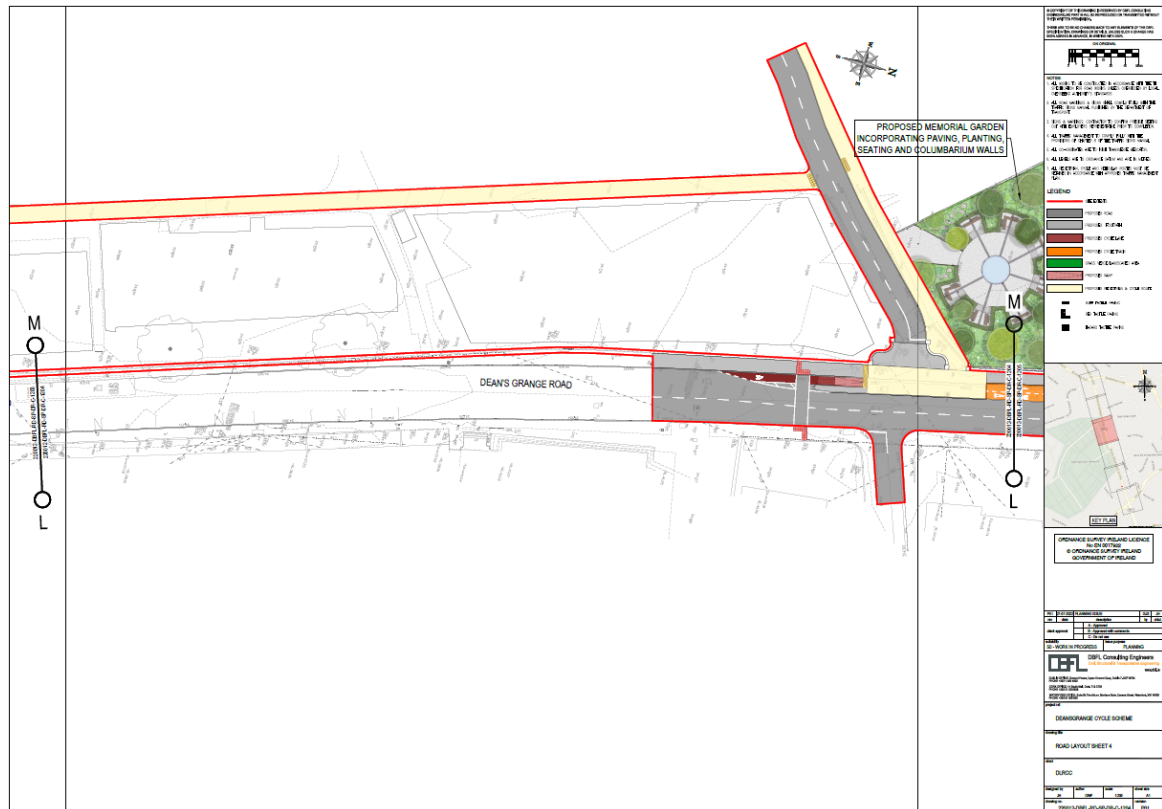


Figure 6-11: Pedestrian and Cycle Path at Northern Side of Cemetery



Figure 6-12: Proposals at northern entrance of Deansgrange Cemetery

6.1.17 A signal controlled pedestrian crossing is proposed along Deansgrange Road south of the junction with St Fintan's Villas and the northern entrance of the cemetery, as shown in Figure 6-11.

6.1.18 It is proposed to allocate a new reflection area within the northern section of the cemetery. This area will create a space where people can sit and reflect while visiting the cemetery. The area proposed is outlined in Figure 6-13 below.



Figure 6-13: Proposed reflection area location

6.1.19 The proposed design of the reflection area has been developed as part of a separate scheme. This draft design is presented in Figure 6-14 and is incorporated within the Preliminary Design Drawings developed as part of this Part 8 application. It is noted that this draft design for the reflection area is currently a concept layout only and may change prior to a finalised layout, however, the proposed facilities within the cemetery as part of this scheme will align with the finalised layout within this reflection area.



Figure 6-14: Draft design for reflection area in northern section of Cemetery

Section 3: Deansgrange Road (Deansgrange Cemetery Entrance to South of Brookville Park Junction).

- 6.1.20 On exiting the northern side of the cemetery through a segregated cycle/pedestrian access, a two-way cycle track of approximately 3m width is proposed on the western side of the Deansgrange Road, as shown in Figure 6-15.
- 6.1.21 The two-way cycle track will continue through a bus stop on this side which will be upgraded as part of this scheme. Tree removal is not required in this section and the two-way facility can be accommodated without the requirement for private land take.

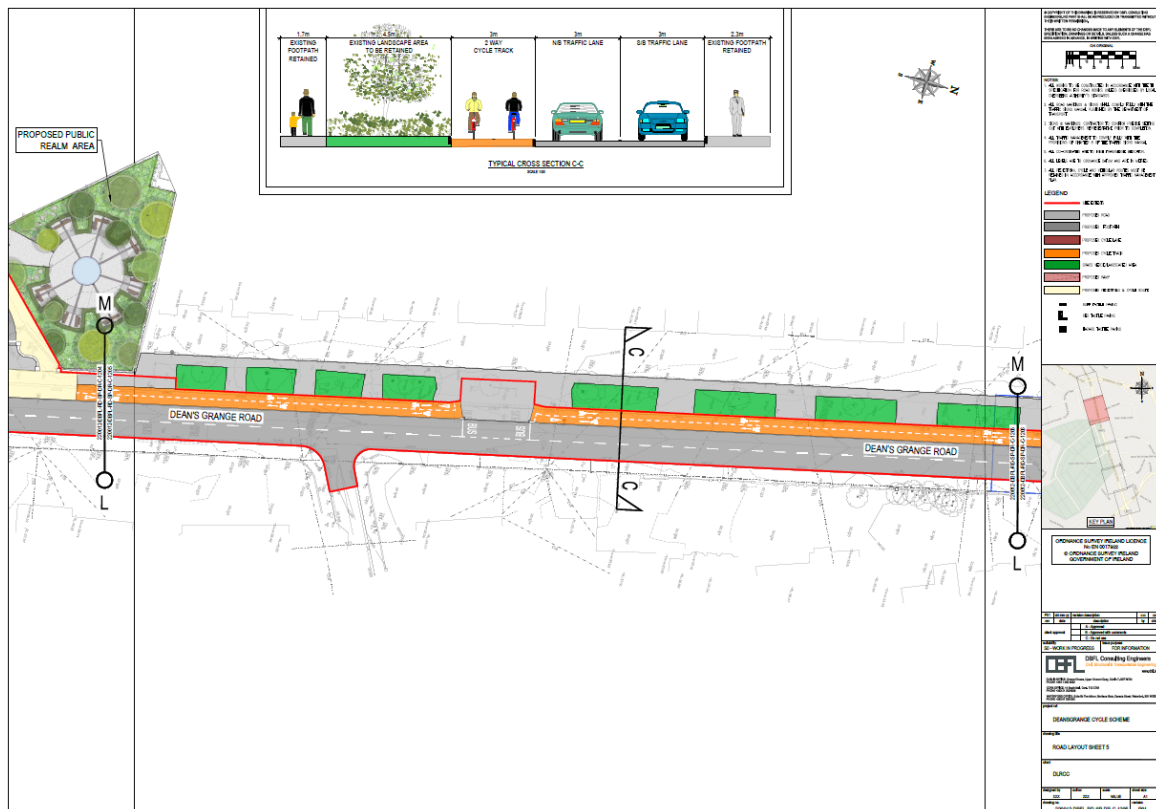


Figure 6-15: Cycle Facilities along northern side of Deansgrange Road

- 6.1.22 A typical cross section of the proposals in this section is shown in Figure 6-16 below with proposals along this section also illustrated in Figure 6-17. It is noted that the existing landscaped area on the western side of Deansgrange Road will be retained along this section. Traffic lanes will be reduced in width to 3m.

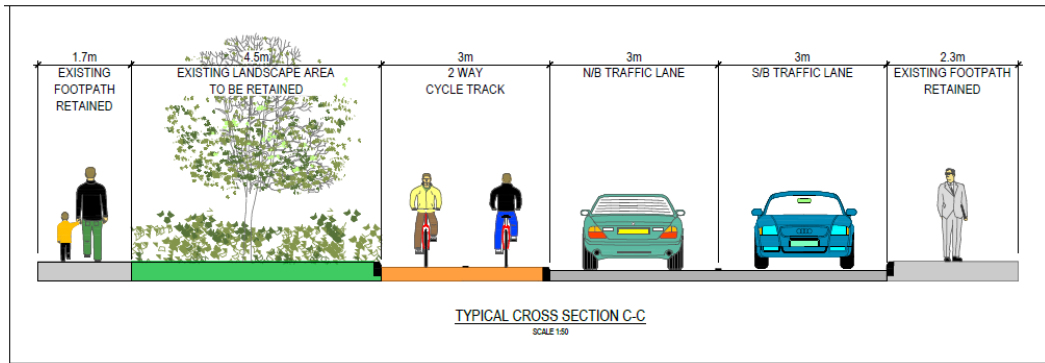


Figure 6-16: Typical cross section for Deansgrange Road at northern side of scheme



Figure 6-17: Proposals along northern side of Deansgrange Road

- 6.1.23 The two-way cycle track will continue along Deansgrange Road and will terminate south of the Deansgrange Road / Brookville Park signalised junction.
- 6.1.24 The scheme proposals will tie in at this junction and will align with proposals outlined for the Dundrum to Dun Laoghaire Active Travel Scheme (the DLR Connector), as shown in Figure 6-18 below. It should be noted that the DLR Connector Scheme design has yet to be finalised and is subject to change.

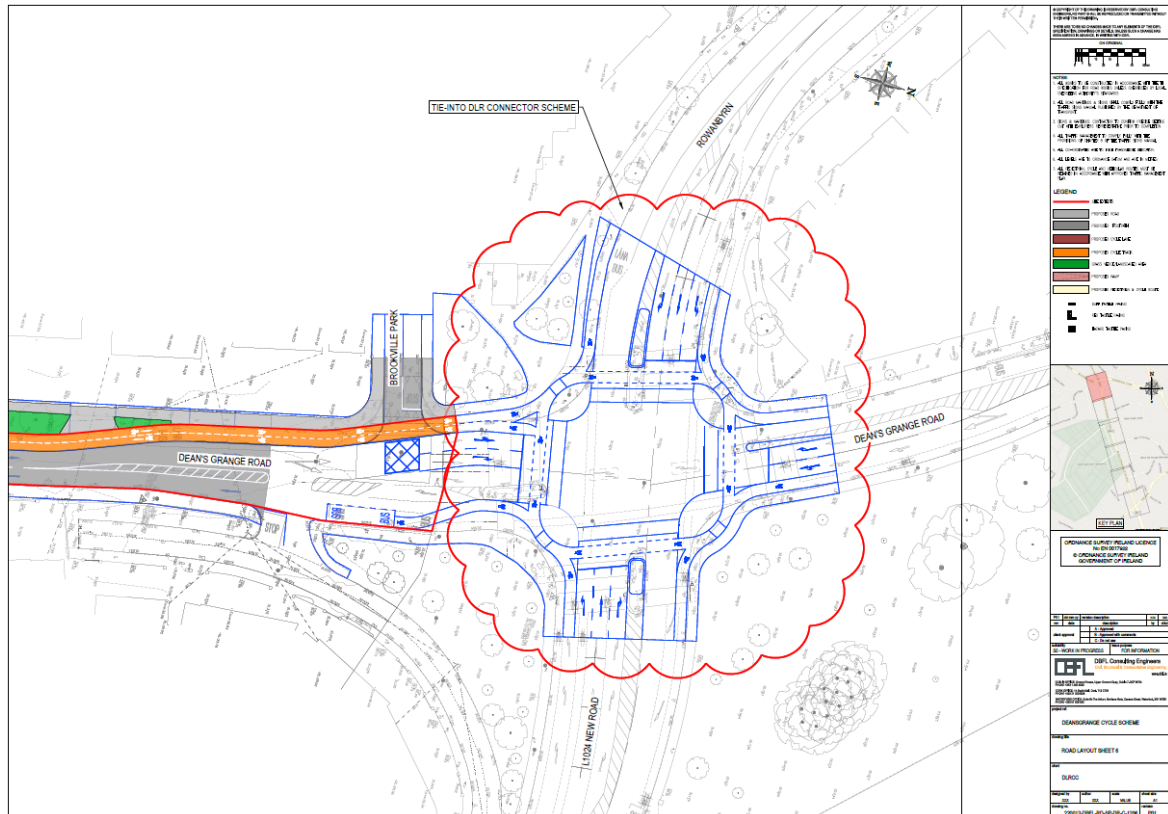


Figure 6-18: Cycle Facilities on Deansgrange Road on approach to Brookville Junction

6.2 HORIZONTAL & VERTICAL ALIGNMENT

6.2.1 The horizontal and vertical alignment of the road will remain unchanged as per the existing road layout. The two-way cycle track facility will be located along the western side of Deansgrange Road which will shift traffic lanes slightly to the eastern side of the road and reduce traffic lane widths to minimum 3m.

6.3 PUBLIC LIGHTING

6.3.1 Road lighting will be provided on both sides of Kill Lane and Deansgrange Road. the location of these lighting poles will be back of footpath. Existing columns along the main roads will be replaced with new lighting columns and all overhead cables will be relocated underground. The existing location of some lighting poles do not provide for adequate spacings, therefore, some columns on the main road network will be required to be relocated from their original location in order to adhere to and meet a recommended lighting standard for all road and footpath sections.

6.3.2 Public lighting will also be provided within the cemetery paths, where the proposed scheme will be routed. Lighting within the cemetery will take into consideration the sensitive nature of the surrounding cemetery area and will be designed and implemented to efficiently mitigate against flora and fauna interference, with particular mitigation for the bat population residing within the cemetery. Bat-sensitive lighting techniques have been incorporated into the lighting plan, including the use of a 'warm' LED tone, and measures to prevent light-spill outside the cycle path.

6.4 SURFACE WATER DRAINAGE FOR DEANSGRANGE ROAD

6.4.1 Gullies located along Deansgrange Road on the western side of the road will be required to be relocated as part of this scheme in order to locate the two-way cycle track on the western side of the road carriageway.

6.4.2 It is noted that there will be no change in the area of existing hardstanding under this scheme for the Deansgrange Road. As a result, there will be no additional surface water run off to the existing network.

6.4.3 No amendments to the capacity of the existing surface water network will be required.

6.5 SURFACE WATER DRAINAGE FOR DEANSGRANGE CEMETERY

6.5.1 A new footpath is proposed on the southern side of the cemetery in place of an existing track in order to improve accessibility.

6.5.2 This is a minor increase in impermeable surfacing. Although it is not expected to have a negative effect on surface water infiltration, due consideration will be given to drainage measures within the area.

6.6 BOUNDARY TREATMENT FOR CEMETERY WALL

6.5.3 It is proposed as part of this scheme to lower the existing boundary wall to the cemetery in order to increase visibility and safety for pedestrians and cyclists.

6.5.4 The existing boundary treatment for the cemetery consists of a stone wall with a capping stone and railings, as shown in the image in Figure 6-19.



Figure 6-19: Existing Boundary Wall and Railings at Deansgrange Cemetery

- 6.5.5 The existing height of the wall and railings are approximately 1.57m and 760mm respectively, which equates to a total wall and railing height of 2.33m. It is proposed to lower the wall to approximately 900mm. The capping stone on the existing wall (300mm depth) is considered an aesthetic feature, therefore, this will be reused with the stone blocks being removed to lower the wall.
- 6.5.6 The existing railing will be replaced with a new railing of increased height that will reduce the overall height of the existing wall and railing from 2.33m to 2m.
- 6.5.7 Therefore, the proposed boundary treatment for the cemetery wall will be a reduced wall, height of 900mm, and increased length of new railing, height 1.1m, as shown below in Figure 6-20.

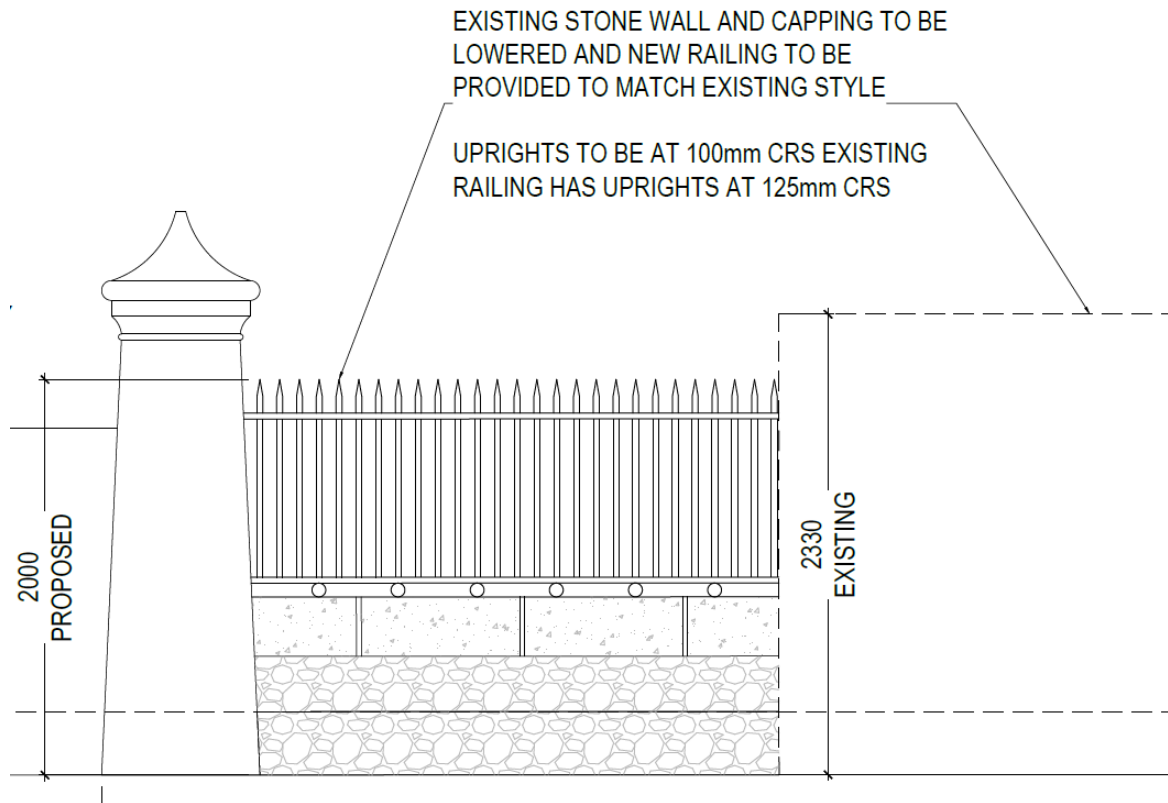


Figure 6-20: Proposed Boundary Wall Treatment for Deansgrange Cemetery

6.5.8 A section of the existing boundary wall will be removed at two locations, the southern side and northern side of the cemetery, in order to provide new pedestrian and cycle entrances to the cemetery at these locations. The location of these new access points is shown in Figure 6-21.

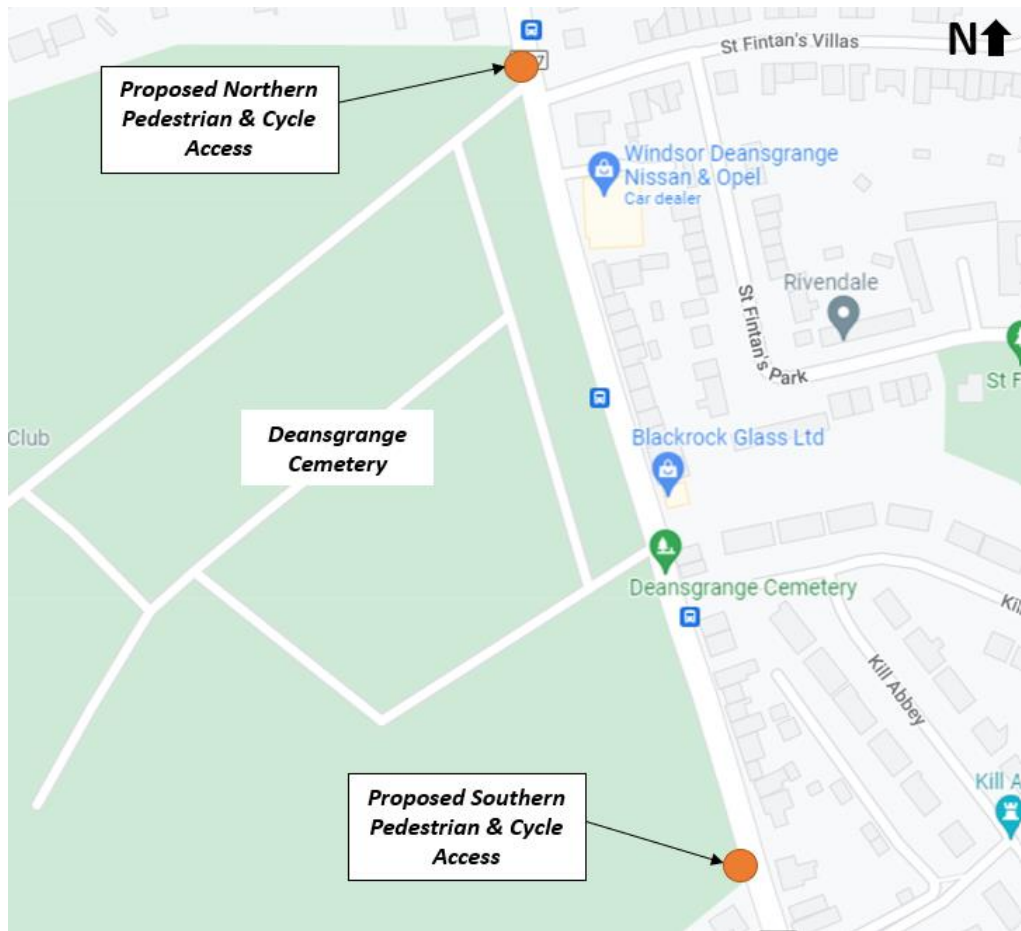


Figure 6-21: Proposed pedestrian/cycle access locations for Deansgrange Cemetery

6.5.9 With regard to the southern access, Figure 6-22 illustrates the existing boundary wall location.

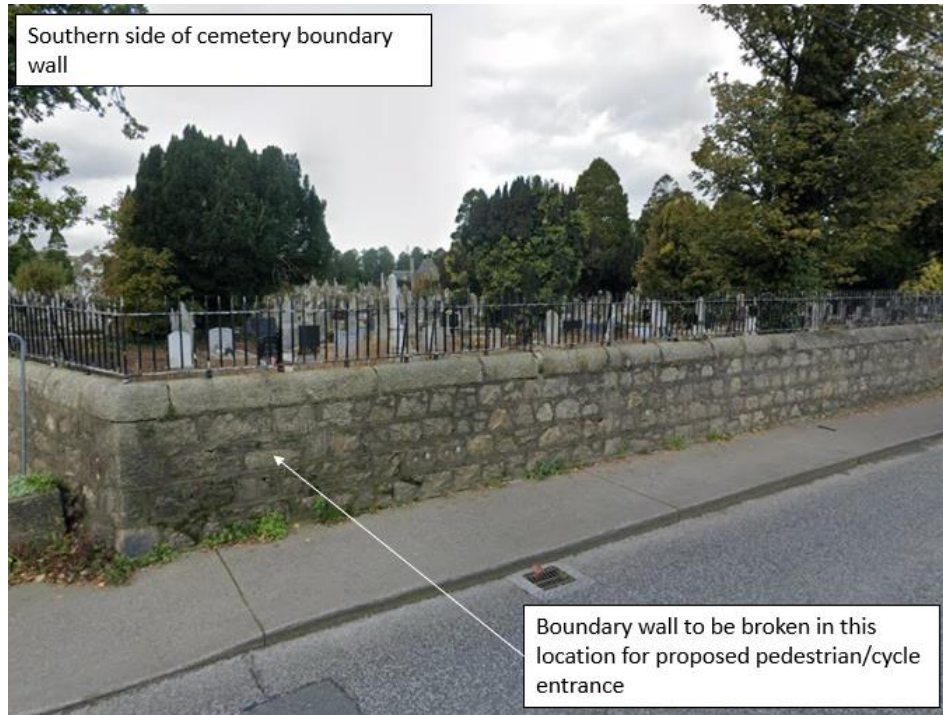


Figure 6-22: Existing southern cemetery boundary wall

6.5.10 The proposed entrance details for the southern access are illustrated in Figure 6-23 below. These are shown in further detail in Drawing Ref. 220012-DBFL-RD-SP-DR-C-5212 which is appended to this report in Appendix E.

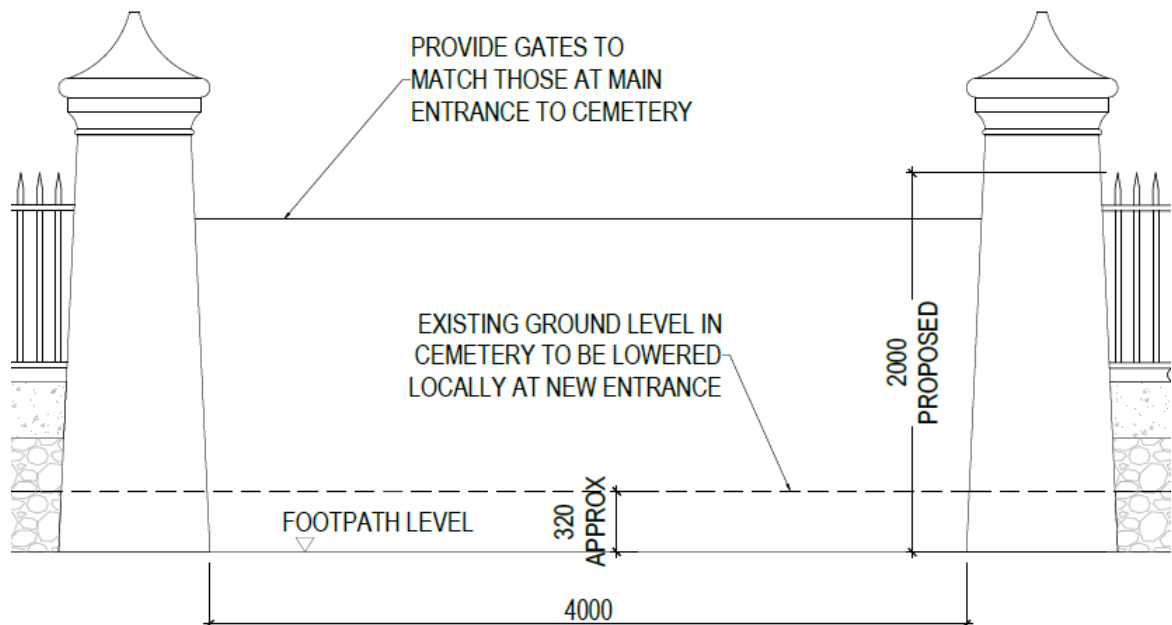


Figure 6-23: Proposed Pedestrian/cycle entrance at southern side of cemetery

6.5.11 Two piers are proposed at this entrance. These will be representative of the existing piers located at the southern vehicle entrance, as illustrated in Figure 6-24 below.



Figure 6-24: Existing Piers at Southern Vehicle Entrance to Cemetery

6.5.12 With regard to the northern access, Figure 6-25 illustrates the existing boundary wall and vehicular entrance location.

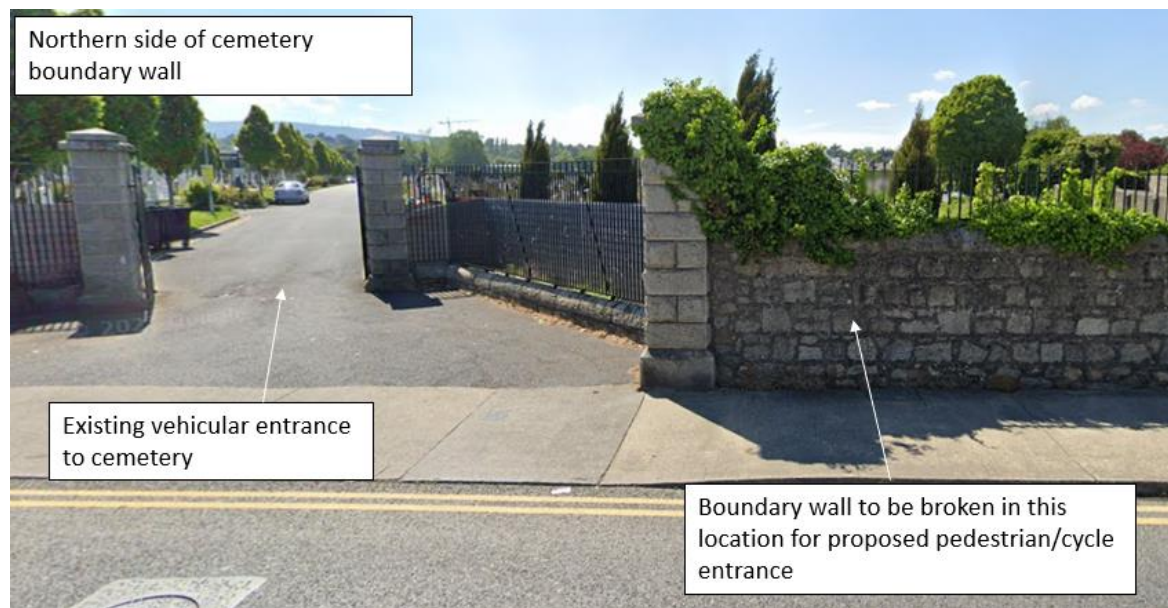


Figure 6-25: Existing northern cemetery boundary wall

6.5.13 The proposed entrance boundary details for the northern pedestrian/cycle access are illustrated in Figure 6-26. These are shown in further detail in Drawing Ref. 220012-DBFL-RD-SP-DR-C-5211 which is appended to this report in Appendix E.

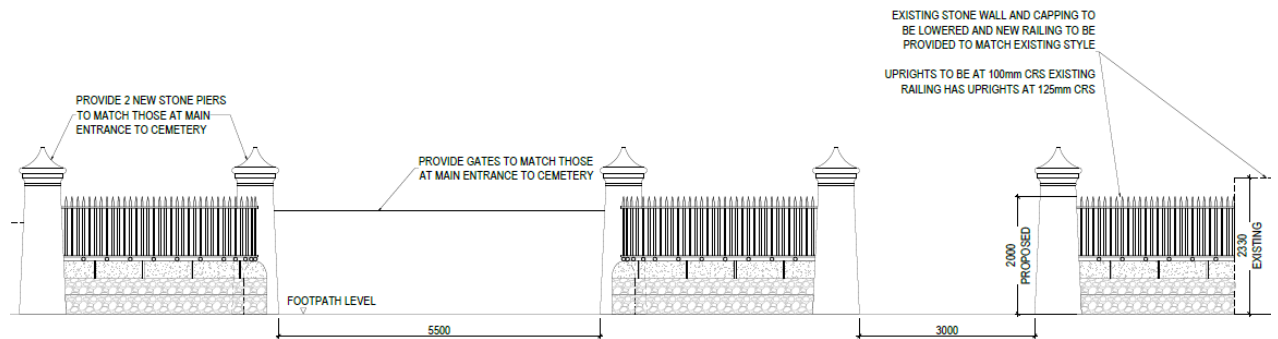


Figure 6-26: Proposed entrance details for the northern pedestrian/cycle access

6.5.14 It is noted that the proposed northern pedestrian/cycle entrance is located adjacent to the existing northern vehicle entrance, as illustrated in Figure 6-25. The existing vehicle entrance is currently narrow at 3.5m width which does not allow for two vehicles to pass one another entering and exiting the cemetery. It is proposed, as part of this scheme, to increase the width of this access to 5.5m in order to allow for two vehicles to pass one another.

6.5.15 The proposed pedestrian and cycle access will be 3m wide and will provide two piers either side of the entrance, as illustrated in Figure 6-26.

7.0 INTERNAL DLRCC DEPARTMENT CONSULTATION

7.1 INTRODUCTION

- 7.1.1 This section of the report provides comments and feedback from a number of the internal departments within Dun Laoghaire Rathdown County Council (DLRCC) in relation to the proposed preliminary design for the Deansgrange Cycle Scheme.
- 7.1.2 Outlined below are the departments consulted during this internal consultation as well as the feedback provided on the scheme. Responses are provided as necessary.

7.2 DEPARTMENT CONSULTATION FEEDBACK

- 7.2.1 The following departments were consulted as part of this scheme:
- Architects Department
 - Community & Cultural Development Department
 - Forward Planning Infrastructure Admin Department
 - Infrastructure and Climate Change Department
 - Housing Department
 - Municipal Services
 - Planning Department

Architects Department

- 7.2.2 No comments were received by the Architects Department.

Community & Cultural Development Department

- 7.2.3 A response was provided by the Community & Cultural Development Department outlining that this department has no objection to the proposed scheme progressing to Part 8.

Forward Planning Infrastructure Department

- 7.2.4 A response was provided by the Forward Planning Infrastructure Department outlining that the department has no comments on the proposed scheme.

Housing Department

- 7.2.5 No comments were received by the Housing Department.

Municipal Services

7.2.6 Comments and feedback was provided by a number of sections within the Municipal Service Department, these are outlined below.

Biodiversity Officer

7.2.7 The following requests were made from the Biodiversity Officer in relation to the proposed scheme:

- Undertake an Ecological Impact Assessment (EcIA), bat impact assessment, including surveys, and an Invasive Species survey and management plan by a suitably qualified invasive species specialist;
- Provide a Construction and Environment Management Plan (CEMP) which will include a section detailing invasive species management and a section detailing biosecurity measures.
- Provide invasive species specialist input and ecological input to the longterm management and landscape programme of the cycleway.

Response:

7.2.8 DBFL have reviewed the requests made from the Biodiversity Officer and appointed NM Ecology Ireland who prepared an Ecological Impact Assessment (EcIA) as well as an Invasive Species Survey and Bat Impact Assessment including a bat survey prior to the commencement of the Part 8 planning application.

7.2.9 With regard to requests made in relation to a CEMP and longterm management plans, this will be addressed in full during the detailed design and construction for the proposed scheme.

Drainage Planning

7.2.10 The following comments and feedback were noted from the Drainage Planning Department:

- Drainage proposals are to be provided in accordance with the County Development Plan 2022-2028.
- This scheme should be used as an opportunity to help alleviate local flooding issues as much as possible.
- Requirements for Sustainable Drainage Systems (SuDS) are to be included at the preliminary design stage to ensure adequate space is provided.

Response:

- 7.2.11 DBFL have reviewed the requests and comments made by the Drainage Department and agree that best practice would be to provide SuDs measures for new scheme proposals where feasible, however, this scheme does not provide for many opportunities for SuDs measures to be implemented along the route.
- 7.2.12 Due to the sensitive nature of Deansgrange Cemetery, it is not possible to excavate the existing paths to the extent that would be required. Along Deansgrange Road, we are limited in terms of available space, therefore, we are not providing any additional proposals. Along Kill Lane, we have proposed a short section for green space landscaping, however, we are limited here in terms of the presence of a culvert

Parks Section

- 7.2.13 The Parks section have outlined that they have no objection in principal to the proposed scheme. The following comments and feedback was provided:
- The 'proposed public realm area' should be re-named to 'proposed memorial garden incorporating, paving, planting, seating and columbarium walls'.
 - The entrances should incorporate large paved thresholds using natural stone and a grey granite coloured resin bound aggregate within the cemetery.
 - There should be a controlled crossing for additional permeability to and from the cemetery.
 - Lighting, pedestrian and cycle prints and other public realm improvements should be included through the cemetery to the link at Holly Park.
 - IAC Archaeology should consult with the Heritage Officer on their submitted document "Archaeological and Architectural Assessment Report".
 - References should be made to the approach to signage/surface and wall/railing materials in the documents.
 - Additional tree planting should be considered throughout the scheme.
 - DLR Parks should be consulted in relation to exact details and materials to be used during the detailed design stage.

Response:

- 7.2.14 DBFL have reviewed the comments and feedback from the Parks Section. Outlined below are some initial responses that address these.

- 7.2.15 The proposed public realm area will be renamed to that outlined within the comments from Parks.
- 7.2.16 Specific details including material types to be used will be considered at detailed design stage. Input from Parks will be most welcome when these are being considered at that stage.
- 7.2.17 DBFL agree that a controlled crossing would be beneficial for additional permeability. A controlled crossing has been included along Deansgrange Road, south of the northern entrance to the cemetery.
- 7.2.18 With regard to including the link to Holly Park within this Part 8 scheme, unfortunately, this is not within the remit or scope of this project for planning stage. It is considered that a lighting plan along this section to Holly Park could be included within this scheme at detailed design stage as part of the tender package.
- 7.2.19 IAC and the DLRCC Heritage Officer have been in consultation in relation to the report submitted.
- 7.2.20 There are not currently any reference to details of materials in relation to signage/surface or wall/railings. These will be addressed at detailed design stage.
- 7.2.21 Additional tree planting will be considered, however, there is limited width available along Deansgrange Road and Kill Lane to incorporate additional trees and the sensitive nature within Deansgrange Cemetery does not allow for any planting of trees as part of this scheme.

8.0 ENVIRONMENTAL ASSESSMENT

8.1 INTRODUCTION

- 8.1.1 This section of the report provides a summary of the independent reports and assessments undertaken with regard to Ecology, Environmental and Heritage conditions surrounding the proposed scheme.
- 8.1.2 The external reports are provided in full in the appendices of this report with the EIAR and AA Screening Report in **Appendix C**, the Ecological Impact Assessment Report in **Appendix D** and the Archaeology & Architectural Heritage Assessment Report in **Appendix E**.

8.2 SUMMARY OF EIA & AA SCREENING REPORT

EIAR Screening

- 8.2.1 This report provides an Environmental Impact Assessment (EIA) and an Appropriate Assessment (AA) Screening Report for a project called the Deansgrange Cycle Scheme, which provides for cycle lanes and pedestrian facilities and junction improvements along the linear project area.
- 8.2.2 The application is being pursued by Dun Laoghaire Rathdown County Council. The process to bring the scheme forward must have regard to the conclusions of the EIA Screening and AA Screening Report which is included in the Appendix of this document. This shall determine whether the appropriate process is a Part 8 (of the Planning and Development Regulations, 2001 to 2021) where the consenting authority is the Council or an application is made to An Bord Pleanála.
- 8.2.3 The EIA screening assesses the proposed scheme with reference to the relevant EIA legislation including the EIA Directive, Planning and Development Regulations, the Roads Act and Regulations. The methodology has particular regard to the '3-Step' assessment process set out in the Office of the Planning Regulator (OPR) Environmental Impact Assessment Screening Practice Note PN02 (June 2021). Regard is also had to European and National guidance documents.
- 8.2.4 The consideration of potential impacts covers all significant direct, indirect and secondary impacts as relevant having regard to the criteria for determining whether development listed in part 2 of schedule 5 should be subject to an environmental impact assessment under Schedule 7 of the Planning and Development Regulations, 2001 to 2021.

8.2.5 Having regard to the nature and scale of the proposed development which is below the thresholds set out in Class 10 of Part 2 of Schedule 5, the criteria in Schedule 7, the information provided in accordance with Schedule 7A of the Planning and Development Regulations 2001, as amended, and the following:

- The scale, nature and location of the proposed impacts
- The potential impacts and proposed mitigation measures
- The results of the any other relevant assessments of the effects on the environment

8.2.6 It is considered that the proposed development would not be likely to have significant effects on the environment and it is recommended that **environmental impact assessment report is not required.**

AA Screening

8.2.7 The Screening for Appropriate Assessment report has been prepared by NM Ecology Ltd on behalf of Dun Laoghaire – Rathdown County Council (DLRCC, the applicant), regarding the Deansgrange Cycle Scheme. The proposed development will involve the creation of cycle lanes, pedestrian facilities and junction improvements along existing roads.

8.2.8 In accordance with their obligations under the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011), the competent authority must assess whether the proposed development could have 'likely significant effects' on any Natura 2000 sites. This document provides supporting information to assist the local authority with an Appropriate Assessment screening exercise, including: a description of the proposed development, details of its environmental setting, a map and list of Natura 2000 sites within the potential zone of impact, and consideration of potential source-pathway-receptor links.

8.2.9 There is no risk of direct impacts on Natura 2000 sites. Potential pathways for indirect impacts were considered, but none were found to be feasible. Therefore, they conclude that the proposed development will not cause direct or indirect impacts on any Natura 2000 sites, and thus that **Appropriate Assessment is not required.**

8.3 SUMMARY OF ECOLOGICAL IMPACT ASSESSMENT REPORT

- 8.3.1 The Ecological Impact Assessment has been prepared by NM Ecology Ltd on behalf of Dun Laoghaire – Rathdown County Council (the applicant), in relation to the Deansgrange Cycle Scheme. Part of the route will pass through Deansgrange Cemetery. The aim of this report is to identify, quantify and evaluate the impacts of the proposed development on ecosystems and their components, including designated sites, habitats, flora and fauna. The main report is provided in **Appendix D** of this Part 8 report, with a summary of the report outlined below.
- 8.3.2 The proposed development site is not within or adjacent to any designated sites. Potential indirect impacts on designated sites were considered within a 5 km radius, and a tenuous surface-water pathway via the Deansgrange Stream was identified to the *Dalkey Coastal Zone and Killiney Hill* pNHA. However, the proposed development will not require any modification of the stream or bridge, and any pollutants that reach the watercourse would be diluted by 5 km of intervening waters, so there will be no impact on the pNHA.
- 8.3.3 Habitats within the proposed development site include buildings and artificial surfaces, dry meadow, amenity grassland, treeline and mixed coniferous woodland. The grassland and woodland habitats within Deansgrange Cemetery are of Local ecological importance. However, impacts on the grassland habitats will be very small in extent, and there will be no impact on trees or woodlands, so overall impacts on these habitats will be negligible.
- 8.3.4 There are two legally-restricted invasive species within Deansgrange Cemetery: Spanish bluebell and three-cornered leek. An Invasive Species Management Plan has been prepared for the proposed development, which includes measures to prevent the spread of these species prior to, during and following the proposed development.
- 8.3.5 Deansgrange Cemetery is used as a foraging area by some common bat species. Bat surveys of the Old Gate Lodge and adjacent building were carried out, but no evidence of a bat roost was recorded. It will be necessary to provide lighting along the cycle path for safety reasons, but bat-sensitive lighting techniques have been incorporated into the lighting plan, including the use of a 'warm' LED tone, and measures to prevent light-spill outside the cycle path. On this basis, lighting will have a negligible effect on foraging bats.

- 8.3.6 Subject to the successful implementation of these measures, it can be concluded that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance.

8.4 ARCHAEOLOGICAL & BUILT HERITAGE CONSTRAINTS

- 8.4.1 The Archaeological and Architectural Assessment report has been prepared by IAC Archaeology on behalf of DLRCC. The report focuses on the impact, if any, on the archaeological, architectural and historical resource of the proposed cycle way at Deansgrange. The main report is provided in **Appendix E** of this Part 8 report, with a summary of the report outlined below.
- 8.4.2 There is one recorded archaeological monument within 200m of the proposed development, however, cartographic analysis has indicated that the original location of a stone cross associated with Kill Abbey (DU023-015) was originally located to the south of Kill Abbey which places this stone cross within the study area.
- 8.4.3 The proposed development consists of the installation of a cycle way along the length of Deansgrange Road. A portion of this proposed cycle way will be diverted through Deansgrange Cemetery to maintain the current flow of traffic in both directions along Deansgrange Road. Deansgrange Cemetery is an exceptionally large cemetery and contains nine structures which are listed under the Recorded Protected Structures Dún Laoghaire-Rathdown. The cemetery itself can be regarded as the curtilage of the protected structures within the cemetery, being the contemporary setting of the cemetery buildings. A further four Protected Structures are located outside the confines of the graveyard within the study area.
- 8.4.4 As part of the proposed development, the existing 'Funeral Gate' into Deansgrange Cemetery will require alteration, including the erection of new gate pillars and recessed entrance. This will result in a direct, negative and significant impact on the entrance, due to the removal and replacement of the original entrance. This portion of the cemetery is later in date, representing an extension established in 1895. The proposed new entrance will stylistically be similar in form to the main entrance, which was built in 1931 and replaced an earlier entrance.
- 8.4.5 A portion of the proposed scheme will be diverted through the Deansgrange Cemetery. This cemetery is an exceptionally large cemetery and contains nine

structures which are listed under the Recorded Protected Structures (RPS) for Dún Laoghaire-Rathdown. A further four Protected Structures are located outside the confines of the graveyard within the study area.

- 8.4.6 As part of the proposed development, alteration will be required to the existing cemetery wall (NIAH only). A new pedestrian entrance will be formed at the southern end of the cemetery wall as part of the scheme. This will result in a direct, negative and slight impact on the fabric of the wall.
- 8.4.7 It is recommended that a full photographic measured survey, accompanied by a written record should be compiled prior to any alteration of the 'Funeral Gate' and cemetery wall.
- 8.4.8 Although some ground stability issues are present in the southern extent of the proposed cycle route within Deansgrange Cemetery, the existing pathway (to be used for the scheme) will not be altered. Where lighting is required, any areas with subsidence will be avoided. As a result, the existing grave plots will not be impacted by the proposed scheme.
- 8.4.9 Works proposed within the cemetery should be sympathetic to the historical character of the cemetery and not detract from its visual appeal. Detailed design may require that input of an architectural heritage report.
- 8.4.10 The proposed development is relatively low impact in terms of excavations. It is possible that limited excavations may be required for services that may have an adverse impact on previously unrecorded archaeological features or deposits as well as historical features and/or structures that have the potential to survive beneath the current ground level.
- 8.4.11 It is recommended that all ground disturbances associated with the proposed development be monitored by a suitably qualified archaeologist. If any features of archaeological potential are discovered during the course of the works, further archaeological mitigation may be required, such as preservation in-situ or by record. Any further mitigation will require approval from the National Monuments Service of the DoH/LGH.

9.0 SUMMARY OF REPORT

9.1 SUMMARY OF REPORT

- 9.1.1 DBFL Consulting Engineers (DBFL) have been commissioned by Dun Laoghaire Rathdown County Council (DLRCC) to provide consulting engineering services for the design and development of the Deansgrange Cycle Route Scheme. This scheme forms part of the Active School Travel project currently being run by DLRCC Active Travel Sector.
- 9.1.2 The overall scheme aims to deliver a high quality, safe walking and cycling route that will meet the current school and commuting demand within the Deansgrange area for all cycle users.
- 9.1.3 A detailed options assessment and engagement process was undertaken for this scheme with a preferred option emerging as a result. The preferred design option has been taken forward and developed further as part of this preliminary design.
- 9.1.4 A number of policy documents on a national, regional and local level have been reviewed in order to inform the overall scheme design and to ensure that the scheme is being developed to best policy and guidance.
- 9.1.5 A review of the local road network and traffic volumes was undertaken as part of this scheme, both along Deansgrange Road and within the Deansgrange Cemetery. Pedestrian and cycle counts were also undertaken.
- 9.1.6 A conflict assessment was conducted at the Kill Lane / Super Valu car park access junction. This assessment focused on identifying the interactions between the different modes of travel through the junction and surrounding area. A number of interactions were noted at the existing priority crossing on Kill Lane. It was proposed as part of this scheme to signalise this crossing.
- 9.1.7 It is noted that the preliminary design for the scheme on the external road network is to provide a two-way cycle track facility on the western side of Deansgrange Road. The cycle facility, as per the Options Report, will proceed into the Deansgrange Cemetery (due to width restrictions along Deansgrange Road).
- 9.1.8 An Options Assessment has been undertaken as part of the Preliminary Design for the scheme with regard to the preferred routing within the cemetery section. The preferred option that emerged through Multi Criteria Analysis (MCA) was to route cyclists along the existing paths in the cemetery.

- 9.1.9 With regard to providing the cycle facility within the Deansgrange Cemetery, there are a number of considerations to improve and provide for a safe facility. These considerations include the following:
- Consultation – Initial consultation with interested groups will be key to achieving a safe and coherent scheme;
 - Public Lighting – Public lighting will be provided within the cemetery. This will be sympathetic to the natural environment and its surroundings;
 - Passive Surveillance – The boundary wall is proposed to be lowered in order to improve passive surveillance to the cemetery;
 - CCTV Surveillance – CCTV is proposed to be extended within the Cemetery;
 - Accessibility – A number of access points are provided along the route within the cemetery;
 - Maintenance – The cemetery is actively maintained on a daily basis which will continue as part of this scheme; and
 - Management – The cemetery is actively managed, in particular, during a funeral procession.
- 9.1.10 The preliminary design for the scheme includes a cycle track both sides of Kill Lane which proceeds from the entrance to Clonkeen Park to the Deansgrange Road/Kill Lane signalised junction. Pedestrian and cycle crossings are provided on two arms of the junction which will allow cyclists to travel between Kill Lane and Deansgrange Road. On Deansgrange Road, it is proposed to provide a two-way cycle track on the western side of the road. The cycle facility will progress within the Deansgrange Cemetery where cyclists will use the existing paths. At the northern side of the cemetery, the two-way cycle track will resume on the western side of the road and will continue to the Deansgrange Road / Brookville Park signalised junction where it will tie in with proposals outlined here as part of the Dundrum to Dun Laoghaire Active Travel Scheme (the DLR Connector).
- 9.1.11 Public lighting, drainage and proposed boundary wall details will all be provided for within the cemetery. Bat-sensitive lighting techniques have been incorporated into the lighting plan, including the use of a 'warm' LED tone, and measures to prevent light-spill outside the cycle path.
- 9.1.12 An AA and EIAR Screening assessment has been undertaken as part of this scheme design. Results of the screening outlined no requirement for further environmental assessment.

- 9.1.13 An Ecological Impact Assessment Report has been undertaken as part of this scheme design. The results of this report outline that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance.
- 9.1.14 An Archaeological and Heritage assessment was undertaken within the cemetery. The report concluded that all ground disturbances associated with the proposed development be monitored by a suitably qualified archaeologist.

Appendix A – Traffic Flow Model

Appendix B – Deansgrange TRANSYT Assessment & Pedestrian Crossing Technical Note

Appendix C – EIA & AA Screening Report

Appendix D – Ecological Impact Assessment Report

Appendix E – Archaeology & Architectural Heritage Report

Appendix F – Preliminary Design Drawings