

R132 Cycle Lane Study

Ministers Road to Quickpenny Lane Options Assessment Report

Fingal County Council

February 2023



Notice

This document and its contents have been prepared and are intended solely as information for Fingal County Council and use in relation to R132 Cycle Lane Study

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

This document has 63 pages including the cover.

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Author-ised	Date
Rev 0	Draft	AR	AR	SW	SW	07/12/2022
Rev 1	Draft	AR	AR	SW	SW	22/02/2023

Client signoff

Client	Fingal County Council
Project	R132 Cycle Lane Study
Job number	5200387
Client signature / date	

Contents

Chapter	Page
1. Introduction	5
Scheme Context	5
Scheme Extents and Study Area	5
Aims and Objectives	6
Scheme Benefits	6
2. Need for the Scheme	7
Planning Policy Overview	7
National Policy	7
Regional Policy	11
Local Policy	13
Planning Process	15
3. Receiving Environment & Constraints	16
Receiving Environment	16
Environmental Considerations	20
Pedestrian and Cyclists Counts	23
4. Development and Assessment of Options	27
Assessment Methodology	27
High Level Route Concepts	27
Preliminary Route Options Assessment	27
Design Guidance	31
Detailed Options Assessment	36
5. Preferred Option	44
6. Next Steps	46
Appendices	47
Appendix A. Constraints Drawings	48
Appendix B. Route Option Drawings	51
Appendix C. Preferred Option Concept Drawings	58
Tables	
3.30. Table 0-1 - Utility Record Collection	26
Table 4-1 - Preliminary Screening Assessment Ranking	29
Table 4-2 - Preliminary Route Options Sifting Assessment	30
Table 4-3 - Detailed Assessment Ranking Scale	40
Table 4-4 - Detailed Link Type Options Assessment	41
Figures	
Figure 1-1 - Study Area	5
Figure 2-1 - Key Policy Documents	7

Figure 2-2 - Sustainable Mobility Policy Principles and Goals	9
Figure 2-3 - NIFTI Modal Hierarchy	10
Figure 2-4 - NIFTI Intervention Hierarchy	10
Figure 2-5 - GDA Cycle Network Plan	13
Figure 3-1 - Typical Road Section Between Ministers Road and Quickpenny Lane	16
Figure 3-2 - Existing Speeds Within Vicinity	17
Figure 3-3 - Minister's Road Junction	18
Figure 3-4 - Link Road Junction	18
Figure 3-5 - Quickpenny Lane Junction	19
Figure 3-6 - Existing Bus Stop Locations	19
Figure 3-7 - Pinch point at Quickpenny Lane	20
Figure 3-8 - Existing Public Lighting	21
Figure 3-9 - Traffic Survey Location	22
Figure 3-10 - PCLC Locations	24
Figure 3-21 - PCLC 1 Results	24
Figure 3-13 - PCLC 2 Results	25
Figure 4-1 - Stages of the Option Assessment	27
Figure 4-2 - TII Cycle Track Requirements	31
Figure 4-3 - NCM Cycle Facility Type	32
Figure 4-4 - At Grade Cycle Tracks Plan View	33
Figure 4-5 - At Grade Cycle Tracks Visualisation	33
Figure 4-6 - Raised Cycle Track Plan View	34
Figure 4-7 - Raised Cycle Track Visualisation	34
Figure 4-8 - Cycle Track Behind Verge Plan	35
Figure 4-9 - Cycle Track Behind Verge Visualisation	35
Figure 4-10 - Link Type Option 1	37
Figure 4-11 - Link Type Option 2	37
Figure 4-12 - Link Type Option 3	38
Figure 4-13 - Link Type Option 4	38
Figure 4-14 - Link Type Option 4	43
Figure 5-1 - Alternative Design Option Cross Section	44
Figure 5-2 - Landtake Required for Alternative Option	45

1. Introduction

Scheme Context

- 1.1. Fingal County Council proposes to develop a safe and attractive cycle and pedestrian route along the R132 which commences at Ministers Road, continuing north before concluding at Quickpenny Lane junction. It would tie into the proposed cycle and pedestrian facilities along the R132 between Blake's Cross and Ministers Road.
- 1.2. The proposed scheme will cater for cyclists primarily, however, given the existing road character, it will also facilitate pedestrians to travel along the R132 in a safer, more comfortable manner. Throughout the options process, both cyclists and pedestrian users have been considered.
- 1.3. The objective of this report is to outline the study undertaken to determine the feasibility and option assessment process for the provision of this cycling route.

Scheme Extents and Study Area

- 1.4. The study area is located along the R132 in the vicinity of the town of Lusk, Co. Dublin, between Ministers Road and Quickpenny Lane. The length of the study area is approximately 1.1 km.
- 1.5. The objective of this study is to investigate and determine the feasibility of installing safe and attractive cycle facilities along this busy section of regional road with the aim of improving sustainable transport options for local road users and residents including (but not limited to) those in Lusk and Man O' War.
- 1.6. The Study Area is shown below in Figure 1-1 below.

Figure 1-1 - Study Area



Aims and Objectives

- 1.7. The main aims and objectives of this Options Assessment Report are as follows:
- To consider the context of the scheme in terms of National, Regional and Local Planning Policy.
 - To identify any significant constraints.
 - To set out the options considered and to summarise their feasibility and relative ranking in terms of economy, integration, accessibility, safety, and environment.
 - To appraise the findings of the study and make a recommendation in relation to a preferred option.
 - To inform the public consultation process

Scheme Benefits

- 1.8. This route is identified as an inter-urban cycling route in Dublin Cycle Network to provide connectivity to Swords, Lusk and Balbriggan. This route forms part of the long-term plan to improve infrastructure facilities for all road users and is being developed under the objectives set out national and local policy including through Fingal's Development Plan to provide improved walking and cycling infrastructure.
- 1.9. The implementation of this scheme will form the first part of a longer overall route which will be developed in stages. The introduction of cycle and pedestrian facilities can have many positive benefits for all who avail of them. A number of these benefits are as follows:
- **Safe and convenient travel:** The proposed scheme will provide a dedicated space for cyclists and pedestrians within the vicinity of Lusk, which makes it much safer and more convenient to travel by sustainable modes. This is especially important in areas where there is heavy traffic or where roads are narrow, as it reduces the risk of accidents and makes cycling and walking a more attractive option for transportation.
 - **Improved Health and Fitness:** Cycling and walking are a great form of exercise and can improve cardiovascular health, reduce stress, and help people maintain a healthy lifestyle and weight. Dedicated facilities for vulnerable road users provide a safe and accessible environment for people to walk or ride their bikes, which in turn can encourage more people to take these up as a new form of exercise
 - **Reduced Pollution:** Cycling and walking are sustainable and eco-friendly modes of transportation that produce zero emissions. The introduction of facilities for these users and the increase in sustainable trips, reduces air pollution and improves the local environment.
 - **Reduced Congestion:** By providing an alternative mode of transport to driving, cycle and footpaths can help reduce congestion on the roads. This can lead to quicker and more efficient travel times for all road users.
- 1.10. The proposed scheme will, primarily, benefit local users by providing a safe and sustainable travel option to local amenities and attractions such as Corduff National School which is located directly along the R132 and links to local sports clubs such as Round Towers GAA and Man O'War GAA clubs while also providing links from the R132 to Lusk.

2. Need for the Scheme

Planning Policy Overview

- 2.1. The development of cycle lanes along the R132 is anticipated to deliver transport infrastructure which supports active lifestyles and provides a sustainable and cleaner alternative to the car, therefore supporting sustainable growth.
- 2.2. Cycle infrastructure has the potential to deliver significant economic, health, social and environmental benefits. The development of this cycle infrastructure along the R132 is anticipated to meet a variety of national, regional and local policies.

Figure 2-1 - Key Policy Documents



National Policy

National Planning Framework (Project Ireland 2040)

- 2.3. The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of Ireland to 2040.
- 2.4. As the NPF states, it is important that communities are designed to encourage active travel which supports improved public health creating a variety of economic and social benefits.

“Communities that are designed in a way that supports physical activity, e.g. generously sized footpaths, safe cycle lanes, safe attractive stairways and accessible recreation areas, all encourage residents to make healthy choices and live healthier lives. Countries with extensive cycle infrastructure report higher levels of cycling and lower rates of obesity. Healthy places in turn create economic value by appealing to a skilled workforce and attracting innovative companies”

2.5. The NPF has a variety of national objectives with those aligned to the R132 Cycle Lane Study presented below:

- National Policy Objective 4 - Ensure the creation of attractive, liveable, well-designed, high-quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.
- National Policy Objective 26 - Support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan, though integrating such policies, where appropriate and at the applicable scale, with planning policy.
- National Policy Objective 27 - Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments and integrating physical activity facilities for all ages.

2.6. The development of cycle facilities on the R132 will allow provide a safe link for sustainable modes of transport along a busy regional road, linking to Lusk and Man of War.

2.7. Improving connectivity through cycle infrastructure supports the aspiration for a higher quality of life and wellbeing by rejuvenating local communities.

National Development Plan (2021 – 2030)

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

2.9. As stated in the NDP, the performance of the Irish economy and the Government's ability to realise its full growth potential in a sustainable way are all inextricably linked and critically dependent on the quality of spatial planning.

2.10. A key aspect of spatial planning is sustainable mobility, providing sustainable transport options will enable growth by facilitating the increasing demand on the transport network, allowing for further development.

2.11. Active travel also contributes to the government's low-carbon economy aspirations. The NDP states the importance of cycle and walking infrastructure and the opportunity to align with public transport:

“provision of safe alternative active travel options such as segregated cycling and walking facilities can also help alleviate congestion and meet climate action objectives by providing viable alternatives and connectivity with existing public transport infrastructure”

2.12. The NDP states that a number of sustainable transport projects (including cycle infrastructure) will be delivered across the five cities of Dublin, Cork, Limerick, Galway and Waterford to provide additional sustainable travel options for users. Cycle infrastructure will be complemented by traffic management, bus priority and improved public transport provision.

2.13. The NDP and the NPF outline the importance of compact growth, where more compact urban and rural settlements are supported by jobs, houses and local services.

2.14. Compact settlements will increase the number of short-distance journeys, travelling by active modes is the most convenient form of travel if the provision is suitable.

2.15. The incorporation of a cycle lane along the R132 has the opportunity to support more compact development, by encouraging active travel journeys.

2.16. The scheme will offer an opportunity to provide additional transport options for commuters in the area, including those travelling to Lusk and onwards to Swords.

National Sustainable Mobility Policy (2022)

2.17. The National Sustainable Mobility Policy was published by the Department of Transport in 2022 and aims to deliver at least 500,000 additional active travel and public transport journeys by 2030. The

vision of the policy is *“To connect people and places with sustainable mobility that is safe, green, accessible and efficient”*.

- 2.18. The policy is guided by three key principles which are underpinned by 10 high level goals as shown in the extract below.

Figure 2-2 - Sustainable Mobility Policy Principles and Goals

PRINCIPLES	GOALS
Safe and Green Mobility	<ol style="list-style-type: none"> 1. Improve mobility safety. 2. Decarbonise public transport. 3. Expand availability of sustainable mobility in metropolitan areas. 4. Expand availability of sustainable mobility in regional and rural areas. 5. Encourage people to choose sustainable mobility over the private car.
People Focused Mobility	<ol style="list-style-type: none"> 6. Take a whole of journey approach to mobility, promoting inclusive access for all. 7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model. 8. Promote sustainable mobility through research and citizen engagement.
Better Integrated Mobility	<ol style="list-style-type: none"> 9. Better integrate land use and transport planning at all levels. 10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation.

- 2.19. The proposed Fingal Coastal Way is well aligned with these goals and principles as it will provide a safe, sustainable route for both leisure and commuting trips which is accessible to all.

Climate Action Plan, 2021

- 2.20. The Climate Action Plan published in 2021 sets out the means and requirements for Ireland to halve its carbon emissions by 2030. These objectives are legally binding and include clear targets and commitments which must be delivered to ensure that climate disruption is kept to a minimum.
- 2.21. The transport section of the Climate Action Plan contains several action points relating to the increase in sustainable and active transport modes which are to be implemented through the National Sustainable Mobility Policy as outlined above. These measures help to implement Sustainable Development Goal (SDG) 11 as agreed by the United Nations in 2015, i.e. making cities and communities more sustainable including targets such as ensuring inclusive and sustainable urbanisation and reducing the environmental impact of cities.

National Investment Framework for Transport in Ireland (2021)

- 2.22. The National Investment Framework for Transport in Ireland (NIFTI) sets out the Department of Transport’s framework for prioritising future investment in the transport network for Ireland. NIFTI sets out to prioritise sustainable mobility measures while decarbonising transport in Ireland and includes four investment priorities as identified below:
- Mobility of people and goods in urban areas;
 - Protection and renewal;
 - Enhanced regional and rural connectivity; and,
 - Decarbonisation.
- 2.23. The priorities are underpinned by modal and intervention hierarchies which determine how investment will be undertaken. These hierarchies are shown in the extracts below:

Figure 2-3 - NIFTI Modal Hierarchy

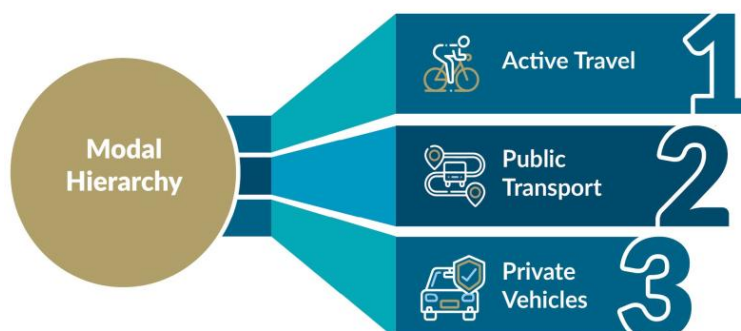


Figure 2-4 - NIFTI Intervention Hierarchy



- 2.24. In practice, the above suggests that active travel projects should be prioritised for investment while maintaining or optimising existing network assets would be preferred when compared to new construction or major interventions.

Get Ireland Active, 2016

- 2.25. Healthy Ireland, A Framework for Improved Health and Wellbeing 2013-2025 is the national framework for seeking to improve the health and wellbeing of people living in Ireland. The Framework identifies a number of broad inter-sectoral actions, one of which commits to the development of a plan to promote increased physical activity levels.
- 2.26. Get Ireland Active aim is to increase physical activity levels across the entire population thereby helping to improve health and wellbeing. Get Ireland Active has developed a plan which will seek to ensure that no group is disadvantaged and recognises that targeted interventions are required to address and overcome barriers to participation which are experienced by some people.
- 2.27. Get Ireland Active acknowledges the role that cycling can play in achieving physical activity targets. The plan highlights the importance of good planning to promote the use of cycling, stating that the layout of the environment has a significant impact on the levels of physical activity undertaken across age groups.
- 2.28. *"The built environment is an important determinant of physical activity behaviour. The way the built environment is designed, planned and built can also act as a barrier to being active and can reinforce sedentary behaviour and car dependence."*
- 2.29. Cycling for transport or leisure is a form of physical activity that can easily be incorporated into the daily activities of many people.
- 2.30. The development of cycling facilities along R132 is a positive example of how the built environment can be developed to promote physical activity, improving the health and well-being of those that choose to travel by bike. Facilities like this will be used for a variety of journey purposes including

travelling to work and school, which is an ideal opportunity to increase physical activity through everyday journeys.

Regional Policy

Regional Spatial and Economic Strategy (RSES) & Metropolitan Area Strategic Plan (MASP), 2019

- 2.31. The new regional strategy for the region sets out a long-term strategic planning and investment strategy for the Dublin area and surrounding counties and Midlands area to 2031.
- 2.32. Chapter 8 'Connectivity' of the strategy promotes the importance of the integration of land use and transport which prioritises the development of lands which are, or will be, most accessible by walking, cycling and public transport, including infill and brownfield sites. Furthermore, the strategy promotes a shift to more efficient modes, i.e. active travel modes and public transport, including walking and cycling to reduce car dependency. In this regard, the following cycling and walking objectives are promoted:
- Delivery of the cycle network set out in the Greater Dublin Area Cycle Network Plan inclusive of key commute routes and urban greenways on the canal, river and coastal corridors
 - Delivery of the National Cycle Plan within the Region.
 - Provide safe cycling routes in towns and villages across the Region

Transport Strategy for the Greater Dublin Area, 2016 - 2025

- 2.33. The Transport Strategy for the Greater Dublin Area (GDA) provides a framework for the development and delivery of transport infrastructure and services in the Greater Dublin Area (GDA) over the next two decades. The purpose of the 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"*
- 2.34. Through the development of the transport strategy, a number of shortcomings were identified which must be addressed over the coming years to ensure that Dublin is seen as a vibrant economic, social and cultural city. Shortcomings identified included:
- Congestion on the strategic road network;
 - Severe local congestion in certain locations;
 - Substandard – and in places dangerous – cycling environment; and
 - Substandard provision for pedestrians, particularly in central areas.
- 2.35. Such shortcomings demonstrate the need for a new transport system that caters for the private car but has an increasing emphasis on more sustainable modes of travel.
- 2.36. It is imperative that the GDA provides users with improved public transport and active travel provision, addressing congestion concerns on the local network but also ensuring we live in vibrant and active communities.
- The GDA transport strategy acknowledges the need for change and identifies the following considerations:
 - The zoning and development of land needs to be carried out in a manner which promotes walking, cycling and public transport for all trips and reduces the need for commuting by private car;
 - Cyclists must be provided with a safe and convenient metropolitan cycle network; and
 - The collapse in the use of sustainable modes for school travel is a critical cross-sectoral concern, which can only be partially addressed by transport.
- 2.37. Whilst the strategy acknowledges the current inadequate provision for cycling and the importance of providing an improved cycle network, as outlined in the strategy, there has been a significant increase and appetite for cycling in Dublin in recent years.

- 2.38. A combination of factors, including the Bike to Work Tax Saver Scheme, enhanced network provision for cyclists, and the implementation of the Dublin Bikes rental scheme have led to a dramatic, sustained increase in the number of people cycling.
- 2.39. The GDA Transport Strategy identifies a key component of the Cycle Network Plan. The strategy identifies that the cycle network will perform a vital commuter function and due to the location it is anticipated that the scheme will cater for a variety of journey purposes and will be a key route within the local network.

Greater Dublin Area Cycle Network Plan, 2013

- 2.40. The GDA Cycle Network Plan is the cycle infrastructure delivery component of the National Cycle Policy Framework (NCPF) and the GDA Transport Strategy.
- 2.41. The NCPF has set out a range of objectives with those most relative to the R132 Cycle Lane Study outlined below:
- Support the planning, development and design of towns and cities in a cycling and pedestrian-friendly way;
 - Provide designated rural cycle networks, especially for visitors and recreational cycling;
 - Provide cycling-friendly routes to all schools, adequate cycling parking facilities within schools, and cycling training to all school pupils;
 - Ensure that all cycling networks - both urban and rural - are signposted to an agreed standard.
- 2.42. The NCPF requires that cycle-friendly planning principles be incorporated in all key planning documents from the national to the local level.
- 2.43. In order to ensure that investments within the GDA are focused in an efficient manner and help to achieve significant modal shifts, the NTA and GDA local authorities need to know existing levels of cycle provision and, the interventions required to make cycling a more attractive and convenient option.
- 2.44. The Cycle Network Plan has been developed to identify and determine in a consistent, clear and logical manner the following cycle networks within the GDA:
- The Urban Cycle Network at the Primary, Secondary and Feeder levels;
 - The Inter-Urban Cycle Network links the relevant sections of the Urban Network and includes the elements of the National Cycle Network within the GDA. It shall also include linkages to key transport locations outside of urban areas such as airports and ports; and
 - The Green Route Network being cycle routes developed predominately for tourist, recreational and leisure purposes.
- 2.45. The scheme is identified as and part of Inter Urban Cycle Network which links the towns and city across rural areas and includes the elements of the National Cycle Network within the GDA.
- 2.46. The cycling network proposals for the Fingal County area outside of the Dublin city suburbs are addressed in the following sectors:
- South Fingal Sector: Swords, Malahide and Portmarnock;
 - Central Fingal Sector: Rush, Lusk and Donabate;
 - North Fingal Sector: Balbriggan and Skerries; and
 - Regional Cycle Links in Fingal.
- 2.47. The figure below is an extract from the GDA showing the categorisation of proposed routes in the area along with R132 with the study area outlined in red.

Figure 2-5 - GDA Cycle Network Plan



- 2.48. The scheme is identified within the Greater Dublin Area Cycle Network Plan where it will form part of the overall route F1. The indicative route for F1 is outlined in the Greater Dublin Area Cycle Network Plan as shown above. This forms a key inter-urban route in North County Dublin, linking Balbriggan, Lusk and surrounding areas to the key employment centre for the region at Swords.

Local Policy

Fingal Development Plan, 2017 – 2023

- 2.49. The Fingal Development Plan 2017-2023 sets out Fingal County Council's proposed policies and objectives for the development of the County up to 2023.
- 2.50. The Development Plan seeks to develop and improve, in a sustainable manner, the social, economic, environmental and cultural assets of the County.
- 2.51. The county of Fingal covers over 450 square kilometres and has the youngest population in the State (total population, 296,214 in 2016 Census), which is a key characteristic of the County as it accommodates an expanding Dublin population.
- 2.52. The young population of the county is an important factor in the propensity for cycling within Fingal.
- 2.53. The Fingal Development Plan sets out to promote and facilitate movement within and to the County through the integration of land use with a sustainable transport system. Priority is given to public transport, walking and cycling. There is a dedicated section in Chapter 7 of the Development Plan that deals with Cycling and Walking. The emphasis in the Development Plan is on the promotion and facilitation of sustainable forms of transport, of which cycling is a key component.
- 2.54. The Strategic Vision specifically includes for the promotion of walking and cycling in the following statement:
"Promote active and healthy lifestyles through increased opportunities for walking, cycling and active sport and recreation".
- 2.55. Chapter 7 deals with Transportation and sets out a policy of:
"Promote and facilitate movement, to, from and within the County of Fingal, by integrating land use with a high quality, sustainable transport system that prioritises walking, cycling and public transport".

- 2.56. The following objectives set out Fingal County Council's commitment to promoting sustainable walking and cycling modes.
- Objective MT13 – Promote walking and cycling as efficient, healthy and environmentally-friendly modes of transport by securing the development of a network of direct comfortable, convenient and safe cycle routes and footpaths, particularly in urban areas.
 - Objective MT14 – The Council will work in cooperation with the NTA and adjoining Local Authorities to implement the Greater Dublin Area Cycle Network Plan subject to detailed engineering design and mitigation measures presented in the SEA and Natura Impact Statement accompanying the NTA plan

Fingal Development Plan, 2023 – 2029

- 2.57. The Fingal Development Plan 2023 – 2029 plans to set out Fingal County Council's proposed policies and objectives for the development of the County up to the year 2029. The planning authority envisage that the final plan will be adopted in February 2023 and will come into effect in March 2023.
- 2.58. A number of objectives specifically relating to the scheme are included in Chapter 6 as outlined below:
- Objective CMO1 – Transition to Sustainable Modes Work with the NTA, TII and other transport agencies in facilitating the integrated set of transport objectives for the County as set out in this Plan, in line with National and Regional policy including the NTA's GDA Transport Strategy and any subsequent plan to encourage modal shift towards more sustainable modes of transport and patterns of commuting to reduce reliance on the private car.
 - Policy CMP7 – Pedestrian and Cycling Network Secure the development of a high-quality, connected and inclusive pedestrian and cycling network and provision of supporting facilities / infrastructure across the County, including the upgrade of the existing network and support the integration of walking, cycling and physical activity with placemaking including public realm improvements, in collaboration with the NTA, other relevant stakeholders, local communities and adjoining Local Authorities in the context of the impact of development schemes with cross boundary impacts and opportunities where appropriate. Routes within the network shall have regard to NTA and TII national standards and policies.
 - Policy CMP9 – Prioritisation of Pedestrians and Cyclists Support the prioritisation of pedestrians and cyclists and the provision of improved public realm to make walking and cycling safer, healthier, quicker, more direct and more attractive.
 - Policy CMP10 – Bicycle Infrastructure Improve bicycle priority measures and cycle parking infrastructure throughout the County in accordance with best accessibility practice.
 - Objective CMO5 – Improvements to the Pedestrian and Cyclist Environment Maintain and improve the pedestrian and cyclist environment and promote the development of a network of pedestrian/cycle routes which link residential areas with schools, employment, recreational destinations and public transport stops to create a pedestrian/cyclist environment that is safe, accessible to all in accordance with best accessibility practice.
 - Objective CMO10 – Walking and Cycling Infrastructure Support the provision of walking and cycling infrastructure, including bike parking, bike repair and support services, to increase footfall and economic activity in town and village centres while reducing emissions and improving quality of life.
 - Policy CMP15 – Safe Routes to School Promote walking and cycling for school trips through support and engagement with the "Safe Routes to School" and the "Green Schools Travel Programme".
 - Objective CMO21 – Safe Routes to School Measures Promote walking and cycling for school trips by implementing the following measures:
 - Identifying school sites that are as close as possible to the communities they serve.
 - Ensuring new schools are designed with an emphasis on active travel and facilitation of same.
 - Ensuring that adequate and secure bicycle storage is provided within schools. "
- Prioritising school routes for permeability projects including the potential for shorter and safer routes to schools by the removal of physical barriers to active movement and provision and enhancement of pedestrian and cycle ways.

- Supporting the use of a range of physical measures to provide improved safety for pedestrians and cyclists at and close to schools, including the implementation of the Safe Routes to School Programme.
- Ensuring that suitable access points are provided to school sites for pedestrians and cyclists.
- Policy CMP17 – Behavioural Change Initiatives Support and facilitate behavioural change initiatives to achieve modal shift towards more sustainable modes and continue to seek funding from relevant funding agencies to advance sustainable mobility schemes and initiatives across the County.

Fingal Climate Change Action Plan, 2019 – 2024

- 2.59. Fingal County Council's Climate Change Action Plan sets out how the Council will improve energy efficiency and reduce greenhouse gas emissions in its own buildings and operations, while making Fingal a more climate resilient region, with engaged and informed citizens. This will be achieved by a range of ongoing and planned actions in five key areas (Energy & Building, Transport, Flood Resilience, Nature-Based Solutions and Resource Management) which will be continuously monitored, evaluated and updated to 2030 and beyond.
- 2.60. This plan concentrates on the two approaches required to tackle climate change. The first, mitigation, consists of actions that will reduce current and future GHG emissions. The second approach, adaptation, consists of actions that will reduce the impacts that are already happening now from our changing climate and those that are projected to happen in the future. Examples of mitigation measures include reductions in energy use, switching to renewable energy sources and enhancement of carbon sinks. Part of this measures implies active travel such as walking and cycling.
- 2.61. Transport contributes to a significant amount of GHG emissions within the Fingal area. Walking, cycling and public transport currently accounts for just 38.6% of all journeys, and the target is to increase this figure to 50%. Therefore, through its own development plan strategy and policies, FCC promotes the integration of land use and transportation, and works with a range of stakeholders to improve transportation in Fingal and encourage modal shift away from private cars to more sustainable alternatives, in order to achieve this target.
- 2.62. Encouraging people to walk or cycle will help FCC to respond to climate change. Moreover, promotion of active travel will improve the health of citizens. Of the transportation modes that FCC can influence and shape, cycling has been the predominant focus.
- 2.63. To encourage the uptake of cycling and walking, the Council is actively advancing a number of specific cycle facilities across the county including the R132 Cycle Lane Study.

Planning Process

- 2.64. It is intended that the proposed scheme would be constructed under Section 38 of the Road Traffic Act, 1994 which allows the Local Authority to construct traffic calming measures as they consider desirable without needing a full Part VIII planning process.
- 2.65. The act describes traffic calming measures as: *“measures which restrict or control the speed or movement of, or which prevent, restrict or control access to a public road or roads by, mechanically propelled vehicles (whether generally or of a particular class) and measures which facilitate the safe use of public roads by different classes of traffic (including pedestrians and cyclists) and includes the provision of traffic signs, road markings, bollards, posts, poles, chicanes, rumble areas, raised, lowered or modified road surfaces, ramps, speed cushions, speed tables or other similar works or devices, islands or central reservations, roundabouts, modified junctions, works to reduce or modify the width of the roadway and landscaping, planting or other similar works.”* From this description, it is clear that cycle tracks and narrowed carriageway lanes falls under this description.

3. Receiving Environment & Constraints

Receiving Environment

R132 Road Character & Constraints

- 3.1. The study area in question for this section of the R132 Cycle Lane Scheme commences at Minster's Road junction and concludes just north of Quickpenny Lane. The entire study area can be classified as a two-way single lane carriageway with ghost islands and right turn lanes.
- 3.2. The R132 was formerly the N1 and as such retains many design features of a national road with a very wide carriageway, generally more than 7m wide, with additional hard shoulders, ghost islands and right turn lanes.
- 3.3. Additionally, the former function of the road means that there are long, relatively straight sections with large radius bends. This results in the road retaining the character of a high-speed environment which is hostile to sustainable modes of transport such as cycling and walking.
- 3.4. The total road reservation varies but is generally around 15m wide. The remaining space (not taken up by carriageway) is generally grass verges or ditches with boundaries typically being formed by hedgerows or walls along residential properties. There are no kerbs along the majority of the road length.

Figure 3-1 - Typical Road Section Between Ministers Road and Quickpenny Lane



- 3.5. There is currently no existing pedestrian or cyclist facilities in place between Ministers Road and Quickpenny Lane. The current speed limit along this section of the R132 is 80km/h. Figure 3-2 below displays the existing speed limit on each road within the vicinity of the study area.
- 3.6. As the R132 connects directly into a number of densely populated areas, the large amount of agricultural and commercial vehicles that travel the road daily can be considered an existing and future constraint.

Figure 3-2 - Existing Speeds Within Vicinity



3.7. There are several side roads that intersect with the R132 at priority T-junctions within the study area including:

- Ministers Road linking to Lusk
- Link Road which leads to Knightstown via Johnstown
- Quickpenny Lane linking towards Man of War.

3.8. These junctions are shown in the figures below:

Figure 3-3 - Minister's Road Junction



Figure 3-4 - Link Road Junction

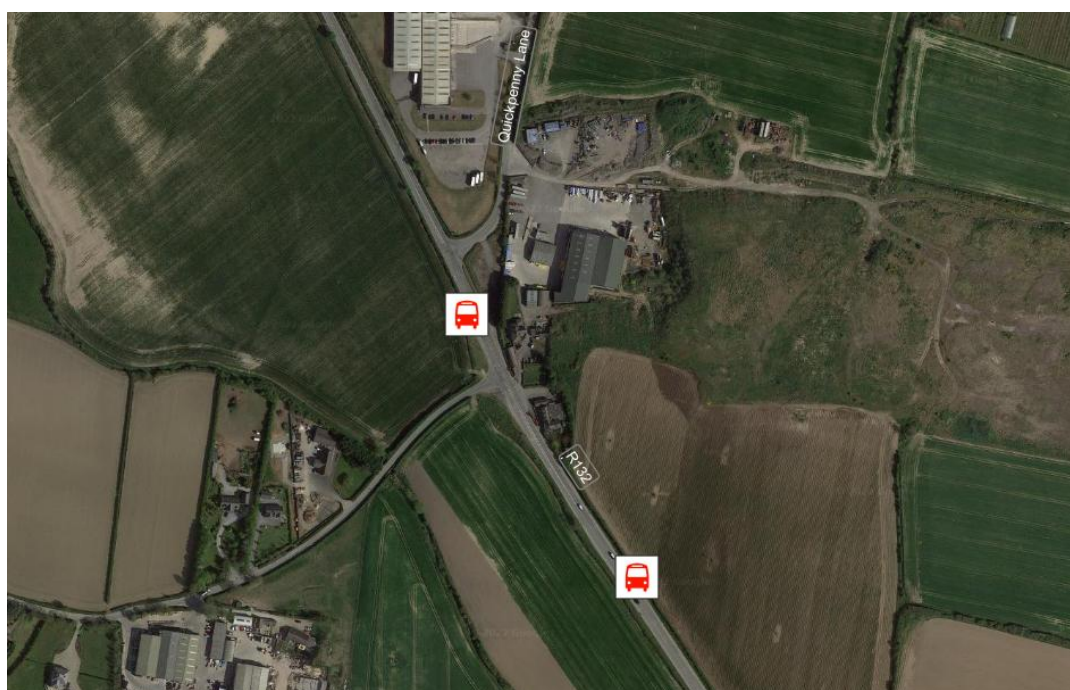


Figure 3-5 - Quickpenny Lane Junction



- 3.9. A number of commercial and residential properties access directly onto the R132 including:
- 3 no. commercial properties
 - 7 no. residential properties
 - 8 no. field accesses
- 3.10. The identified constraints are included on drawings 5200387-ATK-01-XX-SK-C-95120-95121 included in Appendix A.
- Bus Stops**
- 3.11. There are two officially identified bus stops located along the route close to the Quickpenny Lane junction which are served by the 101 Bus Eireann Route. These will be retained as part of any design.

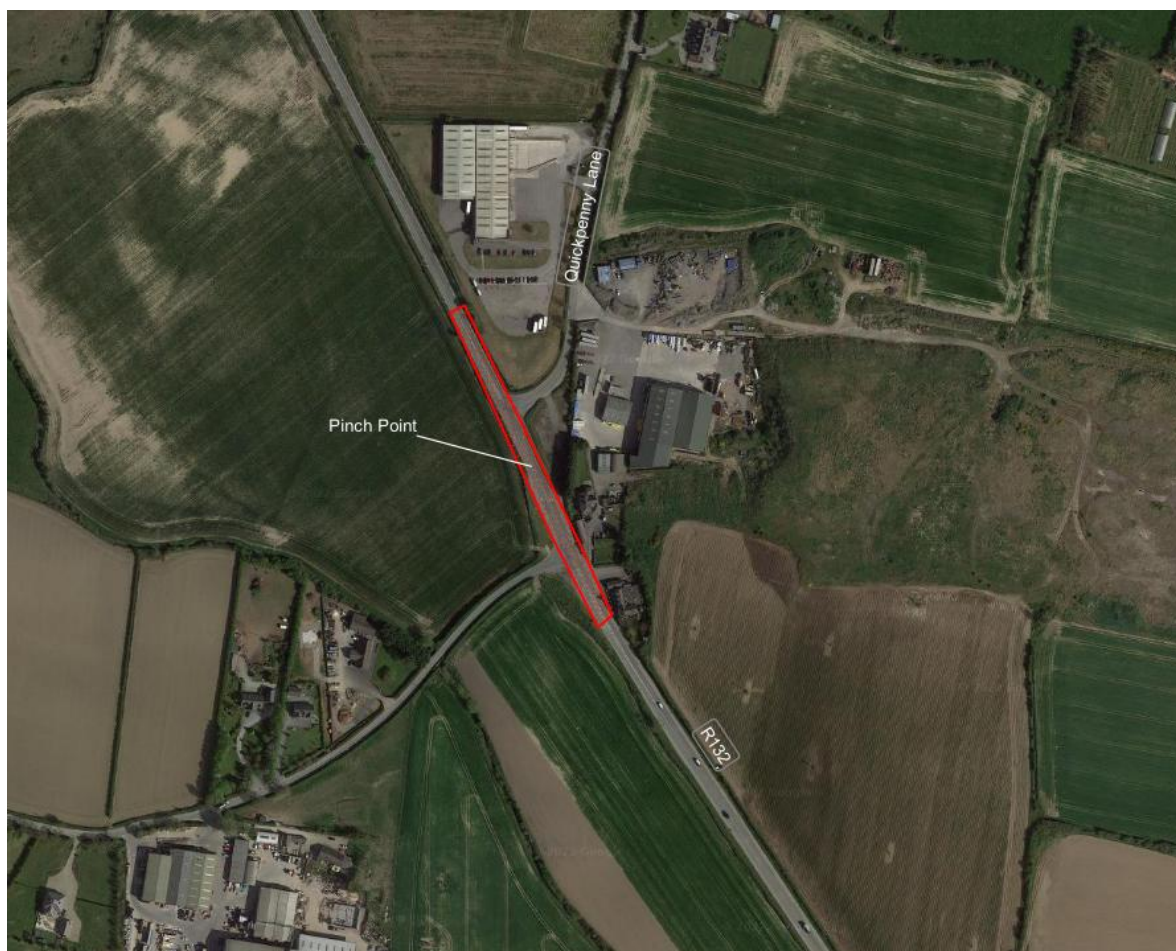
Figure 3-6 - Existing Bus Stop Locations



Pinch points

- 3.12. The existing conditions currently in place along the R132 provides sufficient width for the proposed scheme. However, there is a pinch point worth noting where a slight reduction in the existing carriageway cross section which may prove to have an impact on the design.

Figure 3-7 - Pinch point at Quickpenny Lane



Environmental Considerations

Public Lighting

- 3.13. For most of the study area, there are no public lighting services provided. On approach to Quickpenny Lane, there is public lighting in place for a span of approximately 350m. The area is shown below in Figure 3-6.

Figure 3-8 - Existing Public Lighting



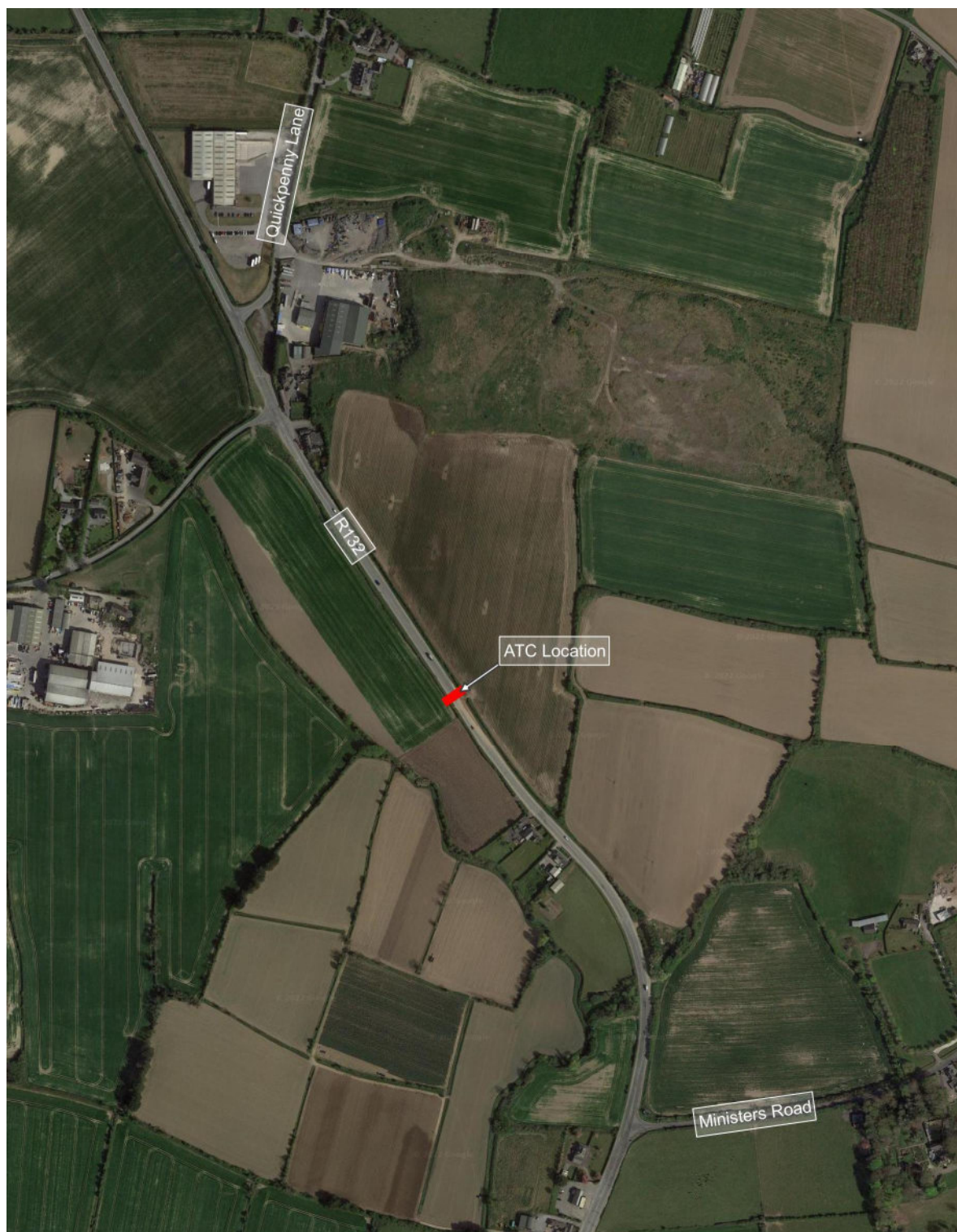
Drainage

- 3.14. While there are gullies provided for drainage at some locations along the R132, the majority of the road is drained freely into verges and ditches on either side of the road. From there, surface water runoff joins the existing natural drainage paths in the area. It is not intended to increase surface water runoff as part of this scheme.
- 3.15. There are some locations along the route where ponding currently occurs occasionally. These areas are typically located in areas where the existing pavement is in unsatisfactory condition and will be addressed as part of the scheme by new surfacing or other such measures.

Traffic Data

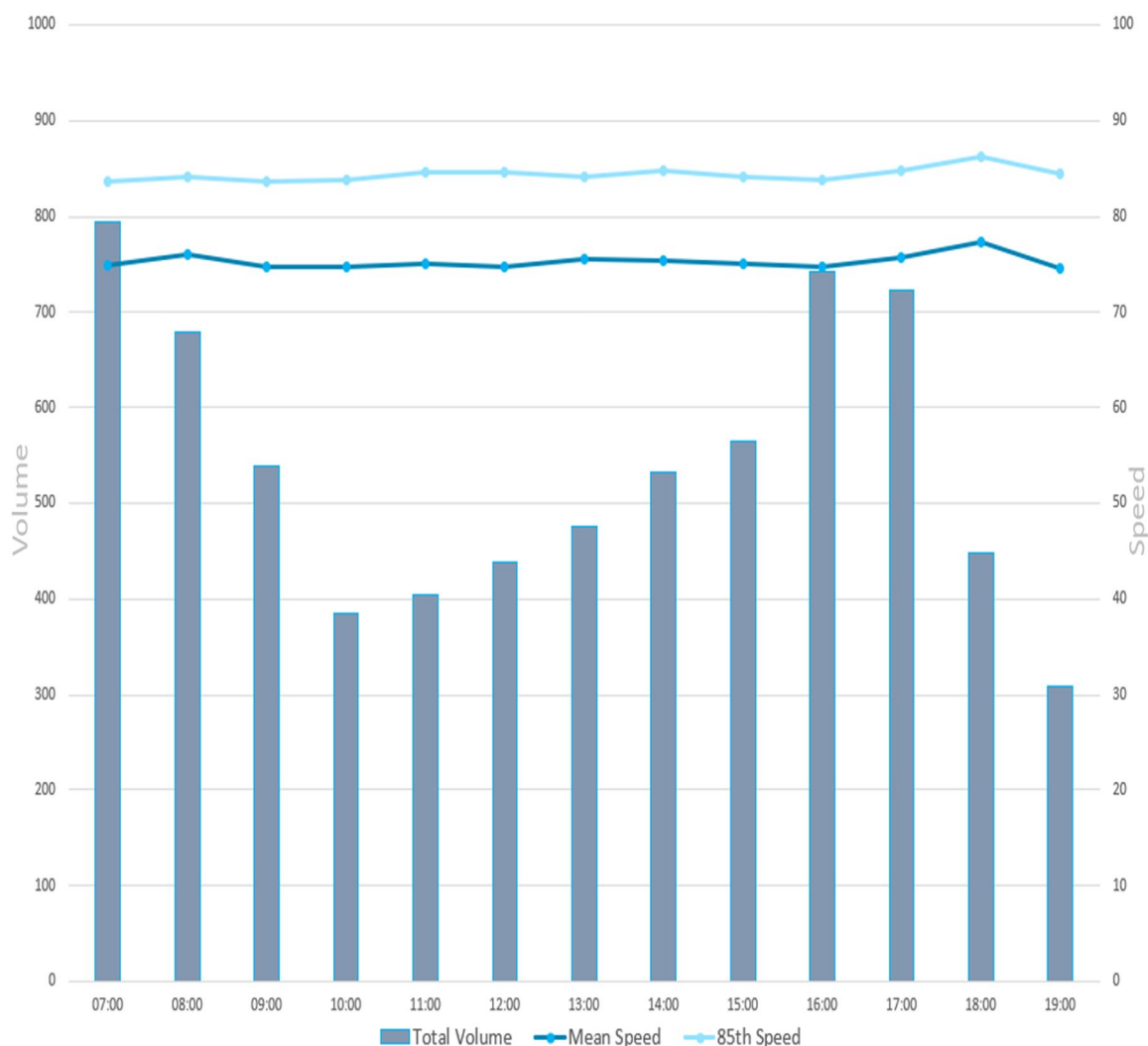
- 3.16. Traffic data was collected on over the week of 3rd – 10th October 2022 and included 1 no. Automatic Traffic Counter along the R132 within the study area to determine the typical speeds and volumes of traffic in the area.

Figure 3-9 - Traffic Survey Location



- 3.17. The data included in the figure below shows the typical volumes and speeds that were captured on Monday 3rd of October until Friday 7th of October between 07:00 to 19:00. These values are combined values for both directions.
- 3.18. The ATC was undertaken at a location approximately 600m north of the Minister's Road junction and 500m south of the Quickpenny Lane junction. The average volumes and speeds are shown in Figure 3-8.

Figure 3-9 - ATC Average Values



- 3.19. From the chart above, the average speed stays reasonably similar throughout the day, with the value never seemingly dropping below approximately 75km/h, whilst the 85th percentile speed is similarly consistent at roughly 85km/h, which is 5km/h above the allowed speed limit currently in place on this section of the R132.
- 3.20. The Annual Average Daily Traffic (AADT) is approximately 7500 vehicles.

Pedestrian and Cyclists Counts

- 3.21. Pedestrian and cyclist data was collected on the 4th of October 2022 and included 2 No. PCLC Counts taken at locations shown in Figure 3-10. The count took place between the hours of 07:00 and 19:00 and gives an accurate representation of the daily pedestrian and cyclist usage along the scheme extents.

Figure 3-100 - PCLC Locations



3.22. Figure 3-11 and 3-12 shows the results of the PCLC counts taken at the two locations shown in Figure 3-10. The results show there was a significant increase of cyclist in the evening hours.

Figure 3-111 - PCLC 1 Results

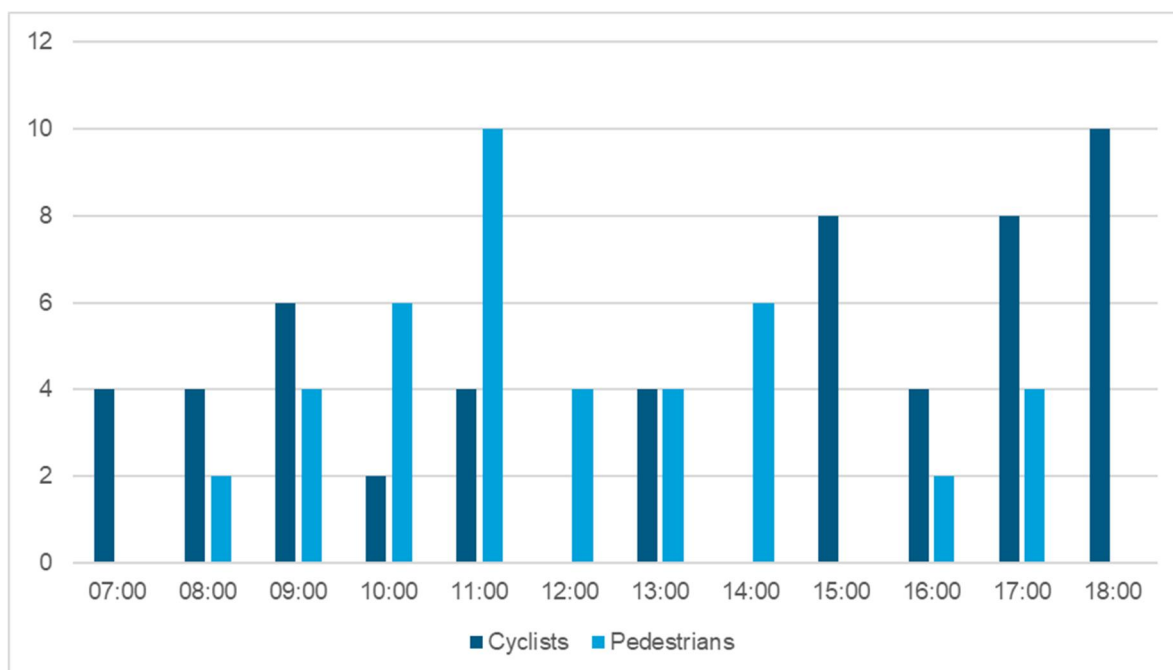
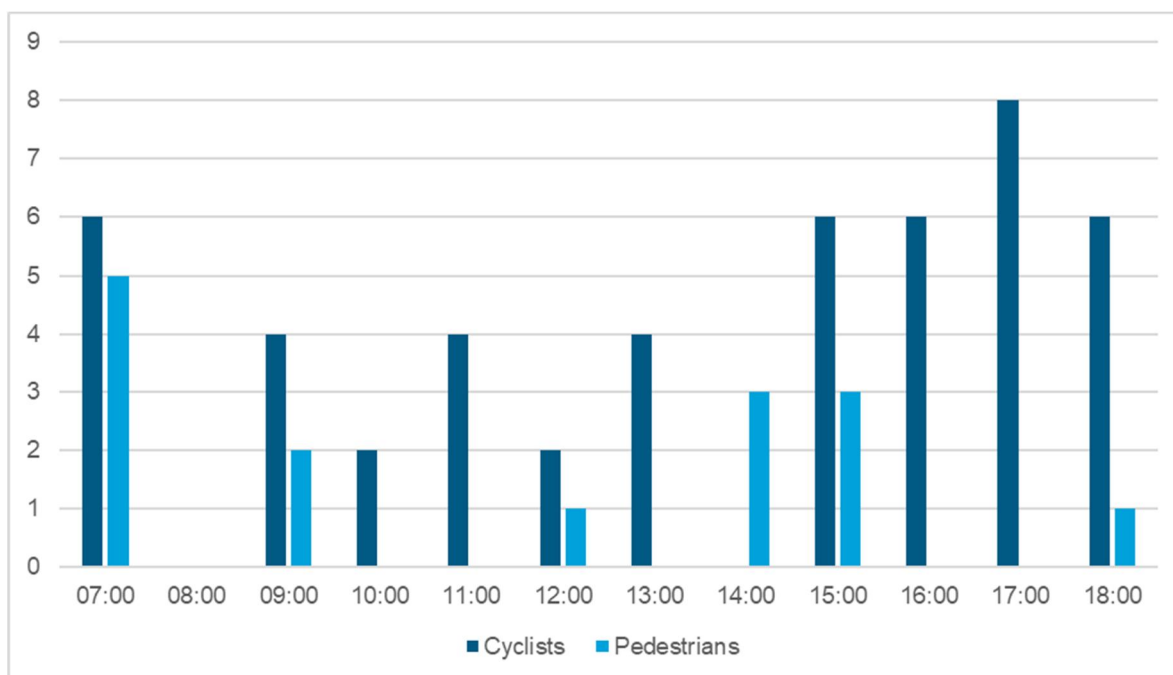


Figure 3-112 - PCLC 2 Results



Traffic Summary

- 3.23. There is a very high percentage of heavy vehicles on the R132, at approximately 11 – 13% of the total vehicles.
- 3.24. Average speeds are consistently around 75 km/h with 85th percentile at around 85km/h between the straight stretch just south of Quickpenny Lane, roughly 5km/h above the required speed limit.
- 3.25. The above all suggest that the volumes and speeds along this section of the R132 result in an unattractive route for cyclists in the current scenario.

Speed Limit Review

- 3.26. The current speed limit along the R132 relevant to the study area in question is 80km/h, with a current proposal being to decrease this to 60km/h to urbanise the route for cyclists and pedestrians and allow for safer travel with reduced car speed.
- 3.27. From the data above it is clear that vehicles are averaging close to the 80 km/h speed limit in this area, albeit with the 85th percentile speed being approximately 5km/h above the speed limit. The character of the road in general lends itself to higher speeds with geometry that was originally designed for a National Road and wide road carriageway lanes. While these are reduced somewhat by the use of hard shoulders, there are inadequate physical measures such as kerbs, islands or bollards along the length of the road which would reduce vehicle speeds.
- 3.28. The introduction of cycle tracks along this section of the R132 will help to reduce vehicle speeds and to change the character of the road to a less rural, lower-speed carriageway.

Utility and Service Companies

- 3.29. Utilities companies and service providers were contacted to determine presence of services and potential impacts. The individual service providers contacted, and their response are shown in the table below.

Table 3-1 - Utility Record Collection

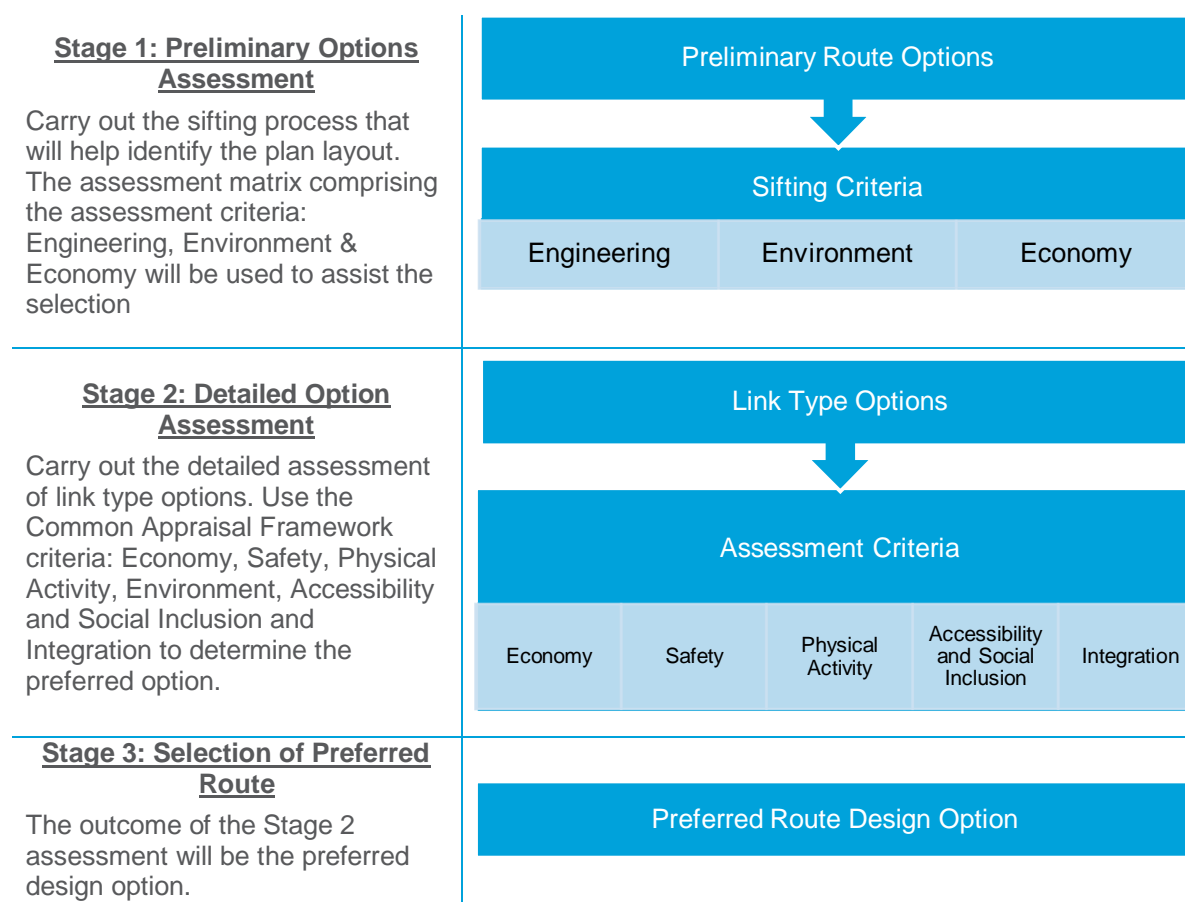
Service Provider	Response Received	Service Present
ESB Networks	Yes	Yes
Eir	Yes	Yes
Irish Water	Yes	Yes
Virgin Media	Yes	No
BT Network	No	-
eNet	No	-
Gas Network Distribution	Yes	Yes
Gas Network Transmission	Yes	No
Aurora Telecom	Yes	No

4. Development and Assessment of Options

Assessment Methodology

- 4.1. The general process and methodology utilised is as illustrated below. The scheme is being developed in accordance with the National Transport Authority's Project Management Guidelines and assessments carried out in line with the Common Appraisal Framework as per the Public Spending Code.

Figure 4-1 - Stages of the Option Assessment



High Level Route Concepts

- 4.2. The following issues were considered as being the guiding aims of the scheme which the preferred route should fulfil:
- Provide cycle facilities with highest possible Level of Service
 - Reduce vehicle speeds throughout the extent of the scheme
 - Ensure safety for all road users including pedestrians
 - Encourage greater number of cyclists and provide alternative option to commuters and school children

Preliminary Route Options Assessment

- 4.3. In order to identify a short list of options to be brought through to Detailed Options Assessment, a Preliminary Route Options Sifting process has been undertaken on the initial route options.
- 4.4. Having collated the available data and analysed the identified constraints, four possible route options have been identified for comparative assessment including a 'Do Nothing' option.

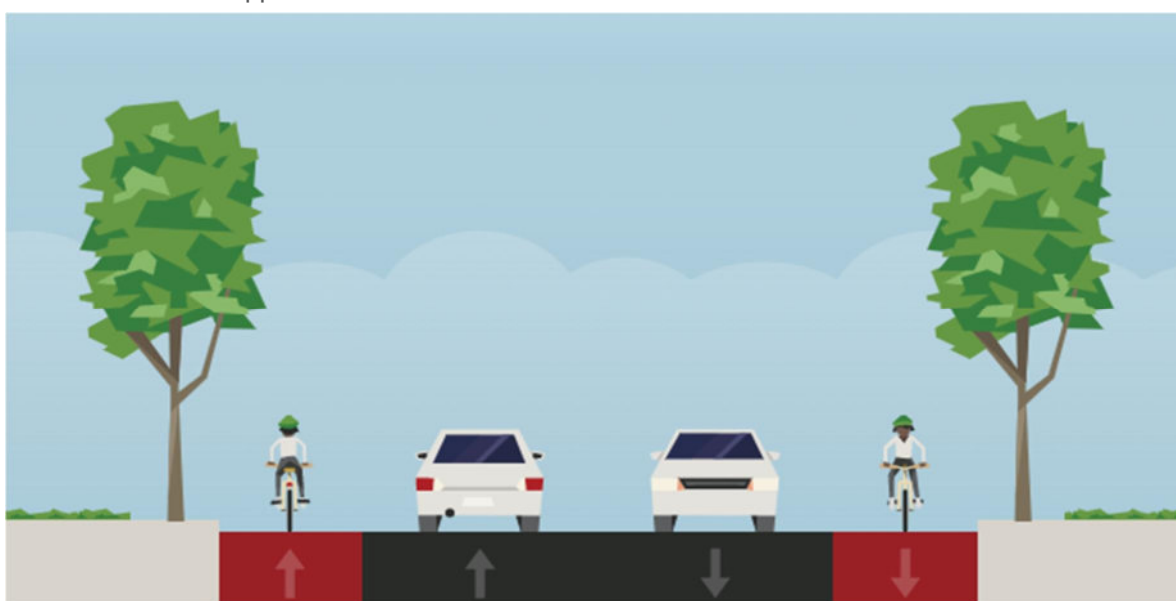
- 4.5. Three Do Something options have also been developed which generally relate to the location of proposed cycle facilities and whether they are one-way or two-way facilities. All of the options are described in the section below and indicative drawings for Route Options 2 - 4 are included in Appendix B.

Route Option 1 – Do Nothing

- 4.6. The 'Do Nothing' option for the R132 Cycle Lane Study is that cyclists will continue to cycle on the existing high volume / high speed road, typically in the hard shoulder, with no dedicated facilities.

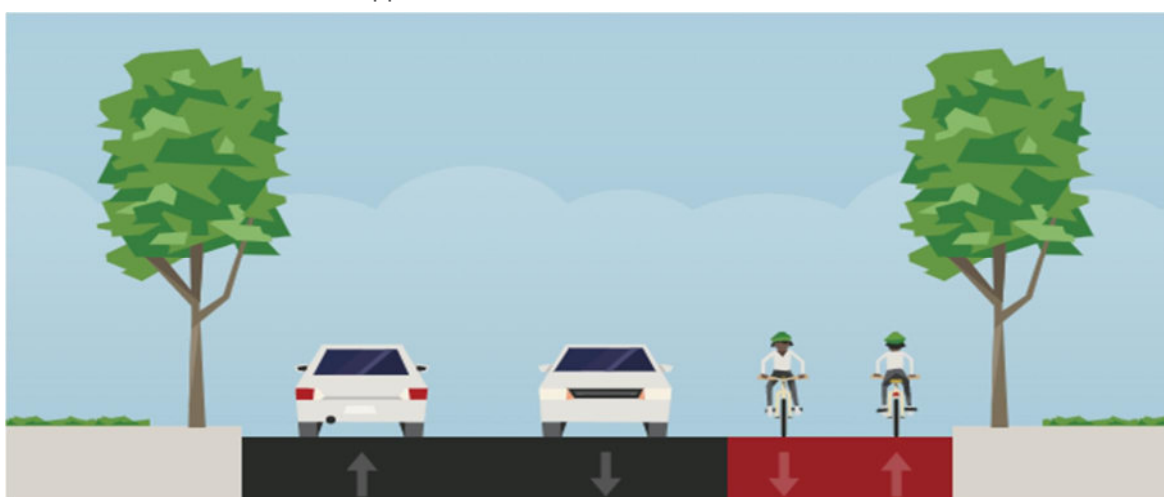
Route Option 2 – One-way Cycle Lanes Both Sides

- 4.7. This option would include 2m wide one-way cycle lanes running on both sides of the R132. The cycle lanes would have priority across all turning traffic at junctions and access in both directions and provides a clear and legible layout for all road users.
- 4.8. Carriageway lanes would be reduced throughout the scheme and a speed limit of 60 km/h throughout the study area recommended. This route option is illustrated in Drawings 5200387-ATK-01-XX-SK-C-95112-95113 in Appendix B.



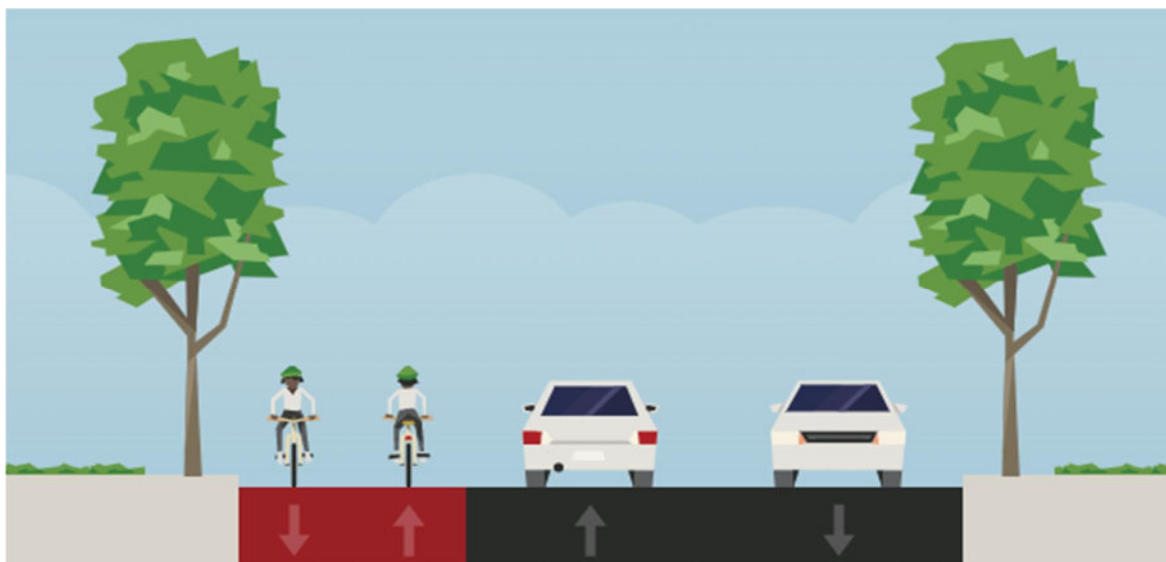
Route Option 3 – Two-Way Cycle Lane Along Eastern Side

- 4.9. This option would include a 3m two-way cycle lane along the eastern side of the existing carriageway only. Carriageway lanes would be reduced throughout the scheme and a speed limit of 60 km/h throughout the study area recommended. This route option is illustrated in Drawings 5200387-ATK-01-XX-SK-C-95114-95115 in Appendix B.



Route Option 4 – Two-Way Cycle Lane Along the Western Side

- 4.10. This option would include 3m two-way cycle lane along the western side of the existing carriageway. Carriageway lanes would be reduced throughout the scheme and a speed limit of 60 km/h throughout the study area recommended. This route option is illustrated in Drawings 5200387-ATK-01-XX-SK-C-95116-95117 in Appendix B. in Appendix B.



Route Options Screening

- 4.11. All options have been developed in accordance with the relevant standards including Design Manual for Urban Roads and Streets (DMURS), the National Cycle Manual (NCM) to provide the highest feasible level of service possible.
- 4.12. In alignment with TII's Project Appraisal Guidelines Unit 7.0, an initial comparison of options was carried out on the basis of Economy, Engineering and Environmental considerations.
- 4.13. Each option was compared to each other under the above criteria and ranked in accordance with the table below and colour coded accordingly.

Table 4-1 - Preliminary Screening Assessment Ranking

Colour Coding	Rank Description
Green	Advantageous compared to other options
Yellow	Comparable to all other options
Orange	Disadvantageous compared to other options

- 4.14. The results of the comparative assessment are summarised in the table below.

Table 4-2 - Preliminary Route Options Sifting Assessment

Criteria	Option 1	Option 2	Option 3	Option 4
Economy	<ul style="list-style-type: none"> No capital costs Unlikely to attract any cycling trips to the area or increase through trips Does not serve local population in terms of sustainable transport options 	<ul style="list-style-type: none"> Similar capital costs to other Do Something Options Cycle tracks on both sides provide access to widest possible catchment Most likely to be used by cyclist traffic in both directions on R132 as easily accessible 	<ul style="list-style-type: none"> Similar capital costs to other Do Something Options Cycle track on one side only may limit catchment with least amount of people located on eastern side of road Likely to result in less use by cyclists travelling through whole length of route as not easily accessible in one direction 	<ul style="list-style-type: none"> Similar capital costs to other Do Something Options Cycle track on one side only will limit catchment. Likely to result in less use by cyclists travelling through whole length of route as not easily accessible in one direction
Engineering	<ul style="list-style-type: none"> No legible or coherent cycle facilities provided Cyclists forced to remain in traffic lanes or hard shoulders sharing space with high speed and high volumes of traffic Use of hard shoulder could lead to unsafe conflicts at side roads/accesses where priority may not be clear 	<ul style="list-style-type: none"> Legible and coherent cycle facilities provided on both sides of road Dedicated facilities provide safety for cyclists Priority at junctions for cyclists clearly identified at side roads and accesses in both directions With flow cycling most legible and easily understood by all road users 	<ul style="list-style-type: none"> Legibility and coherence reduced due to facilities only being on one side of the road Dedicated facilities provide safety for cyclists Priority at junctions for cyclists not clear in both directions due to use of two-way cycle track possibly leading to unsafe conflicts Additional crossing points required to access side of road with facilities 	<ul style="list-style-type: none"> Legibility and coherence reduced due to facilities only being on one side of the road Dedicated facilities provide safety for cyclists Priority at junctions for cyclists not clear in both directions due to use of two-way cycle track possibly leading to unsafe conflicts Additional crossing points required to access side of road with facilities
Environment	<ul style="list-style-type: none"> All options are within existing carriageway boundary and are likely to have limited environmental impact 	<ul style="list-style-type: none"> All options are within existing carriageway boundary and are likely to have limited environmental impact 	<ul style="list-style-type: none"> All options are within existing carriageway boundary and are likely to have limited environmental impact 	<ul style="list-style-type: none"> All options are within existing carriageway boundary and are likely to have limited environmental impact

4.15. From the above table it is clear that Route Option 2 is the most advantageous and represents the best way to redistribute the existing road space.

- 4.16. In particular, this option has significant benefits over the two-way cycle track options at junctions and accesses where drivers may not be expecting cyclists travelling from both directions, resulting in an increased chance of unsafe conflicts occurring.
- 4.17. As a result, Route Option 2 has been brought forward for further detailed assessment as outlined in the following section.

Design Guidance

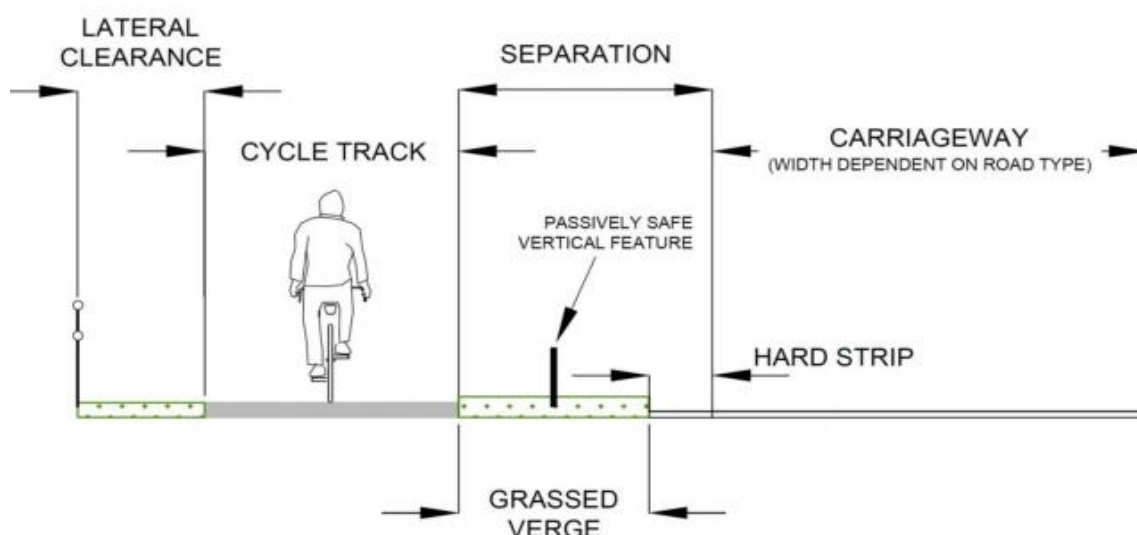
DMURS

- 4.18. For speeds up to 60 km/h the Design Manual for Roads and Streets (DMURS) is the most relevant design guidance with the R132 in this area generally marking a transition between rural and more urban settings.
- 4.19. In general DMURS allows for much reduced carriageway widths, smaller horizontal and vertical radii and shorter visibility and stopping sight distances. These all combine to help reduce vehicle speeds and allow for a safer environment for vulnerable road users.

TII Guidance

- 4.20. For speeds of 80 km/h and upwards, roads are generally required to be designed in accordance with Transport Infrastructure Ireland (TII) guidance.
- 4.21. For this section of the R132, the most relevant guidance is DN-GEO-03031 (Rural Road Link Design) which sets out the requirements for this speed limit. In general, these requirements include much larger minimum radii and stopping sight distances.
- 4.22. The existing layout of the R132 would generally be in line with a Type 2 Single Carriageway which requires 3.5m lanes, however this could possibly be reduced to a Type 3 Single Carriageway which requires only 3m wide lanes.
- 4.23. In terms of provision for cyclists, DN-GEO-03036 (Cross Sections and Headroom) sets out the requirements for provision of facilities as shown in the figure below. A desirable minimum separation of 2m (1.5m as one step below minimum) is required between the carriageway and cycle track with an additional 0.5m clearance required between the cycle track and boundaries etc.

Figure 4-2 - TII Cycle Track Requirements



- 4.24. Given the significant requirement for additional space when compared with the National Cycle Manual, it is critical that the speed limit within the study area is reduced to 60 km/h throughout. This has the added benefit of the entire scheme falling within one design guidance and philosophy rather

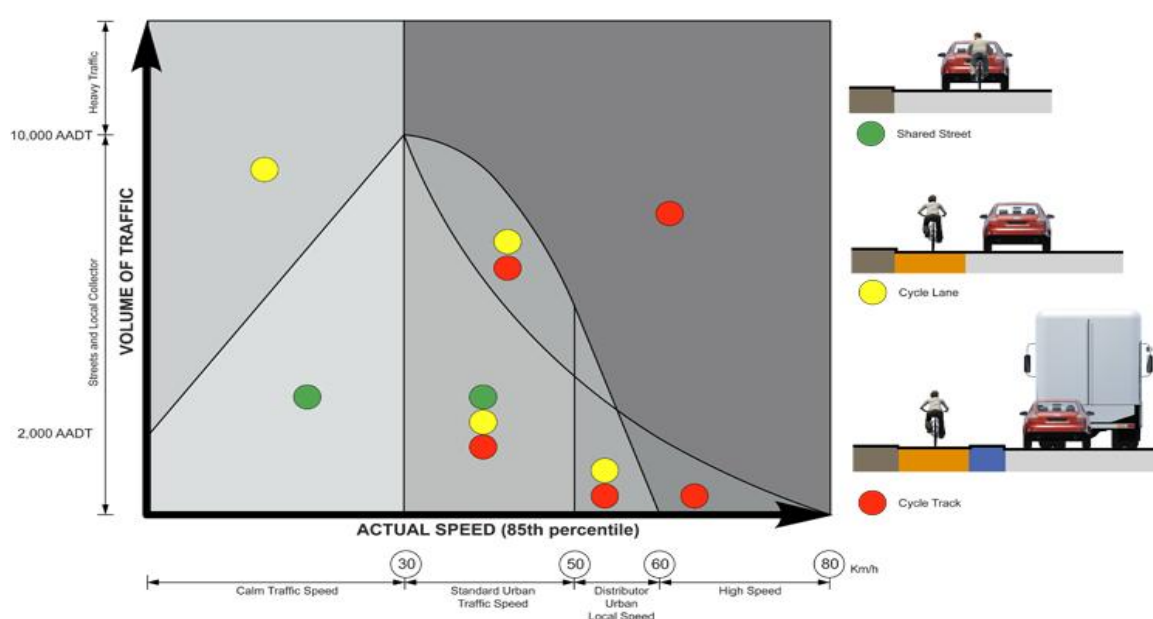
than changing midway along its length. This aids in coherence and legibility of the design and will have a greater impact on reducing vehicle speeds and changing driver behaviour.

National Cycle Manual Guidance

Cycle Facility Type

- 4.25. Section 7.1 of the National Cycle Manual (NCM) published by the National Transport Authority sets out the requirements for the type of cycle facilities based on the volume and speed of traffic on the road.
- 4.26. The figure below is extracted from the NCM and upon review, with the AADT estimated to be 7200 and the 85th percentile speed to be approximately 85km/h, the exact point cannot be plotted on the given graph. This would suggest the speed and volumes on the R132 would require a cycle track.

Figure 4-3 - NCM Cycle Facility Type



Standard Cycle Tracks

- 4.27. The National Cycle Manual includes a number of options for one-way standard cycle tracks as outlined below.

At Grade Cycle Tracks

- 4.28. There are two options included for at grade cycle tracks:
- 0.5m wide road marking ghost island buffer with bollards at approximately 3m centres.
 - 300mm wide continuous kerb with upstand on both sides.

Figure 4-4 - At Grade Cycle Tracks Plan View

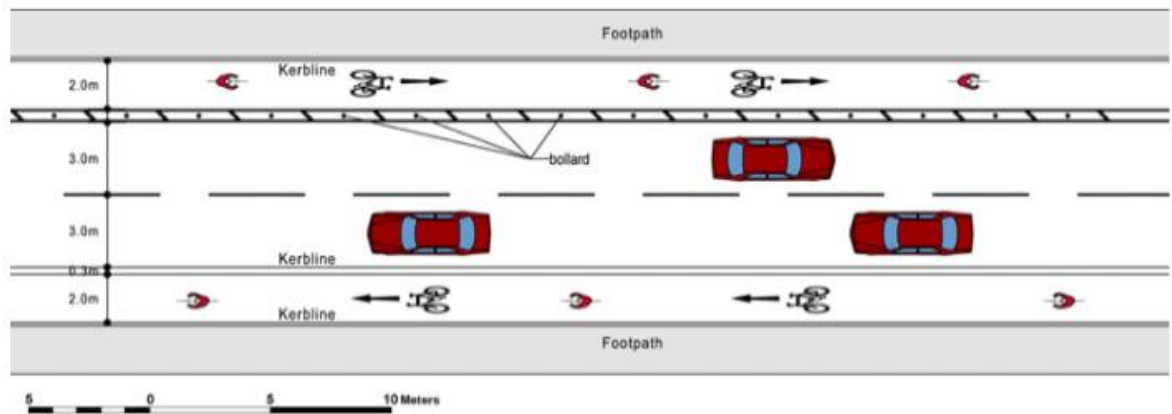


Figure 4-5 - At Grade Cycle Tracks Visualisation



4.29.

Raised Cycle Track

- 4.30. Raised cycle tracks include a continuous height difference between the carriageway and cycle track providing an elevated segregation between modes. The cycle track in this case is raised by 100mm along its entire length excluding junctions and accesses, where it will cross at grade.

Figure 4-6 - Raised Cycle Track Plan View

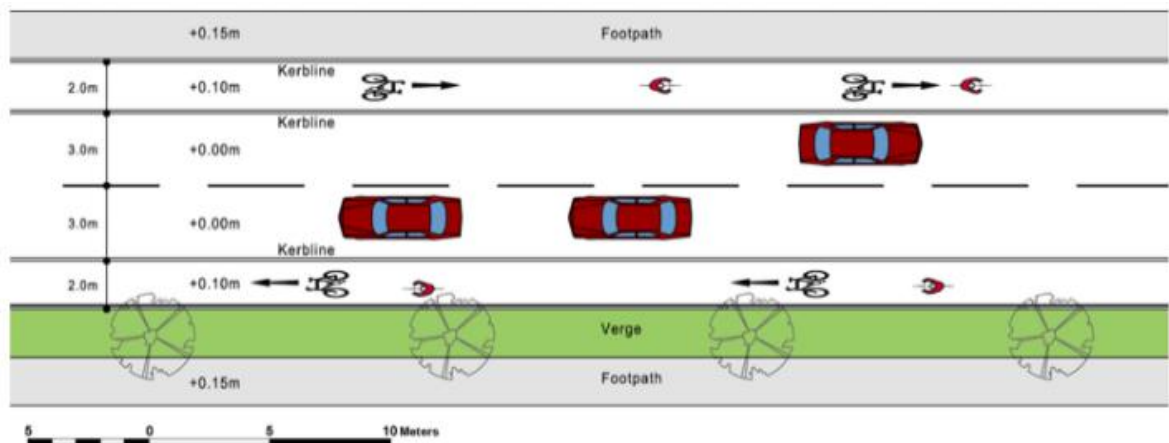


Figure 4-7 - Raised Cycle Track Visualisation



Cycle Track Behind Verge

- 4.31. This cycle track type is similar to a raised cycle track but also includes a verge between the carriageway and cycle track. The cycle track is again raised by 100mm with a verge of ~2m between it and the carriageway.

Figure 4-8 - Cycle Track Behind Verge Plan

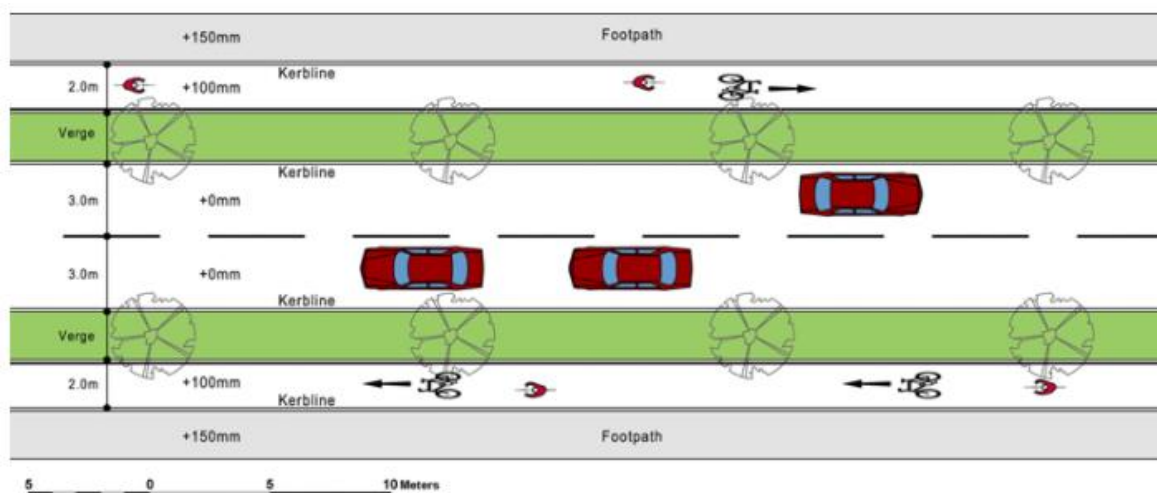


Figure 4-9 - Cycle Track Behind Verge Visualisation



Other Design Guidance

- 4.32. A number of other guidance documents were also considered during the option development and assessment process as outlined below.

Age Friendly Towns – A Guide

- 4.33. This document outlines guidance for ensuring that towns are accessible to people of all ages and includes recommendations for consultations and audits of existing infrastructure.
- 4.34. The existing R132 environment is hostile to all vulnerable road users, especially those with accessibility issues. The proposed scheme will, regardless of what option is chosen, improve this which will make the route more attractive and safe for all people, including the elderly.

Travelling in a Woman's Shoes

- 4.35. This guidance aims to ensure that gender equality is achieved in transport, particularly sustainable transport modes as women primarily rely on private cars.
- 4.36. A number of key issues are clearly outlined in the guidance including the need for safe facilities to encourage more women to utilise cycling and walking as a mode of transport. In particular a lack of safe cycling infrastructure is a particular issue.
- 4.37. Throughout the option development and assessment process, this has been taken into consideration with the need to provide safe, dedicated infrastructure highlighted throughout.

Access Audits

- 4.38. The need for access for all users has been considered throughout the option and assessment process. The proposed scheme will be accessible to all users and will include signage, warning surfaces and road markings as required.
- 4.39. Making the scheme accessible for all will ensure comfort for all users while making the scheme more attractive to vulnerable road users.

Safe Routes to School Design Guide

- 4.40. This design guide was published by the NTA in September 2022 and outlines requirements for providing facilities for people to walk and cycle safely to schools. This has been considered throughout the options and assessment stage as a direct link to Corduff NS is provided along the R132.

Detailed Options Assessment

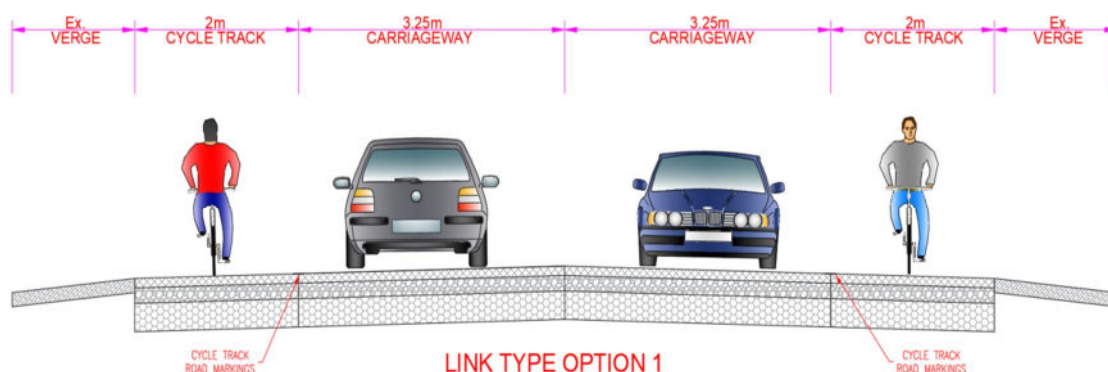
Link Type Options

- 4.41. Having completed the initial sifting assessment and identifying the preferred plan layout for the route, a number of possible link types were then assessed in further detail with reference to the National Cycle Manual as set out above. These different link types all represent various ways of implementing cycle facilities on high-speed roads with the aim of cyclist safety and comfort at the forefront. The various cross sections outlined below display each link type.
- 4.42. The Link Type Options have been developed in accordance with the National Cycle Manual, published by the National Transport Authority as outlined above. Each option has been designed to provide the highest level of service possible for cyclists.
- 4.43. The Cycle Track Behind Verge layout option was not considered as there is insufficient space to provide this in the vast majority of locations.
- 4.44. It is worth noting that a segregated footpath and cyclepath option was considered during the detailed options assessment, but as the R132 does not attract a large number of pedestrian users, it was deemed best to facilitate a shared area approach instead.

Link Type Option 1 – Cycle Lane with Road Markings

- 4.45. Link Type Option 1 is indicatively shown in the figure below. This option involves separating cyclists from vehicular traffic using road markings alone; forming a 2m wide cycle lane and reducing vehicular lanes to 3.25m.
- 4.46. No physical segregation between vehicles and cyclists is provided by this option.
- 4.47. While this arrangement is not recommended for speeds and volumes as experienced on the R132, it is included in the analysis for robustness.

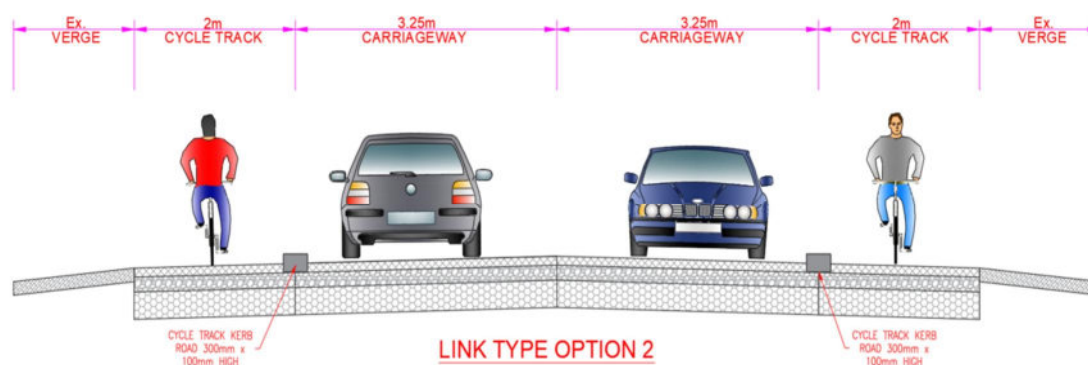
Figure 4-10 - Link Type Option 1



Link Type Option 2 – At Grade Cycle Track with Kerb

- 4.48. Link Type Option 2 is indicatively shown in the figure below. This option involves separating cyclists from vehicular traffic by means of a freestanding 300mm wide kerb, forming a 2m wide cycle track. The kerb would have a 100mm height on both the road and cycle track sides.
- 4.49. Carriageway lanes will be reduced to 3.25m.
- 4.50. Kerb construction is completed by forming a narrow trench and slip forming concrete for the kerb only, resulting in minimal works being required.
- 4.51. 2m long gaps are in the kerblines are proposed at 10m intervals to help maintain existing drainage paths. Bollards will be provided at the start and end of all gaps in the kerblines.
- 4.52. Kerbs will be provided at each access/side road junction allowing a minimum turning radius of 6-9m.

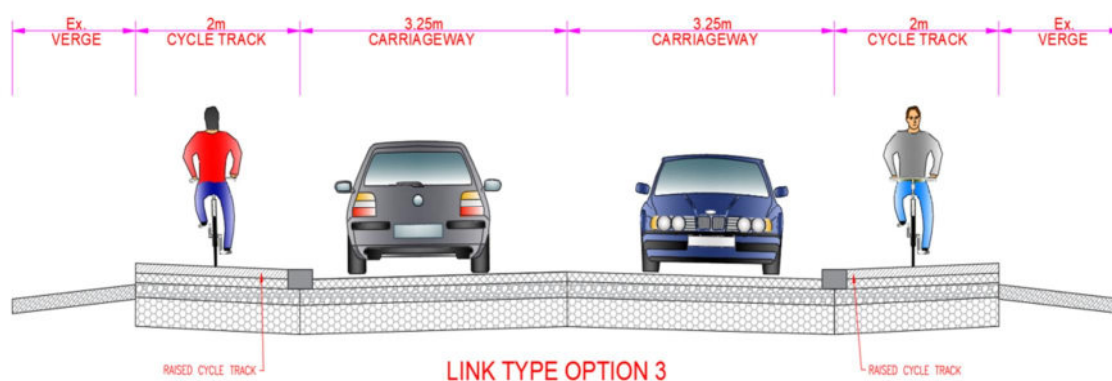
Figure 4-11 - Link Type Option 2



Link Type Option 3 – Raised Cycle Track

- 4.53. Link Type Option 3 is indicatively shown in the figure below. This option involves separating cyclists from vehicular traffic by constructing a 2m wide raised adjacent cycle track and reducing vehicular lanes to 3.25m wide. This results in the cycle track being segregated from traffic vertically by approximately 100mm.
- 4.54. This option requires construction of new kerblines and raising levels at the cycle track by 100mm. A new drainage system would be required as part of this option due to the construction of new kerblines throughout.
- 4.55. Cycle tracks would ramp down to carriageway level at junctions while they would remain at a raised level at private access with bevelled kerbs and ramps provided.
- 4.56. Kerbs will be provided at each access/side road junction allowing a minimum turning radius of 6-9m.

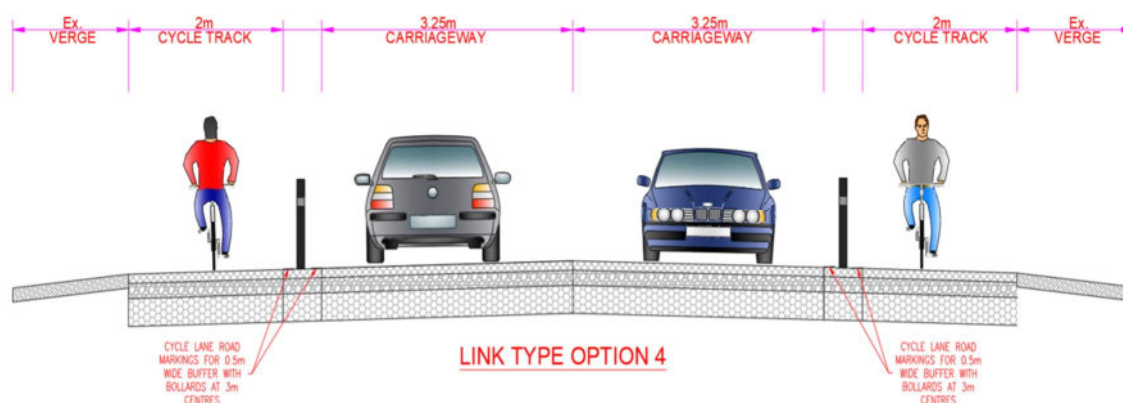
Figure 4-12 - Link Type Option 3



Link Type Option 4 – At Grade Cycle Track with Bollards and Buffer

- 4.57. Link Type Option 4 is indicatively shown in the figure below. This option involves separating cyclists from vehicular traffic by means of a 0.5m wide ghost island buffer with bollards provided every 3m. Bollards provided must be robust to ensure protection for users in the cycle track.
- 4.58. Carriageway lanes will be reduced to 3.25m.
- 4.59. As an additional measure to reinforce the reduced carriageway widths and to reduce vehicle speeds, physical islands of 0.5m wide will be constructed at 150m intervals within the buffer between the carriageway and cycle track. Cycle track width will be 2m for duration up until the Link Road junction, where width will be reduced to approximately 1.75m to fit within the existing road reservation.
- 4.60. Gaps in these islands may be provided to serve as informal crossing points and provide protection for vulnerable road users crossing the R132.
- 4.61. Kerbs will be provided at each access/side road junction allowing a minimum turning radius of 6-9m

Figure 4-13 - Link Type Option 4



Detailed Options Assessment Criteria

- 4.62. The main assessment criteria utilised for the Detailed Options Assessment are the six Common Appraisal Framework (CAF) criteria referenced in TII's Project Appraisal Guidelines Unit 7.0 Multi Criteria Analysis as outlined below:
- Safety
 - Accessibility and Social Inclusion
 - Integration
 - Environment
 - Economy and
 - Physical Activity

- 4.63. It should be noted that the criteria of Physical Activity and Integration have been excluded for the following reasons:
- All options will improve and encourage physical activity in the area and it will, therefore have no impact on the assessment.
 - All options integrate well with current national and regional policies as well as the Fingal County Development Plan and GDA Cycle Network Plan and as such will have no differentiation between routes.
- 4.64. These main criteria have been further broken down to a number of critical sub-criteria which allow assessment and comparison of the critical issues for the success of the scheme. These include the following considerations:

Safety

- Segregation and protection for cyclists and pedestrians from vehicles
- Hazards to vulnerable road users including trip and collision hazards
- Visibility
- Impact on vehicle speeds

Environment

- Impacts on existing drainage network and paths
- Air and noise pollution

Accessibility and Social Inclusion

- Level of service for cyclists including available widths
- Accessibility for vulnerable road users
- Attractiveness for sustainable mode trips

Economy

- Construction costs
- Delivery programme
- Impact on maintenance of road environment

Ranking Procedure

- 4.65. The detailed assessment is a comparative process where each route is directly compared against the others under the criteria listed above and then ranked according to their advantages and disadvantages.
- 4.66. Each criterion was scored on a five-point colour coded scale. This scale is shown in the table below and rates how well each link type ranks under each criterion.
- 4.67. The preferred link type option is then determined based on which option is most advantageous compared to others. This will be reflected in the colour coding as having the most green colours and the least orange colours.

Table 4-3 - Detailed Assessment Ranking Scale

Colour Coding	Rank Description
	Significant advantages to other options
	Some advantages to other options
	Comparable to all other options
	Some disadvantages to other options
	Significant disadvantages to other options

Detailed Options Assessment

- 4.68. Each Link Type Option has been assessed under each criterion using Multi Criteria Analysis and an overall ranking assigned based on its performance. The assessment is summarised in Table 4-4 - Detailed Options Assessment.

Table 4-4 - Detailed Link Type Options Assessment

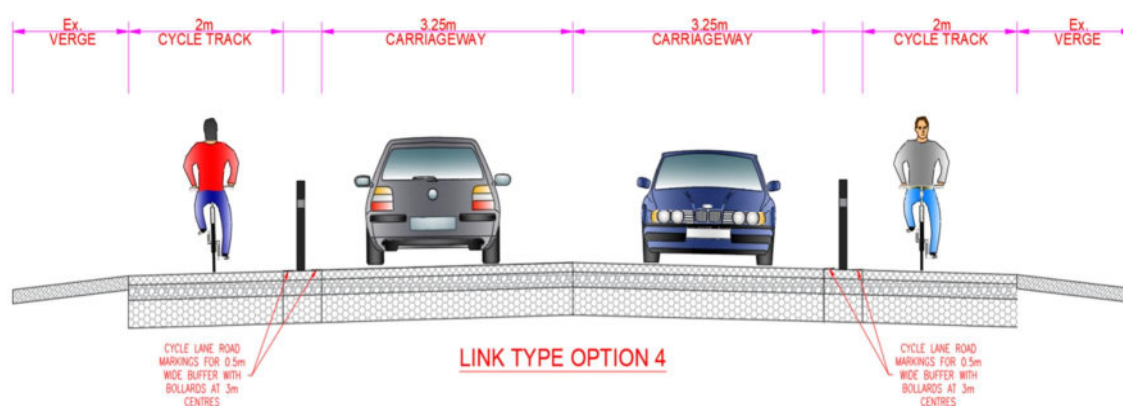
Criteria	Sub-Criteria	Link Type Option 1	Link Type Option 2	Link Type Option 3	Link Type Option 4
Safety	User Safety	<ul style="list-style-type: none"> No physical segregation between cyclist and vehicular traffic Allows for wider cycle tracks in places Lack of public lighting in tandem with above increases hazards for cyclists 	<ul style="list-style-type: none"> Full segregation of cyclists from vehicular traffic with kerb No public lighting on majority of road may make kerb a collision hazard at times Free standing kerb may act as trip hazard for pedestrians wishing to cross road leading to potential significant safety hazards 	<ul style="list-style-type: none"> Full segregation of cyclists from vehicular traffic with raised cycle track Lack of public lighting on majority of road may make kerb difficult to see possibly leading to vehicles mounting onto cycle track Raised cycle track with step down to carriageway is similar to standard footpath with minimal risks 	<ul style="list-style-type: none"> Full segregation of cyclists from vehicular traffic with bollards, buffer and islands Limited physical measures reduce hazard from lack of public lighting – bollards are more forgiving if a cyclist collides with them Gaps between bollards and gaps in islands if required allow for ease of crossing for pedestrians
	Vehicle Speeds	<ul style="list-style-type: none"> No impact on vehicle speeds due to lack of physical infrastructure More difficult to enforce narrower carriageway widths 	<ul style="list-style-type: none"> Physical kerb line and reduced lane widths will help to reduce vehicle speeds 	<ul style="list-style-type: none"> Kerb line and reduced lane widths will help to reduce vehicle speeds 	<ul style="list-style-type: none"> Physical barriers and islands will help to reduce vehicle speeds
Environment	Drainage	<ul style="list-style-type: none"> No impact on drainage 	<ul style="list-style-type: none"> Physical kerbs will alter existing drainage paths with some mitigation provided by regular gaps 	<ul style="list-style-type: none"> Option requires new drainage system which may impact on environment by changing existing ditches etc. 	<ul style="list-style-type: none"> Limited impact on drainage as physical kerbs only locally provided at island locations and junctions
	Other Environmental Impacts	<ul style="list-style-type: none"> Less likely to attract cyclists leading to less reduction in vehicle trips and higher noise/air pollution 	<ul style="list-style-type: none"> Higher level of service likely to attract more cyclists leading to a reduction in vehicle trips and associated reduction in air/noise pollution 	<ul style="list-style-type: none"> Higher level of service likely to attract more cyclists leading to a reduction in vehicle trips and associated reduction in air/noise pollution 	<ul style="list-style-type: none"> Higher level of service likely to attract more cyclists leading to a reduction in vehicle trips and associated reduction in air/noise pollution

Criteria	Sub-Criteria	Link Type Option 1	Link Type Option 2	Link Type Option 3	Link Type Option 4
Accessibility and Social Inclusion	Level of Service	<ul style="list-style-type: none"> • Lower quality of service for cyclists and does not comply with cycle manual guidance for speeds/volumes • Lack of physical segregation could lead to cars parking in cycle lane reducing level of service • Full 2m width for cycle lane possible throughout 	<ul style="list-style-type: none"> • High quality of service for cyclists and complies with cycle manual guidance for speeds/volumes • Physical segregation will improve accessibility of the route • Physical segregation reduces likelihood of cars parking on cycle facilities • Localised pinch points for cycle track but 1.75m min available 	<ul style="list-style-type: none"> • High quality of service for cyclists and complies with cycle manual guidance for speeds/volumes • Physical segregation reduces likelihood of cars parking on cycle facilities • Safer cycle facilities likely to attract additional trips to sustainable modes • Full 2m width for cycle lane possible throughout 	<ul style="list-style-type: none"> • High quality of service for cyclists and complies with cycle manual guidance for speeds/volumes • Physical segregation will improve accessibility of the route • Physical segregation reduces likelihood of cars parking on cycle facilities • Localised pinch points for cycle track but 1.75m min available
	Attractiveness	<ul style="list-style-type: none"> • Option unlikely to attract additional trips to sustainable modes 	<ul style="list-style-type: none"> • Safer cycle facilities likely to attract additional trips to sustainable modes 	<ul style="list-style-type: none"> • Safer cycle facilities likely to attract additional trips to sustainable modes 	<ul style="list-style-type: none"> • Safer cycle facilities likely to attract additional trips to sustainable modes
Economy	Capital Costs	<ul style="list-style-type: none"> • Does not require large scale engineering works resulting in lower capital costs • Can be delivered in a short time period 	<ul style="list-style-type: none"> • Requires engineering works including a lot of kerblines resulting in medium capital costs • New cycle track construction required in small areas • Can be delivered in a relatively short time 	<ul style="list-style-type: none"> • Requires significant engineering works for kerbs, raised adjacent cycle track and drainage system construction • Option would take significantly longer to construct 	<ul style="list-style-type: none"> • Requires some engineering works locally for islands but primarily includes road markings/bollards • New cycle track construction required in small areas • Significant number of bollards required • Can be delivered in a relatively short time period
	Maintenance	<ul style="list-style-type: none"> • Very little maintenance required other than repainting of road markings 	<ul style="list-style-type: none"> • Physical kerblines may impact on operational maintenance such as road cleaning and winter de-icing 	<ul style="list-style-type: none"> • Little maintenance required other than additional gully clearance etc. 	<ul style="list-style-type: none"> • Limited physical kerblines mean little maintenance required and limited impact on cleaning/deicing • Bollards may need to be replaced if collided with
Overall Rank					Preferred Option

Preferred Link Type

- 4.69. The assessment identifies Link Type Option 4 as the preferred option. This option best meets the scheme objectives by providing a safe and attractive dedicated cycle facility which will significantly improve sustainable mode options in the area.
- 4.70. Link Type Option 4 involves separating cyclists from vehicular traffic by means of a 0.5m wide ghost island buffer with bollards provided every 3m. Kerbed concrete islands will also be provided in the buffer area at 150m centres.
- 4.71. Carriageway lanes will be reduced to 3.25m. Cycle track lane widths shall be 2m on either side of the carriageway for the duration, before reducing to approximately 1.75m at the Link Road junction.
- 4.72. Kerbs will also be provided at side road junctions to reduce turning radii and provide additional safety for vulnerable road users.

Figure 4-14 - Link Type Option 4



- 4.73. Link Type Option 4 provides the best balance of attractiveness and safety for all road users taking into account the existing road character and semi-rural location while minimising costs and maintenance issues.

5. Preferred Option

- 5.1. As outlined in the previous section the preferred route consists of:
- New 2m wide one-way cycle lanes on both sides of the road with 0.5m wide ghost island buffer, robust bollards at 3m centres and kerbed islands at 150m centres. Cycle lanes will reduce to approximately 1.75m in width just north of the Link Road junction to fit within existing carriageway.
 - Cycle tracks on road across side roads including reduced turning radii for vehicles, red surfacing to highlight cycle track and priority for cyclists maintained
 - Reduced carriageway widths to 3.25m.
 - Reduced radii for bends throughout the scheme in line with DMURS recommendations for 60 km/h roads to further reinforce reduction in vehicle speeds
 - Introduction of new kerbs at side road junctions to reduce width and splay
 - Removal of hard shoulder throughout the scheme
 - Proposal to introduce 60 km/h speed limit throughout the study area.
- 5.2. Concept design drawings of the preferred option are shown on Drawings 5200387-ATK-01-XX-DR-C-95112-95115 and are included in Appendix C.

Alternative Design for Retention of 80km/h Speed Limit from Minister's Road to Quickpenny Lane

- 5.3. In the absence of a reduction in the speed limit from Ministers Road to Quickpenny Lane, an alternative design would be required for provision of cycle facilities in this section.
- 5.4. This alternative design would be required to be in accordance with DN-GEO-03036 with a cross-section similar to that shown in the figure below. This includes 3m carriageway lanes with a 0.5m hard strip, 2m separation to cycle facilities, 2m wide cycle track and 0.5m clearance to boundaries.

Figure 5-1 - Alternative Design Option Cross Section



- 5.5. Due to the existing limited available space within the carriageway extents, land take would be required from a significant number of properties to provide the above required cross-section. The extent of this land take is indicated in red in Figure 5-2 below.
- 5.6. In addition to this land take, the cross-sectional width shown above would also require removal of the existing grass verge and ditches located on either side of the R132 for approximately 1.7km. This would require new construction of the cycle tracks and grass verges along this section of works which would require heavy civil engineering works.
- 5.7. It is likely that removal of the existing grass verge and ditches would have a significant impact on drainage in the area and is likely to require additional engineering works to provide new drainage channels, pipes and manholes.
- 5.8. The construction of the cycle facilities shown above would also require the removal of a large number of trees and hedgerows along the entire length of this section of the R132. This would have a

significant environmental impact in terms of ecology as well as visual disturbance and loss of privacy for residences.

- 5.9. Accommodation works would be required along the route to provide new boundary treatments for affected residences and fields.

Figure 5-2 - Landtake Required for Alternative Option

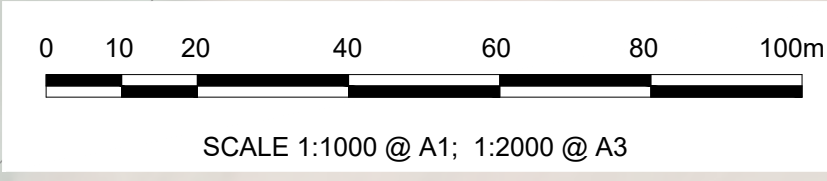


6. Next Steps

- 6.1. It is recommended that the identified preferred option and concept design drawings should be further developed to detailed design standard.
- 6.2. The preferred scheme could be constructed in a relatively short period of time, subject to funding and other constraints, and would represent a significant improvement for vulnerable road users along the R132.
- 6.3. The existing 80km/h speed limit that is currently in place, should be reduced to 60km/h to allow for a much more comfortable and safer environment for cyclists which would enhance the overall cycling experience along the proposed route. This should be progressed prior to construction of this section progressing.
- 6.4. The proposed scheme will link directly to the proposed cycle and pedestrian route between Blakes Cross and Ministers Road which is proposed to be constructed in the near future. As the R132 is designated as an inter-urban cycle route, further links towards Balbriggan and Swords may be developed over time as well as further local links to Lusk, Man O'War and other local destinations.








Appendices

Appendix A. Constraints Drawings



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

LEGEND:

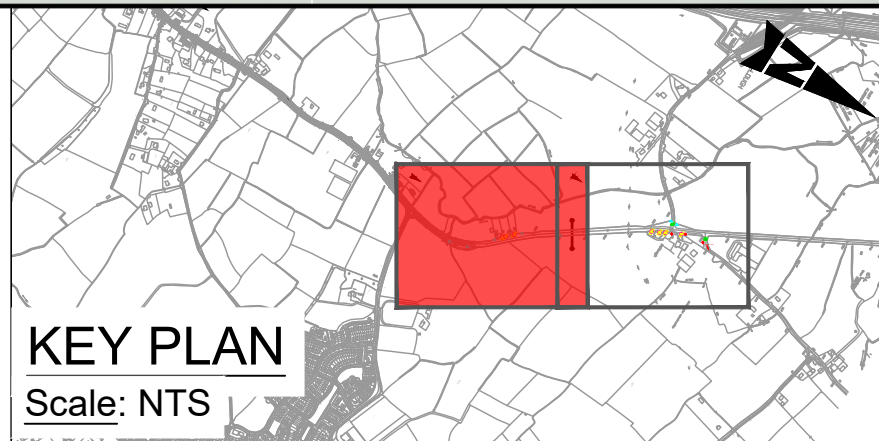
-  SIDEROADS
-  LANEWAYS
-  COMMERCIAL / AGRICULTURAL ACCESS
-  RESIDENTIAL ACCESS
-  FIELD ACCESS
-  PETROL STATION
-  NATIONAL SCHOOL

© ORDNDANCE SURVEY IRELAND LICENSE NR.
AR 0082521. ORDNDANCE SURVEY IRELAND &
GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR
THE USE OF THIS DATA ON ANY PROJECT
OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

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

**Comhairle Contae
Fhine Gall**
Fingal County
Council



-	FOR INFORMATION	AK	10.11.22	AR	SW	SW	
Rev	Description	By	Date	Chk'd	Rev'd	Auth	

Atkins House, 150-155 Airside Business Park, Swords, Co. Dublin	Unit 2B, 2200 Cork Airport Business Park, Cork	1st Floor Technology House Parkmore Technology Park, Galway
Tel (+353) 01 810 8000	Tel (+353) 021 429 0300	Tel (+353) 091 786 050
Fax (+353) 01 810 8001	Fax (+353) 021 429 0360	Fax (+353) 091 779 830

ATKINS

Member of the SNC-Lavalin Group

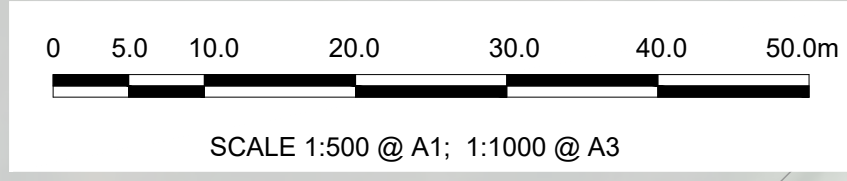
Client

FINGAL COUNTY COUNCIL

Project	R132 CYCLE SCHEME
---------	-------------------








Purpose	INFORMATION
Title	R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY CONSTRAINTS SHEET 1 OF 2

Original Scale		Drawn	Checked	Reviewed	Authorised
1:1000 @ A1		AK	AR	SW	SW
1:2000 @ A3		Date 10.11.22	Date 10.11.22	Date 10.11.22	Date 10.11.22
Status	Drawing Number				Rev
I	5200387-ATK-01-XX-SK-C-95120				-



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

LEGEND:

- | | |
|---|----------------------------------|
|  | SIDERROADS |
|  | LANEWAYS |
|  | COMMERCIAL / AGRICULTURAL ACCESS |
|  | RESIDENTIAL ACCESS |
|  | FIELD ACCESS |
|  | PETROL STATION |
|  | NATIONAL SCHOOL |

Purpose	INFORMATION
---------	-------------

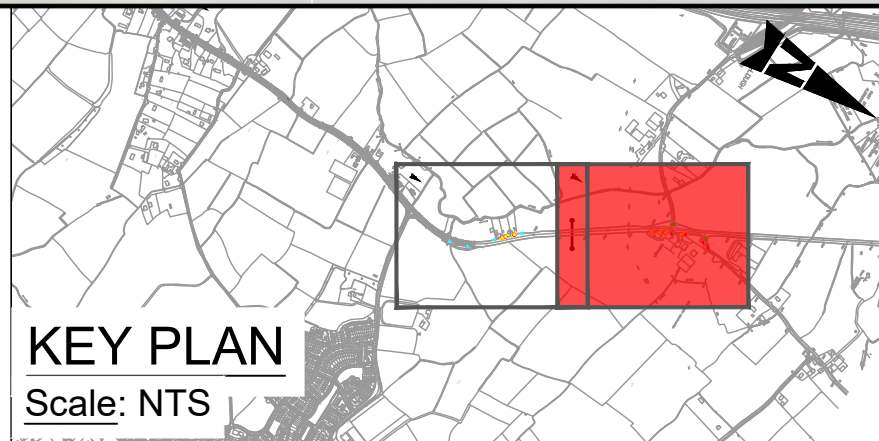
Title
R132 MINISTERS ROAD TO QUICKPENNY LANE
CYCLE LANE STUDY
CONSTRAINTS
SHEET 2 OF 2

Original Scale		Drawn	Checked	Reviewed	Authorised
1:1000 @ A1		AK	AR	SW	SW
1:2000 @ A3		Date 10.11.22	Date 10.11.22	Date 10.11.22	Date 10.11.22
Status	Drawing Number				Rev
I	5200387-ATK-01-XX-SK-C-95121				-

© ORDNANCE SURVEY IRELAND LICENSE NR.
AR 0082521. ORDNANCE SURVEY IRELAND &
GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR
THE USE OF THIS DATA ON ANY PROJECT
OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

**Comhairle Contae
Fhine Gall**
Fingal County
Council



-	FOR INFORMATION	AK	10.11.22	AR	SW	SW	
Rev	Description	By	Date	Chk'd	Rev'd	Auth	

Atkins House, 150-155 Airside Business Park, Swords, Co. Dublin	Unit 2B, 2200 Cork Airport Business Park, Cork	1st Floor Technology House Parkmore Technology Park, Galway
Tel (+353) 01 810 8000	Tel (+353) 021 429 0300	Tel (+353) 091 786 050
Fax (+353) 01 810 8001	Fax (+353) 021 429 0360	Fax (+353) 091 779 830

ATKINS

Member of the SNC-Lavalin Group

Client

FINGAL COUNTY COUNCIL

Project

R132 CYCLE SCHEME

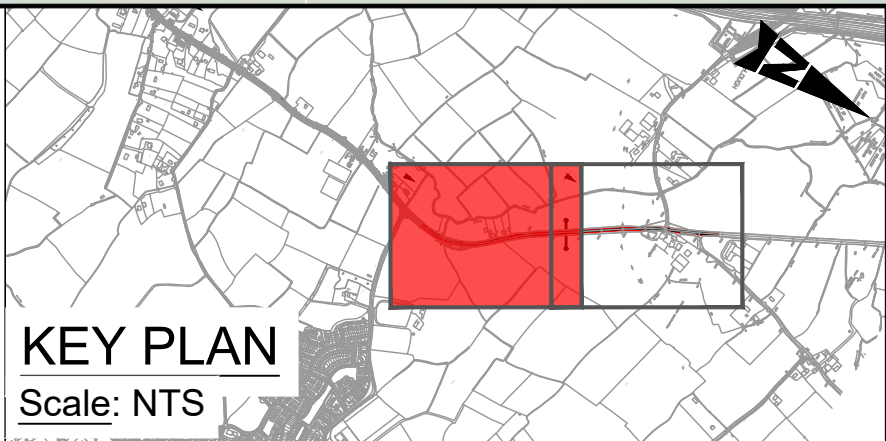
Appendix B. Route Option Drawings



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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

**Comhairle Contae
Fhine Gall
Fingal County
Council**



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW



Member of the SNC-Lavalin Group

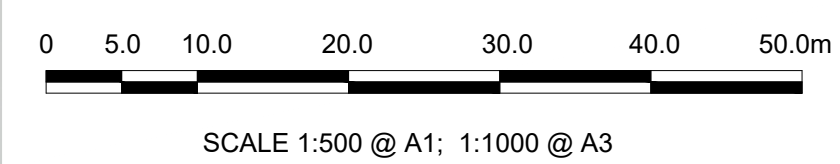
Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL			
Project	R132 CYCLE SCHEME			

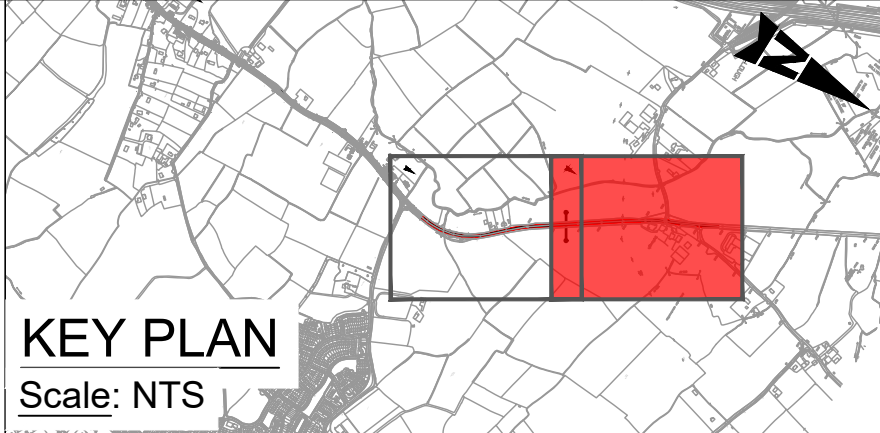
Purpose INFORMATION				
Title R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 2 SHEET 1 OF 2				
Original Scale 1:1000 @ A1 1:2000 @ A3	Drawn AK Date 10.11.22	Checked AR Date 10.11.22	Reviewed SW Date 10.11.22	Authorised SW Date 10.11.22
Status I	Drawing Number 5200387-ATK-01-XX-SK-C-95112			Rev -



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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

Comhairle Contae
Fhine Gall
Fingal County Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW



Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL		
Project	R132 CYCLE SCHEME		

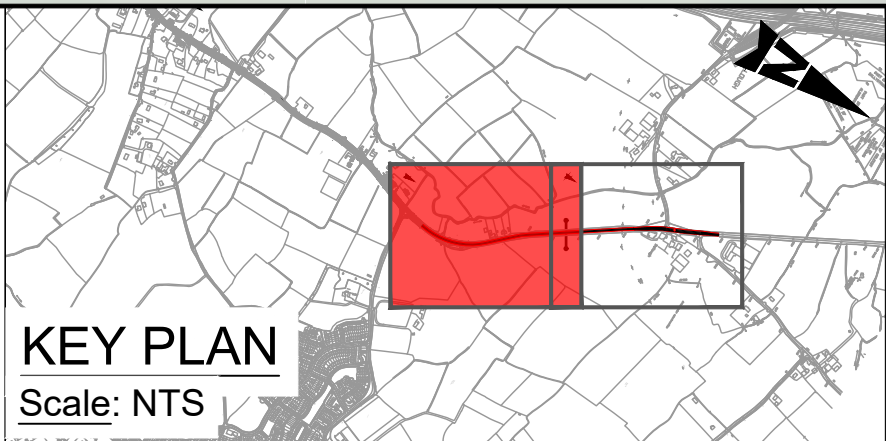
Title R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 2 SHEET 2 OF 2				
Original Scale 1:1000 @ A1 1:2000 @ A3	Drawn AK Date 10.11.22	Checked AR Date 10.11.22	Reviewed SW Date 10.11.22	Authorised SW Date 10.11.22
Status I	Drawing Number 5200387-ATK-01-XX-SK-C-95113			Rev -



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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

**Comhairle Contae
Fhine Gall
Fingal County
Council**



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW

ATKINS
Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside, Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

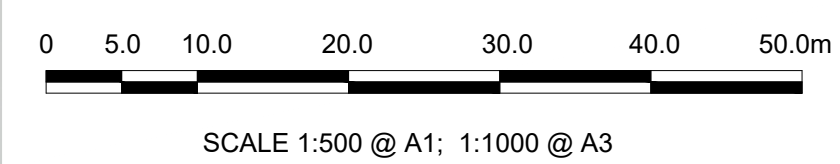
Client	FINGAL COUNTY COUNCIL			
Project	R132 CYCLE SCHEME			

Purpose INFORMATION				
Title R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 3 SHEET 1 OF 2				
Original Scale 1:1000 @ A1 1:2000 @ A3	Drawn AK Date 10.11.22	Checked AR Date 10.11.22	Reviewed SW Date 10.11.22	Authorised SW Date 10.11.22
Status I	Drawing Number 5200387-ATK-01-XX-SK-C-95114			Rev -

A1

DO NOT SCALE

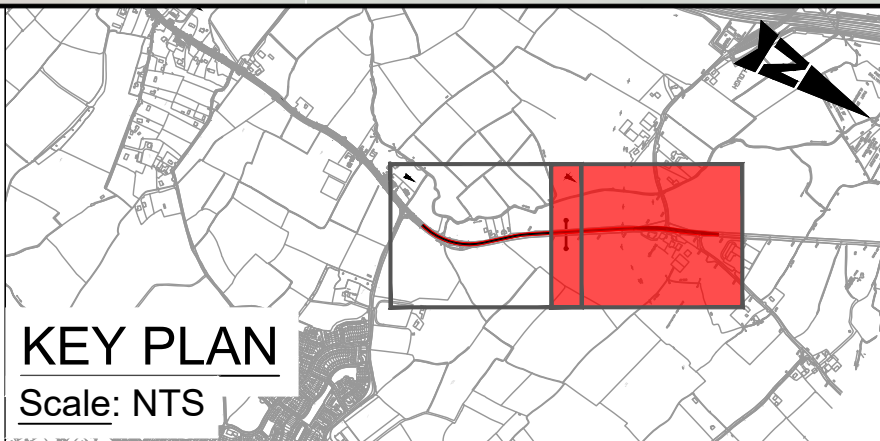
File: 5200387-ATK-01-XX-SK-C-95116-95117.dwg
Date: Dec 08, 2022 - 5:46pm
Plotted by: swyse



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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

Comhairle Contae
Fhine Gall
Fingal County
Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW

Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL
Project	R132 CYCLE SCHEME

Title R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 4 SHEET 2 OF 2				
Original Scale 1:1000 @ A1 1:2000 @ A3	Drawn AK Date 10.11.22	Checked AR Date 10.11.22	Reviewed SW Date 10.11.22	Authorised SW Date 10.11.22
Status I	Drawing Number 5200387-ATK-01-XX-SK-C-95117			Rev -



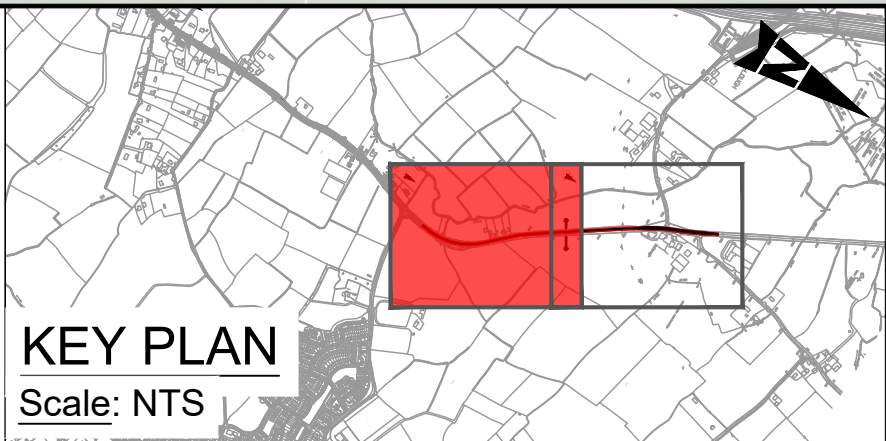
- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 5. DRAWINGS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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

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

Comhairle Contae Fhine Gall
Fingal County Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW

Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL
Project	R132 CYCLE SCHEME

Purpose INFORMATION				
Title R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 4 SHEET 1 OF 2				
Original Scale 1:1000 @ A1 1:2000 @ A3	Drawn AK Date 10.11.22	Checked AR Date 10.11.22	Reviewed SW Date 10.11.22	Authorised SW Date 10.11.22
Status I	Drawing Number 5200387-ATK-01-XX-SK-C-95116			Rev -

A1

DO NOT SCALE

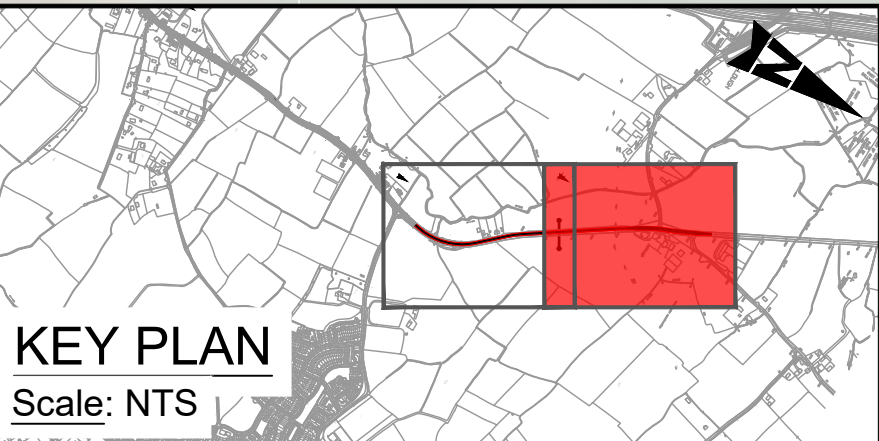
File: 5200387-ATK-01-XX-SK-C-95116-95117.dwg
Date: Dec 08, 2022 - 5:46pm
Plotted by: swyse



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

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

Comhairle Contae
Fhine Gall
Fingal County
Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
-	FOR INFORMATION	AK	10.11.22	AR	SW	SW



Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

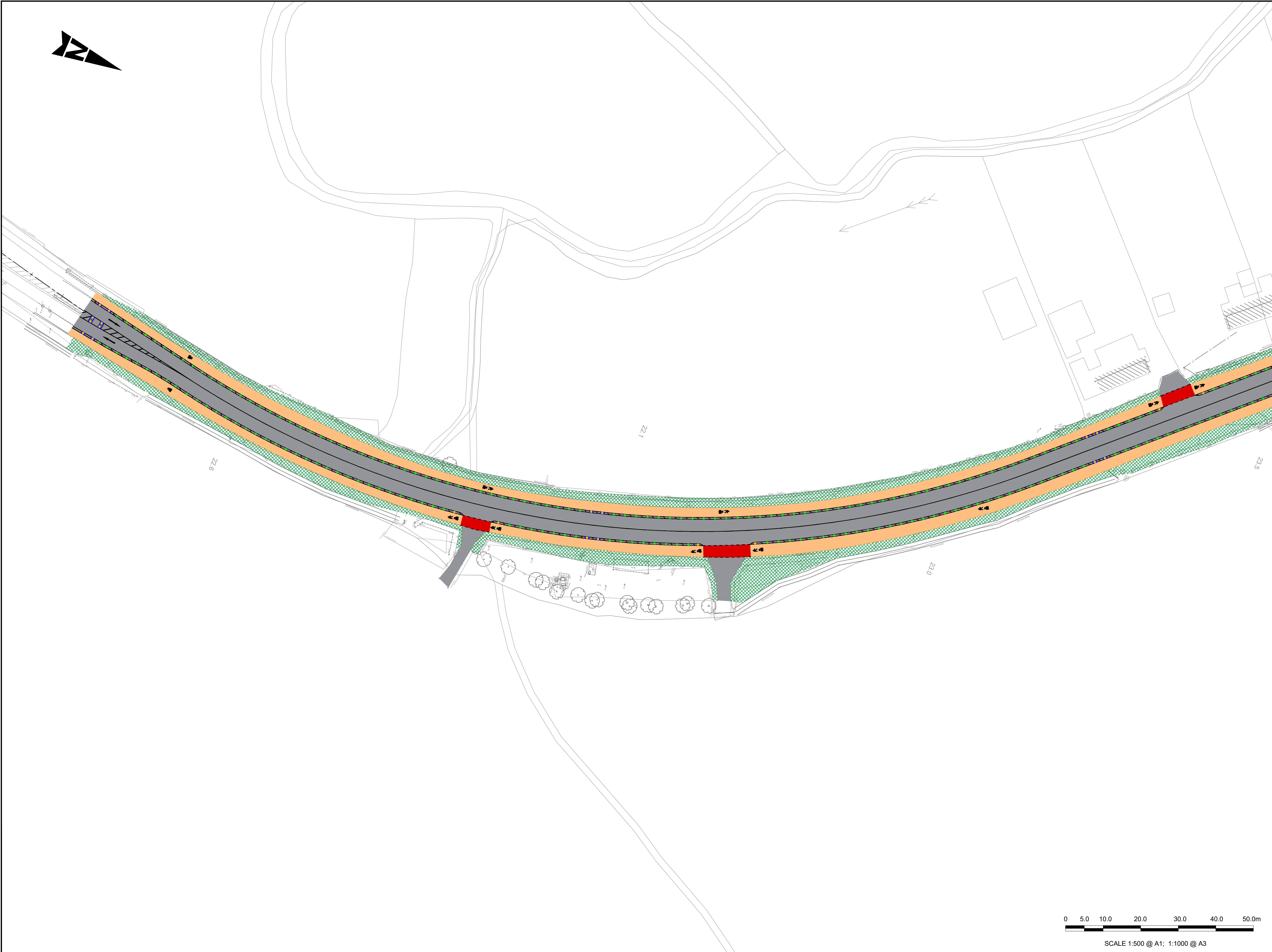
Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL	
Project	R132 CYCLE SCHEME	

Title		R132 MINISTERS ROAD TO QUICKPENNY LANE CYCLE LANE STUDY OPTION 4 SHEET 2 OF 2			
Original Scale	1:1000 @ A1 1:2000 @ A3	Drawn	Checked	Reviewed	Authorised
Status	I	AK	AR	SW	SW
Drawing Number	5200387-ATK-01-XX-SK-C-95117	Date	10.11.22	Date	10.11.22
Rev	-	Date	10.11.22	Date	10.11.22

Appendix C. Preferred Option Concept Drawings



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

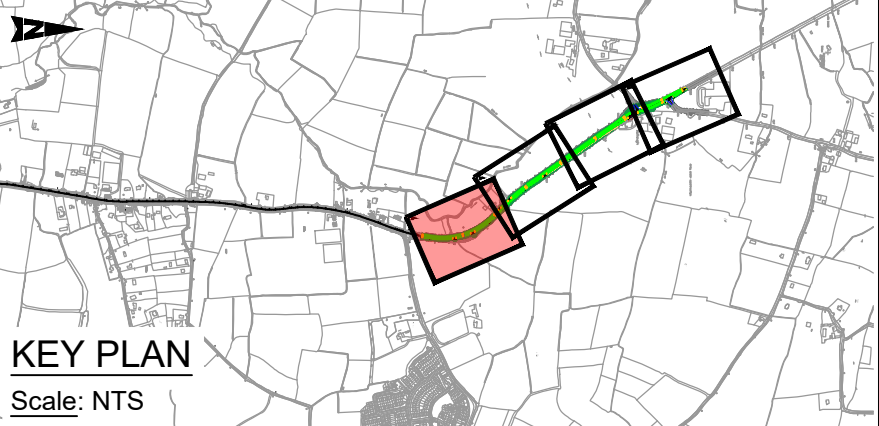
- LEGEND:
- PROPOSED CARRIAGEWAY
 - PROPOSED SHARED AREA
 - PROPOSED CYCLETRACK WITH RED-BUFF
 - EXISTING GRASS VERGE
 - PROPOSED LANDSCAPING
 - PROPOSED TACTILE PAVING
 - PROPOSED 100mm UPSTAND KERB
 - PROPOSED FLUSH KERB
 - PROPOSED BOLLARD TYPE A
 - PROPOSED BOLLARD TYPE B

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

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

Comhairle Contae
Fhine Gall
Fingal County
Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
0	FOR INFORMATION	AR	02.12.22	AR	SW	SW

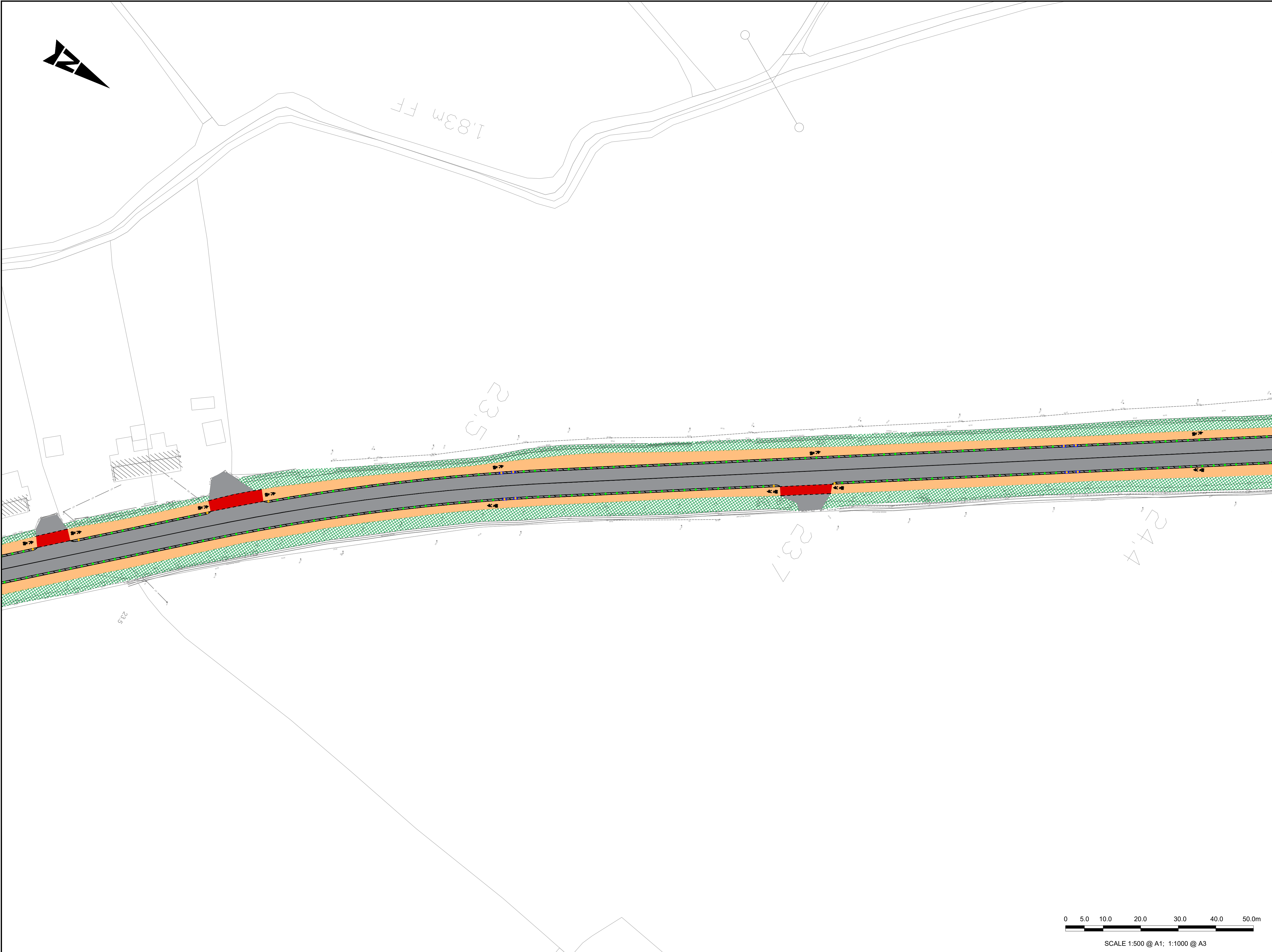
ATKINS
Member of the SNC-Lavalin Group

Atkins House, 150-155 Ainslie Business Park, Swords, Co. Dublin Tel (+353) 01 810 8000 Fax (+353) 01 810 8001	Unit 2B, 2200 Cork Airport Business Park, Cork Tel (+353) 021 429 0300 Fax (+353) 021 429 0360	1st Floor Technology House Parkmore Technology Park, Galway Tel (+353) 091 786 050 Fax (+353) 091 779 830
---	--	---

Client
FINGAL COUNTY COUNCIL

Project
R132 CYCLE SCHEME

Purpose		INFORMATION			
Title					
R132 CYCLE SCHEME MINISTERS ROAD TO QUICKPENNY LANE SHEET 1 OF 4					
Original Scale		Drawn	Checked	Reviewed	Authorised
1:500 @ A1		AR	AR	SW	SW
1:1000 @ A3		Date 02.12.22	Date 02.12.22	Date 02.12.22	Date 02.12.22
Status	Drawing Number				Rev
I	5200387-ATK-01-XX-DR-C-951112				0



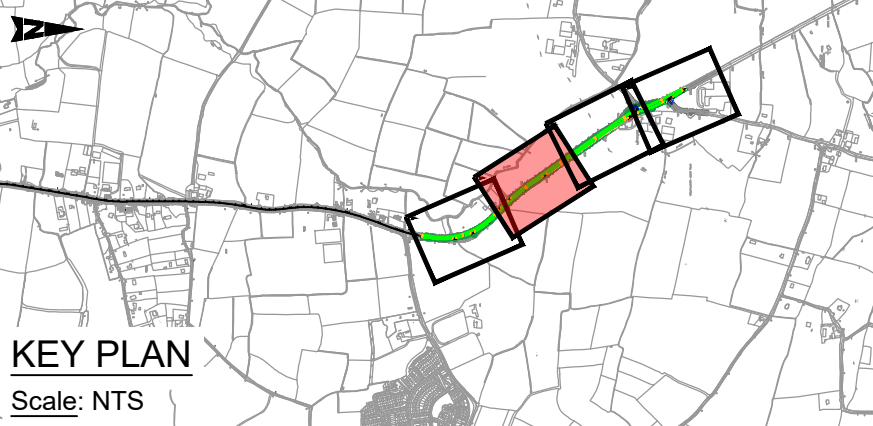
- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 5. DRAWINGS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

- LEGEND:
- PROPOSED CARRIAGEWAY
 - PROPOSED SHARED AREA
 - PROPOSED CYCLETRACK WITH RED-BUFF
 - EXISTING GRASS VERGE
 - PROPOSED LANDSCAPING
 - PROPOSED TACTILE PAVING
 - PROPOSED 100mm UPSTAND KERB
 - PROPOSED FLUSH KERB
 - PROPOSED BOLLARD TYPE A
 - PROPOSED BOLLARD TYPE B

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

Comhairle Contae
Fhine Gall
Fingal County
Council



0	FOR INFORMATION	AR	02.12.22	AR	SW	SW
Rev	Description	By	Date	Chk'd	Rev'd	Auth

ATKINS
Member of the SNC-Lavalin Group

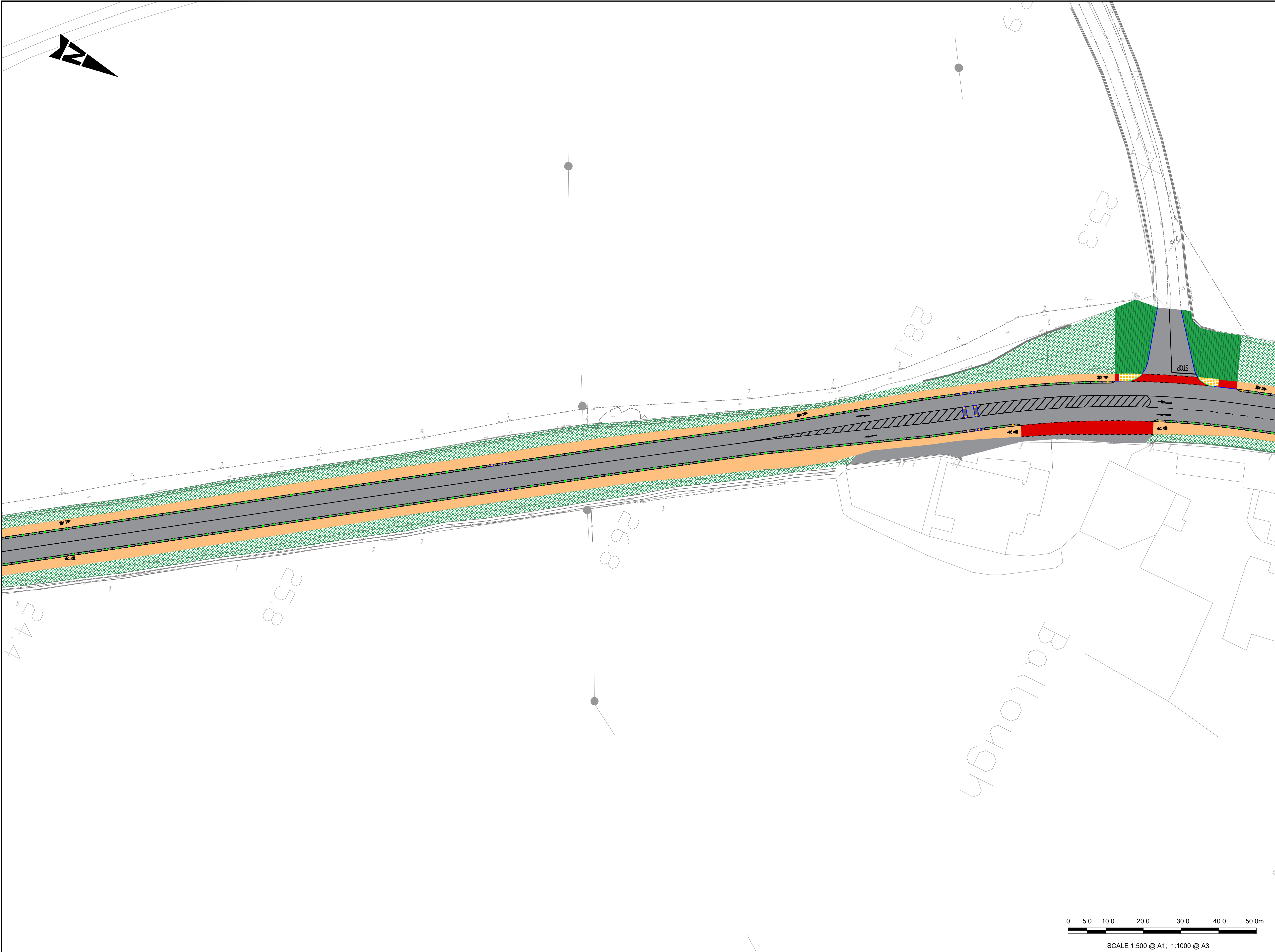
Atkins House, 150-155 Ainslie Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL
Project	R132 CYCLE SCHEME

Purpose		INFORMATION			
Title		R132 CYCLE SCHEME MINISTERS ROAD TO QUICKPENNY LANE SHEET 2 OF 4			
Original Scale		Drawn	Checked	Reviewed	Authorised
1:500 @ A1		AR	AR	SW	SW
1:1000 @ A3		Date 02.12.22	Date 02.12.22	Date 02.12.22	Date 02.12.22
Status	Drawing Number				Rev
I	5200387-ATK-01-XX-DR-C-951113				0



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

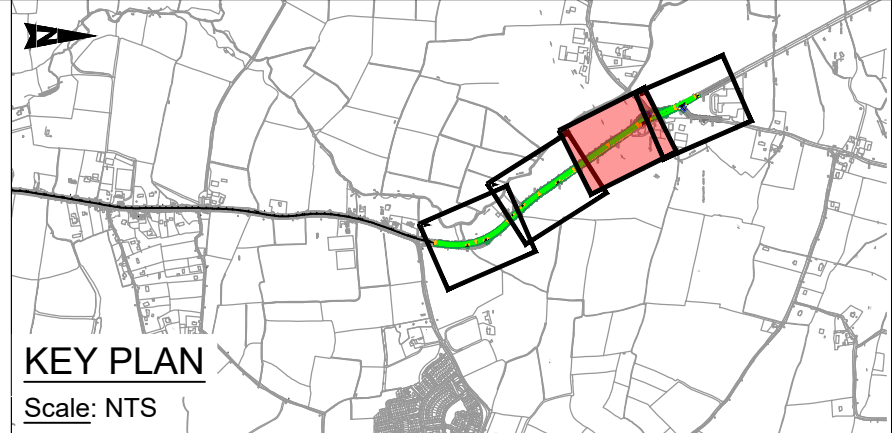
- LEGEND:
- PROPOSED CARRIAGEWAY
 - PROPOSED SHARED AREA
 - PROPOSED CYCLETRACK WITH RED-BUFF
 - EXISTING GRASS VERGE
 - PROPOSED LANDSCAPING
 - PROPOSED TACTILE PAVING
 - PROPOSED 100mm UPSTAND KERB
 - PROPOSED FLUSH KERB
 - PROPOSED BOLLARD TYPE A
 - PROPOSED BOLLARD TYPE B

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND

ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

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

Comhairle Contae Fhine Gall
Fingal County Council



Rev	Description	By	Date	Chk'd	Rev'd	Auth
0	FOR INFORMATION	AR	02.12.22	AR	SW	SW

ATKINS
Member of the SNC-Lavalin Group

Atkins House, 150-155 Ainslie Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client
FINGAL COUNTY COUNCIL

Project
R132 CYCLE SCHEME

INFORMATION					
Purpose R132 CYCLE SCHEME MINISTERS ROAD TO QUICKPENNY LANE SHEET 3 OF 4					
Original Scale 1:500 @ A1 1:1000 @ A3		Drawn AR Date 02.12.22	Checked AR Date 02.12.22	Reviewed SW Date 02.12.22	Authorised SW Date 02.12.22
Status I	Drawing Number 5200387-ATK-01-XX-DR-C-951114				Rev 0

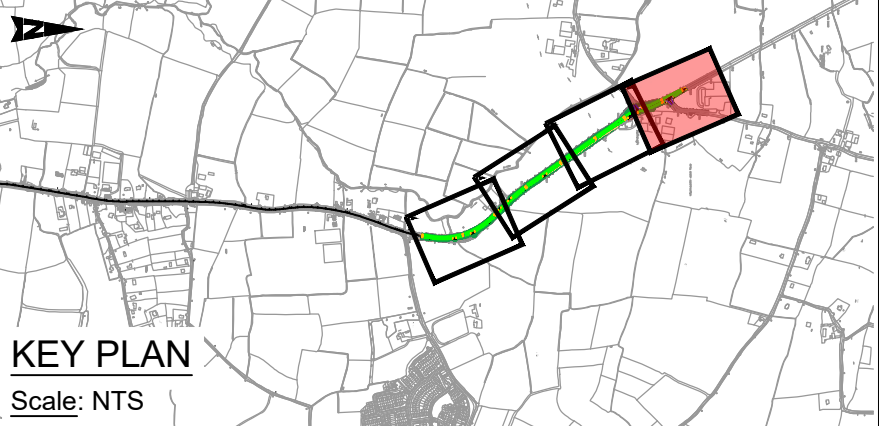


- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 5. DRAWINGS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

- LEGEND:
- PROPOSED CARRIAGEWAY
 - PROPOSED SHARED AREA
 - PROPOSED CYCLETRACK WITH RED-BUFF
 - EXISTING GRASS VERGE
 - PROPOSED LANDSCAPING
 - PROPOSED TACTILE PAVING
 - PROPOSED 100mm UPSTAND KERB
 - PROPOSED FLUSH KERB
 - PROPOSED BOLLARD TYPE A
 - PROPOSED BOLLARD TYPE B

© ORDNANCE SURVEY IRELAND LICENSE NR. AR 0082521. ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND
ATKINS WILL NOT TO BE HELD LIABLE FOR THE USE OF THIS DATA ON ANY PROJECT OTHER THAN THE PROJECT:
R132 CYCLE SCHEME

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



Rev	Description	By	Date	Chk'd	Rev'd	Auth
0	FOR INFORMATION	AR	02.12.22	AR	SW	SW

Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

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

Client	FINGAL COUNTY COUNCIL
Project	R132 CYCLE SCHEME

Purpose	INFORMATION
Title	R132 CYCLE SCHEME MINISTERS ROAD TO QUICKPENNY LANE SHEET 4 OF 4
Original Scale	1:500 @ A1 1:1000 @ A3
Drawn	AR
Checked	AR
Reviewed	SW
Authorised	SW
Date	02.12.22
Date	02.12.22
Date	02.12.22
Date	02.12.22
Status	I
Drawing Number	5200387-ATK-01-XX-DR-C-951115
Rev	0

WS Atkins Ireland Limited

Atkins House
150 Airside Business Park
Swords
Co. Dublin
K67 K5W4