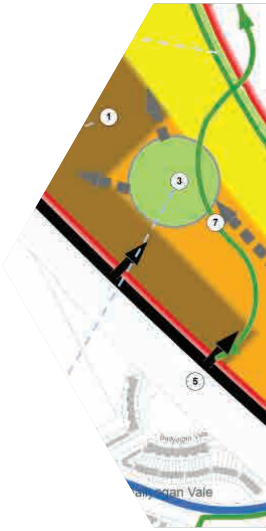
DBFL CONSULTING ENGINEERS

dlr Comhairle Contae County Council



Racecourse South Lands Local Transport Plan

Contents

1. Revision	2. Date	3. Description	4. Originator	5. Checker / Reviewer	6. Approver
1	20/12/2023	Draft Preliminary Direction of Travel	MMcC	KB	
2	04/09/2024	Draft for Review	MMcC	JE	KB
3	06/11/2024	Draft for Review	MMcC	JE	KB
4	14/02/2025	Draft for Review	MMcC	JE	KB
5	30/04/2025	Final Issue	MMcC	JE	KB

1 Introduction

1.1 Overview

DBFL Consulting Engineers (DBFL) have been commissioned by *Dún Laoghaire-Rathdown County Council* to undertake an Area Based Transport Assessment (ABTA) for the Racecourse South lands at Carrickmines to support Specific Local Objective (SLO) 143 of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* and the *Ballyogan and Environs Local Area Plan 2019-2025*.

1.2 ABTA Key Stages – Scope of Study

The key stages of the ABTA process are set out as follows:

- Baseline Conditions & Policy Review
- Establish Context
- Option Development
- Option Assessment, Refinement and Optimisation *(Sense Check the Proposals)*
- Draft Racecourse South Lands Local Transport Plan (LTP)
- Finalisation of LTP (this document)

The Study approach to the Racecourse South ABTA process is consistent with that outlined by the National Transport Authority (**NTA**) and Transport Infrastructure Ireland's (**TII**) *'Area Based Transport Assessment Guidance Note'* issued in December 2018 and *ABTA How to Guide: Guidance Document (*2021) and the *'ABTA and LTPs Supplementary Advice Note'* (2024).

1.3 Supporting Documents

This report provides an overview of the supporting documents which together comprise the Racecourse South ABTA. These are as follows:

- Racecourse South Baseline Conditions and Policy Context Report
- Racecourse South Context Report
- Racecourse South Options Development & Assessment Report

1.4 Report Structure

This report is split into three parts as follows:

Part A

Part A presents the **Background Information** and covers the following chapters:

- **Chapter 1**: Introduction
- **Chapter 2**: Racecourse South Today (Baseline Conditions)
- **Chapter 3**: Policy Review
- **Chapter 4:** Case Studies
- **Chapter 5**: Racecourse South Transport Objectives
- **Chapter 6**: Options Development and Assessment

Part B

Part B presents the **Strategy** for the Racecourse South LTP and covers the following chapters:

- **Chapter 7:** Overview of Proposals
- **Chapter 8**: Active Travel Network
- **Chapter 9**: M50 Crossings
- **Chapter 10**: Luas

- **Chapter 11**: Bus Network
- **Chapter 12**: Road & Street Network
- **Chapter 13**: Car Parking
- **Chapter 14**: Bicycle Parking
- **Chapter 15:** Supporting Measures

Part C

Part C presents the **Strategy Implementation and Outcomes** and covers the following chapters:

- **Chapter 16**: Transport Modelling Assessment
- **Chapter 17**: Implementation and Outcomes

Appendix A

Lastly, **Appendix A** presents a summary of the recommended measures outlined in this LTP.

1.5 Specific Local Objective (SLO) 143

- *To carry out in consultation with TII and the NTA a collaborative Area Based Transport Assessment (ABTA) prior to the development of lands at Racecourse South. The Local Authority will engage with the landowner on the preparation of the ABTA. The ABTA will address how development will avoid undermining the safe and efficient operation of the National Road and light rail network and ensure that the strategic function of the M50 will be maintained with full build out of the lands.*

The ABTA will include assessment of impact on Junction 15 and LUAS operation and will be carried out in accordance with the TII/NTA Area Based Transport Assessment (ABTA) Advice/Guidance Notes (2018). The outcome and recommendations of the ABTA shall be taken into account in the assessment of future planning applications.

Dún Laoghaire- Rathdown County Development Plan 2022-2028

Figure 1-1 Racecourse South Lands Study Area Boundary.

1.6 Overriding Status of the ABTA

This ABTA is situated alongside a hierarchy of statutory documents that is subject to environmental assessment/ screening for environmental assessment, as appropriate, and forms the decision-making and consent-granting framework.

This ABTA does not provide consent or establish a framework for granting consent and will not itself be binding on any decisions relating to the granting of consent.

In order to be implemented, relevant elements of this ABTA may be integrated future statutory land use plans, which will be subject to their own Strategic Environmental Assessment (SEA)/ Appropriate Assessment (AA) related processes.

In order to be realised, measures from this ABTA will have to comply with the various legislation, policies, plans and programmes that form the statutory decision- making and consent- granting framework – including the provisions of the Dún Laoghaire- Rathdown County Development Plan 2022- 2028.

This ABTA aligns with the provisions of the National *Climate Action Plan 2024*, the *Regional Spatial and Economic Strategy 2019- 2031*, the *Transport Strategy for the Greater Dublin Area 2022-2042* (including associated cycle network), the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* and the *Dún Laoghaire-Rathdown Climate Action Plan 2024-2029*, all of which have been subject to legislative requirements relating to public consultation and environmental assessment/screening for environmental assessment. As such, this ABTA is wholly subject to the requirements of the provisions set out in these documents, including provisions relating to sustainable development, environmental protection and environmental management that have been integrated into these documents, including through SEA and AA processes.

Part A

Background

2 Racecourse South Today

2.1 Overview

This chapter identifies the Study Area of the ABTA, and subsequently provides a spatial context for its location, its existing and proposed land uses and population, as well as existing mobility patterns associated with the area.

Figure 2-1: Study Area of the Racecourse South Lands ABTA.

2.2 Study Area Location

Racecourse South is located within the urban footprint of Dún Laoghaire-Rathdown County Council's administrative area, approximately 10km south of Dublin City, at the foot of the Dublin mountains. The site consists of a substantial landholding of c. 20 hectares of largely undeveloped land, situated immediately contiguous to the southeast of Leopardstown Racecourse.

The land incorporates two parcels of relevant public land in ownership of Horse Racing Ireland (HRI) and Dún Laoghaire-Rathdown County Council. The Land Development Agency (LDA) are currently in discussions with HRI regarding proposals for the area. The Leopardstown Racecourse bounds the site to the north, with residential properties bounding both the northeast of the site off Brighton Road and the southeast boundary at Ballyogan Grove. Also running along the north-eastern boundary is the alignment of the old Harcourt Street Railway.

Bounded by the M50 motorway to the southwest, the Racecourse South site is situated in close proximity to Junction 15 and is served by a vehicular access road at this junction, which runs alongside the M50, and provides controlled access to the Leopardstown Racecourse. The Luas Line runs from Ballyogan crosses the M50 via a light rail only bridge, which then partially severs the Study Area at its southern end.

The Cherrywood Strategic Development Zone is located to the south of the ABTA Study Area, and Sandyford Business District is located to the north of Leopardstown Racecourse.

2.3 Existing Land Use and Environment

At present, the land use in the Racecourse South comprises an overflow car park with a temporary surface finish at the northern section of the site which is regularly used by Leopardstown Racecourse on race days throughout the year, as well as for temporary event spaces such as the circus or a drive-in cinema. The remaining southern section consists primarily of overgrown vegetation.

The site's internal topography is relatively flat, despite its position sitting at a slightly higher level than the access road along the southwestern boundary. The Racecourse Stream flows along the south-western boundary. There is also a main 33" water distribution line from Vartry Reservoir to Stillorgan Reservoir running along the northeastern boundary of the site, as well as a gas distribution line.

A Strategic Environmental Assessment (SEA) in accordance with the European SEA Directive and an Appropriate Assessment (AA) Screening in accordance with the Habitats Directive were prepared for the *Ballyogan and Environs Local Area Plan 2019-2025.* There are no Special Areas of Conservation or Special Protection Areas within the BELAP lands, nor in the immediate vicinity, however there are elements of industrial heritage, as well as areas of trees and woodland to be preserved.

2.4 Future Land Use

The two primary policy documents which set out the future proposals relating to land use for the Study Area are:

- *Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCDP); and*
- *Ballyogan and Environs Local Area Plan 2019-2025 (BELAP)*

Under the *DLRCDP*, the lands are included as part of the *DLR Residential Development Capacity Audit* zoned for residential development identified in the Core Strategy and Housing Strategy.

Under the *BELAP, the* lands are identified as one of the two largest tracts of undeveloped zoned land within the LAP's Study Area. As such, a more in- depth suite of policies was developed for them in the form of a Site Development Framework (SDF). This included identifying a capacity for 850 to 1100 residential units for them and a proposed a density range of 45 to 80 + dwellings per hectare. These densities allow for a mix of residential typologies across the site. There is also an objective for the delivery of a new school and open space within the site.

This ABTA has been developed based on the land use identified in the *DLRCDP* and provided by DLRCC officers i.e., a predominantly residential - led mixed- use development site.

2.5 Area of Influence

The area of influence refers to the *geographic area which can be affected by a plan or scheme's implementation.* Within the context of the ABTA, this is the area which is likely to generate the most significant number of local trips connected to the future development of the Study Area. It is considered critical to define the Area of Influence beyond the Study Area to ensure the ABTA considers the connectivity between these areas by sustainable modes.

If future land use is to be predominantly residential, as outlined in the *DLRCDP 2022-2028* land use objectives (see Section 3.7) and the *BELAP 2019-2025*, it was deemed appropriate that the Area of Influence would include surrounding key employment areas and neighbourhoods that offer retail, medical and community uses, which future residents of Racecourse South may be attracted to.

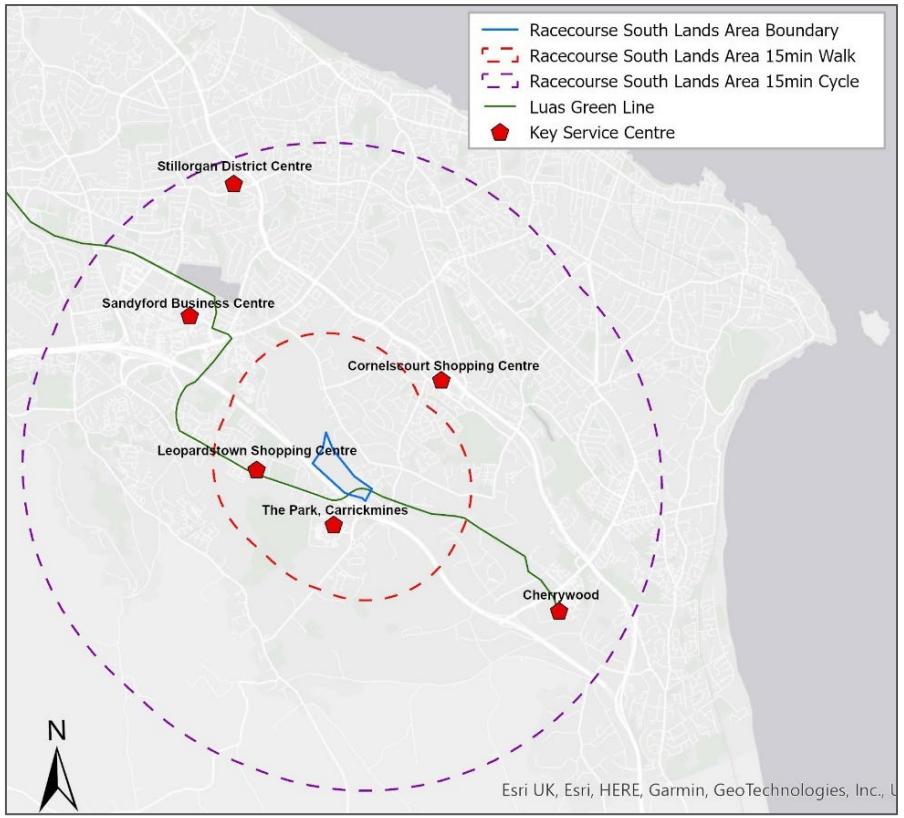


Figure 2-2: The Area of Influence for Racecourse South ABTA.

2.6 Existing Transport Network

2.6.1 Pedestrian Network

There is no pedestrian network within the Racecourse South site, aside from a paved pedestrian path connecting a car park at the northern end of the site to the Luas stop south east of the site.

Externally, there is a footpath along the northern side of the M50 Parallel Road linking Leopardstown Racecourse to Carrickmines Luas Park and Ride in the south. The footpath is continuous and appears to be of high quality.

There are currently low levels of pedestrian connectivity to nearby schools, shops, recreational facilities and community centres. The M50 acts as an impermeable barrier and hinders pedestrian access to services and facilities south east of the M50.

2.6.2 Cycle Network

The M50 Parallel Road lacks dedicated cycling facilities. However, there are cycle facilities to the south of the site connecting across Junction 15 extending from Glenamuck Road North to Glenamuck Road South.

2.6.3 Public Transport Network

Bus

The site is well-connected to both bus and light rail networks. There is a bus stop along Glenamuck Road North, southeast of the Racecourse South lands. Additionally, there is both a bus stop and a Luas stop at Ballyogan Wood across the M50 to the southwest of the site.

Luas

The Luas Green Line (Broombridge / Brides Glen) passes through the ABTA Study Area. The Racecourse Luas stop is located immediately to the east of the lands but to date has remained closed. This Luas stop is connected to Racecourse South by a pedestrian path with an at-grade pedestrian crossing point.

Figure 2-3 Racecourse South existing Public Transport Network

The Carrickmines Luas Stop is located further south of the ABTA Study Area, within approx. 0.4km of the currently unused Luas stop. Accompanying this Luas stop is the Carrickmines Luas Park and Ride (P&R), which has 350 car parking spaces and 4 E-Vehicle charging points

2.6.4 Vehicular Access and Movement

The site is only accessible through a singular vehicle access road from Junction 15 of the M50, through which there are three vehicular access points onto the site. This road is known as the M50 Parallel road.

Figure 2-4 Existing External Road and Street Network.

M50 Parallel Road

There are speed bumps along the M50 Parallel road approaching each site entrance. The road has three lanes with a speed limit of 50 km/h and its primary use is to provide controlled access to Leopardstown Racecourse from Carrickmines North Roundabout.

M50

The M50 sits to the immediate southwest of the site. The M50 is Dublin's orbital motorway and provides access to strategic locations in the north and west including Tallaght, Blanchardstown, and Dublin Airport, as well as southwards to Bray and Wicklow.

2.6.5 Car Clubs

GoCar are the longest serving car club operator in Ireland and have a significant presence across the Greater Dublin Area. GoCar is a car sharing platform that allows its member to rent cars by the hour or day using the GoCar application, providing an alternative to car ownership, to those who only need a car on occasion.

There are a limited number of dedicated GoCar bases located close to the Study Area, including one in Foxrock Village to the north of the site and one in Carrickmines Retail Park to the south of the site. An additional six are located in the Sandyford Business District. There are also a number of Yuko and Enterprise car club bases in the vicinity of Racecourse South.

2.7 Strengths, Weaknesses, Opportunities and Challenges (S.W.O.C) Analysis.

Strengths

- A large site at approx. 20ha of undeveloped residential zoned land.
- Strong national and local policy mandate for its development.
- Relatively regular layout and level topography.
- Public transport – Luas and Bus – within walking distance of the site.
- Proximity to emerging neighbourhood centre at The Park, Carrickmines to the south.
- Proximity to significant employment clusters such as Dublin City, Sandyford, and Cherrywood.
- The site is bounded to the south by the M50 and Junction 15 – a critical element of the strategic road corridor, providing strategic connectivity to the north and west including Tallaght, Blanchardstown, and Dublin Airport, as well as southwards to Bray.

Weaknesses

- Singular vehicular access road from Junction 15
- Likely high noise and air pollution resulting from the M50.
- Low levels of pedestrian permeability and cyclist connectivity to existing nearby schools, shops, recreational facilities, and community facilities in adjacent areas including Carrickmines, Ballyogan, Foxrock, Cabinteely, and so on.
- No bus service on the M50 Parallel Road
- Racecourse Stream Flood Zone A designation near Site's the south-western boundary is an active constraint on the site's developability.

Opportunities

- Significant potential to create a vibrant, people-oriented neighbourhood where the majority of trips are carried out by sustainable modes.
- Potential for innovative parking management measures through the use of Mobility Hubs, Mobility Points, Park and Strides, and other dynamic parking models to achieve a 'car-lite' neighbourhood from the outset.
- Opportunity to significantly improve pedestrian and cycle permeability for existing communities surrounding the site that better align with desire lines (e.g., to Brighton Road, Ballyogan Road).
- Potential for the delivery of a significant number of residential units and an appropriate housing mix to meet housing demand (850-1100 residential units as noted in the BELAP).
- Scope to provide higher residential densities near high-quality public transport links.
- Delivery of new pedestrian and cyclist linkages / infrastructure, including Green Infrastructure.
- The Harcourt Street Railway at the north eastern boundary of the site provides the opportunity for a key movement route through the site.
- Unused Luas Stop to the immediate south of the site.

Challenges

- Changes to the current national and local political and financial climate that threaten investment and delivery.
- Severance effect of the M50 to adjacent neighbourhoods.
- Partial severance effect of the Luas bridge. Consideration of how the space under the bridge is designed and used.
- Severance effect of Luas Line within the site.
- Reduction of developable land as a result of implementing necessary strategic transport upgrades.
- Water and gas distribution lines along the north-eastern boundary may act as a physical constraint.
- Potential capacity issues at M50 Junction 15.

3 Review of Policy Context

3.1 Overview

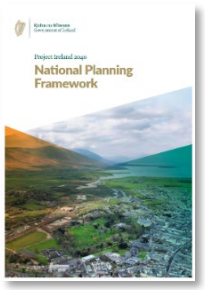
The *Racecourse South Lands Area Based Transport Assessment (ABTA)* is being developed within the strategic land use and transport planning framework at a National, Regional and Local level. Policy objectives and targets established at the national level sit at the top of this framework, providing over-arching and strategic directions. These are in turn translated into regional and local level policies to enable more place-specific objectives.

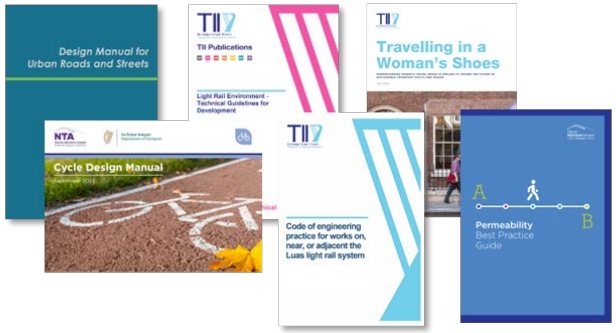
This chapter presents a summary of key policy documents outlined in Part 1 of this ABTA (Baseline Conditions and Policy Review).

3.2 National Level: Statutory Policy

National Planning Framework (NPF)

The *NPF* was published in February 2018 and sets out the strategic vision and a long - term, over- arching framework for the future growth and spatial development of Ireland up to 2040.





The *NPF* is underpinned by a set of National Strategic Outcomes (NSOs):

Additionally, the *NPF* sets out key growth enablers for Dublin. The following is the most relevant for the Racecourse South:

- "*Progressing the sustainable development of new greenfield areas for housing, especially those on public transport corridors*".

National Development Plan 2021-2030 (NDP)

The *NDP* sets out a significant level of investment, €165 billion, which will underpin the *NPF* and drive its implementation over the next ten years. The *NDP* consists of a review of expenditure to date and current available capital investment in Ireland.

In 2021, over 75% of the allocation of €10.8 billion is concentrated in four sectors, including Transport which accounts for 25.1% at €2,528 million. The following transport-related point are central to this ABTA:

- With over 50% of housing to be situated in cities and an additional 30% of housing to be provided in existing build up-areas, compact urban grown "*will be supported under this NDP through investment in high quality integrated active travel and public transport systems and supporting amenities*".

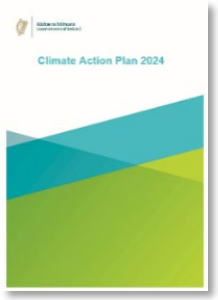
Additionally, the *NDP* states:

- "*This NDP provides for significant investment in active travel, bus and rail infrastructure over the next ten years in terms of expanding sustainable mobility options in our cities, towns and villages, supporting our ambition for compact growth and seeking to develop our regional cities as centres of scale in line with the NPF targets*" and that "*given the long term planning necessary to give effect to these plans the Government is committed to putting in place the necessary long-term funding to deliver on these requirements*".

The *NDP* also provides a commitment to the Luas network extension of the Green Line as far as Finglas to the north and for the construction of BusConnects Core Bus Corridors to be substantially complete by 2030.

Climate Action Plan 2024 (CAP)

The *Climate Action Plan 2024* represents the third annual update to Ireland's *Climate Action Plan 2019.*



The *CAP* sets out a major programme for change in response to reducing Ireland's greenhouse gas emissions.

CAP 24 builds on the progress made since the publication of *CAP 23* and provides a roadmap of actions to realise the ambitious climate action targets.

Under the Climate Action and Low Carbon Development (Amendment) Act 2021, emissions must reduce by 51% by 2030, setting a path towards a zero net-emissions scenario by 2050. For transport, there are

three main actions required that should inform the development of an area, namely:

- Reducing the demand for travel;
- Increasing use of public transport, walking and cycling and a reduction in trips by car;
- Conversion of the transport fleet to zero emissions vehicles

Key to this are policies to reduce transport emissions by improving our towns, cities and rural planning, and by adopting the *Avoid-Shift-Improve Approach* – i.e., reducing or avoiding the need for travel, shifting to public transport, walking and cycling, and improving the energy efficiency of vehicles.

Figure 3-1: The Avoid-Shift-Improve Approach.

Moving Together – A Strategic Approach to the Improved Efficiency of the Transport System in Ireland

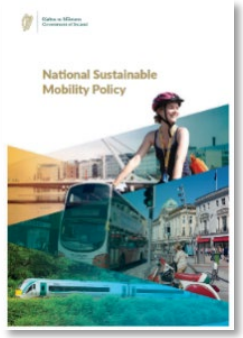
Moving Together was published in 2024 and is a key policy component in the decarbonisation pathway for Ireland' s transport sector as outlined in the *CAP*, representing the 'Avoid' in the Avoid- Shift - Improve Approach.

The Strategy provides an overarching framework for the development and delivery of potential demand management measures that can create a transformational change in travel behaviour. The objectives of the plan are as follows:

- To contribute to the national target of halving transport emissions, by reducing total vehicle kilometres travelled by 20% by 2030.
- To improve the efficiency of the existing transport system, by reducing demand for less sustainable journeys, by people and by freight
- To support the health, safety and wellbeing of people, and minimise the social, and environmental costs of transport and car dependency including those related to congestion, air and noise pollution.
- To encourage compact, mixed use and transport-led development, reinforcing the role of the city, town and village centres as attractive, walkable, accessible destinations.
- To support economic and financial sustainability in the just transition to net zero.

National Sustainable Mobility Policy (SMP)

The *SMP* is another key policy component of the *CAP*, representing the 'Shift' in the Avoid-Shift-Improve Approach. The *Moving Together* strategy relies on the implementation of the *SMP*.



The *SMP* provides the strategic framework for 2030, encouraging active travel and public transport journeys to help Ireland meet its climate action obligations to achieve a

51% reduction in carbon emissions by 2030.

The Policy is aligned with the *Climate Action Plan* to deliver at least 500, 000 additional daily active travel and public transport journeys by 2030 and a 10 % reduction in the number of kilometres driven by fossil fuelled cars. The Policy is guided by three key principles which are underpinned by 10 high-level goals:

- Safe and Green Mobility
- People Focused Mobility
- Better Integrated Mobility

The overall vision of this Policy is to connect people and places with sustainable mobility that is safe, green, accessible, and efficient.

The Racecourse South ABTA will help achieve this vision by developing a transport plan to help inform the future masterplan of the site, which will prioritise connectivity for sustainable modes first in line with the *DMURS* User Hierarchy, as well as improving overall connectivity with surrounding areas.

National Investment Framework for Transport in Ireland (NIFTI)

NIFTI is the Framework created by the Department of Transport for prioritizing future investment in the land transport network.

It guides transport investment in the years ahead to enable the *National Planning Framework*, support the *Climate Action Plan*, and promote positive social, environmental and economic outcomes throughout Ireland.

NIFTI sets out the road user modal hierarchy in Ireland as follows:

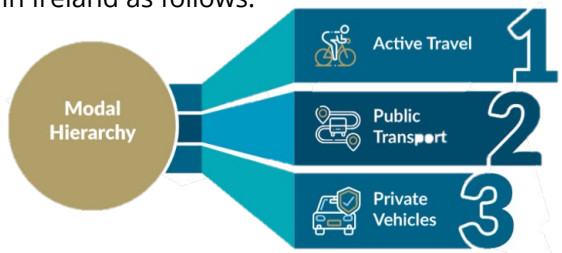


Figure 3-2 NIFTI Modal Hierarchy.

NIFTI also outlines an intervention hierarchy as follows:

1. **Maintain**: measures which protect the existing transport network, and keep it at the standard or capability at which it was designed).
2. **Optimise**: measures which are targets at increasing levels of service of transport infrastructure through enabling and encouraging more efficient behaviour and sustainable use of the network.
3. **Improve**: measures which increase the capability of existing infrastructure.
4. **New**: measures which entail significant increases to transport infrastructure capacity.

Town Centre First Policy

The *Town Centre First Policy* aspires to create town centres which function as attractive, viable and vibrant places for people to live, work and visit, while also functioning as the service, social, cultural and recreational hubs for the local community. The *Town Centre First* approach underpins the wider vision for Racecourse South's sustainable development.

TII's National Cycle Network (NCN) Plan

TII's *NCN* was published in 2024. This plan act as the core network connecting towns, cities and destinations across Ireland. The proposed network includes approximately 3,500 km of cycle infrastructure connecting more than 2.8 million people and 200 settlements. According to the *NCN*, successful implementation of the

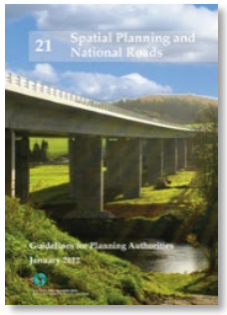
plan will provide the benefits that include:

- Ensure delivery of a high- quality cycle network which will promote safety, comfort and increased participation in cycling.
- Supporting both urban and rural economies through increased leisure and tourism cycling.
- Making use of existing infrastructure wherever possible including greenways, road infrastructure, and declassified roads where safe and inviting cycle experiences can be provided.

The *NCN* will establish a core spine of infrastructure aimed at encouraging future development of cycling projects. This network will have a significant impact on the development of cycle networks in the vicinity of the ABTA Study Area.

3.3 National Level: Statutory Guidelines for Planning Authorities

Spatial Planning and National Roads Guidelines for Planning Authorities



Spatial Planning and National Roads is a guideline document published by the Government in 2012, which established planning policy considerations for developments affecting National Primary and Secondary roads, including Motorways and associated junctions, outside the 50-60kph speed limit zones for cities, towns and villages.

National roads play an integral role within Ireland's overall transport system, and in the country's economic, social and physical development. The primary role of the National Road network is to provide strategic transport links between the main centres of population and employment, including key international gateways such as the main ports and airports, and to provide access between all regions.

The guidelines charge local authorities to develop sustainable and complementary local transport strategies that cater for the requirements of local developments, as well as protecting the strategic function of the national road network.

The Racecourse South is located adjacent to the M50 motorway and Junction 15 at Carrickmines Interchange to the south. This ABTA complements these guidelines by seeking to protect the capacity and strategic function of the national road network in the study area.

Sustainable Urban Housing: Design Standards for New Apartments

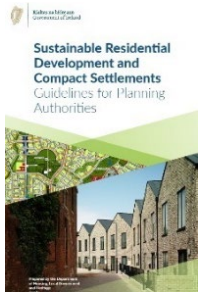
These guidelines contain a number of transport related concerns, some of which are relevant to the development of the ABTA. These include:

- A default policy prescribing minimal, substantially reduced, or wholly eliminated carparking provisions in areas with high levels of accessibility, such as in or adjoining city core or at a confluence of public transport systems, such as rail and bus stations located in close proximity.

These locations are generally situated within 15-minute walking distances of city centres, within 10- minutes walking distances of commuter rail or bus stops, and/or within 5-minute walking distance of high frequency bus services. Thus, there are minimal needs for parking provisions.

- Reduced overall parking standard and provision of a maximum car parking standard for Housing schemes with more than 45 dwellings per hectare net in suburban/urban locations served by public transport or close to town centres or employment areas.
- A requirement that cycling is fully integrated into the design and operation of all new apartment schemes; and
- A significant uplift in the quantity and quality of cycle parking provision is expected in relation to the location, quantity, design, and management of bicycle storage areas.

Sustainable Residential Development and Compact Settlements – Guidelines for Planning Authorities



These updated guidelines contain several transport-related topics that are relevant to this ABTA including:

- A high quality of urban design and placemaking and street design that emphasises sustainable and efficient movement of pedestrians and cyclists.
- Promotion of high-intensity mix of uses at town centres and public transport nodes;
- Integration of Green and Blue Infrastructure into local plans and individual planning applications.
- A requirement that new developments include a permeable and legible street network that prioritises sustainable modes (walking, cycling and public transport) and is easy to navigate.
- A requirement that new developments improve connections between neighbourhoods, public transport services, and local services and amenities.
- A reduced overall parking standard and application of a maximum car parking standard (Chapter 5 Development Standards includes a specific planning policy requirement (SPPRs) that addresses car parking rates in new residential developments. Car parking standards for the Racecourse South are also referred to in ***Section 3.7).***
- A requirement that cycling is fully integrated into the design and operation of all new apartment schemes; and
- A significant uplift in the quantity and quality of cycle parking provision.

3.4 Statutory Design Guidance

Cycle Design Manual (CDM)

The updated manual is a national guidance document from the NTA that details the principles of designing safe off-road and on-road cycle facilities for both urban and rural areas.

The 2023 manual puts an emphasis on recommendations focusing on segregating cyclists from traffic where speeds and

volumes make roads unsuitable for sharing. It also includes several new types of infrastructure which are commonly used in other countries, and which will now become an option for Ireland including protected junctions, Dutch style cycle-friendly roundabouts, and parallel crossings.

The *CDM* identifies five key requirements for cycle friendly infrastructure:

5 Requirements for Cycle-Friendly Infrastructure

Safety
Cyclists should feel safe using cycling facilities

Coherence
Cycle routes should be connected and easy to navigate

Directness
Cycle routes should connect to origins and destinations using the shortest route with as little delay as possible.

Comfort
Factors that influence how comfortable a facility is includes width, gradient, stoppages / delays, surfacing, shelter and maintenance.

Attractiveness
Cycle routes should be as pleasant and interesting as possible

Design Manual for Urban Roads and Streets (DMURS)

The *DMURS* provides guidance on the design of urban roads and streets, and aims to rebalance urban environments to account for the negative effects of car dominance in Ireland. The Manual promotes the following four core principles:

1. Connected Networks
2. Multi-Functional Streets
3. Pedestrian Focus
4. Multi-disciplinary Approach

TII Standards on *The Treatment of Transition Zones to Towns and Villages on National Roads* notes: *Within the Centres of towns and villages that lie on National Roads, the Treatments described in DMURS shall apply.'* Developments on National Roads within settlements shall comply with TII Publications (Standards) for National Roads as well.

DMURS encourages more sustainable travel patterns and safer streets by proposing a user hierarchy for user priorities. This hierarchy places pedestrians at the top, indicating that walking is the most sustainable form of transport and that by prioritising pedestrians first, the number of short car journeys can be reduced, and public transport made more accessible.

DMURS also sets out a road hierarchy of Arterial, Link and Local Streets. In the ABTA, process roads and streets will be classified by *DMURS* categories before suggestions for the appropriate type of active and sustainable transport facility for each.

The proposals and recommendations of the Racecourse South lands ABTA will be developed in accordance with the *DMURS*, particularly the User Hierarchy, street categorisation and other key principles.

Figure 3- 3 User Hierarchy. Source: DMURS

TII Publications

TII Publications set the standards and design guidance for the national road network and associated infrastructure. Moreover, TII Publications are the Government recommended design guidance for all roads with speed limits greater than 60km/h. DMURS is the recommended design guidance for all roads and streets with a speed limit of 60km/h or less.

This ABTA is mindful of the requirement to safeguard the strategic function of the National Road Network. This ABTA will observe statutory design guidance outlined in TII Publications (Standards) and TII Publications (Technical), and will fully consider any potential impact to the surrounding national road network that may arise as a result of potential options from the ABTA process. TII Publications central to this ABTA will be discussed in the following sections.

TII-NGS Circular No. 2 of 2022

This Circular (re. *Application of Guidelines and Standards in relation to works on Public Roads in Ireland*) specifies Essential Common Requirements in relation to Guidelines and Standards and their application for all schemes or works on public roads, or proposed public roads in Ireland, as well as other road, cycling or active travel related infrastructure overseen /funded by the Department of Transport or its agencies.

This document lists the approved standards and guidelines, which are published by the NTA, TII and the Department of Transport, for the design particular infrastructure (rural roads, urban roads, urban cycle infrastructure, bus-related infrastructure etc.).

TII's 'Code of engineering practice for works on, near, or adjacent to the Luas light rail system.'

Any works adjacent or interfacing with Luas infrastructure must be carried out in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system.*

This Code of engineering practice document sets out information on precautions to be taken in accordance with current legislation and Luas operating procedures. It also sets out the procedures to be followed in applying for, carrying out, and completing the works on, near or adjacent to the light railway. In the unlikely event that there is any difference between a requirement of the bylaws and any provision of this code, the former shall take precedence.

TII' s Light Rail Environment – Technical Guidelines for Development

TII published *Light Rail Environment – Technical Guidelines for Development* in 2020. This guide provides information on the design and execution of developments and related works in the vicinity of light rail environment.

The identified transport options as part of this ABTA will proceed complementary to the safe and efficient operation of the Luas network and will be developed in line with both TII's *Light Rail Environment - Technical Guidelines for Development*, and TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*.

3.5 Best Practice Documents

Permeability: Best Practice Guide

This document provides guidance on how to address demand for walking and cycling that is not being met due to severance being designed into the local environment. The document details how permeability between homes, shops, schools, workplaces, public transport and other community services can be increased by the retention and creation of linkages within the existing urban environment.

The Guide promotes the establishment of modal choice in existing built-up areas, giving people the option to walk or cycle if they wish to do so. It encourages filtered permeability measures to give pedestrians and cyclists an advantage in terms of speed, distance, convenience, and safety over that of the private car, and to create more people-friendly neighbourhoods. Measures include:

- Closure of existing streets to vehicular traffic using planting and bollards.
- Providing a link for pedestrians and cyclists only via existing cul-de-sacs or through fences/blank walls.
- Providing a link for pedestrians and cyclists via green areas or along water courses.

Figure 3-4 Impermeable Neighbourhood VS Neighbourhood with Filtered Permeability. Source: NTA

TII's Travelling in a Woman's Shoes

Travelling in a Woman's Shoes was produced by Transport Infrastructure Ireland (TII) in 2020 and highlighted the realities for women in an Irish context. It includes a call to action to consider women's needs in the formation of Ireland's future transport policy and infrastructure provision.

Figure 3-5 Source: TII

The document sets out goals that public transport is working towards in Ireland:

- Providing public and active transport modes that are reliable, accessible, convenient, and safe.
- Ensuring transport feels safe for women.
- Being inclusive.

- Encouraging sustainable behaviour to fulfil our climate goals.

Additionally, the following aspects of design should be considered in the context of existing and new public realm and transport schemes:

- Good Quality Lighting
- Active Ground Floor Frontage
- Clear Sightlines
- Legibility and Wayfinding
- Citizen Engagement, Participation and Co-Creation

2023 Study: Opportunities for Transport Oriented Development in Major Urban Centres

A study prepared by a Transport Oriented Development (TOD) working group was published by the DoHLGH and the DoT in 2023.

This involved a review of sites within the four Dublin local authorities that are located close to existing or proposed high-capacity public transport notes. 14 locations were identified as suitable for a phased delivery of high-density mixed-use development, particularly residential, in accordance with the principles of TOD.

While the Racecourse South is not specifically acknowledged, the study also identifies locations which are notable "*in terms of their potential to contribute to housing delivery and / or to embed sustainable mobility across the system in conjunction with planned investment in the public transport network.*" The area characterised as Carrickmines – Kiltiernan is identified as one of these locations.

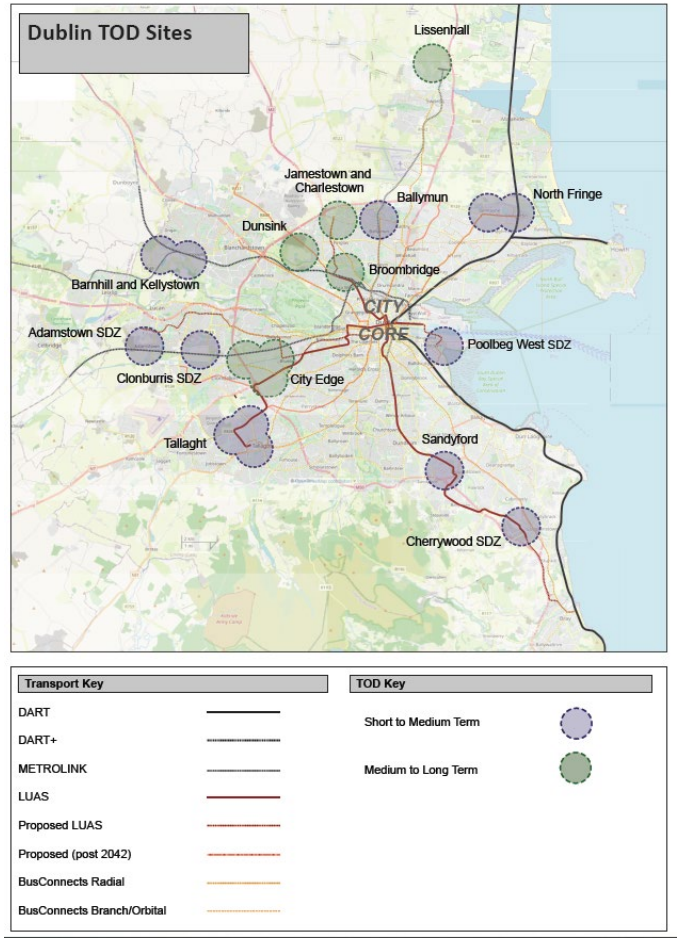


Figure 3-6 Dublin Study (2023): Opportunities for TOD in Major Urban Centres.

3.6 Regional Level Planning Policy & Guidance

Eastern and Midlands Regional Spatial and Economic Strategy (RSES)

The Eastern and Midlands Regional Assembly (EMRA) covers nine counties and twelve local authorities including Dún Laoghaire-Rathdown County Council. The *RSES* is a strategic plan and investment framework to shape the future development of the Region to 2031 and translates the objectives and strategic priorities of the NPF at a regional level.

It supports continued population and economic growth in Dublin City and suburbs, promoting quality new housing and a focus on the role of good urban design, brownfield redevelopment, urban renewal and regeneration. It promotes improvement in the provision of public transport and active travel and the development of strategic amenities to provide for sustainable communities.

The *RSES* provides further basis for the integration of land use and transport planning in the region, informing the preparation and implementation of plans, programmes and projects at all levels.

Dublin Metropolitan Area Strategic Plan (DMASP)

The *DMASP* is a key feature of the *RSES* and contains seven local authorities, including Dún Laoghaire- Rathdown County Council. It sets out a vision for the future growth of the metropolitan area, as well as large scale strategic residential employment and regeneration development opportunities.

The *DMASP* envisages a population of 1.65 million in the metropolitan area by 2031 , an increase of 18 % from 2016. The anticipated rate of population growth has significant implications for the Dún Laoghaire- Rathdown administrative area and for its two established Major Town Centres, Dundrum and Dún Laoghaire.

Furthermore *the DMASP* identifies a number of strategic development corridors predicated on the delivery of high- frequency, high-capacity public transport. The Metrolink – LUAS Corridor, as represented by the green line in **Figure 3-7**, includes the area around the Study Area including supporting development at the new and emerging mixed- use districts of Sandyford, Cherrywood and new residential communities in Ballyogan.

Figure 3-7 Dublin Metropolitan Area Strategic Plan. Source: RSES.

Greater Dublin Area Transportation Strategy 2022-2024

The *GDA Transportation Strategy 2022-2028* emerged in response to a review of the original 2016 strategy. Based on this review, an updated document *"sets out the framework for investment in transport infrastructure over the next two years."* The transport strategy's foremost aim is *"to provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth".*

With this in mind, the *GDA Transport Strategy 2022-2028* identifies four primary objectives:

- An Enhanced Natural & Built Environment
- Connected Communities & a Better Quality of Life
- A Strong Sustainable Economy

Although the Study Area is not specifically referenced in the *GDA Transport Strategy*, '*Measure LRT9 – Luas Green Line*' is intended to deliver significant additional capacity on the Luas Green Line for the Short-Term period of 2022-2030. This will be achieved through the provision of additional fleet and necessary infrastructure to meet forecast passenger demand. The Racecourse South and its environs is served by the Luas Green Line.

BusConnects Dublin

The focus of the BusConnects Dublin, as identified in the *GDA Transport Strategy,* is the delivery of the core bus network and associated bus infrastructure that is needed to make the bus system operate efficiently and reliably. The intention is to improve Dublin's bus services, enhance cycling and pedestrian infrastructure, and transition to a zero emission bus fleet. The scheme comprises 16 radial Core Bus Corridors (CBCs), and the delivery of over 200km of walking, cycling and bus infrastructure along key transport corridors in Dublin.

The most relevant CBC to the Study Area is the **Bray to City Centre CBC**, planned for Stillorgan Road (N11) through Cornelscourt and Cabinteely. Additional new local bus routes include **L26** and **L27**. Both routes will have a 30 minute frequency on weekdays and weekends. The L26 serves Kiltiernan to Blackrock, and the L27 will serve Ballyogan to Dún Laoghaire. Lastly, **S 8** serves Leopardstown Road north of the Study Area.

Figure 3-8 BusConnects Dublin 'Big Picture Map.' Source: NTA.

GDA Cycle Network Plan

Created as part of the *Greater Dublin Area Transport Strategy 2022-2028*, the *Greater Dublin Area Cycle Network Plan* aims to deliver an inclusive cycle environment which is safe for all abilities and ages, and which has strong functional and recreational connectivity between homes and key destinations. The Plan exhibits a network comprised of Inter-Urban, Primary, Secondary and Greenway routes for each of the seven Local Authorities within the GDA.

The key routes associated with the Racecourse South include a Greenway (**Greenway – Utility**), Ballyogan Road / Luas Bridge (**Primary Radial**) and the Leopardstown Racecourse Overbridge (**Secondary**).

The **Sandyford/Harcourt St Railway Line Greenway** runs through the ABTA Study Area in a north-south direction. The Plan identifies this route along the old Harcourt Street Railway Line travelling along the eastern edge of Leopardstown Racecourse and through the Racecourse South.

The Plan also identifies a **Primary Radial** cycle route along Ballyogan Road across the Carrickmines Interchange Overbridge (M50 Junction 15) as a potential M50 crossing in the vicinity of the existing Luas Bridge (north of the R842).

In addition the Plan identifies a **Secondary Route** over the M50 using the Leopardstown Racecourse Overbridge, which usually include moderately trafficked cycling connections between local zones and other network classifications. This would provide a connection between Ballyogan and Leopardstown Road.

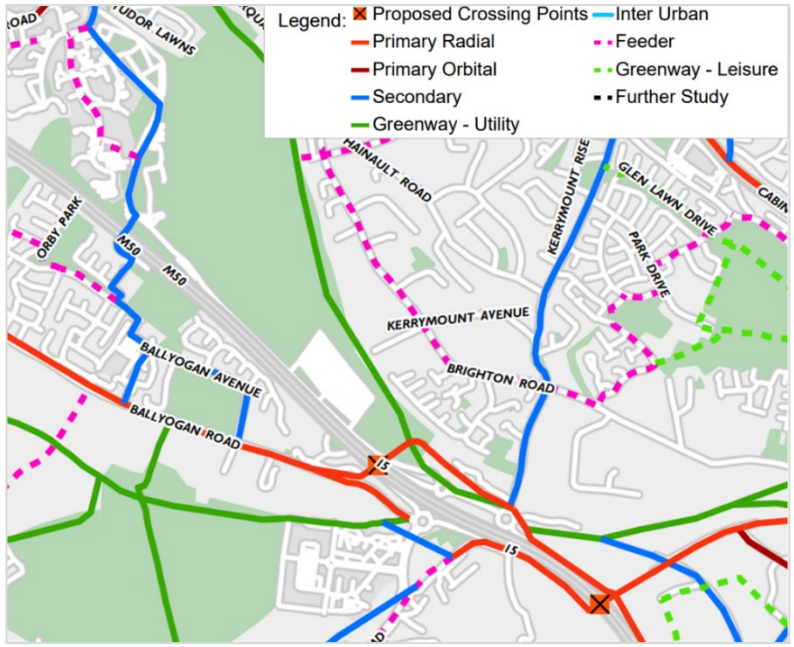


Figure 3-9 The *GDA Cycle Network Plan*, with an explanation of the types of routes located within and surrounding the Study Area. Source: NTA.

Classification	Function
Primary Radial	Main cycling arterials enabling high levels of utility movements among town centres and Dublin City in a radial manner.
Primary Orbital	Main cycling arterials enabling high levels of utility movements orbitally among Dublin's town centres.
Secondary	Moderately trafficked cycling connections between local zones and other network classifications and provides resilience to the Primary Networks.
Greenway – Utility	Parkland, coastal or waterway links providing utility functions for commuting, education, community service access and onward transport connections.
Feeder	Localised cycling connections providing access among residential areas and local zones as well as providing access onto other classifications.

3.7 Local Policy & Guidance

Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCDP)

The *DLRCDP* came into effect in April 2022 and sets out the policy objectives and the overall strategy for the proper planning and sustainable development of the County over the plan period from 2022 to 2028. The Plan sets out an approach centred on the core principle of sustainability, with a focus on creating vibrant, liveable, climate resilient communities.

While the *DLRCDP* is in place for a six-year period, it is framed having regard to the long-term development objectives of the County beyond 2028. The Plan focuses on five Strategic County Outcomes (SCO):

- A climate resilient County
- A compact and connected County
- A network of liveable Towns and Villages
- An inclusive and healthy County
- A vibrant economic County

In order to achieve SCO 2, land use and transport policy must be integrated, ensuring that services, employment and education are easily accessible by means of sustainable transport modes. The policy approach to transport and mobility includes the following:

- Support and focus on moving people from the private car to more sustainable modes, such as public transport, walking and cycling.
- Improve permeability for pedestrians and cyclists.
- Provide attractive, accessible and high quality walking and cycling networks that provide direct connections to key services and public transport interchanges.
- Design roads and streets in accordance with *DMURS*.

The Plan also supports the '**10 Minute Neighbourhood'** concept where a range of facilities and services are accessible in a short walking and cycling timeframe from home or are accessible by high-quality public transport located within a short walk from home.

As well as this, it is an objective of the Plan to implement **Travel Demand Management measures** aimed at reducing the demand for travel and encouraging walking, cycling and public transport.

Strategic Local Objective (SLO) – 143 is directly relevant to the Racecourse South, as noted in **Chapter 1** of this ABTA. This SLO involves carrying out a collaborative ABTA prior to the development of lands at Racecourse South, in consultation with TII and the NTA.

Furthermore, due to the Study Area's proximity to Leopardstown Racecourse, this ABTA recognises the importance of **SLO - 49**, which is detailed in **Table 3-1** along with other relevant objectives.

The *DLRCDP* further identifies *Long Term Road Objectives / Traffic Management / Active Travel Upgrades* for the south-west of the site. The *M 50 Parallel Road from Leopardstown to Carrickmines Interchange Road Scheme* is proposed run north to south adjacent to the M 50 on the site' s southwestern boundary, linking up to the M50 Parallel Road.

Lastly the Plan identifies a *Long- Term Motorway Proposal – the M50 Third Lane* (Sandyford Interchange to M11).

These road proposals fall under ***Policy Objective T23*** and will play a crucial role in shaping the future development of the Racecourse South and the surrounding areas.

Table 3-1 Relevant DLRCDP Policy Obejctives

T4 – Development of Sustainable Travel and Transport To promote, facilitate and cooperate with other transport agencies in securing the implementation of the transport strategy for the County and the wider Metropolitan Area as set out in Department of Transport's 'Smarter Travel A Sustainable Transport Future 2009 – 2020', and subsequent updates and the NTA's 'Transport Strategy for the Greater Dublin Area 2016-2035' and subsequent updates, the RSES and the MASP.
T10 – Rail Stations / Luas Stops To co-operate with the NTA, Iarnród Éireann, TII and other relevant authorities to secure the improvement and further development of railway stations and Luas stops in the County.
T13 – County Cycle Network To secure improvements to the County Cycle Network in accordance with the Dún Laoghaire-Rathdown Cycle Network Review whilst supporting the NTA on the development and implementation of the GDA CNP 2013 and subsequent revisions, subject to environmental assessment and route feasibility.
T23 – Roads and Streets To, in conjunction and co-operation with other transport bodies and authorities such as the TII and the NTA, to secure improvements to the County road network – including improved pedestrian and cycle facilities, subject to the outcome of environmental assessment (SEA, EIA and AA), flood risk assessment and the planning process.
SLO 49 – Strategic Local Objective To support the status of and continued viability of Leopardstown Racecourse as one of Europe's premier racetracks and a major leisure facility in the County by encouraging its future development and facilitating the development of supporting facilities.
CS13 – Strategic Regeneration To support the development and renewal of strategic regeneration sites in the County.

Car Parking Standards

There are four parking zones set out in the *DLRCDP*. The zones have been defined based on proximity to quality public transport as well as the range and accessibility of services within an area, by foot or by bike. The majority of the Racecourse South lands is located in Zone 3, with a smaller section of the land within Zone 2 (see **Figure 3-10** adjacent).

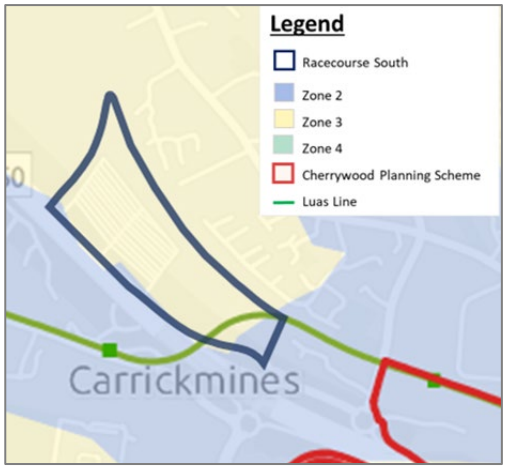


Figure 3-10 DLRCC Parking Standard Zones. Source: Extract from Supplementary Maps T2 Parking Zones

Zone 2 is characterised by access to a **good level** of existing or planned public transport services, and a **good level** of service accessibility, existing and planned, by walking or cycling.

Zone 3 is characterised has having some level of access to existing or planned public transport services, and a **reasonable level** of service accessibility.

Where applicable, these *DLRCDP* car parking standards have been superseded by the aforementioned *Sustainable Residential Development and Compact Settlement Guidelines for Planning Authorities* in the context of the Racecourse South lands.

The application of parking maximums in the development of the Racecourse South will be dependent on three critical enablers enhancing access to public transport links, as detailed in **Chapter 7.**

Chapter 13 of this ABTA presents recommendations for car parking in the context of the Racecourse South.

Strategic Flood Risk Assessment (SFRA)

The *SFRA* prepared as part of the *DLRCDP 2022-2028* indicates that an area south of the ABTA Study Area (i.e. Ballyogan Grove / Castle View local road) is within **Flood Zone A.** Flood Zone A refers to areas where the probability of flooding from rivers is greater than 1 in 100 a year and may require a Justification Test. For example, the nearby area adjacent to the Carrickmines Shopping Centre which is also within Flood Zone A did not pass the Justification Test for Plan Making, with no further development permitted under the *SFRA*.

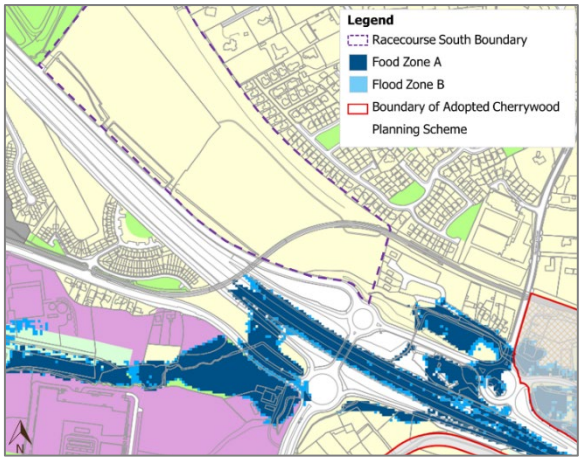


Figure 3-11 Areas of Flood Risk Concern (DLRCDP 2022-2028). Ballyogan Grove / Castle view can be seen to be within Flood Zone A

Dún Laoghaire-Rathdown's Green Infrastructure Strategy

Dún Laoghaire - Rathdown' s Green Infrastructure (GI) Strategy makes provision for an expanded and improved network of pedestrian and cycling infrastructure across the *DLRCDP* area. Racecourse South is within **Corridor 4 – Dún Laoghaire to the Mountains** and **Corridor 6 – Gateway Parks**. Both corridors each have their own objectives and actions to help achieve these objectives. For example:

Corridor 4

- **Objective:** To provide a multi-functional GI corridor connecting the mountain, urban area and coast.
- **Action:** Enhance connections with the Carrickmines Luas stop and across the Luas and M50.

Corridor 6:

- **Objective:** To provide transitional gateways to the mountains and open spaces from the urban areas of the County.
- **Action:** Improve corridor links across the M50, which should attempt to link habitat and water functions. It is accepted that some breaks in habitat connectivity is likely for such large infrastructure crossings.

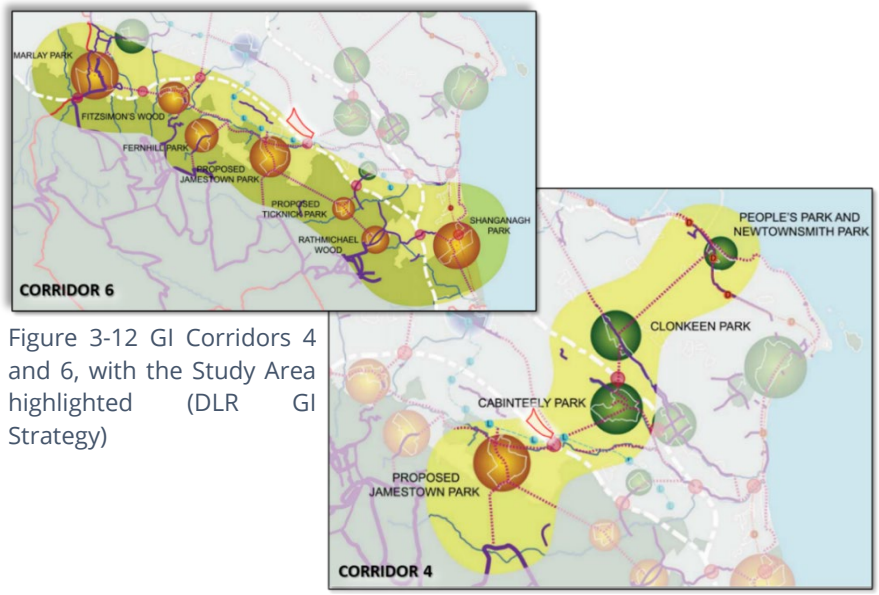
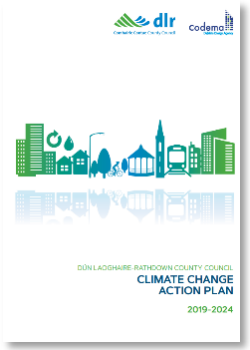


Figure 3-12 GI Corridors 4 and 6, with the Study Area highlighted (DLR GI Strategy)

Dún Laoghaire-Rathdown County Council Climate Change Action Plan 2019-2024



The *Dún Laoghaire-Rathdown County Council Climate Change Acton Plan 2019-2024 (CCAP)* represents an important step forward for the council in tackling the critical issue of climate change.

The *CCAP* sets out the Council's approach to both combating the causes of climate change as well as mitigating against its effects and building resilience through adaptation at a local level. It is organised around Key Action Areas, including the areas of Energy and Buildings, Transport, Flood Resilience, Nature- Based Solutions, and Resource Management.

The most recent Annual Progress Report (2022) highlighted that Dún Laoghaire-Rathdown continues to demonstrate national leadership in improving pedestrian and cycling infrastructure thus encouraging the uptake of cycling and walking across the County.

Dún Laoghaire-Rathdown County Biodiversity Action Plan 2021-2025

Ireland's first *National Biodiversity Action Plan 2002-2006* called for all Local Authorities to produce Local Biodiversity Action Plans. The purpose of these plans is to ensure the protection and appreciation of biodiversity at the county (local) level. Dún Laoghaire-Rathdown have a County-wide Ecological Network stretching from the mountains to the sea. It forms the basis of the County's Green Infrastructure and Biodiversity. Most relevant to this ABTA is the **Leopardstown to N11 Wildlife Corridor**, wherein the Racecourse South lands are located.

Dún Laoghaire-Rathdown County Cycle Network

A County Cycle Network was developed for Dún Laoghaire-Rathdown County Council in 2012. This plan provided a priority listing for the development of key cycle routes in the county. According to the *DLRCDP*, cycle infrastructure improvements are ongoing. The County Cycle Network identifies a greenway route through the Study Area.

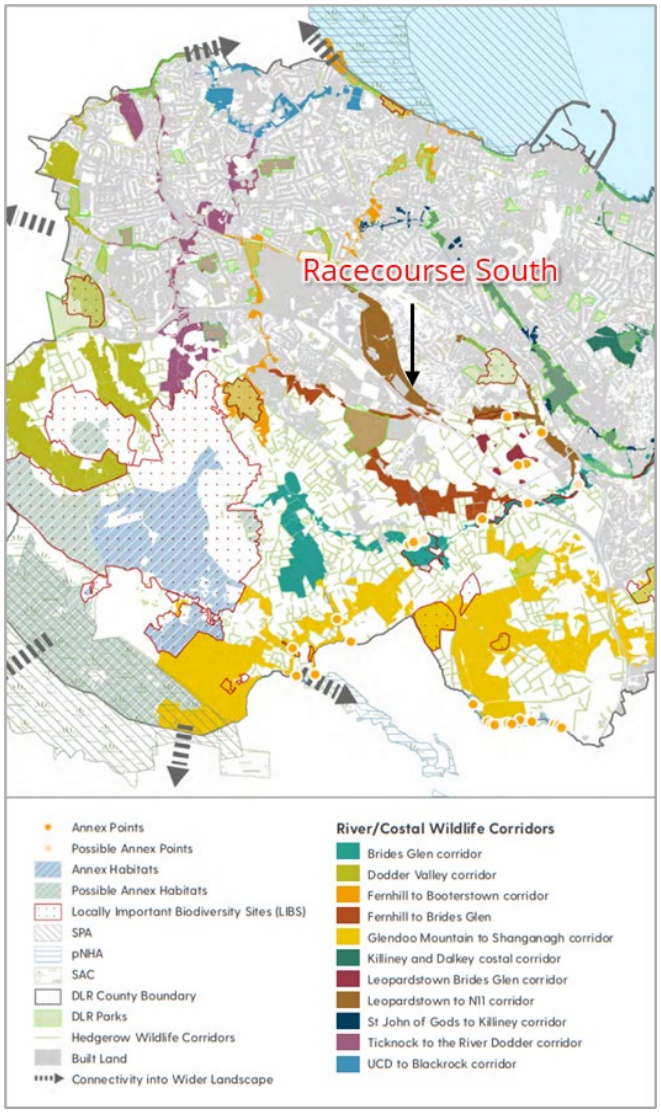


Figure 3-13 The Dún Laoghaire County-Wide Ecological Network. Source: DLRCC.

Ballyogan and Environs Local Area Plan 2019-2025 (BELAP)

The *BELAP* is one of the most important policy documents to inform the preparation of the Racecourse South ABTA, as it sets out the vision and specific objectives for the Study Area. The *BELAP* covers Ballyogan and its environs, and represents roughly 3.7% of the overall land area of Dún Laoghaire Rathdown.

The primary objective of the Plan is to help the *BELAP* area develop as an attractive place to live, work, and visit. The Plan envisages the *BELAP* area developing as a network of interconnected 'Quarters' where walking and cycling will be a convenient and sustainable alternative to the private car for short and medium distance journeys.

The Vision Statement for the Ballyogan Quarter, which includes the Racecourse South lands (Neighbourhood 7), states *"a framework for comprehensive and integrated development at Racecourse South will be set out by way of a Site Development Framework*".

The *BELAP further* states that some of the area' s most significant opportunities and challenges are within the area of transport and mobility ,- highlighting two of the most significant pieces of strategic infrastructure within both the *BELAP* area and Dún Laoghaire- Rathdown County – the Luas and the M50.

Additionally, the *BELAP* outlines Local Policies and Objectives which are directly relevant to the Racecourse South, including:

Policy BELAP SDF1 – Masterplan: A Masterplan for the entire SDF area shall be prepared and accompany all planning applications for significant development at these lands. The Masterplan shall accord with the Guiding Principles set out in this Site Development Framework.

Policy BELAP SDF2 – Consistency Statement: All planning applications shall be accompanied by a 'Consistency Statement' detailing how each of the Guiding Principles in this SDF is to be delivered.

Tables 3-2, 3-3 and 3-4 outline additional relevant *BELAP* objectives for the Racecourse South ABTA.

Table 3-2 Relevant MOV Objectives for the ABTA

Relevant Objectives - Movement
MOV2 M50 Crossings
To facilitate the delivery of new and improved crossing opportunities of the M50 within and adjacent to the BELAP area, with particular emphasis on pedestrian and cycle route.
MOV3 Onward Connections
To ensure integration between the LAP lands with initiatives such as 'Smarter Travel' and strategic cycle routes connecting Dun Laoghaire-Rathdown and Dublin City and to develop improved connectivity to surrounding communities including Sandyford, Cherrywood and Kiltiernan/Glenamuck.
MOV4 Cycling Infrastructure
To ensure that all new cycling infrastructure be provided in accordance with the standards set out in the National Cycle Manual (2012) published by the NTA, where practicable, recognising the challenges in retrofitting infrastructure within the existing road network.
MOV6 Racecourse Luas Stop
To facilitate the opening of the Racecourse Luas Stop on the Green Line permanently to the public.
MOV9 Facilitating All Modes
To ensure that all new routes, inclusive of those accommodating traffic, shall be designed and constructed in a manner that will facilitate the safe and easy movement of pedestrians and cyclists. Schemes shall be designed on the principle of 'filtered permeability.
MOV12 – New Linkages
To provide or facilitate the delivery of the new linkages shown in Table 4.5 and Figure 4.11.

Other relevant *BELAP* objectives include:

Table 3-3 Other Relevant Objectives for the ABTA

Other Relevant Objectives
RE4 Locations for Higher Buildings The locations identified as 'RES4' in Racecourse South…are considered as suitable locations for higher buildings within the BELAP area. It is anticipated that all bar one (The Park Carrickmines) of these locations would be suitable for residential buildings, consistent with the prevailing zoning objective.
COM4 School Provision To continue to work with the Department of Education and Skills to ensure the timely delivery of Primary and Post-Primary schools in the BELAP area. Three school sites have been identified within the BELAP area at Kilgobbin South, Glencairn North, and Racecourse South.
ENV9 Playing Pitches in Racecourse South To explore the provision of a playing pitch within the Racecourse South lands.

Additionally, new Linkages specifically identified in *BELAP MOV12 New Linkages* include:

Table 3-4 BELAP MOV12 New Linkages

	Description
8	Racecourse South (Harcourt St Line) - Junction 15 to Leopardstown Road - connecting the Racecourse South to Junction 15; providing external connectivity to Cherrywood to the east and Foxrock, Cabinteely and the N11 to the north.
9	M50 Crossing – Junction 15 - connecting the Racecourse South and residential areas in Foxrock and Ballyogan Road negating the need to cross at the existing Junction 15; providing strategic north-south (Kiltiernan-Foxrock) and east-west connectivity.
10	Brighton Place to M50 Parallel Road - providing internal permeability through the Racecourse South lands and connecting residential areas in Foxrock to the M50 Parallel Road.
11	Racecourse South (Harcourt St Line) to M50 Parallel Road - providing permeability at the western end of the Racecourse South lands to the M50 Parallel Road.

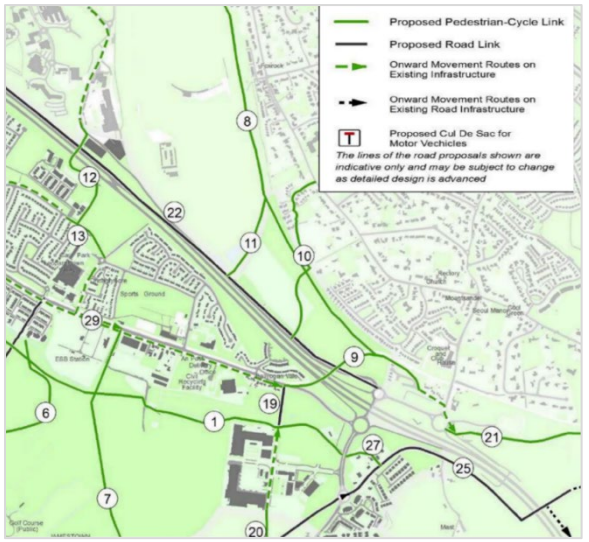


Figure 3-14 Excerpt from the BELAP Movement Strategy and Proposed Linkages. Source: BELAP 2019-2025, Map 4.11.

Site Development Framework for the Racecourse South

As noted previously, the *BELAP 2019- 2025* states that there are certain areas with significant opportunity for change within the *BELAP* area which need a more detailed approach. The *Site Development Framework (SDF)* for Racecourse South covers the majority of the Racecourse South Neighbourhood (approx. 20 ha.). The *SDF* sets out key objectives for the study area, and each *SDF* Objective has a spatial component (see **Figure 3-15*).***

SDF Objectives include:

Table 3-5 SDF Objectives. Source: BELAP

SDF Objective 1: Broad location suitable for the provision of increased height.
SDF Objective 2: Provision of a focal point including a landscaped plaza and a mix of small-scale local neighbourhood uses.
SDF Objective 3: Preferred location of primary open space.
SDF Objective 4: Preferred location for the delivery of pedestrian and cyclist connectivity with land south of the M50.
SDF Objective 5: Optional location for the delivery of pedestrian and cyclist connectivity with land south of the M50
SDF Objective 6: Potential for future linkages to lands north of the SDF.
SDF Objective 7: Preferred location for the delivery of a school.

SDF Guiding Principles

The *SDF* has also identified Guiding Principles for the Racecourse South lands for land use, building height, density, movement, landscape and places.

Land Use - Guiding Principles:

Regarding land use, the primary use on the Racecourse South will be residential, with supporting ancillary uses. The area adjacent to the Racecourse Luas stop shall include a high- quality public plaza that will incorporate a mix of small-scale uses such as a local shop, crèche and café, consistent with the 'A' zoning. Additionally, a site shall be reserved for a school within the SDF area, and the opportunity for co-locating the school and the primary area of open space should be pursued.

Building Heights and Density - Guiding Principles:

Further to Policy BELAP RES4 – Locations for Higher Buildings, the SDF map identifies key areas within the site for buildings of varying heights. The area to the west of the site and the area to the immediate south of the Luas Bridge are considered suitable for taller buildings, providing that they are of high architectural and design quality. **Figure 3- 15** illustrates the indicative residential bands for the site. The target net density for the Racecourse South Neighbourhood is 65 units per hectare, given that the site relatively level and is close to high quality public transport.

Movement - Guiding Principles:

Pedestrian and cyclist permeability should be prioritised in the layout and design of the public realm. The success and sustainability of the neighbourhood will be measured in terms of its connectivity to schools, shops, recreational amenities' and community facilities.

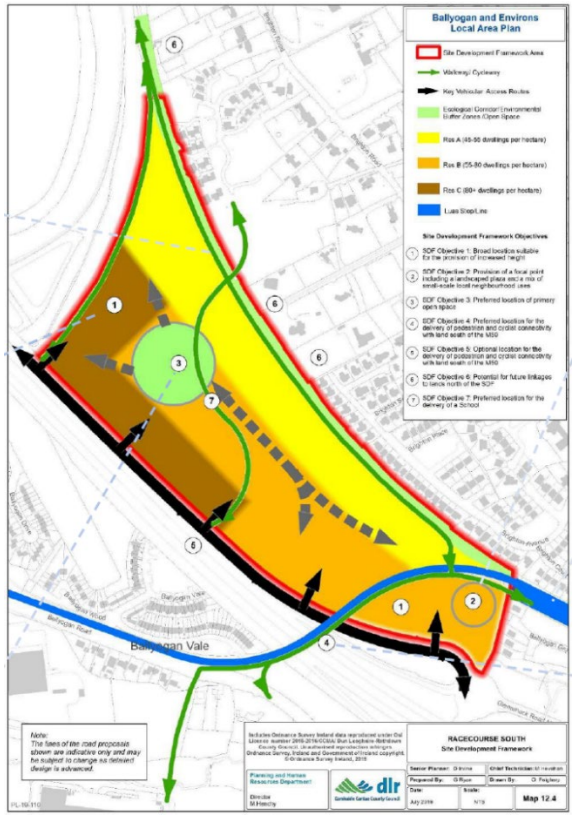


Figure 3-15 Site Development Framework: Racecourse South. Source: BELAP 2019-2025, Map 12.4.

In support of *MOV12 New Linkages*, Proposed linkages / routes include:

- Pedestrian and cyclist route to the immediate south of the old Harcourt Street railway line, to link the site to Glenamuck Road North.
- Potential for additional future linkages through to Brighton Road.

Landscape and Spaces - Guiding Principles:

The preferred location of the primary open space is identified in **Figure 3-15.** The BELAP states that a playing pitch must be included in any future applications for the site at a minimum of 0.81 hectares. There should be a large amount of open space within the site, including pocket parks and a public plaza near the Luas Stop in the southern section of the site. This plaza will play a key role as a focal point in the neighbourhood.

Ecological corridors should also be provided along the north east and north west boundaries. Due to the fact that there is a water distribution line and a gas distribution line running along the north eastern boundary, this ecological corridor will be informed by the need to provide a setback to these lines.

Cherrywood Strategic Development Zone Planning Scheme

Dun Laoghaire Rathdown County Council recognise the potential of Cherrywood, which is south of the Racecourse South lands, to be a major new residential and employment area in the County. Since 2010, approx. 360 ha of land at Cherrywood has been designated as a **Strategic Development Zone (SDZ**).

Most relevant to the future Racecourse South pedestrian and cycle network is a proposed walkway / cycle way north of the Cherrywood SDZ. The Cherrywood SDZ proposes a walkway / cycleway to link to Carrickmines Park and Ride in the northern section of the Scheme. This link, located along Acton's Way, is proposed to provide residents access to a transport interchange at Carrickmines P&R.

Sandyford Urban Framework Plan – Sandyford Business District

Sandyford Business District is defined by the *Sandyford Urban Framework Plan (SUFP)* and comprises of 190ha of land. This includes six separate developed areas that are at different stages of development. This includes the Stillorgan Business Park, Sandyford Business Park, Central Park, the Legionaries of Christ, South County Business Park, and Leopardstown Park Hospital. The *SUFP* aims to integrate the separate areas within the Plan so that the area develops as a coherent district.

Given their spatial proximity, achieving soft mode connectivity and better integration with Sandyford Business District and the Cherrywood SDZ will be key considerations in the Racecourse South ABTA.

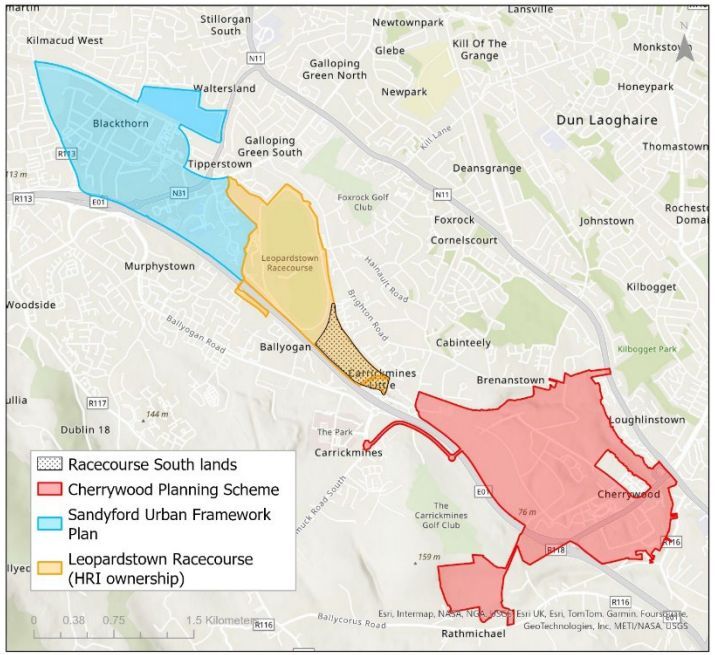


Figure 3-16 Cherrywood SDZ and Sandyford Business District in relation to the Racecourse South ABTA Study Area.

4 Case Studies

In order to establish the context upon which the transport characteristics of the Racecourse South would be based, a selection of relevant case studies that display high-quality sustainable transport practices were identified. These act as exemplars with growth strategies planned around strong public transport systems, having prioritised sustainable transport interventions and alternatives to the use of the private car, and achieved ambitious mode share targets.

These case studies will establish key principles to guide the development of Racecourse South and identify any relevant interventions that may be applicable to the Study Area.

4.1 Vauban, Freiberg (Germany)

Vauban is a master-planned development located 3km south-west of Freiburg City Centre, consisting of 2,000 housing units and hosting a population of approximately 5,000 people. Planning of the district began in 1998 and was completed in 2006.

Sustainable Mobility Design Measures

Vauban was designed with a 'car-free' concept in mind and planning was based on environmental, economic and social sustainability. This was achieved through maintaining a car-free centre, providing extensive public transport links and developing excellent walking and cycling facilities.

Parking at a Distance

A key principle of the design of Vauban was to make private car use much less convenient than sustainable modes.

Vauban employs the '**Parking at a Distance**' principle, whereby car parking is provided at a location not directly outside or adjacent to the persons home or destination. Cars are restricted within the internal streets, and instead car parking is available for both residents and visitors at the edge of the neighbourhood in two garages which residents can apply to lease a space from. Moreover, the parking space to household ratio is approximately 0.5.

High-frequency public transport and car sharing services enable residents to move around without the need to own a car. This sharing service operates in the whole city of Freiburg, but the Vauban area has the most members, and at least ten cars are always parked in Vauban for residents to use. The German rail service's 'RegioMobilCard' promotes the use of public transport by offering discounts, including 20% off carsharing usage fees.

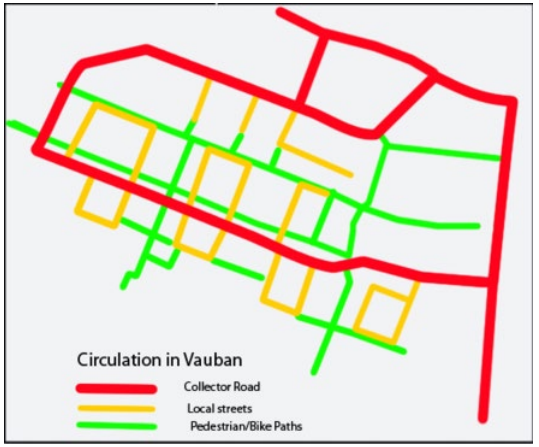


Figure 4-1 Transportation network in Vauban

4.2 Nordhavn, Copenhagen (Denmark)

Nordhavn is located 4km from the Copenhagen's city centre and is the largest metropolitan development project in Scandinavia. A Masterplan has been developed for this post-industrial harbour site, envisioning Nordhavn has an urban archipelago of small islands connected by pedestrian infrastructure and green elements.

Sustainable Mobility Design Measures

The district is based on the principle of a '5-Minute City,' making it possible to reach shops, institutions, work places, cultural facilities and public transport within 5 minutes' walk from any point in the district. Facilitating this concept is a metro line, connecting the district to Copenhagen's city centre in under 20 minutes – similar to the Racecourse South Lands and its connection to Dublin City Centre via the Luas. Therefore, the district's master planning and mobility-enabling designs makes it easier to walk, cycle, and use the metro than to travel by car.

Multi-Storey Car Parks

Nordhavn's streets and urban spaces have been designed and constructed as intimate and pedestrian-friendly environments. Large public spaces will create reference points, pocket parks will offer recreational hideouts, and narrow green edge zones along the buildings will enrich the urban environment.

The Park'n'Play multi-storey car park in Nordhavn is a unique car park that redefines the traditional car park design. It incorporates green facades and a rooftop playground, making full use of its placement in an up-and-coming urban neighbourhood. The exterior is made up of shelves of planting and stairways with handrails that the architects call the 'red thread,' leading visitors up to the roof of the car park.

Figure 4-2 Park 'n Play in Nordhavn. Source: Rasmus Hjortshøj/Coast Studio

Figure 4-3 Park 'n Play in Nordhavn. Source: Rasmus Hjortshøj/Coast Studio.

4.3 Leidsche Rijn, Utrecht (Netherlands)

Leidsche Rijn is a new district located in Utrecht, in the Netherlands. Situated west of the Amsterdam-Rhine Canal, Leidsche Rijn is a sustainable urban extension developed to prevent urban sprawl, and has been built upon the principles of compact growth, transit oriented development (TOD) and active travel.

The presence of the A2 motorway adjacent to Leidsche Rijn presents a challenge in terms of the district's spatial continuity and presents parallels with the Racecourse South, particularly regarding the severance created by the M50 motorway.

Sustainable Mobility Design Measures

Leidsche Rijn is centred on the principle of transit-oriented development (TOD). Workplaces, amenities and residential dwellings are situated in close proximity to significant transit infrastructure, making it easier to walk, cycle and use public transport. Leidsche Rijn has two train stops, Utrecht Tewwijde and Utrecht Leidsche Rijn.

The Leidsche Rijn Centrum shopping centre, incorporates a new market square and mixed-

use developments in its vicinity, including residential, commercial and recreational uses. This creates shorter travel distances between shops, workplaces, homes and transit services.

The design of Leidsche Rijn's light rail stops and their proximity to central plazas scattered with residential, commercial and recreational uses offers a key insight in how the Racecourse South can successfully integrate nearby Luas stops with a central plaza and a variety of uses and activity.

Dedicated bus lanes feature throughout Leidsche Rijn, while city and regional buses run with high frequency, connecting Leidsche Rijn to Utrecht City Centre. There is also a Park & Ride at the Leidsche Rijn Centrum.

Dafne Schippers Cycling Bridge

Since 2017, the Dafne Schippers Bicycle Bridge, has connected the new district of Leidsche Rijn with the historic city centre of Utrecht, which were previously severed from each other by the Amsterdam-Rhine Canal.

The bridge represents the shortest, and therefore the most efficient and attractive cycling route between Utrecht Centre and the Leidsche Rijn district. The bridge is subject to greater passive surveillance compared to other bridges nearby, as it runs primarily through residential areas Furthermore, the bridge becomes part of the urban landscape through its integration with a primary school and a park in one coherent design.

Figure 4-4 Dafne Schippers Bridge connecting Leidsche Rijn with Utrecht City Centre. Source: Archdaily / Marcel IJzerman.

Figure 4-5 Integration of the approach span of the cycle route with the roof of the nearby primary school. Source: ARUP / Jeroen Musch

4.4 Krakow (Poland)

Krakow was the first city in Poland to adopt a sustainable transport policy in the early 1990s. Several measures were established including introducing pedestrian zones, zones with limited access for cars and modernising public transport fleets. Krakow's transport policy was updated in 2007 and aims to create an efficient, safe, economical and environmentally friendly transport system.

Planty Park is a city park encircling the historic central core of Krakow's Old Town. The Park route consists of eight separate gardens that are merged together to form a 4km long circular walking route which neatly encloses Kraków's historical centre. This orbital route is an example of an attractive green public space within a built-up urban environment, acting as an ecological corridor and complementing the cyclist-friendly and people-oriented streets within the Old Town.

Sustainable Mobility Design Measures

The radial route around the Old Town offers a cyclist and pedestrian-friendly link between various locations around Kraków, connecting the central station in the north with university buildings in the west and the city's Central

Square in the south. The Park integrates active travel modes with green infrastructure, with over 40 tree species covering the 21ha park.

Figure 4-6 Planty Park 'green lung' around Krakow Old Town

Public transport is highly accessible within the Old Town and on the edges of Planty Park. Tram stops surround the green ring of the park and divides the southern half and the northern half of Planty Park and Old Town. This street operates as a shared space between cars, cyclists and trams. The inner road network of the Old Town is largely pedestrianised, with vehicular access restricted to permit holders and taxis. Street parking is also limited to residents of Old Town.

4.5 Ulleråker & Rosendal, Uppsala (Sweden)

Situated approximately 71km north of Stockholm, Upsalla is the fourth largest city in Sweden and has strategic rail and motorway connections to both the capital and Stockholm-Arlande Airport. By 2050, Uppsala anticipates an additional 25,000 homes and 10,000 jobs.

There is a municipality plan to consolidate the majority of this growth within two new city districts based in the South of Uppsala – Ulleraker and Rosendal, both centred around public transport. This includes the provision of a new light rail system in the south of the city, and a new double tracked train station at Bergsbrunna on the main Stockholm-Uppsala rail line.

District Mobility Plan

To support a targeted 80% sustainable mode share within the city districts, vehicular traffic will be severely restricted. To support this, all carparking is prohibited to mobility hubs situated on the periphery of the districts, which also include bicycle sharing schemes, cycle parking, car clubs and public transport connections.

Transit-Oriented Development (TOD)

The development of Ulleråker and Rosendal will include the provision of a new light rail system in the south of the city, and a new double tracked train station at Bergsbrunna on the main Stockholm-Uppsala rail line. The majority of future development will occur in close proximity to the new light rail line servicing their respective communities

4.6 Summary of Key Concepts

It is not always appropriate to replicate exactly what is done elsewhere successfully. Instead, learning from them and applying principles and ideas in a local context, such as in the Racecourse South, can offer valuable insights and lessons on some of the key ingredients for success and innovate solutions for local issues.

New areas that are more densely populated (Vauban) are planned for a reduced use of motorised vehicles, with a higher rate for public transport use and walking and cycling for local trips or as part of linked trips with public transport. They have been planned originally with minimal on-street parking, filtered permeability and are highly transit-oriented.

Other areas (Leidsche Rijn) have used innovative approaches to enhance cyclist and pedestrian connectivity while integrating with other land uses. This is especially important in the case of the Racecourse South due to the compact nature of the site.

Historic cities such as Kraków have introduced measures like extending the pedestrian and cycle network with pedestrianisation of the Old Town Centre and shared space streets, and removal of on-street parking spaces. The key principles from the case studies that may be appropriate for the Racecourse South Local Transport Plan includes:

- **Filtered Permeability** with shared streets
- **High quality cycle and pedestrian network –** including pedestrian and cycling priority measures + **Fietsstraat** – cycle streets
- High-quality **active travel bridge**
- **10-Minute Neighbourhood** model
- Availability of **accessible public transport** (bus and light rail)
- **Parking at a Distance –** use of peripheral parking areas for residential parking
- Multi-modal transport interventions that facilitates **Transit-Oriented Development Principles (TOD)**
- **Mobility Hubs** / Park'n'Play
- **Greenway / urban green areas**

Table 4-1 Summary of key sustainable mobility measures in each case study

Case Study	TOD	Shared Spaces	Cycling / Pedestrian Network	Filtered Permeability	Green spaces	Parking at a Distance
Vauban	✖	✖	✖	✖	✖	✖
Nordhavn	✖	✖	✖	✖		✖
Leidsche Rijn	✖	✖	✖	✖	✖	✖
Uleraker & Rosendal	✖	✖	✖	✖	✖	✖
Krakow Old Town & Planty Park		✖	✖		✖	

5 Racecourse South Transport Objectives

5.1 Transport Oriented Development (TOD)

According to the *National Sustainable Mobility Policy*, a **Transit-Oriented Development (TOD)** is a form of development that seeks to maximise the provision of housing, employment and leisure space closer to frequent, high- quality transport services. TODs are friendlier to public transport users, cyclists and pedestrians, and seek to convert car trips to public and active transport trips.

TOD' s align with the *NPF* National Strategic Outcome (NSO) 1 to pursue compact growth, and ensure that high- density residential areas are supported by employment, services, amenities and access to high-quality public transport.

TODs are also key to supporting climate action targets under the *Climate Action Plan 2024*, with the goal to achieve a 50% reduction in greenhouse gas emissions by 2030 in the transport sector.

Additionally, the NTA supports the delivery of TOD in locations identified in the *GDA Transport Strategy 2022- 2042* (**Measure PLAN 7**). The NTA notes that it will continue to work with local authorities to:

- *"Identify further locations served by existing and proposed public transport which are appropriate for high density development supporting a mix of uses*".

The Transport Strategy identifies that the higher level of accessibility provided by TOD allows for a higher density of development.

Relevant to the Racecourse South, the *GDA Transport Strategy* identifies that areas within 800m of an existing or proposed DART, Luas or Metro stop are considered as appropriate locations where development could occur with a higher density than would normally apply.

5.2 Principles of TOD

TOD can unlock the potential of lands for large-scale housing delivery while also maximising the value of existing transport hubs. The **Institute for Transportation and Development Policy (ITDP)** uses eight principles to define TODs:

1. **WALK -** Develop neighbourhoods that promote walking**.**
2. **CYCLE** - Promote non-motorised transport networks.
3. **CONNECT -** Create dense networks of streets and paths.
4. **TRANSIT -** Locate development near high-quality public transport
5. **MIX -** Plan for mixed uses, income, and demographics.
6. **DENSIFY -** Optimise density and match transit capacity.
7. **COMPACT -** Create regions with short transit commutes.
8. **SHIFT -** Increase mobility by regulating parking and road use.

This ABTA recognises the potential of developing the Racecourse South as a TOD. This is outlined in Transport Objective 1 in the following Section.

5.3 Racecourse South Transport Objectives

In conjunction with the objectives set out by the international, national, regional, and local policies detailed in **Chapter 3 – Policy Review,** five key transport objectives in total have been identified for the Racecourse South, and guide the progress of the Racecourse South ABTA as a whole.

These objectives have been designed to correspond with national and regional policy, as well as objectives set out in the *Dún Laoghaire - Rathdown County Development Plan 2022-2028,* and the *Ballyogan and Environs Local Area Plan 2019- 2025* which includes the *Site Development Framework for the Racecourse South lands.*

To assist the Option Development and Assessment Stage of the Racecourse South Local Transport Plan, a Vision for the Racecourse South has also been developed. This is based on the vision for the Racecourse South as outlined by the *BELAP Site Development Framework*.

RACECOURSE SOUTH TRANSPORT OBJECTIVES

Transport Objective 1:
Prioritise high-quality public transport options that facilitates best practice Transit Oriented Development Principles.

Transport Objective 2:
Support a fully permeable 10-Minute Neighbourhood for that prioritises movement by active travel modes through the use of filtered permeability measures.

Transport Objective 3:
Address community severance by developing strategic pedestrian & cycling connections on important permeability desire lines between the Study Area & surrounding neighbourhoods .

Transport Objective 4:
Develop appropriate car parking management practices that align with prevailing national and regional policy.

Transport Objective 5:
Safeguard the strategic function of the M50 motorway network that includes Junction 15 in accordance with national road development policy set out in *Spatial Planning and National Roads Guidelines for Planning Authorities* and in compliance with the requirements of TII Publications.

The Vision for the Racecourse South lands near Carrickmines

The Racecourse South Lands will be an exemplar transit-oriented development that will successfully integrate with the surrounding neighbourhoods through a high-quality public realm and green links, building design and layout, and prioritisation of sustainable transport.

6 Option Development & Assessment

6.1 Overview

The Options Development stage seeks to identify options for the Racecourse South, addressing the weaknesses of each transport mode. The previous stages of the ABTA process inform the development of options for the Racecourse South. The identified options are further informed by existing policies and transport proposals set out in the earlier **Baseline Conditions** and **Context Reports** and address the weaknesses found in the Strengths, Weaknesses, Opportunities and Challenges (SWOC) analysis.

The Options Assessment Stage first assesses whether the options meet the objectives of this ABTA, and options that pass this initial sift are carried forward for Multi- Criteria Analysis (MCA). MCA criteria are drawn from the Department of Transport's *Transport Appraisal Framework* (TAF).

Options that meet the objectives and would have a positive impact as determined by the MCA are then included in Part B of the Local Transport Plan, which is prepared in Parts 4 and 5 of the ABTA process.

Consultation from statutory stakeholders including the National Transport Authority (NTA) and Transport Infrastructure Ireland (TII) then informs the finalisation of the LTP and the phasing of projects and initiatives.

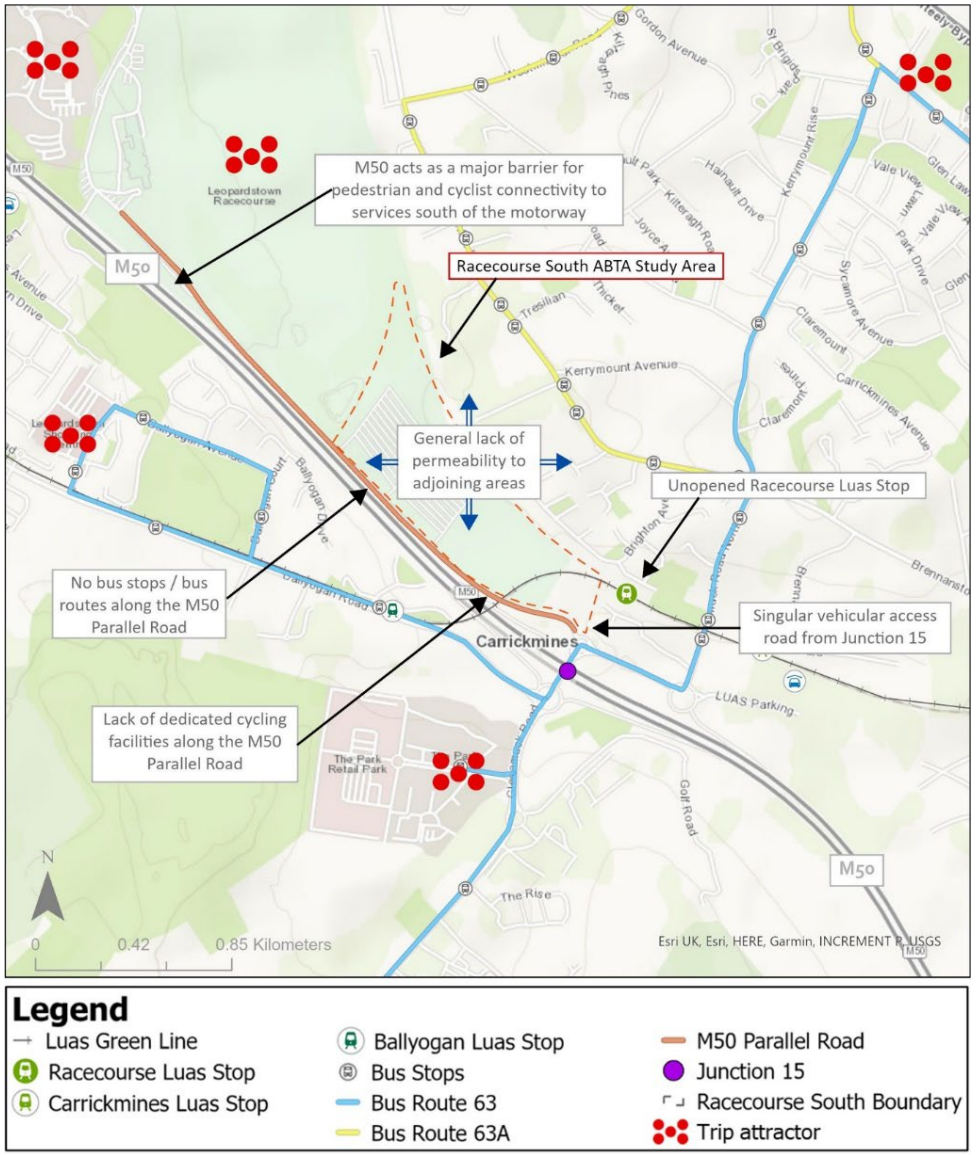


Figure 6-1 (**right**) Overview of Weaknesses & Opportunities addressed in Part 1 of this ABTA. The key services (key trip attractors) such as health services, retail and education, and employment centres are also shown here.

6.2 DMURS Analysis

An assessment of the existing state of play was undertaken in accordance with the street hierarchy as set out in the *Design Manual for Urban Roads and Streets (DMURS).* This street hierarchy was used to define the current situation of the Study Area. *DMURS* defines three types of streets:

- **Arterial Streets:** major routes via which major nodes are connected.
- **Link Streets:** provide the links to arterial streets or between neighbourhoods and/or suburbs.
- **Local Streets:** provide access within communities and to arterial and link streets.

Given the importance of establishing an active travel network to cater for a significantly increase in walking and cycling, this Study will also introduce **Greenways** and low-trafficked routes.

The M50 Parallel Road is an **Arterial Street**. At the southern end, it has a moderate speed limit of 50 km/h, but at the northern end upon entering Leopardstown Racecourse this drops to 30 km/h along with traffic calming measures (speed bumps). This road is the main link between the Racecourse South lands and the connecting roads. At the southern end it joins the Carrickmines Interchange / Junction 15, where the motorway transitions to the regional road R842.

Section 1.3 of *DMURS* notes that the principles and standards set out in the Manual apply to the design of urban roads and streets with a speed limit of 60km/h or less. However, the M50 motorway and its junctions are part of the national road network and are outside the scope of *DMURS*.

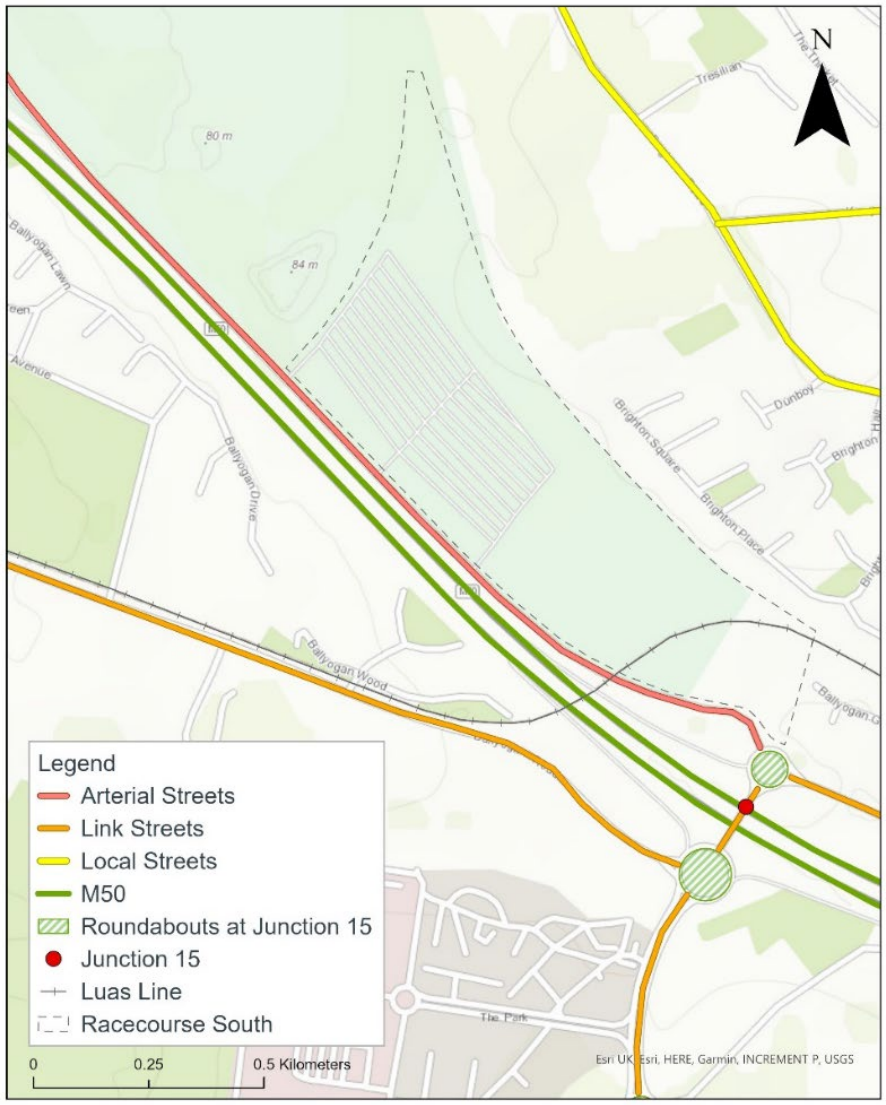


Figure 6-2 DMURS Analysis of Existing Street and Road Network on the Racecourse South. Also illustrated is the M50 and Junction 15.

In this case, the *DMURS* analysis excludes the M50 and Junction 15 because standards set out in TII Publications apply.

6.3 Key Principles and Transport Proposals

To ensure that the options developed address the weaknesses in the SWOC, key principles were identified to inform the development of options for the Racecourse South. These key principles were formulated based on principles identified in the Case Studies (Chapter 4).

- Develop **strategic links for active travel modes** that provide a connection to surrounding neighbourhoods.
- Supplement the active travel links with **ancillary cycle infrastructure** such as cycle hubs, short-stay cycle parking, cycle hire scheme and other forms of micro-mobility such as e-scooters.
- **Local / Residential internal Streets** where active modes are the primary and preferred mode of transport. Speed limits for motorised vehicles are low.
- Develop a **Green Ring** around the Racecourse South, providing an ecological corridor with pedestrian and cycle links**.** This would connect to the greenway identified by the *GDA Cycle Network Plan*.
- **Open** the **Racecourse Luas Stop** for use.
- Deliver **bus routes** aligning with the planned BusConnects local routes (L26 and L27) to serve the Racecourse South and surrounding neighbourhoods.
- Employ the **Parking at a Distance** principle, consolidating car parking in multi-storey or basement car parks that also provide a high degree of sustainable transport infrastructure.
- **Quietways** should be developed on residential streets linking to the centre of the Racecourse South lands, benefitting visitors and residents by facilitating local access but prioritising full active travel movement.

6.3.1 Transport Proposals

Walking and Cycling Connections

The availability of services nearby will make sustainable travel modes the instinctive travel choice for many future residents in the Racecourse South lands. This necessitates the creation of high-quality, safe and enjoyable active travel routes. Strategic pedestrian and cycling links will connect the Study Area with surrounding neighbourhoods, and will be supported internally through the prioritisation of active travel modes (see **Figure 6-3)** on the next page.

It should be noted that although **Figure 6-3** indicates the *GDA Cycle Network Plan (GDACNP)* link traversing over the M50 via the Luas Bridge, there are constraints associated with the Luas Bridge which is designed to carry a Light Railway only. Progressing this *GDACNP* route as shown presents significant technical, and safety matters which would be difficult to overcome to provide a future walking and cycling link.

Alternatively, this ABTA presents a proposal for a new active travel bridge which could facilitate this link.

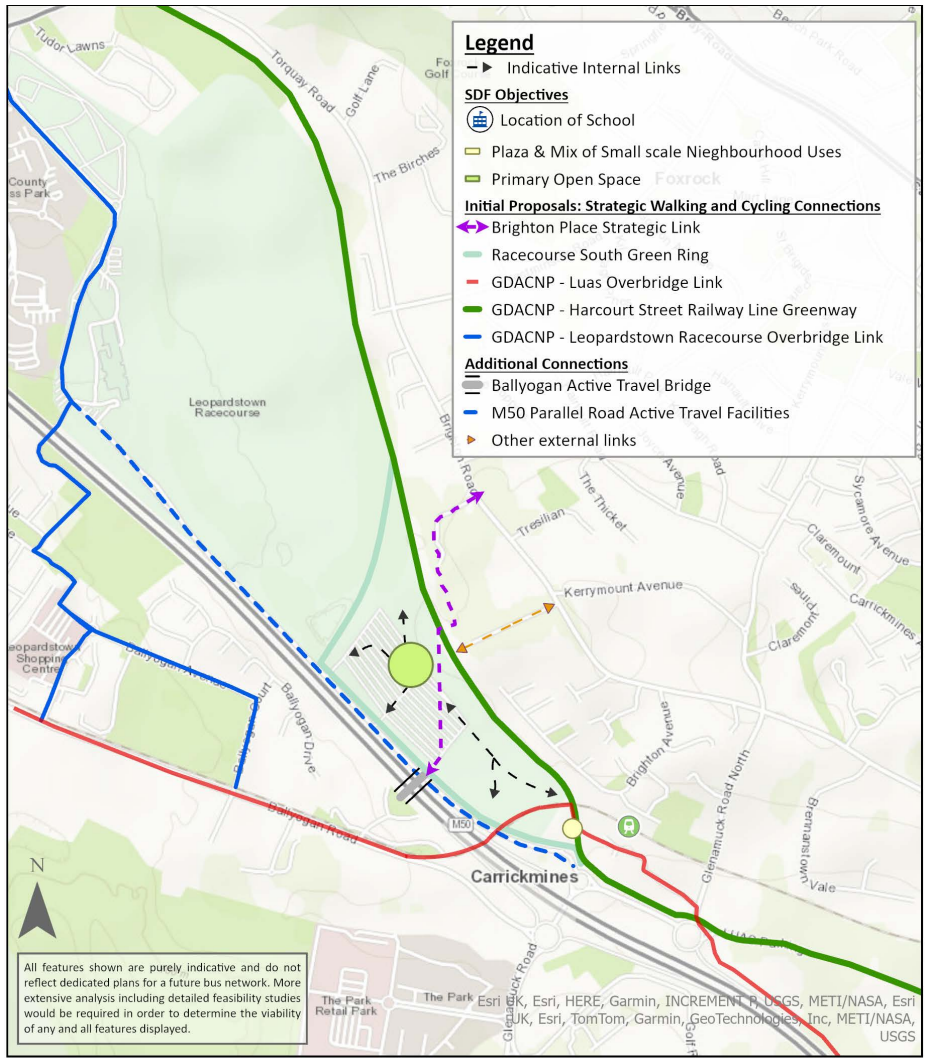


Figure 6-3 An initial overview of Strategic Pedestrian and Cycle Routes and Indicative Internal Pedestrian and Cycling Links proposed for the Racecourse South. All features displayed are subject to the master planning process, and shall be explored in Part B of this Report.

Greening & Racecourse South Green Ring

To support the ecological corridor that the route follows, planting and Sustainable Urban Drainage Schemes (SUDs) will be incorporated wherever possible. This includes creating linear Rain Gardens to help improve surface water management and raised planting beds.

A Green Ring along the north eastern and north western boundaries would align with the Harcourt St Railway Line Greenway proposed under the *GDA Cycle Network Plan.* This would:

- Provide an ecological corridor for wildlife.
- Provide a valuable natural amenity for future residents of Racecourse South.
- Provide external connectivity northwards.
- Provide external connectivity to Cherrywood SDZ in the south.
- Enhance Green Infrastructure (GI) connections to GI Corridor 4 and Corridor 6.
- Contribute to Leopardstown to N11 Wildlife Corridor.

Public Transport

The baseline assessment highlights deficiencies in the public transport network that serves the Racecourse South lands. A potential bus route is proposed to overcome these deficiencies, and the Racecourse Luas Stop is proposed to be opened to align with local policy and provide residents with a high- frequency light rail option at their doorstep.

Parking Management

- Be guided by *'Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities'* for carparking standards.
- Support car-lite neighbourhoods by consolidating car parking at the edge of the neighbourhood in multi-storey car parks. This would support the prioritisation of walking, cycling and public transport by providing a better balance of space.
- Provide some own-door parking for residents with reduced mobility.
- Support behavioural change away from the private car.

Mobility Hubs

A concept for the Racecourse South includes the provision of two mobility hubs, including a Park 'n' Play. This multi-storey car park will incorporate exterior SUDs, a play area for children on the roof, and will provide an opportunity to showcase local art on the exterior wall of the building. An initial proposal is to locate mobility hubs along access points to the Arterial Streets.

6.3.2 Place-Based Considerations

As per *Policy BELAP SDF1 – Masterplan*, the transport options recommended in Part B of this LTP will aim to support the master-planning process. Part B of this LTP will also recommend key principles and place-based considerations that should be taken into account in the development of the Masterplan.

Public Realm

- Deliver Primary Open Space in the north of the site to provide relief to the higher density area to the west, as well as an array of more casual open spaces and pocket parks throughout the site.
- Provide a Central Plaza located in the south by the Racecourse Luas Stop to deliver a high-quality public realm, acting as an arrival/departure focal point for the neighbourhood.
- Provide high-density residential development with a mix of small-scale uses such as a local shop, crèche, and a café at this plaza.

Figure 6-4 Salmon Weir Pedestrian and Cycle Bridge crossing the River Corrib in Galway.

Figure 6-5 Pedestrian zone in Königsegggasse, Vienna.

Figure 6-6 Interchange point with bike and car share schemes, at Heverlee Train Station in Leuven, Belgium.

6.4 Options Development Process

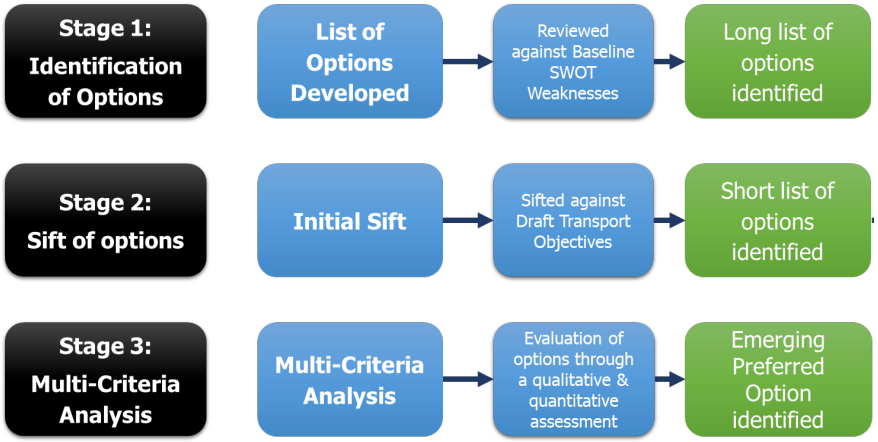
Options were developed by the following modes, to ensure that residents of the future Racecourse South neighbourhood would have the infrastructure required to live a sustainable and vibrant lives, supported by key walking and cycling links, as well as highly accessible and high-frequency public transport options:

- Develop a strategic **Active Travel Network.**
- Improve existing **M50 Crossings** and consider options for a **new Active Travel Bridge** across the M50 to address the severance for pedestrian and cyclist activity resulting from the motorway.
- Provide sustainable mobility upgrades **to Junction 15.**
- Improve **Public Transport Services** (Luas and Bus).
- Improve the **External Road Network.**
- Encourage effective **Parking Management** by applying Parking at a Distance principles.
- Encourage and facilitate the delivery of short and long term **Bicycle Parking Options.**
- Deliver a suite of **Supporting Measures.**

6.5 Options Assessment Process

With these Principles, Transport Proposals and Place-based Considerations in mind, the ABTA process formalised the lists of options and assessed them. Because this is an underdeveloped site and the measures recommended in this LTP area high-level measures, individual options were analysed rather than 'scenarios' of several 'packaged' options.

The assessment process took the options through the following steps:



Stage 1 Identification of Options: Options for each mode were identified.

Stage 2 Sift of Options: Options were screened against the Transport Objectives of the ABTA. Options that satisfied at least one of the four Transport Objectives are submitted to a Multi-Criteria Assessment (MCA).

Stage 3 Multi- Criteria Analysis: The MCA is based on criteria from the Transport Appraisal Framework (TAF) (2023) (Table 6-1).

In order to assess the transport user benefits, the wider economic impacts and the funding and costs of each option, 'Economy' was added as an MCA criteria, in accordance with Transport Infrastructure Ireland's (TII) Project Appraisal Guidelines Unit 7.0 - Multi-Criteria Analysis (PE-PAG- 02031). 'Economy' was split into 'Transport User Benefits' and ' Wider Economic Impacts' to provide more clarity and detail on the impact of an option (Table 6-2).

Each proposed scheme was evaluated on a seven-point scale with the effects ranging from highly positive to highly negative as judged against the existing conditions and with a view to how the proposed scheme supports the Transport Objectives (***Table 6-3***).

Table 6-1 MCA Criteria from the TAF & PAG. Source: Department of Transport; TII.

Economy	Considers how the proposed option will impact time spent travelling, household expenditure on transport, journey reliability and journey quality. This also considers the level of funding required.
Accessibility	Measures how the proposed option will improve access to key services, and educational institutions, healthcare facilities, transport centres (Luas stops and bus stops), recreational facilities and employment areas.
Social	Examines how the proposed option will impact accessibility for people from deprived groups or different transport needs, as well as gender specific impacts.
Land Use	Considers the impact of the proposed options on the quality of the public realm, existing public transport facilities, land use zoning, and impact on access to / integration with existing transport networks and services.
Safety	Assesses the proposed schemes' impact on safety and security for all road users
Climate Change	Explores how the proposed options provide climate change mitigation and adaptation
Local Environment Impact	Examines the impact of the proposed schemes on air quality, noise and vibration, biodiversity, water resources and landscape and visual quality.

Table 6-2 Breakdown of the Economy MCA criteria. Source: Department of Transport; TII

i. Transport User Benefits	Considers how the proposed option will impact time spent travelling, household expenditure on transport, journey reliability and journey quality, and change in land use value.
ii. Wider Economic Impacts	Considers wider economic benefits and the level of Exchequer funding required.

Table 6-3 Criterion Assessment from the TAF. Source: Department of Transport.

Highly Positive Impact	The option significantly improves conditions for the relevant criteria.
Positive Impact	The option is likely to improve conditions for the relevant criteria.
Low Positive Impact	The option is likely to somewhat improve conditions for the relevant criteria.
Neutral Impact	The option will result in no change in conditions for the relevant criteria.
Low Negative Impact	The option is likely to somewhat worsen conditions for the relevant criteria.
Negative Impact	The option is likely to worsen conditions for the relevant criteria.
Highly Negative Impact	The option significantly worsen conditions for the relevant criteria.

Final Stage: Emerging Preferred Option: The options that scored the most positively in the Multi Criteria Assessment stage form the basis for the recommended measures included in **Part B** of this ABTA.

Part C includes an implementation table summarising all measures (see **Chapter 17 – Implementation**) and associated phasing of schemes and projects recommended within this Local Transport Plan. As discussed, and agreed with Dún Laoghaire-Rathdown County Council, implementation will depend on factors such as:

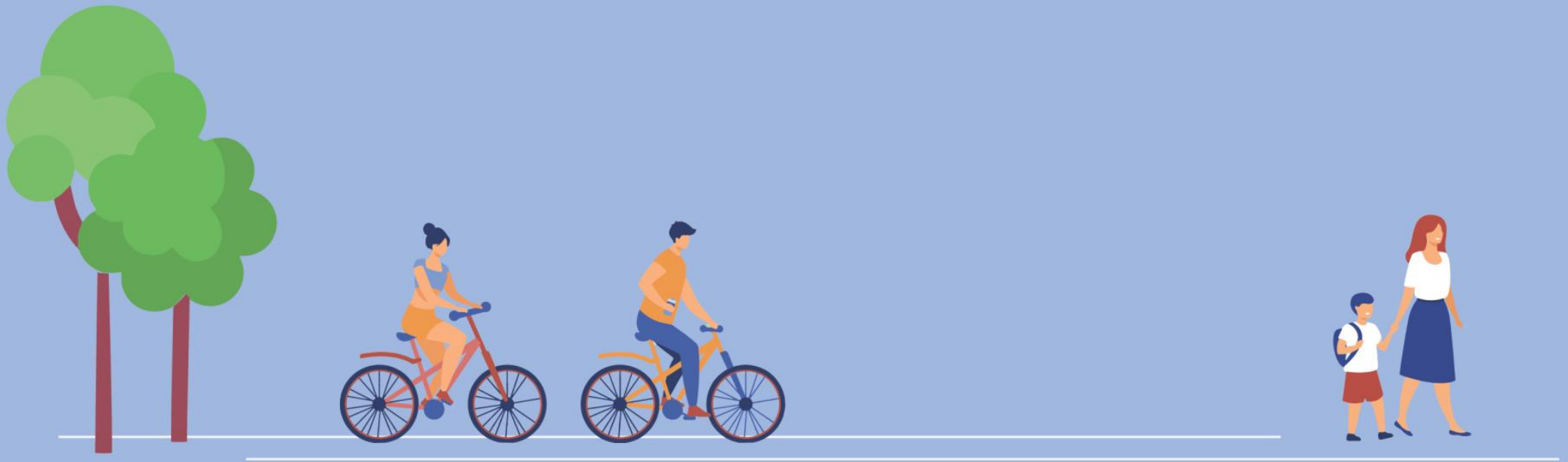
- Dún Laoghaire-Rathdown County Council's priorities;
- Availability of funding;
- Agreement with landowners;
- Feasibility and environmental appraisals; and
- The appropriate statutory approval processes with the necessary consultation with the NTA and TII.

All projects must algin with national, regional and local policies. Each individual project is subject to appropriate feasibility, environmental, archaeological and architectural screenings and statutory approval processes.

The Options and Measures that follow in **Part B** have been developed and analysed through the Option Development and Assessment process. Collectively, these present options whose implementation leads to the creation of safe neighbourhood with coherent, comfortable, direct and attractive active travel and public transport links, fulfilling the Transport Objectives and informing this Plan.

Part B

The Strategy



7 Overview of Proposals

7.1 Summary of Recommendations

This section sets out an *overview* of the key recommendations for the Racecourse South lands. This LTP has been informed by national, regional and local policies, a comprehensive baseline assessment, a review of principles employed in international case studies, and a collaborative optioneering process involving a series of workshops held by the project team over the course of Spring and Summer 2024.

The place context for the Racecourse South can be generally described as Neighbourhood, which will include residential-led development as per the *Dún Laoghaire Rathdown County Development Plan 2022-2028*.

7.2 Critical Enablers of Development

In order for the site to be developed in the short term, the following **three critical enablers** emerged at the conclusion of the ABTA process:

1. **Opening the Racecourse Luas Stop** to provide a light rail option to the immediate south of the Study Area (see **Chapter 10**).

Maximising public transport connectivity is critical for the sustainable development of the Racecourse South. The Racecourse Luas stop is envisaged to play a significant role as a multi-modal interchange hub with the Luas Green Line and pedestrian and cycle links. Small-scale community uses, such as a crèche, local convenience shops and cafés situated around a public plaza are also envisaged for the area around the Racecourse Luas stop. The development of the planned BusConnects routes L26 and L27 must occur in tandem with this.

2. Constructing the **new active travel bridge** to facilitate a connection to Ballyogan Wood Luas and bus stops (see **Chapter 9**).

This bridge will provide opportunities to enhance the permeability to and from the Racecourse South lands, local public transport stops and the wider walking and cycling catchment area.

Crucially, this bridge will enhance accessibility to neighbourhood centres and services such as supermarkets, schools, sports facilities and community centres south of the M50 at Ballyogan and Carrickmines.

3. Opening a **public right of way** into Brighton Wood via the Brighton Place Strategic Link (see **Chapter 8**).

Crucially, this will **enable connections to** Brighton Road. This will also support the future street network of pedestrian and cycle streets which will provide strategic north-south and east-west movement throughout the Racecourse South and to surrounding neighbourhoods. This will facilitate a connection between the Racecourse South and The Park Carrickmines, schools and key services in Ballyogan, the Neighbourhood Centre at Brighton Road / Foxrock and childcare facilities in Brighton Wood, and further afield to Cabinteely and Cornelscourt.

Additionally, the street network will be augmented by a **greenway**, which will loosely surround the Racecourse South and provide an important north-south connection. This greenway will facilitate walking and cycling journeys, including commuting journeys, and connectivity with surrounding areas.

Early delivery of this greenway would enable active travel to be front-loaded to help achieve the desired mode shares, and to ensure that the Racecourse South lands is connected to high - density employment centres and services to the north (South County Business Park and Sandyford Business District) and Cherrywood to the south.

Lastly, Mobility Hubs are envisaged to play an integral role in the management of car parking in the site by consolidating primarily residential parking in the Racecourse South neighbourhood.

Figure 7-2 overleaf illustrates an overview of proposals for this future neighbourhood, combining the strategic active travel links, as well as bridge, bus and light rail proposals.

Appendix A presents a summary of measures recommended in this LTP.

Figure 7-1

Cycle streets in the Netherlands where cars are guests.

Waterford Greenway.

CGI of Mobility Hub in Dortmund. Source: Scheffler Helbich Architekten.

7.3 Environmental Screening

This Plan has been subject to Screening for Strategic Environmental Assessment (SEA) and Screening for Appropriate Assessment (AA). The findings of the screenings are provided in the accompanying Screening for SEA Report and Screening for AA Report.

The next chapters will examine the different modes and options in more detail.

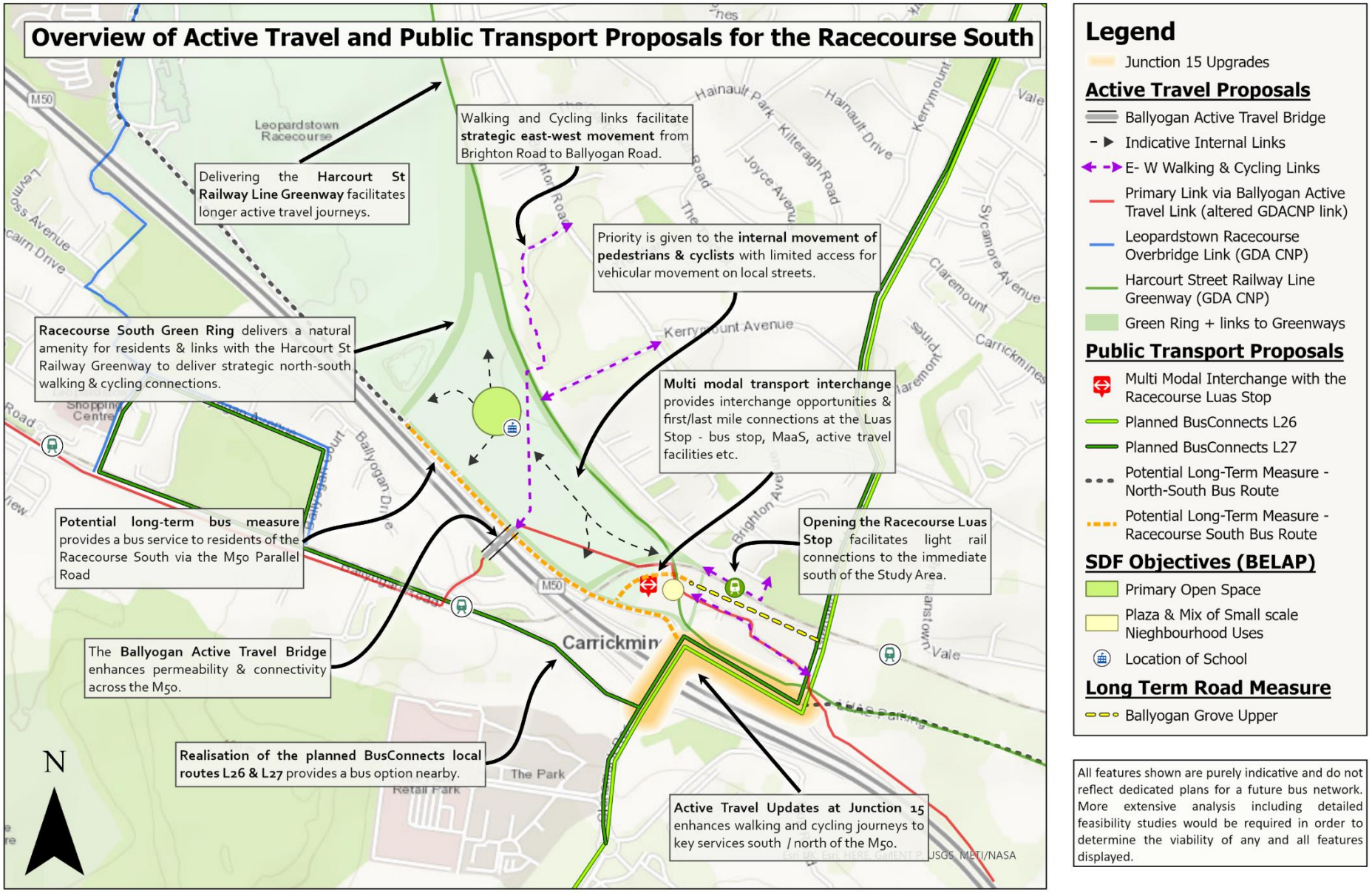


Figure 7-2 Overview of Indicative Proposals for the Racecourse South. This map does not include the internal street network as this is subject to a future masterplan.

8 Active Travel

8.1 Introduction

Active travel, i.e., walking, wheeling, cycling and scooting, is one of the most sustainable forms of mobility, that offers a low-cost, flexible and healthier alternative to the private car. DLRCC is justifiably proud of its innovation in active travel schemes such as the Coastal Mobility Route and has ambitious proposals to link the Racecourse South site with key destinations across the borough and beyond.

Key insights from the 2023 Dublin Metropolitan Area Walking and Cycling Index indicate that every day in the Dublin Metropolitan Area those who walk and cycle take nearly **530,000 cars** off the road. Additionally, there is a **€1.48 net economic benefit** for each km cycled instead of driven, and **€1.01 net economic benefit** for each km walked instead of driven.

The prioritisation of walking and cycling is therefore embedded into this LTP, based on the modal hierarchy set out in the *National Investment Framework For Transport in Ireland* . Every street within the Racecourse South network will be expected to facilitate a high - quality environment for walking and cycling, following the user hierarchy principles. This user hierarchy prioritises designing for the needs of pedestrians first, followed by cyclists, public transport and lastly cars.

8.2 Active Travel Targets

Achieving a modal shift to active travel modes is crucial in achieving the 2030 target of a 51% reduction in Ireland's greenhouse gas emissions. This is highlighted in a range of publications including the *Climate Action Plan 2024* , the *National Investment Framework for Transport in Ireland* and the *National Sustainable Mobility Policy*.

Dún Laoghaire-Rathdown County Council (DLRCC) have one of the most ambitious modal share targets for walking, cycling and public transport in Ireland, with a target of 70% of travel by sustainable travel modes and 30% by cars and other forms of private transportation (*Dún Laoghaire-Rathdown County Development Plan 2022-28* (*DLRCDP*)). This includes **15 %** share for walking, **25%** for cycling and other forms of micromobility such as e-scooters and **30%** for public transport.

8.2.1 Dún Laoghaire-Rathdown Active Travel Programme 2023

In order to meet these ambitious modal share targets, DLRCC are rolling out active travel schemes as well as a number of initiatives on active and smart mobility solutions.

Recent years have seen a marked increase in investment in active travel by the government, reflecting a broader interest in moving away from dependence on the private car and expanding the use of Active Travel modes, as well as pursuing sustainability targets set out in key national policy guidance. In 2023, the National Transport Authority (NTA) allocated €290 million in Active Travel Investment Grants to local authorities to enhance the delivery of hundreds of projects across the country.

In total, the investment will contribute to the development of almost 1,000km of new and improved walking and cycling infrastructure across

the country by 2025, including the delivery of segregated cycle lanes, widened footpaths, new walking and cycling bridges, and new pedestrian crossings. DLRCC were allocated €22 million for a variety of Active Travel schemes under the 2024 grants.

8.3 Existing Conditions

The Baseline Conditions and Policy Context report produced as part of Stage 1 of the ABTA process highlighted deficiencies with the pedestrian and cycling network in and around the Racecourse South.

Due to the undeveloped nature of the Racecourse South, there is currently no pedestrian or cycling network within the site, with the exception of a single pathway serving the Racecourse Luas stop. Externally, the M50 Parallel Road lacks any dedicated cycling infrastructure up to Junction 15. A continuous footpath extends along the northern side of the road, linking Leopardstown Racecourse to Carrickmines Luas P&R in the south.

Despite this, there are currently low levels of pedestrian connectivity to nearby schools, residential areas, supermarkets, and neighbourhood centres. This is particularly true to the south and west as the M50 acts as a barrier, severing pedestrian and cycling access to the areas south of the motorway.

8.3.1 Key Active Travel Outcomes for the Racecourse South

The future Racecourse South walking and cycling network should be fully accessible, permeable, safe, and attractive. Additionally, these networks should follow a high standard of design in line with *DMURS* that prioritises safer and more efficient active travel movement over that of the private car. The cycling network specifically should provide a continuous and coherent route between the main trip generators and attractors in the neighbourhood, and all cycling facilities should be designed to the NTA's *Cycle Design Manual (CDM) 2023* standards, including cycle parking.

Figure 8-1: Existing conditions of the M50 Parallel Road. Source: DBFL.

Additionally, the Racecourse South cycling network should address the five main requirements for cycle-friendly infrastructure as outlined in the CDM, which can be found below.

Figure 8-2 The 5 Requirements of Cycle - Friendly Infrastructure. Source: NTA's CDM (2023).

8.4 Options Development and Assessment Process

The Option Development and Assessment Stages of this ABTA identified that the internal road and street layout of the Racecourse South should comprise street with a high place value in order to complement the 'Neighbourhood' development typology.

The Masterplan for the Racecourse South may provide more detail regarding the layout of the future internal street network to accommodate the appropriate densities and housing typologies. The following section therefore presents recommendations for **strategic linkages** which should complement the future internal street network, and which aim to address the poor permeability and connectivity between the Study Area and surrounding neighbourhoods. **Key principles for the internal active travel network** for which all future development in the site should follow is also set out in this chapter.

8.5 Measures: Strategic Linkages

The recommended **strategic linkages** includes:

GDA Cycle Network Links:

- **Sandyford / Harcourt St Railway Line Greenway**
- **Leopardstown Racecourse Overbridge link**
- **Primary Link via the new Active Travel Bridge.** This link fulfils the GDACNP 'Luas Overbridge link,' by an alternative alignment over the M50.

North-East Strategic Link:

- Brighton Place link

Strategic Greenway Link:

- Racecourse South Green Ring

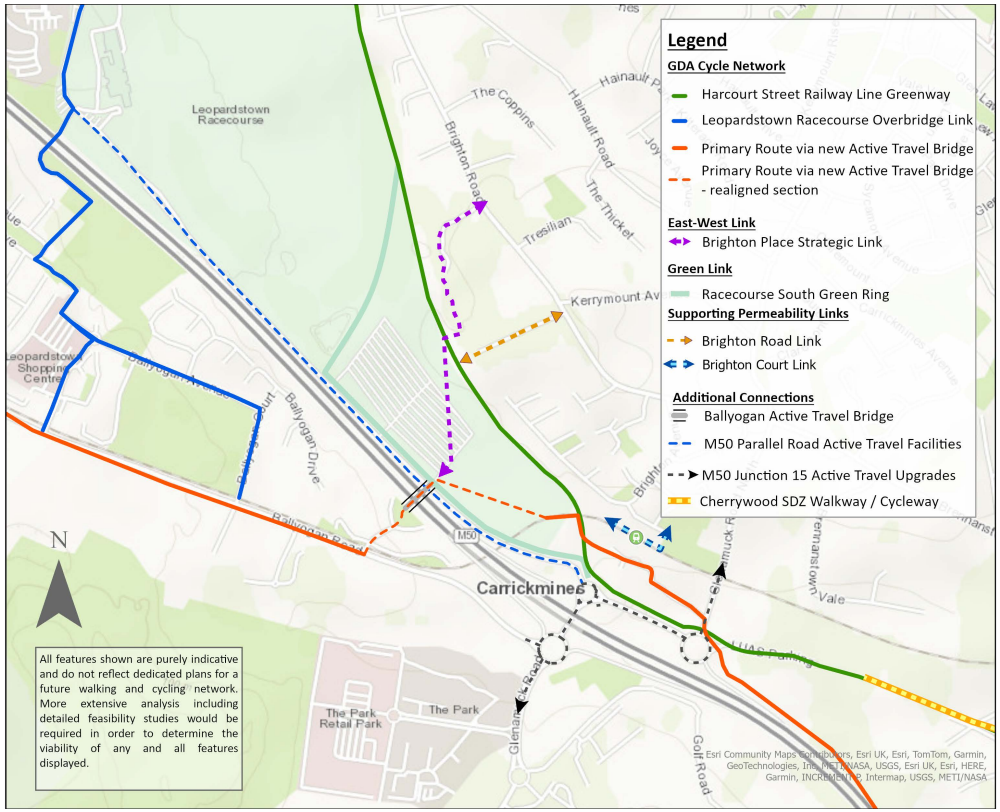


Figure 8-3 Overview map of the Indicative Strategic Walking and Cycling Links, which are subject to further feasibility assessment.

8.5.1 GDA Cycle Network Plan

Key to the delivery of pedestrian and cycling infrastructure for the Racecourse South will be the connections to existing / proposed walkways, greenways and cycle routes. This includes alignment with the

NTA's *GDA Cycle Network Plan* (*GDACNP*) Primary, Secondary and Greenway routes which are explained in detail in **Section 3.6.**

These cycle routes would contribute to the provision of interconnected pedestrian infrastructure between the Racecourse South and Foxrock, Ballyogan, Cherrywood and Leopardstown Road. As previously noted in the Report, the key routes associated with the Racecourse South which should be realised to support the development of the Study Area include the following:

1. Sandyford / Harcourt St Railway Line Greenway

The old Harcourt Street Railway Line extends along the eastern edge of Leopardstown Racecourse and the Racecourse South. *The GDACNP* identifies a **Greenway** along this rail line, to cross the Racecourse South in its southern half and connect to Glenamuck Road. This greenway would serve both an amenity and commuter function.

2. Primary Link via the new bridge (Ballyogan Active Travel Bridge)

The Plan also identifies a **Primary Radial Route** along Ballyogan Road, crossing the M50 and travelling southwards through the Racecourse South towards the Carrickmines P&R. This route would provide a link from Ballyogan to the P&R, and southwards to Cherrywood.

The identified link proposes using the Carrickmines Interchange Overbridge, however alternative alignment that fulfils the *GDACNP* objective is proposed in this LTP through the use of the recommended Ballyogan Active Travel Bridge identified in **Chapter 9.**

3. M50 Crossing / Leopardstown Racecourse Overbridge

A **Secondary Route** is identified south of the M50, providing a cycling connection over motorway via the Leopardstown Racecourse Overbridge.

This route would provide important connectivity from schools, recreational centres and residential areas in Ballyogan to the South County Business Park and northwards to Leopardstown Road.

The LTP recommends the delivery of these routes to complement the future internal pedestrian and cycle networks.

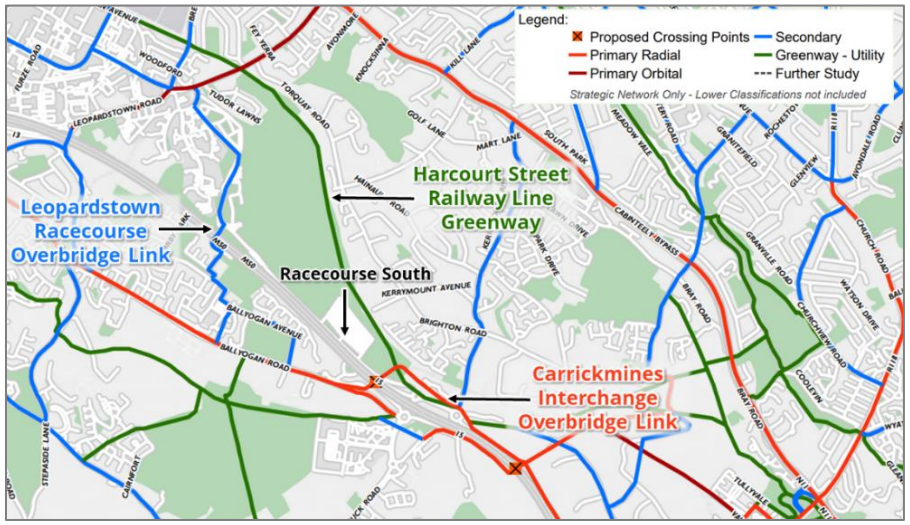


Figure 8-4: GDA Cycle Network Plan Overview.

Measure AT 1

GDA Cycle Network Plan

Dún Laoghaire-Rathdown County Council will work in collaboration with the NTA, TII and other relevant stakeholders to deliver the proposed routes under the GDA Cycle Network Plan, with an amendment to the Carrickmines Interchange Overbridge Link to utilise the proposed Ballyogan Active Travel Bridge instead of the Luas bridge.

Figure 8-5 Harcourt Street Railway Bridge, and Brighton Wood, Foxrock

8.5.2 Brighton Place Strategic Link

The lack of permeability to the north / east of the Study Area is recognised. Located at the north-eastern boundary of the Racecourse South lands, the Harcourt Street Railway Bridge provides an opportunity to connect to Brighton Road and address this permeability issue. The bridge was restored as part of the planning conditions in the residential development in Brighton Wood, Foxrock in 2016 (*DLR Application no. D13A/0285, ABP no. PL06D.243193*).

The Planners Report notes that the public right-of-way could only come into effect when the Sandyford / Harcourt St Railway Line Greenway route is secured and / or the Racecourse South lands are developed, after which it could be addressed *"under compliance by way of a suitable condition attached to any future grant of permission."*

Furthermore, the Dep. of Transport's *National Investment Framework for Transport in Ireland* notes the importance of utilising existing assets over new infrastructure. Developing this existing link would provide attractive opportunities for active travel for residents, providing external connectivity north-eastwards and would greatly boost the appeal of the Racecourse South lands' public realm. The delivery of this **link is considered a critical enabler** of development of the lands.

Measure AT 2

Brighton Place Strategic Link

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders to ensure that the Brighton Place Strategic Link is delivered, and the public right-of-way comes into effect via the old Harcourt Street Railway Line Bridge.

8.5.3 Racecourse South Green Ring

A 'green ring' is recommended to be provided to loosely encircle the Racecourse South, completing the comprehensive internal and external active travel network.

External connectivity will be provided via the Brighton Place Strategic Link and the Greenway to nearby employment centres, key services, and the Cherrywood SDZ Planning Scheme's proposed walk/cycleway (see **Chapter 3 Policy Review**).

Ecologically, the green ring will connect to the Leopardstown to N11 River/Coast Wildlife Corridor and enhance Green Infrastructure (GI)

connections to GI Corridors 4 and 6 (see **Chapter 3 Policy Review**). GI connections to local parks will also be provided, including Jamestown Park, Cabinteely Park, Fernhill Park, parks within the Cherrywood SDZ, as well as pocket parks within the Racecourse South itself.

Measure AT 3

Racecourse South Green Ring

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders to ensure that a Green ring / Greenway is delivered around the Racecourse South Lands, to align with the GDA Cycle Network Sandyford / Harcourt St Railway Line Greenway and the old Harcourt Street Railway Line bridge into Brighton Wood.

8.5.4 Supporting Permeability Links

Additional walking and cycling permeability links should be explored in the master planning stage in order to provide pedestrians and cyclists with a high degree of permeability between residential areas, public transport stops and key services.

Potential permeability links highlighted in **Figure 8-3** includes a link between Brighton Court and the Racecourse South via the Racecourse Luas Stop, and Brighton Road and the Racecourse South via an existing N-S residential road. Additional detailed feasibility assessments of these links should be undertaken in the master planning stage

Figure 8-6: An example of a 'Green Ring' in Planty Park, Krakow (Planty Garden Ring, see **Chapter 4 – Case Studies**).

Measure AT 4

Supporting Permeability Links

In the preparation of the Masterplan for the Racecourse South Lands, Dún Laoghaire-Rathdown County Council will seek to engage with the NTA, TII, the developer/ s and other relevant stakeholders, to develop additional permeability links between residential blocks, public transport stops and key services to support the internal and external active travel network.

8.6 Measures: Internal Network

8.6.1 Indicative Internal Network

The following key principles should be applied to future development in the Racecourse South and are intended to support more detailed measures recommended in any future Masterplan of the Study Area.

Fietsstraat/ Bicycle streets

Fietsstraat should be considered to prioritise pedestrian and cyclist access (**Figure 8-9).** These 'bicycle boulevards' are a Dutch concept, where cyclists and pedestrians are given priority over motorists. Although cars are permitted in these streets, it must be made clear that they are guests in the space– typically through the use of low speed limits for motor vehicles, change of materials, speed bumps and filtered permeability.

Filtered Permeability

Filtered permeability principles should be used throughout the Racecourse South. The street network should be designed to facilitate full walking and cycling movement between blocks, providing attractive, safe and legible routes between residential areas and key services.

In some circumstances, streets with filtered permeability can support limited delivery and servicing requirements, waste collection, additional accessibility requirements, and access to mobility hubs. Therefore, people walking, wheeling and cycling will have complete access and while through-vehicular movement is restricted (**Figure 8-10**).

Placemaking

Residential streets should be complemented with placemaking elements such as pocket parks, open spaces, a central plaza and a primary public space (**Figure 8-7).**

Public Transport Options

Highly-accessible public transport options such as the Luas and bus services should ensure the attractiveness of sustainable transport choices over the private car. Bus stops should be highly accessible from pedestrian and cycling routes, providing opportunity for interchange between modes with cycle parking and bike share schemes in the vicinity of the stops. Similar principles should be used in the provision of bike parking and interchange between modes at the Racecourse Luas stop.

Private Motorised Vehicles

Motorists should use the main thoroughfare through the site (**Figure 8-8**) and some streets within the neighbourhood. In general, however, streets should not allow through vehicular traffic. Similar to Vauban, most residential streets should be *stellplatzfrei*, or 'free from parking spaces', which should instead be located in Mobility Hubs on the edges of the district. This would aim to discourage car use.

Measure AT 5

Internal Pedestrian and Cycling Network

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the NTA, TII, as well as the developer/s, to ensure that the Masterplan of the Racecourse South Lands delivers a safe and attractive internal active travel network. This will include consideration of the following:

- Fietsstraat principle - with low speed limits & speed bumps for motor vehicles
- Use of filtered permeability measures
- Complementing residential streets with pocket parks and open green spaces.

8.6.2 Mode Share Targets

The case studies in **Chapter 4** also include principles and strategies around mode share and targets. Vauban, for instance, has a share of 79% for sustainable modes, compared to 21% for cars.

Based on both the case studies and DLRCC's ambitious modal share targets, the table below illustrates the recommended modal share targets for the Study Area. These targets provide an opportunity to embed sustainable transport habits into the population of the Racecourse South from the outset.

Table 8-1 Mode Share Targets for the Racecourse South.

Sustainable Mode Share Targets	Car Mode Share Targets
70%	30%

Measure AT 6

Mode Share Targets

Dún Laoghaire-Rathdown County Council will seek to promote and facilitate sustainable transport modes in the Racecourse South Lands to meet the recommended mode share targets of 70% sustainable modes (walking, cycling, other micromobility and public transport) (see also DLRCDP Objective T4).

8.7 External Pedestrian and Cycling Network

In order to create a safe and complete cycling network and in order to support the internal walking and cycling networks and LAP Linkages, this LTP recommends that the M50 Parallel Road shall be upgraded with high-quality segregated pedestrian and cycling infrastructure.

Chapter 12 – Road and Street Network sets out the M50 Parallel Road's indicative layout as well as the recommended measures for active travel provision on Junction 15.

Figure 8-7 Public square with a central tram stop in Place du Ralliement, Angers, France

Figure 8-8 Vauban's Collector Road - Merzhuaser Strasse, and tram line.

Figure 8-9 Fietsstraat in the Netherlands. The sign on the right 'auto te gast' indicates that cars are guests on this street.

Figure 8-10 Filtered Permeability at Rothsay Street (London)

9 M50 Crossings

9.1 Overview

The Racecourse South is located to the north-east of the M50 motorway. The early stages of the ABTA process identified that the severance and 'barrier' effect brought about by the motorway for pedestrian and cyclist movement as a weakness and challenge for the site in the baseline assessment. Consequently, the LTP recommends the provision of a dedicated active travel M50 crossing. This will be necessary in order to facilitate a safe and direct connection to services south of the M50, and to facilitate the future development of the site.

9.2 Existing Accessibility to Services

Although the nearest neighbourhood to Racecourse South on the north of the M50 is Foxrock, it lacks many essential services including educational or health services, supermarkets or employment centres. Additionally, although both Cornelscourt and Cabinteely provide these key services (educational, health, retail, commercial), they are both at least a 40 minute walk away from the Study Area.

On the other hand, there are a variety of services to the south of the M50 in Ballyogan and Carrickmines, at Ballyogan Business Park and Leopardstown Shopping Centre.

The Park, Carrickmines is also located south of the M50, and its north-east quadrant has been identified under SLO 82 of the *Dún Laoghaire Rathdown County Development Plan 2022-2028* as the area in which to *"provide for the development of a Neighbourhood Centre*".

Figure 9-1 Existing M50 Crossings in the vicinity of the Racecourse South ABTA Study Area. Ballyogan and Cornelscourt neighbourhoods are also identified.

In terms of access in addition to the Luas Bridge, there are two other existing M50 bridge crossings in the vicinity of the Racecourse South that provide access to these existing and future services.

The Leopardstown Racecourse Overbridge provides connectivity to services in Ballyogan (see ***Figure 9-1***) and is within a 12 – 20-minute walk of the Racecourse South. This bridge is understood to be in private ownership for private use by Horse Racing Ireland (HRI).

The Carrickmines Interchange Overbridge provides access to services south/west of the motorway, but also has associated challenges for walking and cycling. This bridge has a national strategic transport function as part of the M50 (Junction 15). Therefore, it is not considered the most suitable crossing for active travel modes.

These bridges are discussed in further detail in **Section 9.4.**

9.3 Local Policy

The *Dún Laoghaire-Rathdown County Development Plan 2022 – 2028* (*DLRCDP)* and the *Ballyogan and Environs Local Area Plan 2019-2025* (*BELAP*) both acknowledge the barrier effect created by the M50 corridor, particularly regarding east-west pedestrian and cyclist movement.

Dún Laoghaire-Rathdown County Development Plan 2022-2028

Progressing pedestrian and cycle bridges over the M50 is a 'Key Performance Indicator' of the *DLRCDP*. This is represented in Policy Objective T13: County Cycle Network, which aims to:

- *"Secure improvements to the County Cycle Network in accordance with the DLR Cycle Network Review, whilst supporting the NTA on the development and implementation"*.

Under this Policy Objective, the Plan encourages the provision of shared cycle / pedestrian footbridges at key locations along the M50 to address permeability, and mitigate issues of severance and potential traffic hazards. Bridge locations proposed by the *DLRCDP* relevant to the Racecourse South include the 'M50 Carrickmines Junction (east to west)', and the 'Leopardstown Racecourse Overbridge - Ballyogan to South County Business Park/HRI lands'.

Ballyogan and Environs Local Area Plan 2019-2025

The *BELAP* also acknowledges the significance of providing new ways for pedestrians and cyclists to cross the M50, stating the following:

- "As *part of the preparation of the Masterplan for the Racecourse South lands the Planning Authority with the landowner/ developer will engage with the relevant transport agency regarding the appropriate location for a pedestrian and cycle crossing of the M50".*

Furthermore, the *BELAP* identifies that the development of the Racecourse South must occur in tandem with the delivery of key infrastructure and linkages identified in this LAP.

Consequently, the LTP acknowledges that **the delivery of an active travel crossing over the M50 is a critical enabler** of development of the Racecourse South.

The *BELAP* identifies potential pedestrian and cycle links across the M50 via the existing Luas Bridge and the Leopardstown Overbridge. These same routes are highlighted in the *Greater Dublin Area* (GDA) *Cycle Network*, which proposes the use of the existing Luas Bridge as a Primary Radial route and the Leopardstown Racecourse Overbridge as a Secondary Cycle Route.

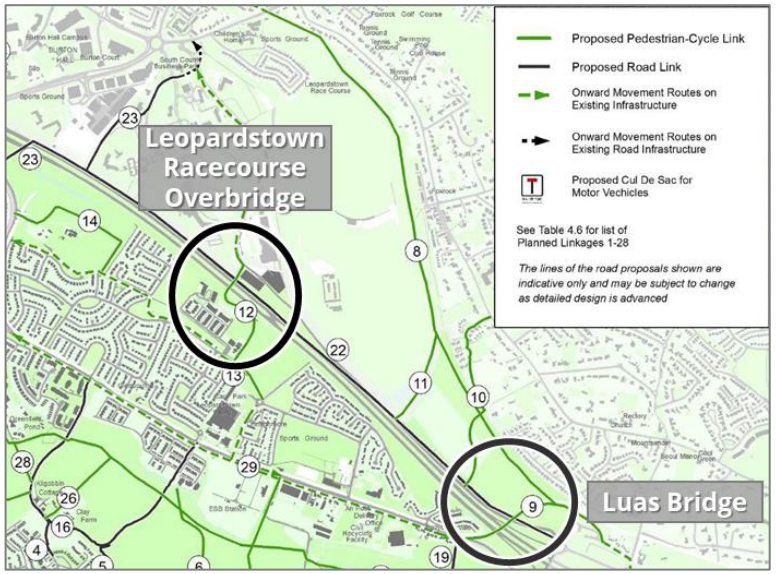


Figure 9-2: Map Extract: Movement Strategy – Planned Linkages. Source: BELAP Fig. 4.11.

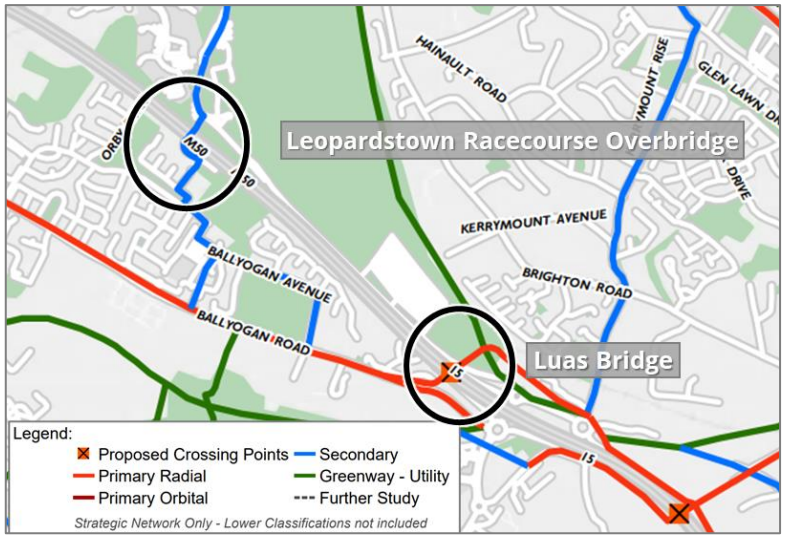


Figure 9-4: Map Extract: GDA Cycle Network Plan.

9.4 Existing Bridges

As noted before, there are 3 no. existing M50 bridge crossings in the vicinity of the Study Area, as described below.

Luas Bridge

The Luas Bridge is a dedicated light rail-only bridge which crosses the M50 and traverses the southern extent of the Study Area. It facilitates the Luas Green Line and stops at Ballyogan Wood and Carrickmines Luas Stop. There is an additional Luas stop to the immediate south of the Study Area – the Racecourse Luas Stop – however as previously stated, this is currently not in use.

Figure 9-3: Luas Crossing at Carrickmines. Source: BELAP, Figure 1.3.

Leopardstown Racecourse Overbridge

This M50 crossing is located north of the Racecourse South Study Area and consists of a two-way vehicular carriageway with a footpath on either side of the roadway. The bridge is approximately 10m wide and is in private ownership by HRI. It is also understood that the occasional pedestrian / cyclist informally use the bridge.

Figure 9-5 Leopardstown Racecourse Overbridge

Carrickmines Interchange Overbridge

Carrickmines Interchange Overbridge forms part of the national motorway network at Junction 15 (M50), and connects to the R842 Glenamuck Road at either side of the motorway. This bridge is located to the south of the Study Area and is the primary east-west crossing for pedestrians, cyclists, public transport and cars in the vicinity of the Study Area.

Figure 9-6 Carrickmines Interchange Overbridge

This bridge holds a dual-carriageway with footpaths grade separated from the road and raised cycle path on each side of the road. The quality of the cycling infrastructure includes poor crossing opportunities and will require future proofing consistent with the guidance set-out in the updated *Cycle Design Manual* (2023). To ensure that the national strategic function of the crossing has been addressed in the ABTA process, this bridge is discussed in further detail in **Section 12.6.**

9.5 Measures: Existing Bridges

In order to cater for future development of the Racecourse South, it is necessary to firstly address the severance produced by the M50 for active travel modes. This section will first propose recommendations to existing crossings, which will be followed by proposals for new crossings that can facilitate pedestrian and cyclist priority.

9.5.1 Leopardstown Racecourse Overbridge

Presenting the Leopardstown Racecourse Overbridge as an attractive option for a publicly accessible M50 crossing would shorten journey time between the Racecourse South and key services in Ballyogan, particularly to educational centres such as Holy Trinity National School and Stepaside Educate Together Secondary School.

It would also provide a new connection between Ballyogan and high-density employment areas such as the South County Business Park and northwards to Sandyford Business District.

Identified as the Emerging Preferred Option in the Options Development and Assessment stage (Part 2b and 3), it is recommended that the Leopardstown Racecourse Overbridge will be prioritised for active travel use, providing a quieter, safer and more attractive route across the M50.

Table 9-1 below presents a summary of the opportunities and constraints of the interventions proposed for the Leopardstown

Racecourse Overbridge as assessed during Part 2b and 3 of the ABTA. This bridge crosses the M50 motorway, therefore, design and delivery of any proposed interventions are subject to compliance with TII Publications, including technical acceptance procedures for structures.

Table 9-1 High-level analysis of the interventions proposed for the Leopardstown Racecourse Overbridge

Opportunities	• Requires no additional physical infrastructure – cost effective • Provides an opportunity to connect Racecourse South with neighbourhood amenities and key services in Ballyogan. • Provides connection between residential neighbourhoods in Ballyogan with high-density employment centres. • Provides a quiet, safe and attractive route across the M50. • Aligns with the proposed Secondary Route under the *GDA CNP.* • Enhances permeability networks in the vicinity of the Study Area
Constraints	• Private ownership – therefore agreement must be made between HRI and DLRCC prior to the public use of the bridge. • Impact on vehicular traffic that currently use bridge.

Measure BR 1

Leopardstown Racecourse Overbridge

Dún Laoghaire- Rathdown County Council will seek to engage with HRI, the NTA, TII, the LDA/ developers and other relevant stakeholders regarding the potential future use of the Leopardstown Racecourse Overbridge as a method of overcoming the severance of the M50. This engagement should seek to assess the use of modal filters to restrict access to pedestrians and cyclists, subject to compliance with TII Publications.

9.6 New Active Travel Bridge: Case Studies

The availability of services nearby will make walking and cycling the instinctive travel choice for many future residents in the Racecourse South. This necessitates the creation of high-quality, safe and enjoyable routes, which will reduce journey times for commuters and the need for the private car.

In order to complete a robust Options Development and Assessment Process, several case studies presenting different design opportunities for a new active travel bridge in the vicinity of the Study Area were identified. These case studies include Irish and international examples.

Irish Examples

The Cabinteely Footbridge crosses the N11 at Johnstown Road in Dublin. This footbridge, which is located to the south-east of the Racecourse South, facilitates both pedestrians and cyclists and is approx. 3.5m wide.

Figure 9-7 The Cabinteely Footbridge, which crosses a 36m wide carriageway.

Another example is Vernon Mount Bridge, which crosses the N40 South Ring Road in Cork City. The pedestrian and cyclist bridge is approximately 4m wide, 63m in length and has a 1km long pathway. It provides connectivity from the Tramore Valley Park to Grange south of the N11, and onwards towards Douglas (**Figure 9-8**).

Figure 9-8 Vernon Mount Bridge, crossing the N40 in Cork City.

A covered pedestrian and cycling bridge crosses the M50 at Junction 12 , along the R113 St. Colmcille's Way. The bridge crosses over an approx. 35m carriageway and is approx. 6.5m wide. It is located to the adjacent of a vehicular bridge of ca. 40m which crosses the M50 in an east-to-west direction. The pedestrian and cyclist crossing can be seen to the left of the carriageway in **Figure 9-9**.

Figure 9-9 Pedestrian and cyclist crossing located to the left of a vehicular crossing over the M50 at Junction 12.

International Examples

1. The Snelbinder Bridge (Nijmegen, Netherlands)

Alternatively, the Snelbinder Bridge is an international example of a bridge that was constructed alongside an existing rail bridge. The bridge is part of a 15.8km cycle 'superhighway' in the Netherlands.

This 2km pedestrian and cycle bridge was attached to a 19th century railway bridge in 2004 to provide direct access from Nijmegen city centre to new residential developments in Lent, in the north of the city. Although cars can still access Lent, pedestrians and cyclists have the most direct route.

The significance of this bridge for the residents of Nijmegen is reflected by the 6000 cyclists who use the bridge on a working day. The project cost approximately 40 million euros. This bridge can be seen below in **Figure 9-10.**

Figure 9-10 Pedestrians and Cyclists on the Snelbinder Bridge. Source: Steven Vance

2. The Dafne Schippers Bridge (Leidsche Rijn, Netherlands)

In the case of the Dafne Schippers Bridge (2017), the presence of the Amsterdam-Rhine Canal to the west of Leidsche Rijn presented a challenge for the district's connectivity to Utrecht City Centre.

The bridge represents the shortest cycling route between Utrecht Centre and the Leidsche Rijn district, as cyclists were previously obliged to use either the Hogeweide Bridge, located 1km north, or the De Meernbrug Bridge, located 1km to the south.

By contrast, the Dafne Schippers Bridge offers the most efficient and attractive route, and is subject to greater passive surveillance, running primarily through residential areas.

Furthermore, the bridge becomes part of the urban landscape through its integration with a primary school and a park in one coherent design.

Figure 9-11: Dafne Schippers Bridge connecting Leidsche Rijn with Utrecht City Centre over the Amsterdam-Rhine Canal.

9.7 Options Development and Assessment Process

Initial analysis was undertaken as part of the Option Development and Assessment Stage to determine the most suitable option and location for a new additional M50 crossing for walking, wheeling and cycling.

Figure 9-12 overleaf illustrates the location of all 4 no. proposed active travel bridge options that were considered and assessed, including:

1. Luas Bridge Extension
2. Northern Bridge
3. Ballyogan Bridge
4. Carrickmines Bridge

Options 1 (Luas Bridge), 2 (Northern Bridge) and 4 (Carrickmines Bridge) were discounted on the grounds that they did not meet requirements set out in TII's *Light Rail Environment - Technical Guidelines for Development (PE-PDV-00001)* and TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system.* They were therefore not carried forward to the MCA for further assessment.

In particular, a technical analysis of Option 1 determined that a cantilever addition to the Luas bridge would be unsuitable as the structure would threaten the structural integrity of the existing bridge as well as the safety of the light rail corridor (see Options Development and Assessment Report for full detail).

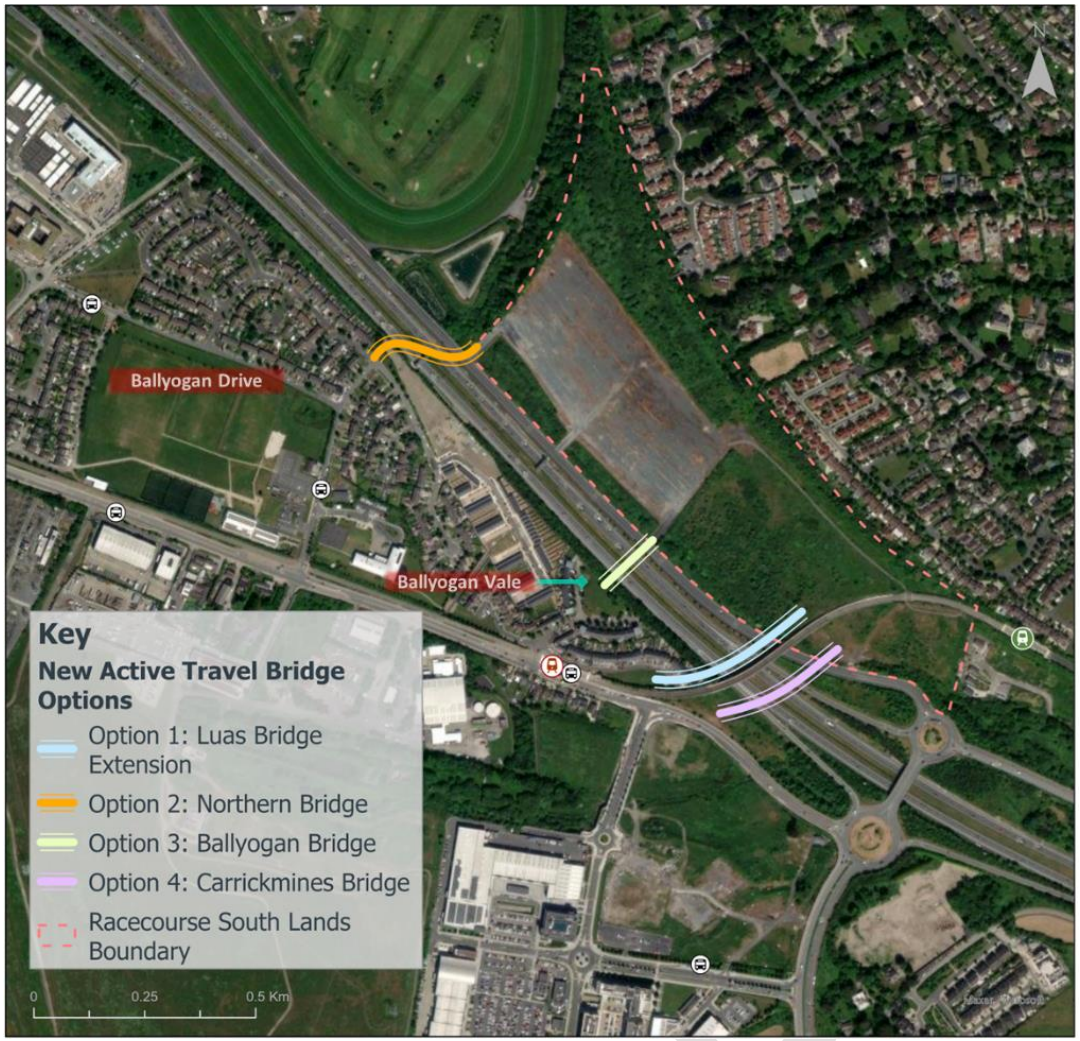


Figure 9-12 Overview of the proposed new active travel bridge options that were assessed in Part 2b and 3 of the ABTA Process.

9.8 Ballyogan Active Travel Bridge

The Options Assessment process suggests that **Option 3 – Ballyogan Active Travel Bridge** is the preferred location for a new active travel bridge to address the severance created by the M50 for the future residents of Racecourse South lands to access the new neighbourhood centre at Carrickmines, as well as existing services in Ballyogan. It also boosts connectivity to the Ballyogan Luas stop for both future residents as well as visitors and staff of Leopardstown Racecourse.

This bridge would connect directly from the mid-point of the Racecourse South lands to Ballyogan Vale residential estate south of the M50. A high level technical assessment was undertaken of the landing area in Ballyogan Vale. It was determined that this option would be technically feasible and would not require excessive ramp lengths on the Ballyogan Vale side of the motorway, as this is higher than the M50, where the green area of Ballyogan Vale is 5m above the level of the M50 at this location (79m vs 74m). **Figure 9-14** overleaf illustrates a break-down of the ramp lengths required.

Despite the costs of constructing this bridge, there are many transport user related benefits. This bridge would reduce travel time and costs for short trips to key services negating the need to cross at the existing Junction 15, and it follows the anticipated desire lines of pedestrians and cyclists travelling from the Racecourse South to Ballyogan and Carrickmines.

Additionally, this bridge would provide connectivity to the designated Neighbourhood Centre at the Park, Carrickmines (SLO 82 of the *DLRCDP 2022-2028*). Furthermore, public transport stops at Ballyogan Wood (Luas and bus) would be located 200m from the proposed location of the bridge in Ballyogan Vale, or a 3 minute walk (approx.) (see **Figure 10-3**).

Although this option scored the most positively in the MCA, all options require additional assessment to assess their feasibility where collaboration between Dún Laoghaire-Rathdown County Council and key stakeholders such as TII and the NTA will be essential. Lastly, it is essential that the operation and construction of the new active travel bridge is consistent with all TII Publications to ensure that the safe and efficient operation of the M50 motorway continues.

Figure 9-14 Break- down of the technical assessment of the landing area required south of the M50 for Option 3.

Figure 9-13 Proposed Landing Area in Ballyogan Vale.

9.8.1 Greenery and Landscaping

The Ballyogan Active Travel Bridge would connect to the Racecourse South Green Ring as discussed in **Section 8.5.3.** There is therefore an opportunity to enhance Green Infrastructure corridors in the vicinity of the Racecourse South as identified by Dún Laoghaire Rathdown's Green Infrastructure Strategy, by incorporating landscaping and greening elements along the bridge, such as SuDS and wildflowers to encourage local biodiversity.

This would aim to deliver a community benefit and enhance local amenities, giving the Ballyogan Bridge a dual use – both as a movement corridor for pedestrians and cyclists and as an amenity use. The integration of green elements would also work to soften the hard 'grey' environment that people walking, wheeling and cycling may otherwise experience on bridges crossing a motorway, as well as reduce potential impact on residential amenity for existing residents of Ballyogan Vale.

An example of a bridge structure that incorporates greenery and landscaping is the High Line bridge in New York City as in **Figure 9-15.**

Figure 9-15 High Line NYC. Source: ArchDaily

Measure BR 2

New Pedestrian / Cycle Bridge

As a means of overcoming the severance of the M50 for pedestrians and cyclists, Dún Laoghaire-Rathdown County Council will seek to engage with the NTA, TII, and other relevant stakeholders where necessary, to:

- Undertake a full engineering assessment of providing a pedestrian & cycle bridge in the location identified by the Ballyogan and Environs Local Area Plan's Site Development Framework (SDF) Objective 5, with a view to its development within the short-medium term (Ballyogan Active Travel Bridge).

9.9 Conclusion

The Department of Transport' s *National Investment Framework for Transport in Ireland (NIFTI)* aspires to support Ireland's decarbonisation efforts, to facilitate vibrant and sustainable communities, and to deliver a high performing transport and system.

Priority Four of *NIFITI* (Mobility of People and Goods in Urban Areas) notes that in order to facilitate compact growth in urban areas, it is essential that pedestrian, cycling and other sustainable transport infrastructure is provided for future developments located in constrained environments.

Therefore maximising the use of existing bridges (Leopardstown Racecourse Overbridge and the Carrickmines Interchange Overbridge) as high-quality pedestrian, cycling and public transport linkages will be key for the future sustainable development of the Racecourse South.

In addition the option development and assessment process indicates that delivering a pedestrian and cycling bridge in the identified location in the *BELAP SDF* (**SDF Objective 5**) is critical in terms of connectivity across the lands and M50. (Ballyogan Active Travel Bridge).

10 Luas

10.1 Existing and Future Luas Network

The Luas Light Rail transit system's Green Line traverses the southern end of the Racecourse South lands. The Luas Green line provides high-capacity light rail services operating at a frequency of up to every 3 minutes during peak hours, and runs from Bride's Glen in South Dublin to Broombridge.

The Green Line stops at Ballyogan Wood, south of the M50, and at Carrickmines Luas Stop southeast of the Study Area.

There are two access points to the Carrickmines Luas Stop – one pedestrian access on Glenamuck Road, and another through the Carrickmines Park and Ride. Currently, pedestrians have to traverse through Junction 15, and cross Glenamuck Road and the Carrickmines South Roundabout to access both of the stops.

Similarly, pedestrians must cross the M50 through Junction 15 and the Carrickmines Interchange Overbridge to access the Ballyogan Wood Luas stop.

In addition, there is also a Luas stop located to the immediate south of the Study Area, but to date has remained closed. The primary intent of the Racecourse Luas stop was to provide public transport connectivity for Leopardstown racegoers on race days.

The Racecourse South lands and the Racecourse Luas stop are connected by a pedestrian path with an at-grade pedestrian crossing point over the Luas line.

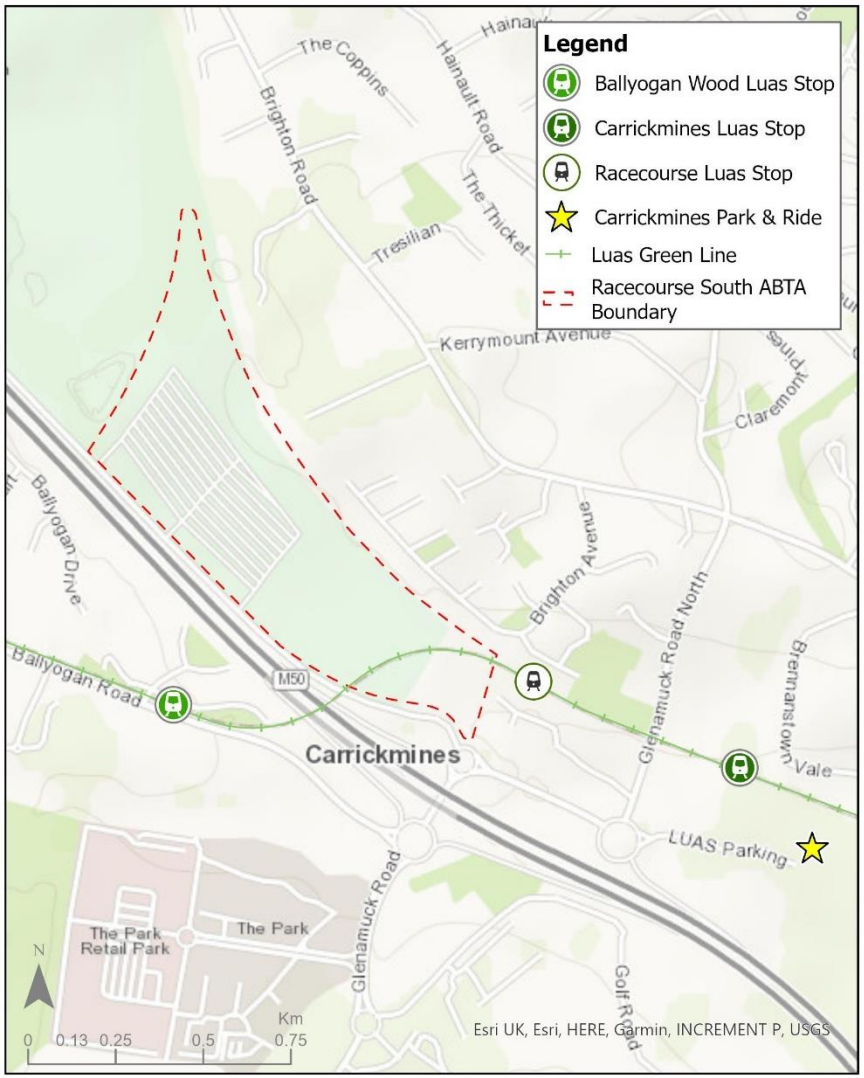


Figure 10-1: Luas Green Line and Existing Stops in the vicinity of the Racecourse South.

10.2 Options Development and Assessment Process

Initial analysis was undertaken as part of the Option Development and Assessment Stages to determine the most suitable option for the provision of Luas services to the Racecourse South. Options were assessed in combination with other modes and options, including the proposal for a new active travel bridge, so as to ensure that the impact of options were assessed giving regard to cumulative impacts.

The Options Assessment Process included a walking catchment assessment from the *southern-most existing vehicular* entrance in the Study Area to the Luas Stops in the vicinity of the Racecourse South. Of particular note, an assessment was completed of a future scenario that would include the construction of the active travel bridge, as discussed in **Chapter 9** of this Report.

10.2.1 Walking Catchment Analysis

The walking catchment analysis found that it takes more than 15-minutes to walk to the Carrickmines Luas Stop, and without the construction of a new active travel bridge, it is a 15-minute walk to the Ballyogan Wood Luas Stop. This is depicted in the map in **Figure 10-2**.

An additional assessment showed that the future scenario, with the new active travel bridge would significantly reduce the distance to the Ballyogan Wood Luas Stop to a 5-minute walk. This assessment is shown in the map in **Figure 10-3**.

The construction of the Ballyogan Active Travel Bridge would therefore address the severance for pedestrians and cyclists created by the motorway to both public transport stops and key services, encouraging the use of sustainable modes over driving.

10.3 Measures

10.3.1 Improving Accessibility to Existing Luas Stops

The Options Assessment Process identified that improving safety and accessibility to the Carrickmines and Ballyogan Wood Luas stops will be critical to facilitate a future population increase in the area.

Improving access to both of these Luas stops, providing good quality lighting and legible design of pathways would enhance the feeling of safety for its users. *Travelling in a Woman's Shoes*, produced by TII in 2020, offers guidance on specific design elements that improve accessibility and increase the feeling of safety around public transport stops.

This recommendation would additionally be supported by measures discussed in **Chapters 9** and **12**, such as constructing the active travel bridge and improving active travel facilities on the Carrickmines Interchange Overbridge.

Additionally, **Chapter 12** discusses the use of Ballyogan Grove / Castle view as a quiet route to the Carrickmines Luas stop and P&R for pedestrians and cyclists.

Measure LR 1

Improving Accessibility to Existing Stops

Dún Laoghaire- Rathdown County Council will seek to engage with the NTA, TII and other relevant stakeholders to ensure that accessibility to the Ballyogan Wood and Carrickmines Luas Stop is improved in accordance with national policy and guidance having regard to TII's *'Code of engineering practice for works on, near, or adjacent the Luas light rail system'.*

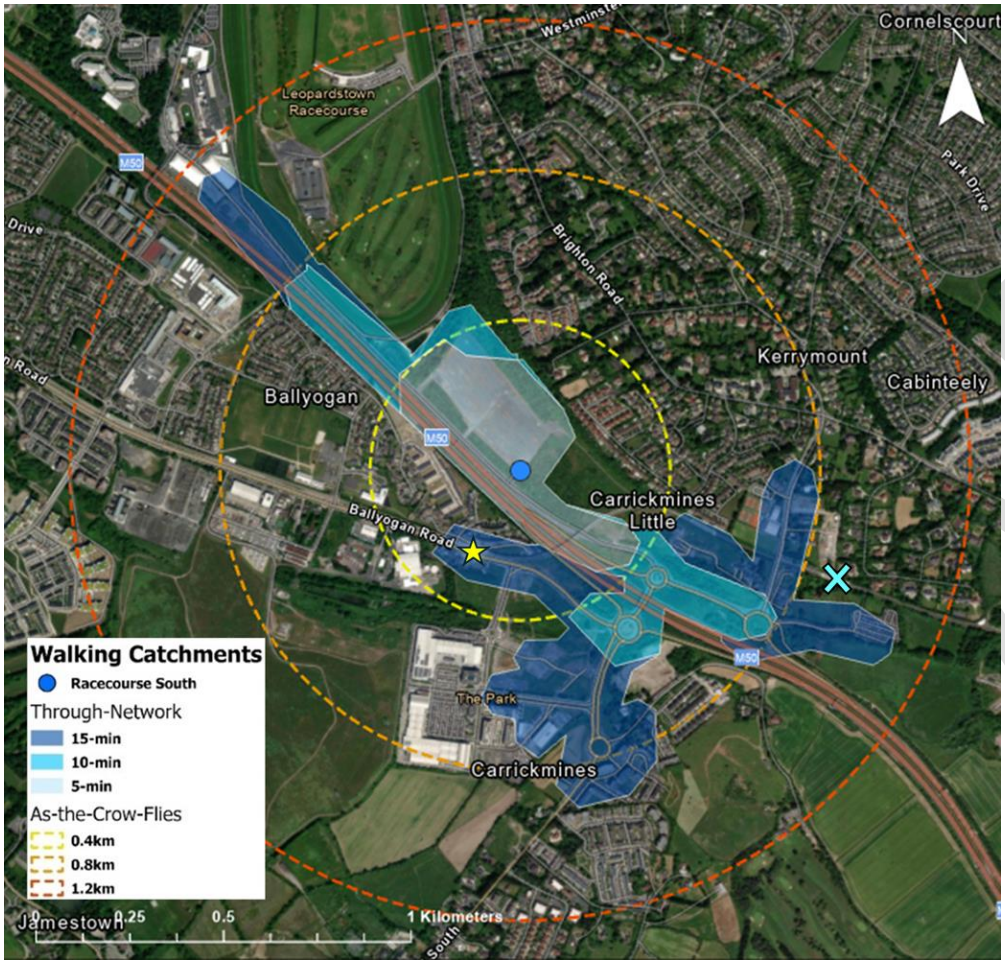


Figure 10-2: Walking Catchments between the Study Area and existing Luas Stops, **without** the construction of the proposed active travel bridge.

Ballyogan Wood is represented by the **yellow star**, and the Carrickmines Luas Stop is represented by the **blue cross**.

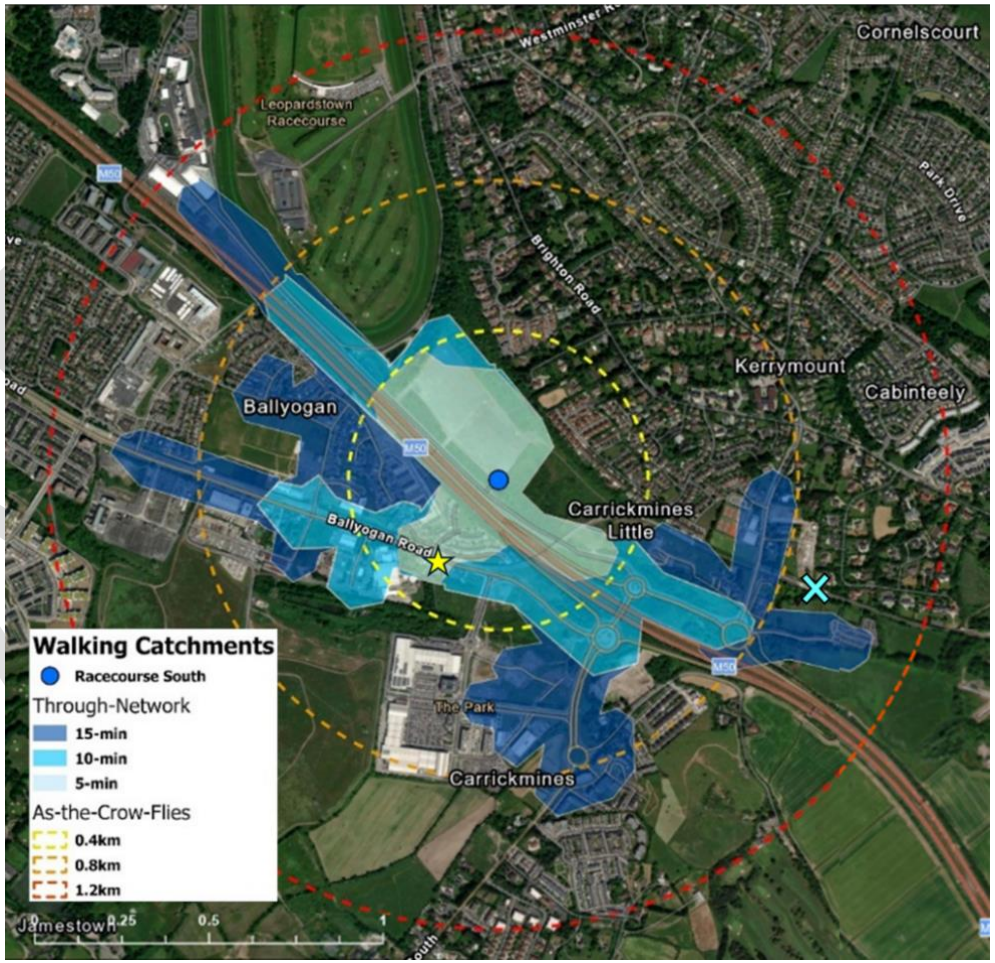


Figure 10-3: Walking Catchments between the Study Area and existing Luas Stops, **with** the proposed active travel bridge.

Ballyogan Wood is represented by the **yellow star**, and the Carrickmines Luas Stop is represented by the **blue cross**.

10.3.2 Opening the Racecourse Luas Stop

This LTP envisions the Racecourse South as a Transit-Orientated Development (TOD), where public transport provision and capacity will underpin its development. The Options Development and Assessment Process identified the need to open the Racecourse Luas Stop to support the development of the site as a TOD.

The opening of the Racecourse Luas Stop would provide a frequent, affordable and reliable public transport option for the residents and visitors to the Racecourse South. In this regard, the **opening of the Racecourse Luas Stop is considered a critical enabler** of the delivery of homes in the Racecourse South. This would require engagement and discussion with key stakeholders Transport Infrastructure Ireland (TII).

This option also supports *BELAP MOV 6* of the *BELAP 2019- 2025* which identifies the need to "*facilitate the opening of the Racecourse Luas Stop on the Green Line permanently to the public*".

Furthermore, the opening of this Luas stop would benefit Leopardstown Racecourse. It would provide a high frequency public transport option for racegoers, as per the original intent of the stop, and together with the other bus service and active travel proposals as outlined in this report would help the Leopardstown Racecourse and Racecourse South achieve better modal shares for sustainable modes.

Measure LR 2

Opening the Racecourse Luas Stop

Dún Laoghaire-Rathdown County Council will work with the NTA, TII and other relevant stakeholders to ensure that the Racecourse Luas Stop, as an early enabler of the Racecourse South, is operational in the short to medium term, in accordance with technical and operational requirements of TII and in advance of the opening of the first phase of residential development.

10.3.3 Racecourse Luas Stop Accessibility

The Racecourse Luas Stop should be designed so that all people, regardless of their age or mobility can access the stop safely and conveniently. Any developments in the vicinity of the Luas Stop should therefore maintain pedestrian and cycling desire lines, ensuring that they are well-lit with clear sightlines and wayfinding elements.

Transport Infrastructure Ireland (TII) oversees the strategic function of the Luas network. Developments should ensure there is no adverse impact on Luas operation and safety, and shall comply with TII's 'Code of engineering practice for works on, near, or adjacent the Luas light rail system', and should be designed having regard to the following guidance:

- *Light Rail Environment – Technical Guidelines for Development* (TII Publication)
- *Design Manual for Urban Roads and Streets* (DoTTS & DoECLG)
- *Permeability Best Practice Guide* (NTA)

- *Cycle Design Manual (NTA)*
- *Travelling in a Woman's Shoes* (TII)

Measure LR 3

Racecourse Luas Stop: Accessibility

Dún Laoghaire- Rathdown County Council will seek to engage with relevant stakeholders on accessibility to the Racecourse Luas Stop including the provision of pedestrian paths that follow desire lines between residential / commercial / public spaces and the Stop, subject to compliance with TII' s *Code of engineering practice for works on, near, or adjacent the Luas light rail system* and with regard to other TII Publications, *DMURS* and the NTA' s *Cycle Design Manual*.

10.3.4 Integration with the Public Realm

The *BELAP Site Development Framework (SDF) Objective 2* identifies a location near the Racecourse Luas stop as the preferred location for a landscaped plaza that acts as a "*focal point*" in the neighbourhood which should include a mix of small-scale local neighbourhood uses.

The main aim of this plaza will be to deliver a high-quality public realm and provide an arrival / destination focal point for the neighbourhood.

This public plaza would allow the Racecourse Luas Stop to benefit from passive surveillance through the provision of a clear sightline between the plaza and the Luas Stop.

Development proposals for the Racecourse South lands should include necessary documentation showing that buildings and elements of the public realm within the vicinity of the Luas are located and designed safely. TII Guidelines must be followed in the design of infrastructure that is *within the light rail environment*.

A multi- modal interchange should be facilitated in the vicinity of the Racecourse Luas Stop in order to support first- and- last- mile connections. This LTP supports locating a Mobility Hub at an appropriate distance from the Racecourse Stop, to provide sufficient and comfortable transport alternatives to discourage the use of the private car for the first and last leg of trips.

Measure LR 4

Racecourse Luas Stop: Integration with the Public Realm

Dún Laoghaire- Rathdown County Council will work with the NTA, TII, and other relevant stakeholders in the design of Racecourse Luas Stop to allow for a safe transition between the stop and the public pla za (SD F O bjective 2), residential and commercial structures.

Design integration of the public plaza, and general public realm with the Racecourse Luas Stop shall have regard to:

- *Light Rail Environment – Technical Guidelines for Development, TII Publication PD-PDV-000;* and shall observe
- *TII's Code of engineering practice for works on, near, or adjacent the Luas light rail system*.

This includes facilitating secure and sheltered bicycle parking, Mobility as a Service (Maas) systems, and a number of drop-off / pick-up spaces and taxi set-down facilities.

This LTP also recommends that the proposed transport hub should not preclude/should allow for the development of a bus stop at this location at a later date, following further assessment of passenger demand

THE TRAIN STATION AT LEIDSCHE RIJN, UTRECHT (FAR LEFT) & BRUSSLESPLEIN PLAZA (FAR RIGHT)

The design of train stations in Leidsche Rijn, Utrecht (Netherlands) and their proximity to the central plaza scattered with residential, commercial and recreational uses offers a key insight into how the Racecourse South can successfully integrate nearby Luas stops with a plaza and a variety of uses and activity.

Figure 10-4: Carrickmines Luas Stop.

Measure LR 5

Racecourse Luas Stop: Interchange Facilities

Dún Laoghaire-Rathdown County Council supports the development of a multi-modal interchange point at an appropriate distance to the Racecourse Luas Stop and identified plaza (SDF Objective 2). This should include consideration of the following:

- Provision for a future bus stop / set-down area
- Bicycle parking
- Bicycle sharing schemes
- Car sharing bases
- Drop-off / pick-up parking spaces

11 Bus Network

11.1 Overview

Key to the development of the Racecourse South as an attractive, resilient and compact neighbourhood is ensuring that people have reliable and convenient bus options, in particular for longer journeys.

Sustainable connectivity to Cherrywood, Sandyford, Dún Laoghaire, Blackrock and the wider Greater Dublin Area by bus will be important for residents and visitors to access education and employment opportunities, recreational and social amenities, and health facilities that are not envisaged to be provided within the site extents under the current land use zoning objectives, and are not located along the Luas Green Line.

It will also be critical in providing car-free / car-lite developments to maximise the use of space to support the delivery of high-density housing and attractive and healthy neighbourhoods in accordance with the *Sustainable Residential Development and Compact Settlement Guidelines for Planning Authorities*. Moreover, as one of Ireland's biggest racecourses, the adjacent Leopardstown Racecourse attracts many visitors on race days which would significantly benefit from an uplift to bus services.

11.2 Existing Bus Network

Figure 11-1 illustrates the existing and planned bus network in the context of the Racecourse South lands. As the Study Area is an undeveloped site, it has no existing internal street network, and has limited bus connectivity. The closest bus stop to the site is on Glenamuck Road (Carrickmines Luas Bus Stop) southeast of the Racecourse South, with additional bus stops on Brighton Road, and on Ballyogan Road south of the M50

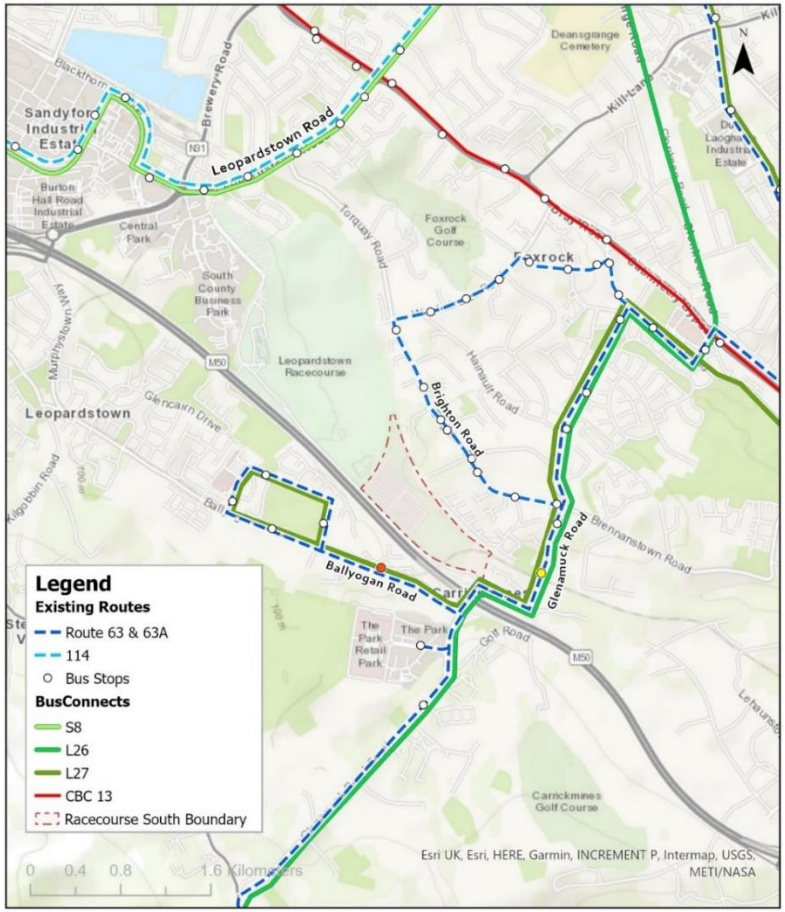


Figure 11-1: Overview of existing and future (planned BusConnects) bus services. The two closest stops to the Study Area are indicated in yellow and red.

As the roll out of bus connects happens, the existing routes will continue to be updated by the new routes as shown on **Figure 11-1.** For example at the end of January 2025, the L26 came into operation in place of route No. 63. Further phases of the bus connects program will see the full implementation of these proposed routes.

11.2.1 Accessibility to Existing Bus Stops

Transport for London's (TfL) guidance document *Assessing transport connectivity in London* was reviewed as part of the Options Assessment stage to provide a benchmark for best practice public transport standards. This guidance document assumes that people will walk up to 640m to a bus service, which equates to approximately eight minutes.

The Carrickmines Bus Stop is within a 900m (approx. 13 minutes) walking distance from the southern-most (existing) entrance point of the Racecourse South as in **Figure 11-2**. The same bus stop is located 1.2km walking distance (approx. 20 minutes) from the northern-most entrance point. Additionally, the Ballyogan Wood Bus Stop is within a 1.1km walk (approx. 15-20 mins) from the southern-most entrance point, and 1.4km (22 mins) from the northern-most entrance point as in **Figure 11-3**.

11.3 BusConnects Dublin

Dublin's public transport network is in the midst of significant improvements, with BusConnects being incrementally rolled out across the GDA. As noted in **Part A**, the most relevant BusConnects Core Bus Corridor to the Study Area is the Bray to City Centre CBC, which is planned for Stillorgan Road (N11). This CBC is a c. 45-minute walk from

Figure 11-2 Walking distance from the Study Area's northern-most & southern-most entrances to the Carrickmines Luas Bus Stop. Source: Google Maps.

Figure 11-3 Walking distance from the northern-most and southern-most entrances to the Ballyogan Wood Bus Stop. Source: Google Maps.

Racecourse South. The S8 southern orbital route currently provides a service from Tallaght, via Sandyford, to Dún Laoghaire.

As noted previously, at the time of finalising this Report, bus routes 63 and 63A have been replaced by local routes L26 (Kiltiernan to Blackrock) and shortly the L27 (Ballyogan to Dún Laoghaire) under the BusConnects Network Redesign (see **Figure 11-1**). Both routes will have a frequency of 30 minutes on weekdays and weekends. The LTP has considered these proposals in the context of the development of the Racecourse South lands.

11.4 Options Development and Assessment Summary

The following option was identified as the preferred option during the Options Development and Assessment stage, in discussions with the NTA's Service Planning Team:

- Realisation of the planned BusConnects Dublin Routes.
- Long-term measure to deliver a bus service that directly serves the Racecourse South, contingent on additional feasibility assessments and consultation with key stakeholders.
- Consideration of a future north-south bus route from Priorsland / Carrickmines P&R, northwards to Leopardstown Road.

Figure 11-4 provides an overview of the proposed short-medium- and long-term measures.

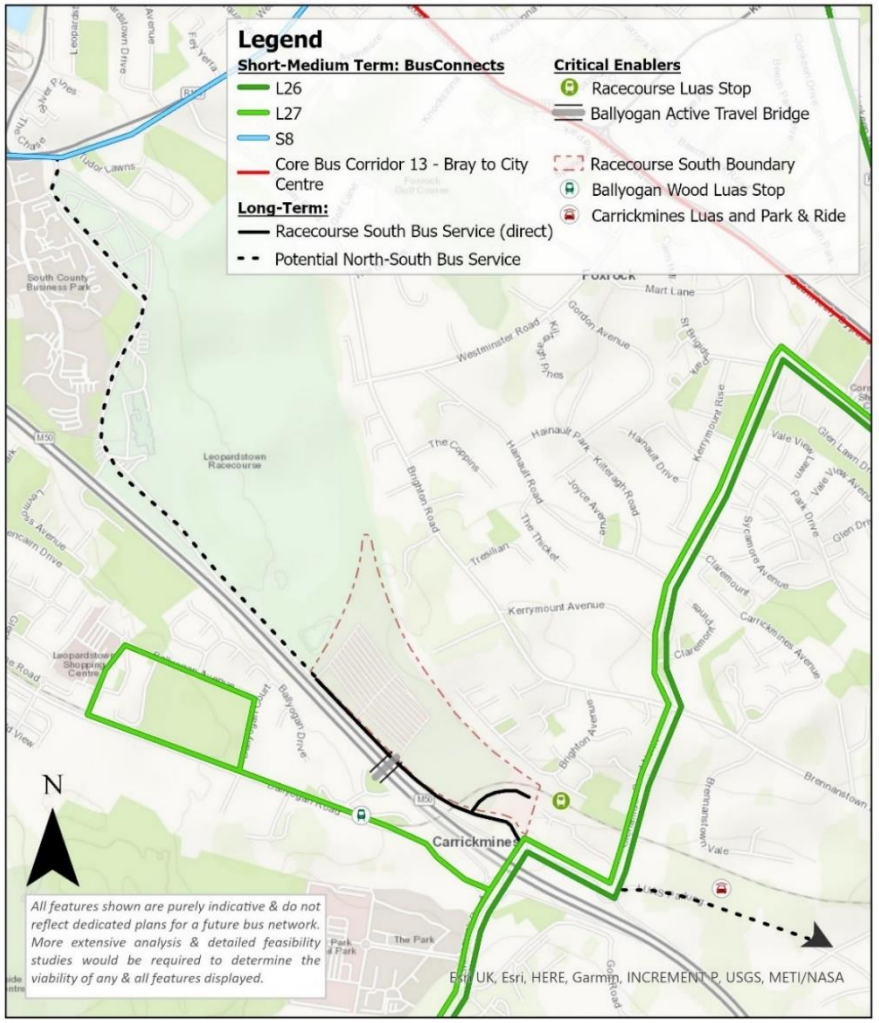


Figure 11-4: A map with the planned L26 and L27 BusConnects Local Routes, and an example of what the long-term bus proposals may look like. All alignments shown are indicative & subject to further discussion with the NTA, TII, HRI & other relevant stakeholders.

11.5 Measures

11.5.1 Planned BusConnects

The Racecourse South lands will be served by the planned BusConnects L26 and L27 routes. This LTP supports the roll out of these routes in the short- to medium- term to improve connectivity between the Racecourse South and surrounding neighbourhoods of Carrickmines and Ballyogan, to Cornelscourt Shopping Centre and the N11 (Bray to City Centre) Core Bus Corridor (CBC).

Ensuring there is a frequent, reliable bus serving the lands embedded in advance of the first residents moving in, is crucial.

Again, as before, the LTP proposes the following 3 items as ***critical enablers of development*** that will further boost connectivity and accessibility to existing and proposed public transport options including the Ballyogan Luas stop and bus services to the south, to Brighton Road and the CBC on the N11 to the north, and the inactive Luas stop on the site itself. These include:

- The new proposed **Ballyogan Active Travel Bridge** should be constructed to improve connectivity to the Luas and bus stops on Ballyogan Road;
- The **Racecourse Luas stop** should be opened for use, providing a light rail option to the immediate south of the Study Area; and
- Delivery of the **Brighton Place Link** at the northern corner of Racecourse South between the site and Brighton Wood in order to facilitate active travel movement to the north of the site, onward to Foxrock and the CBC on the N11. The restoration of this bridge is in line with planning conditions for the Brighton Wood residential development.

> Measure B 1
>
> BusConnects Dublin – Local Routes
>
> Dún Laoghaire- Rathdown County Council will liaise with the NTA in the roll out and delivery of the L26 and L27 routes (planned as part of BusConnects) in the short to medium term, in advance of the first residents of the Racecourse South moving in.

11.5.2 Racecourse South Bus Service – Potential Long Term Measure

Contingent on additional feasibility assessments and consultation with key stakeholders including the NTA Service Planning Team, TII and HRI, this LTP recommends the delivery of a bus service to potentially *directly* serve the Racecourse South in the **longer term.** There is also potential for this future bus service to serve the Racecourse Luas Stop Interchange Hub within the site.

In order to protect the future shared use of the M50 Parallel Road as the primary access road to both Leopardstown Racecourse and the future Racecourse South, there is also the potential to deliver a **bus gate** under the long-term measure. This would involve traffic signal control to allow bus priority over general traffic at certain sections of the road to ensure bus reliability. Bus gates are planned for several locations in the wider BusConnects Dublin Programme.

The M50 Parallel Road is currently under ownership of HRI. Given that access is controlled by gates at both the northern and southern end, an agreement must be made with HRI to secure bus priority access should this long-term measure be fulfilled.

Lastly, the long-term measure of delivering a bus service on the M50 Parallel Road would not only benefit residents living in the future neighbourhood, but also Leopardstown racegoers on race days. This would help the Racecourse achieve better modal shares for sustainable modes.

Measure B 2

M50 Parallel Road Bus Service – Potential Long Term Measure

Dún Laoghaire-Rathdown County Council will liaise with the NTA Service Planning Team, TII, HRI and other relevant stakeholders with a view to considering the potential provision of a future bus service to directly serve the Racecourse South lands via M50 Parallel Road in the **longer-term.**

11.5.3 North-South Bus Service – Potential Long Term Measure

As noted in the Cherrywood SDZ Planning Scheme Report, it was an objective of the *DLRCDP 2010-2016* to provide a bus gate to connect Cherrywood with the Carrickmines P&R via Castle Street in Priorsland.

This LTP recommends the consideration of a long-term measure to provide a bus service from Cherrywood through to Leopardstown Road via a bus gate on Castle Street and via the M50 Parallel Road. Further discussion with the NTA Service Planning Team is required to consider this route.

Measure B 3

North-South Bus Service – Potential Long Term Measure

Dún Laoghaire- Rathdown County Council will liaise with the NTA Service Planning Team, TII and other relevant stakeholders with a **long-term** view to:

- Consider introducing a new N-S- bus route from Priorsland northwards to Leopardstown Road via the M50 Parallel Road.
- Consider introducing a bus gate between Priorsland and the Carrickmines P&R, to facilitate bus & active travel movement - only between Junction 15 and Cherrywood.

11.5.4 Bus Stops

Any future bus service on the M50 Parallel Road should include bus stops with real time information, cater for all ages and abilities and should support first / last mile connections by providing sufficient and comfortable alternatives to unsustainable modes of transport.

Any new bus network should include high quality bus stops and shelters. Bus shelters should provide a *sense of safety* for passengers, and should include the most up-to-date service information. Seating should be provided to assist mobility impaired passengers, and space should be left for wheelchair users.

Lasty, Green Infrastructure (GI) at bus stops/shelters includes street trees, planters and green roofs can deliver environmental, economic and social benefits.

Figure 11-5: GI on a bus stops in Utrecht (NE) as part of the 'Bee Stop Project.

Measure B 4

Bus Stops and Shelters

Dún Laoghaire-Rathdown County Council will liaise with the NTA on bus shelters that accompany a future bus service on the M50 Parallel Road and within the Racecourse South on first / last mile connections, Real Time Information (RTI), seating, lighting and GI / landscaping, where relevant and applicable.

12 Road and Street Network

12.1 Overview

The road and street network within the boundary of the Racecourse South is underdeveloped. This presents an opportunity to design future roads to prioritise sustainable transport, aligning with the *Design Manual for Urban Roads and Streets* (DMURS) and TOD Principles.

12.2 Existing External Road Network

12.2.1 M50 Parallel Road

The **M50 Parallel Road** is the only access road to the Racecourse South from both the north and south directions. It currently has three access points into the Racecourse South lands, with an additional more informal access point just to the south of the Luas Bridge.

The road is a 3-lane road (approx. 15m wide), with hatching in between each lane, and a speed limit of 50km/h. The road extends from the Junction 15 in the south to the entrance of Leopardstown Racecourse and the South County Business Park north of the Study Area.

Traffic calming measures are in place with 8 speed bumps along an approximate 1.5km stretch, from Junction 15 to the entrance of Leopardstown Racecourse. On the entry to Leopardstown Racecourse, the road narrows to two lanes. At this point there are 39 car parking spaces, with a mix of parallel and perpendicular parking.

There is a continuous footpath of approximately 2m in width along the north / eastern side of the road. There is a lack of dedicated cycling facilities on this road.

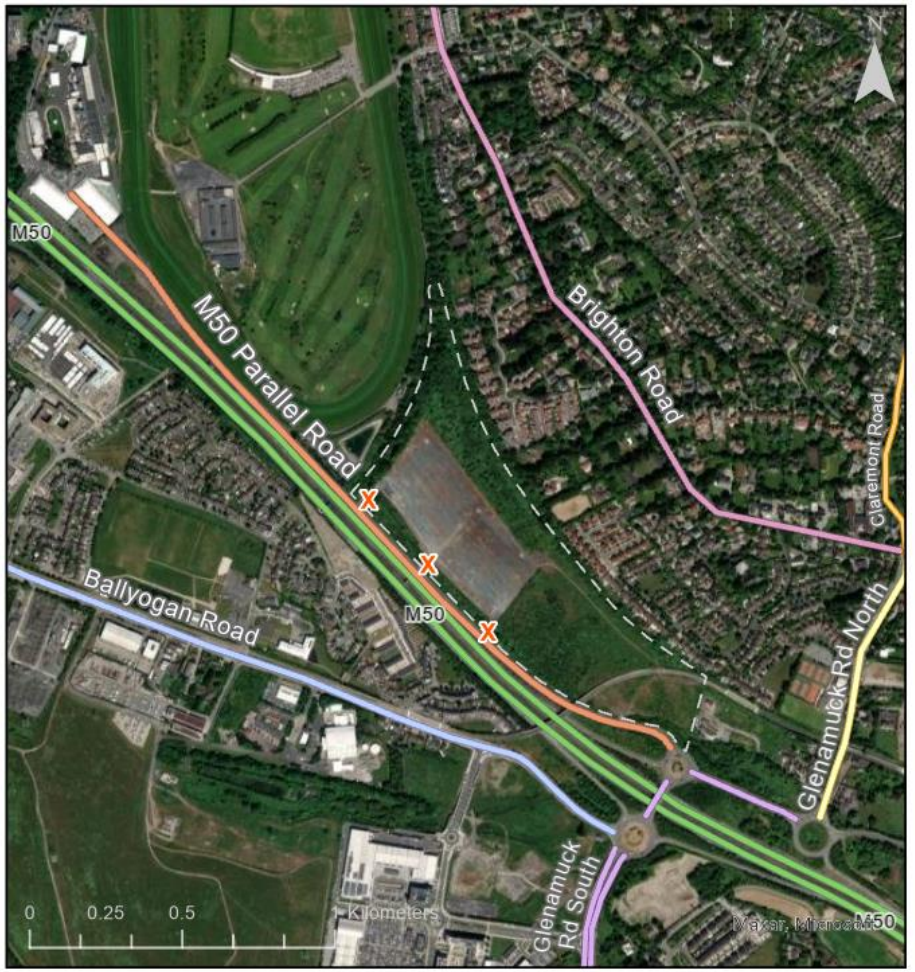


Figure 12-1: Existing Conditions – Racecourse South External Road Network and the existing formal vehicular entrances marked by the red **X**.

The primary use of the M50 Parallel Road is to provide controlled access to and from Leopardstown Racecourse from the exit at Junction 15. As the road is in private ownership for private use by HRI, access is currently controlled by HRI through the use of gated entry points, with one gate at the entrance to Leopardstown and one at the beginning of the M50 Parallel Road in the south.

Public access onto the M50 Parallel Road from Junction 15 is core for the delivery of residential- led development in the Racecourse South. Agreement will therefore need to be reached with HRI regarding ownership and access rights to allow through- movement of traffic along the M50 Parallel Road.

Measure RN 1

M50 Parallel Road Ownership and Use

Dún Laoghaire- Rathdown County Council will seek to engage with HRI and other relevant stakeholders such as TII and the NTA with a view to taking in charge and formalising the public use of the M50 Parallel Road.

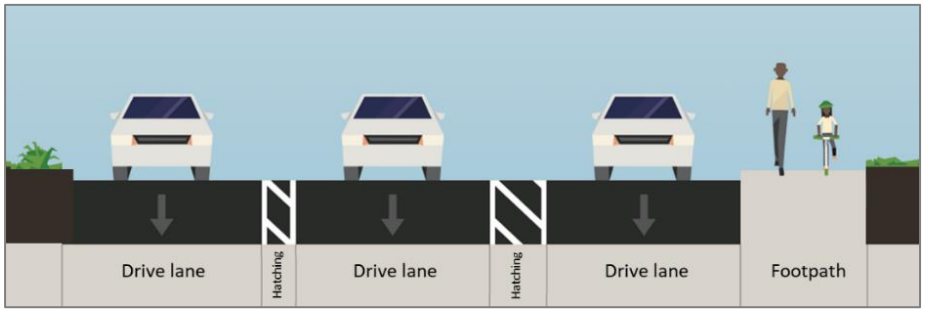


Figure 12-2: Representative cross-section of the existing conditions along the M50 Parallel Road.

Figure 12-3: Existing layout of the M50 Parallel Road.

12.2.2 Glenamuck Road

Glenamuck Road extends from the south-west to the north-east, through Junction 15 and the Carrickmines Interchange Overbridge to the south. The speed limit on Glenamuck Road is 50km/hr. It should be noted that the Glenamuck District Roads Scheme (GDRS) is under construction south of Ballyogan, which is a six year road objective under the *DLRCDP 2016-2022.*

Glenamuck Road North is a two-lane carriageway connecting to Brighton Road and Claremont Road. The road has two bus stops, and the Carrickmines Luas stop can be accessed via a pedestrian access point. Cycle facilities include stepped cycle tracks on both sides of the road up to the Carrickmines South Roundabout.

To the south of Junction 15, **Glenamuck Road South** provides access to the Park, Carrickmines, Ballyogan Road and southwards towards Kiltiernan/Glenamuck. Glenamuck Road South has four vehicular lanes, as well as a footpath on each side of the road.

The centre of the four-lane carriageway has a landscape treatment of approx. 3.5m. Additionally, there is a two way standard cycle track on the western side of Glenamuck Road South of approx. 2.8m, and a one way stepped cycle track on the eastern side of approximately 1.8m. As noted in **Chapter 9**, pedestrian and cycle facilities continue between Glenamuck Road North and South through the Carrickmines Interchange Overbridge.

Figure 12-4 Glenamuck Road North, showing the cycling facilities, a bus stop & pedestrian entrance to the Carrickmines Luas Stop and P&R on the right.

Figure 12-5 Glenamuck Road South, showing the cycling facilities, landscaping and four lane carriageway.

12.2.3 Ballyogan Grove / Castle View

Ballyogan Grove / Castle View is accessed from Glenamuck Road North. This is a residential road located to the immediate south of the Racecourse South and provides access to a Traveller accommodation site and several other residential properties. The road is typically less than 5 m at its widest point with a substandard footpath on one side of the road, which reduces to approx. 3m with no footpath. The road is also in close proximity to the Carrickmines River / Racecourse Stream, and lies within Flood Zone A which imposes a number of restrictions on its development (see **Section 3.7**).

Figure 12-6 Ballyogan Grove / Castle View

12.2.4 Ballyogan Road

Ballyogan Road is located to the southern side of the M50, and is a relatively wide road measuring approx. 17 – 17.5m. Ballyogan Road facilitates both segregated cycling and pedestrian facilities, bus and light rail, with the Luas line running parallel to the road. It has an important

function providing connectivity between Junction 14 and Junction 15, and south to Stepaside via Kilgobbin Road.

Despite this connectivity, the width and layout of the road contributes to the community severance in Ballyogan. This is particularly true regarding access from residential areas to The Park, Carrickmines and open spaces such as Jamestown Park and the Cruagh Greenway south of the road, as well as Orby Park, Samuel Beckett Civic Campus and community centres to the north.

Figure 12-7 Ballyogan Road, with the Ballyogan Wood public transport stops to the right.

12.3 M50 Parallel Road: Future Network

This LTP recognises the *Long Term Road Objective / Traffic Management / Active Travel Upgrade* identified under Policy Objective T23: Roads and Streets of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCDP)* for the 'Leopardstown to Carrickmines Interchange Road Scheme'.

This road scheme (see **Figure 12-8**) is proposed to run from the Sandyford Interchange in the north, to where the M50 and the M11 meet south of the Study Area. This scheme is proposed to run alongside the M50 at the Racecourse South's southwestern boundary, and will connect to the M50 Parallel Road.

Figure 12-8: *DLRCDP 2022-2028* Long Term Road Objective. Data source: DLRCDP.

12.4 National Roads Network – M50 Motorway

12.4.1 National Roads Requirements

The **M50 Motorway** is Dublin's orbital motorway and is one of the busiest motorways in Ireland. The M50 sits to the immediate south west of the M50 Parallel Road, outside the Study Area.

Both the M50 and M50 Junction 15 (Carrickmines) are part of the national road network and within TII's Motorway Maintenance and Renewal Contracts (MMaRC) Network Area A. Although the M50 performs a vital strategic transport role, it acts as a barrier for east-west pedestrian and cyclist movement to the Study Area from south of the motorway.

Currently, people walking, wheeling and cycling wishing to cross the M50 must do so at Junction 15, where dedicated footpath and cycle lanes are adjacent to large volumes of strategic vehicular traffic. There are no controlled crossings at Junction 15. Junction 15 is discussed in further detail in **Section 12.6.**

Any future improvements or other new works arising from measures in this LTP that impact the motorway, and its associated Junction 15 must accord with DoECLG *Spatial Planning and National Roads Guidelines for Planning Authorities* (2012) and must comply with all relevant requirements of TII Publications (Standards and Technical) for National Roads, including the *Treatment of Transition Zones to Towns and Villages on National Roads* (DN-GEO-03084).

Furthermore, **Strategic Local Objective (SLO) 143** of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCDP)* outlines the following in preparation of the ABTA for the Racecourse South lands:

"...The ABTA will address how development will avoid undermining the safe and efficient operation of the National Road and light rail network and ensure that the strategic function of the M50 will be maintained with full build out of the lands".

Transport Infrastructure Ireland (TII) Publications

TII's *Treatment of Transition Zones to Towns and Villages on National Roads (TII, 2021, DN-GEO-03084)* describes the requirements that shall be implemented on National Roads on the approaches to towns and villages in terms of the provision of traffic calming measures and pedestrian crossings.

Junction 15, on the slip road down to the M50 Parallel Road, is considered to be a Transition Zone. *Treatment of Transition Zones to Towns and Villages on National Roads* defines **Transition Zones** as generally within a 50/60/km/h speed limit, passing through areas of low density residential and commercial development and/or industrial, or institutional areas, such as schools, hospitals, recreational or sports grounds.

As the M50 Parallel Road is a 50km/h road and is the only access road to the Racecourse South, it is essential that a transition zone is introduced between Junction 15 and the entrance to the future Racecourse lands neighbourhood to create a calmer, more attractive environment. The DoECLG's *Spatial Planning and National Roads Guidelines for Planning Authorities* (2012) is discussed in detail in **Chapter 3 - Policy Review.**

Measure RN 2

National Roads Requirements

Dún Laoghaire-Rathdown County Council will work with TII and the NTA and other relevant stakeholders to facilitate the protection of the M50 motorway and its associated Junction 15 in accordance with DoECLG '*Spatial Planning and National Roads Guidelines for Planning Authorities' (2012*) and in compliance with TII Publications.

12.5 Options Development and Assessment Summary

The Options Development and Assessment stage divided the options for the M50 Parallel Road into **two** categories for assessment:

1. Access into the Racecourse South

Options were assessed regarding the **preferred access road** into the Racecourse South Study Area. This assessment evaluated access options from the M50 Parallel Road, from Ballyogan Grove / Castle View and Glenamuck Road, as well as through-movement along the M50 Parallel Road from Junction 15 northwards to Leopardstown Road. New road options were also assessed.

2. Active Travel facilities (alignment) on the M50 Parallel Road

Options were assessed concerning the preferred layout of the M50 Parallel Road in terms of cycling and pedestrian infrastructure, including buffers and landscaping elements.

12.5.1 Access into the Racecourse South

The Option Development and Assessment Stage determined the following as the preferred option for the Study Area's **primary vehicular access road**:

1. Preferred Main Vehicular Access Road:

The **M50 Parallel Road** is the preferred main vehicular access road for all modes. Access permitted from Junction 15 and northwards through South County Business Park / Leopardstown Racecourse. The existing three lane layout should remain in place.

1a. Preferred Arrangement for Buses

Dependent on the potential long-term measure to deliver a bus service on the M50 Parallel Road, a **bus gate system** could be used whereby on its exit from the Study Area, bus movement is prioritised over general traffic via traffic-controlled signals. **Figure 12-10** presents an example of the Bus Gate concept from Dublin BusConnects.

2. Additional Access Road: Ballyogan Grove / Castle View

Access should be permitted for **active travel modes** along Ballyogan Grove / Castle View as an additional entrance into the Study Area, which should also occasionally provide access for vehicles maintaining the Racecourse Luas stop and local access to existing residential properties. This would be supported by filtered permeability measures.

The identified preferred option is subject to further assessments and engagement with the NTA and landowner/ developer. Furthermore, engagement with TII will be required regarding access to the Study Area due to the potential impact of a future increase of traffic on the capacity of the Junction 15 (M50).

Figure 12-9: View northwards into Leopardstown and South County Business Park, where access is controlled by HRI gates. Source: DBFL.

Figure 12-10: Extract from BusConnects CBC Project - Signal Controlled Priority Simulation. Source: NTA.

Figure 12-11: Indicative map showing an overview of recommended Access Roads and Entrances. All modes are permitted access via the M50 Parallel Road, and only active travel modes and Luas maintenance vehicles are permitted access via Ballyogan Grove / Castle View.

Measure RN 3

Racecourse South Access Road

Dún Laoghaire- Rathdown County Council will seek to engage with HRI, the NTA, TII, the developer/ s and other relevant stakeholders to ensure the following in relation to access to the Racecourse South:

- Access northwards through the South County Business Park and Leopardstown Racecourse is permitted for all modes; and
- Dún Laoghaire- Rathdown County Council will engage with HRI, the NTA, TII, the developer/ s and other relevant stakeholders to assess the feasibility of prioritising bus movement on the M50 Parallel Road by use of a bus gate.

Measure RN 4

Ballyogan Grove / Castle View

Future development of the Racecourse South shall ensure that Ballyogan Grove / Castle View provides a service road function to both facilitate pedestrian and cycle movement between Glenamuck Road and the M50 Parallel Road, and to provide access to the Race course Luas Stop for maintenance purposes.

3. Long Term Measure: New Road Ballyogan Grove Upper

The ABTA considered the potential of a new road 'Ballyogan Grove Upper' that would link Glenamuck Road North, with the opened Racecourse South Luas Stop before exiting onto the M50 Parallel Road as illustrated in **Figure 12-12** below. The road would provide additional public transport connectivity and potentially facilitate local access only to reduce its attractiveness as a rat-run route.

The road is not considered a critical enabler in the short run given the availability of alternatives and the following considerations:

- Potential impact on the safe operation of the Luas Line.
- Cost implications relating to land acquisition as well as the construction of the road itself.
- Impact on the receiving environment; and
- Impact on existing residents in Castle View.

Figure 12-12 Indicative alignment for a new road at Ballyogan Grove Upper

The requirement of the road may become more pressing in the medium to long-term depending on a number of factors relating to the phasing of the site's development including a higher than anticipated density and the future layout of the Land Development Agency's site. Additional feasibility assessments should therefore be undertaken by the master planning team, and / or by the landowners / future developers of the land . Engagement with TII will be necessary, and traffic modelling may be required to fully understand the impact of these options.

Measure RN 5

New access road- Ballyogan Grove Upper

A new access road may be required to the north of the Racecourse Luas stop in the medium to long term. Assessments should be undertaken by the master planning team and or the developer/ s prior to development of the Racecourse South Lands to assess the feasibility of the construction of a new road north of Ballyogan Grove. The following should be assessed at a minimum:

- Impact on the receiving natural environment
- Impact on existing residents in Castle View
- Impact on the safe operation of the Luas

12.5.2 M50 Parallel Road Active Travel Facilities

The M50 Parallel Road is an urban road and is the main link between the Racecourse South and Junction 15, where Ballyogan road and Glenamuck road meet and provide connectivity to surrounding neighbourhoods.

Therefore, according to *DMURS* road and street classifications, the M50 Parallel Road can be identified as an **Arterial Route**, which are major routes via which the major centres / nodes are connected.

The Options Development and Assessment stage identified measures which should be applied to the road to facilitate the development of the Racecourse South as a residential-led mixed-use neighbourhood comprising of streets with a high value on pedestrian and cyclist movement, with the main access to the site designed to reflect this principle. The M50 Parallel road should ensure the safe movement of pedestrians and cyclists, offer high-quality public transport services but also ensure the efficient movement of general vehicular traffic.

Any interventions for the M50 Parallel Road should therefore aim to:

- Reduce the speed limit and consider traffic calming measures, which would enable active travel, reduce emissions and create a safer environment;
- Maintain three-lane layout with one lane kept in reserve to facilitate the existing 'tidal' arrangements that can be established on major event days to facilitate receipt and discharge of traffic generated by the Leopardstown Racecourse;
- Include a landscaping scheme on the south / west side of the road to act as a buffer / screen from the noise and visual impacts of the M50; and
- Consider aligning future bus stops with the main entrance points into the Racecourse South to maximise catchment.

Additionally, active travel facilities should include widening existing footpaths on the north-eastern side of the road where necessary. Two-

way cycling facilities should also be located on this side of the road separated from vehicular traffic by a 1.5m buffer (minimum). A two-way cycle track of this layout is suitable on urban roads with speed limits of up to 50km/h, according to the NTA's *Cycle Design Manual* (CDM). This is also consistent with existing provision on the parallel road between the M50's Junction 13 and Junction 14 (see **Figure 12-14**).

Additionally, the south-western side of the road has no destinations or services, therefore locating active travel facilities on this side would be inconvenient for people going to/from Racecourse South. The recommended layout also aligns with the with the proposed layout of active travel infrastructure at Junction 15 (see **Section 12.6).**

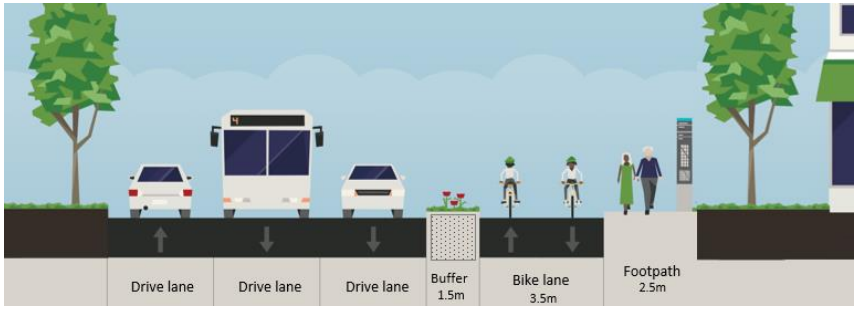


Figure 12-13: Indicative cross-section for the M50 Parallel Road.

As the M50 Parallel Road is located on the boundary of the MMaRC Network Area A, engagement with TII will be required regarding the recommended alignment of the road. Engagement with HRI is also critical.

Figure 12-14: Example of existing active travel facilities on the parallel road between the M50's Junction 13 and Junction 14.

Measure RN 6

M50 Parallel Road Upgrades

Dún Laoghaire- Rathdown County Council will consider the following alterations to the M50 Parallel Road – to facilitate the development of the Racecourse South Lands:

- Reduce the speed limit & consider traffic calming measures;
- Deliver cycling infrastructure along the entire length of the road:
  - Two-way cycle track on the north-eastern side of the road – min. 3.5m total width
  - Widen existing footpath on north-eastern side of the road to allow space for bus stops, benches and wayfinding elements
  - Min. 1.5m wide buffer separating the cycling facilities from vehicular traffic
- Include landscaping & placemaking elements (planters, street trees).

12.5.3 Internal Street Network

It is understood that the site will be master-planned. Therefore, the following paragraphs set out key principles to inform the development of that Masterplan.

The recommended principles for the internal street network of the Racecourse South is the creation of a fully permeable network for people walking, wheeling, and cycling along all routes, that maximises accessibility to public transport stops. Local streets of the internal network should emphasis a high place value through an urban design-led approach.

This approach is similar to that adopted in the planned neighbourhood of Vauban, Freiberg, depicted in **Figure 12-15** illustrating the main thoroughfare, pedestrian and cycle-only streets, peripheral car parks, and the light rail line which connects the neighbourhood to the main city of Freiburg.

Future development of the Study Area should follow the DMURS street classification, with an additional 'Filtered Permeability' function to emphasis pedestrian and cycle movement between residential blocks.

- **Link Streets**: These provide the links to Arterial Streets, or between Centres, Neighbourhoods, and/or Suburbs.

This LTP recommends the use of a **Link Street** as the main thoroughfare in the Racecourse South which will provide direct access to the M50 Parallel Road and between local streets, as well as to clusters of consolidated car parking areas. Circulation for cars will be curtailed where practicable to prevent local streets from becoming dominated by vehicular movements. This street will provide multi-modal transport options.

- **Local Streets:** These provide access within communities and to Arterial and Link Streets.

This LTP recommends that the majority of the integrated street network within the Racecourse South consists of **Local Streets**. These streets are to be predominantly residential in character and designed for low speeds (20/30 km/h).

A network of off-street pedestrian and cycle paths from the Link streets should provide access to every destination within the district. In many cases, these streets will be curtailed to prevent rat-running by vehicles but allow full access to pedestrian and cycling through filtered permeability methods:

- **Filtered Permeability** measures should be applied to facilitate full walking and cycling movement between blocks and provide attractive, safe and legible routes between residential areas.

In some circumstances, they can support limited delivery and servicing requirements, waste collection, additional accessibility requirements, and access to mobility hubs. However, through traffic movements will be restricted through the use of bollards, planters, or emergency gates as appropriate. In all street types, the high place value of the Racecourse South will emphasise the following:

→ High quality urban design solutions that emphasise the importance of place;

→ Support the highest possible levels of connectivity and accessibility for pedestrian movement and comfort; and
→ Traffic calming where appropriate, to support a high degree of integration between users.

Figure 12-15 Vauban's Street Network.

Measure RN 7

Internal Street Network

Any future development in the Racecourse South Lands should deliver an internal street network and placemaking strategy within the final agreed masterplan that is cognisant of the following general principles:

- Establish a street hierarchy whereby the majority of the integrated street network within the Racecourse South consists of Local Streets that are residential in character and designed for low speeds.
- Establish a Link Street as the main thoroughfare to provide direct access to the M50 Parallel Road and between local residential streets.
- Restrict car movement to residential streets for pick-up / drop-off only, however allow access to disabled parking spaces on the streets.
- Establish physical barriers to restrict car access pedestrian and cyclist only streets; and
- Providing SUDS and GI as part of the Internal Road Network.

12.5.4 Speed limits

Lower speed limits enable active travel, reduce emissions and create a safer environment for all. This LTP therefore recommends the Department of Transport's Speed Limit Review and all future guidance is followed to ensure that lower speed limits are applied on the relevant roads and streets throughout the Racecourse South, and externally on the M50 Parallel Road to support the recommended principles and measures of the LTP. The following should be applied in the internal street network:

- A limit of 20km/h should be applied to pedestrian zones & shared spaces.
- A speed limit of 30km/h should apply on all other local streets.
- A limit of 50km/h should be applied to key bus routes (should the long term measure of the delivery of an internal bus service be fulfilled).

Figure 12-17 The safety impact of lower speed limits, showing that the risk of injury or death for pedestrians and cyclists increases as vehicular speeds increase.

Figure 12-16 Homezone with pedestrian priority and 10km/h speed limits in Adamstown, Co. Dublin.

Measure RN 8

Speed Limits

Dún Laoghaire-Rathdown County Council will liaise with the Department of Transport (DoT) to ensure that all speed limits within the Racecourse South Lands are aligned with future DoT publications regarding the National Speed Limit Review, and apply the recommended speed limits for each road and street.

12.6 Junction 15

As noted, the Study Area is served by Junction 15, which is an important junction on the national strategic road network and part of the M50 motorway. Junction 15 is the primary east-west motorway crossing point for pedestrians, cyclists, public transport and cars in the vicinity of the Study Area. Junction 15 consists of Carrickmines Interchange Overbridge and three roundabouts, including:

- Carrickmines South Roundabout
- Carrickmines North Roundabout and
- Glenamuck Road North Roundabout

Carrickmines Interchange Overbridge consists of a dual-carriageway with grade separated footpaths and raised cycle paths on each side of the road. The speed limit for each roundabout is 50km/h.

12.6.1 Existing Active Travel Facilities

Carrickmines South Roundabout has limited cycling facilities on its northern arms including a two-way standard cycle track (approx. 3m wide) protected from the road by a grass buffer (1.5m) on the northern side. These facilities continue to Carrickmines North Roundabout, where the two-way cycle track on the southern arm changes to a one-way standard cycle track on both sides of the road (approx. 1.7m each), crossing the M50.

The facilities continue to the Glenamuck Road North Roundabout to Ballyogan Road and Glenamuck Road. There is also a shared cycle lane and pedestrian path between Carrickmines South Roundabout and the Carrickmines Park and Ride.

Figure 12-18: Junction 15 (Carrickmines Interchange), the Carrickmines Interchange Overbridge and the junction's three roundabouts.

Figure 12-19: Existing crossing point at Carrickmines North Roundabout.

For the most part, the footpaths at Junction 15 range from a width of 1.8m, such as along Glenamuck Road North between the Glenamuck Road North and the Carrickmines North Roundabout, to 2m across the Carrickmines Interchange Overbridge. The existing cycling facilities are illustrated in **Figure 12-20**.

Figure 12-20: Existing cycle facilities at Junction 15.

12.6.2 Guidance and Standards

Because Junction 15 is part of the national road network, any improvements or other new works that impact the M50 and Junction 15 must accord with DoECLG's *Spatial Planning and National Roads Guidelines for Planning Authorities (2012)* and all relevant requirements of TII Publications (Standards and Technical) for National Roads. This includes:

- *Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade-separated and compact grade separated junctions* (DN-GEO-03060); and
- *Treatment of Transition Zones to Towns and Villages on National Roads* (DN-GEO-03084).

Cycle Design Manual (CDM) Design Principles

Guidance from the NTA's *Cycle Design Manual* must also be followed in the design of cycling facilities. The following design principles should be considered in the designing a cycle-friendly roundabout.

- Approaching traffic should be slowed (to near stopping speed) by narrowing the entry lane.
- Traffic speed on the roundabout should be controlled by a single narrow circulatory lane.
- Approach arms should be aligned towards the centre point of the island and not deflected.
- Traffic lanes should approach roundabouts at right angles rather than obliquely, and without flares.
- The location and visibility of any pedestrian and cyclist crossing facilities must be carefully considered.
- Landscaping and artwork within the central island can encourage slower vehicular speeds; and
- Where multi-lane approaches or double or multiple gyratory lanes are necessary for capacity, the cycle traffic should be taken off the carriageway into a separate cycle facility.

12.6.3 Options Development and Assessment Process

The Options Development and Assessment process identified several options for active travel facilities on Junction 15 and its associated roundabouts, having regard to TII Publications compliance and CDM design principles.

12.6.4 Junction 15

Subject to appropriately agreed engineering feasibility and design progression with TII and compliance with TII Publications, the following option currently emerges as the preferred option, and consists of two elements:

1. Fully signalised roundabouts with a potential total of 5 controlled crossings.
2. Upgrading existing active travel facilities across the Junction.

The preferred option seeks to improve the pedestrian and cyclist experience at each roundabout by upgrading active travel facilities and delivering safe controlled crossing points (see **Figure 12-21**).

A high-level technical analysis, including a sensitivity analysis, of this preferred option was undertaken using the junction modeling software, TRANSYT, to understand the impact of the proposals on the operation of Junction 15 and the National Road Network and inform future detailed design of active travel upgrade measures. Results of this analysis are detailed in Chapter 16.

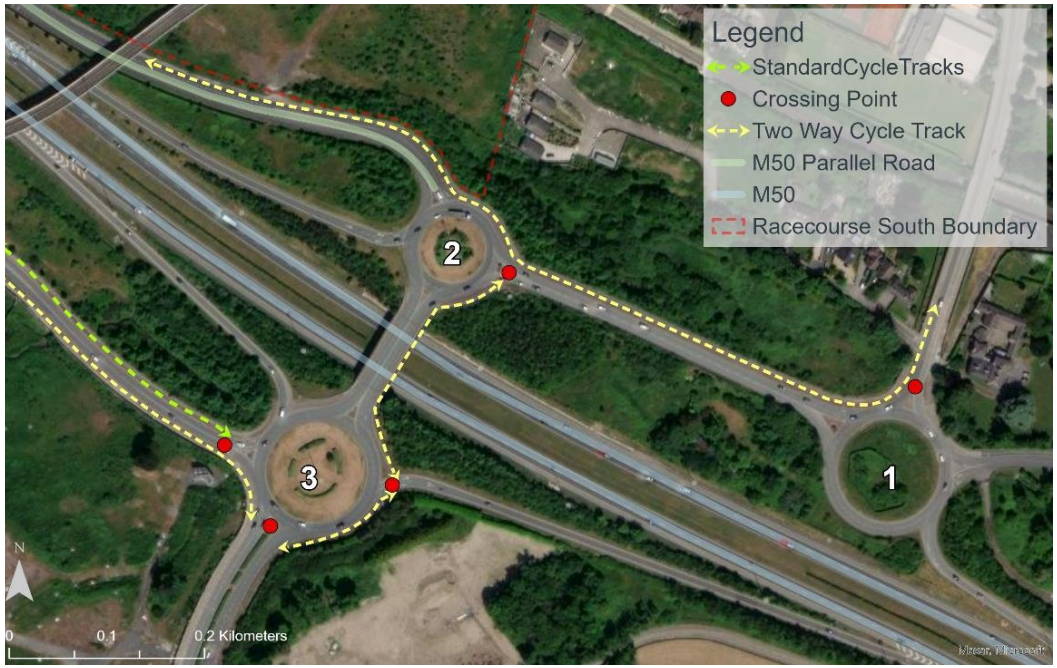


Figure 12-21 Indicative locations for controlled crossing points at the three roundabouts at Junction 15, and recommended locations for the two-way cycle tracks to ensure a more coherent, clear and direct active travel network.

Measure RN 9

Carrickmines Interchange Overbridge

Dún Laoghaire-Rathdown County Council will engage with relevant stakeholders, in particular TII and the NTA, to upgrade the pedestrian and cycling facilities on each roundabout at Junction 15, which is part of the national road network and therefore subject to the DoECLG's 'Spatial Planning and National Roads Guidelines for Planning Authorities' (2012), with the aim of ensuring that a coherent, safe and direct route is provided for active travel modes between the Racecourse South and south of the M50.

The locations of necessary controlled crossing point and modifications to the active travel infrastructure will be subject to feasibility technical assessments. Any modifications to the existing layout of the junction must take account of areas currently managed by the Motorway Maintenance and Renewal Contracts (MMaRC), comply with *TII Publica*tions and algin with the NTA's *Cycle Design Manual 2023*.

Measure RN 10

Protection of the Strategic Transport Function of Junction 15

Dún Laoghaire County Council will work with TII to ensure that the strategic transport function of the Carrickmines Interchange Overbridge, which is part of the national road network is protected, and any future works are in accordance with TII's Publications and the DoECLG's '*Spatial Planning and National Roads Guidelines for Planning Authorities' (2012).*

13 Car Parking

13.1 Overview

Since the advent of the private car, our built environment has become increasingly dominated by cars, often designed to prioritise their movement and storage. There has been a step-change in recent years, however, to re-examine our approach to car parking management and the role our streets play as places that support a much broader range of functions and how best to balance those, often competing, demands.

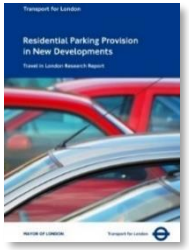
Managing the location, availability and cost of parking is one of the most widely used demand management measures and therefore, is a key component of any strategy that aims to effect a modal shift toward sustainable travel and reduce car dependency.

The step-change in thinking regarding parking provision is reflected within Irish policy directives at national, regional and local level where there has been a move towards more compact forms of development, highly walkable and cyclable town centres and accessibility to high-quality public transport (Transit Oriented Development).

The *NPF* recommends that there should generally be limited car parking requirements for new development in or near the centres of the five cities, and a significantly reduced requirement in the inner suburbs of all five. The *Sustainable Residential Development and Compact Settlements Guidelines* require planning authorities to have regard to circumstances under which parking can be minimised, substantially reduced or wholly eliminated.

This chapter discusses the approach recommended by the LTP for car parking provision in relation to the Racecourse South Lands site.

13.2 Public Transport and Parking Standards



There is a long-established relationship between availability of public transport, car parking and impact on travel behaviour. A Transport for London study looked at more than 800 new developments across both Inner and Outer London with varying levels of public transport accessibility and car parking levels applied to the development.

The study found that the level of car parking provided in new developments has a substantial impact on the level of car use generated by that development. There is a strong relationship between **public transport accessibility** and **household car ownership** – as public transport accessibility increases, car ownership in new developments falls. Additionally, the **more parking provided** by a new development, **the higher the household car ownership level**. With more parking, there are more cars. This was true for all groups and in all areas studied. Lastly, **developments with more parking produce more car travel**.

In areas that are most accessible to high frequency public transport a typical approach is to encourage higher densities within a typical 1km catchment of public transit and car-free or low-car development. This aims to mitigate car trips, congestion and associated negative impacts on the liveability and quality of place associated with the private car.

Typically, in car-free and low-car developments, new occupants of housing are restricted from applying for on-street car parking. Mobility/Transport as a Service (M/TaaS) incentives are offered, including developer-funded membership of car clubs, public transport smart ticketing and bicycle hire membership, to off-set the loss of car parking.

13.3 Sustainable Residential Development and Compact Settlements Guidelines

The *Sustainable Residential Development and Compact Settlements – Guidelines for Planning Authorities* (2024) replaces the *Sustainable Residential Developments in Urban Areas – Guidelines for Planning Authorities* issued under Section 28 of the Act 2009. The Guidelines outline the evolution of wider policy since the publication of the *Sustainable Urban Housing: Design Standard for New Apartments* in 2022 and presents a summary of emerging policy approaches to managing density and development standards for housing.

The Guidelines address a variety of transport-specific issues and sets out principles that should be applied in the preparation of local plans and in the consideration of individual planning applications. In the context of the Racecourse South ABTA, the Guidelines specifically states:

*"The **quantum of car parking** in **new developments** should be **minimised** in order to manage travel demand and to ensure that vehicular movement does not impede active modes of travel or have undue prominence within the public realm."*

Specific Planning Policy Requirement (SPPR) 3 – Car Parking

The Guidelines consider that proximity and accessibility to public transport should form the basis for the approach to car parking in new developments. Specific terms are therefore used to define proximity and accessibility to services and public transport, two of which are pertinent to the ABTA and are outlined below.

Accompanying these terms, the Guidelines identifies Specific Planning Policy Requirement (SPPR) 3 – Car Parking which addresses car parking rates in new residential developments, such as in the Racecourse South. Two of the four definitions applicable to the Racecourse South and its future services are as follows:

> **1. High Capacity Public Transport Node or Interchange:** This land is **located within 1,000m walking distance** of an **existing** or **planned high capacity urban public transport node or interchange**. This includes DART, high frequency commuter rail (10-11 minute frequency), light rail or Metrolink; or locations within 500m walking distance of an existing or planned Bus Connects Core Bus Corridor stop.

As the Study Area is located within Dublin City and its Suburbs, the following also applies, as noted in *SPPR 3 – Car Parking*:

*"...Car-parking provision should be **minimised**, **substantially reduced** or **wholly eliminated**. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling."*

2. Accessible Locations: Land characterised as an 'accessible location' include those located within 500 m, i.e. up to a 5-6 minute walk, of existing or planned high frequency (i.e. 10 minute peak hour frequency) urban bus service.

For lands characterised as Accessible Locations, car-parking provision should be substantially reduced as follows;

"The maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 1.5 no. spaces per dwelling."

Much of the southern half of the Racecourse South is currently within a 15-minute walk (1.2km) to the nearest Luas stop (Ballyogan Wood) and bus stops (Ballyogan Wood or Glenamuck Rd North bus stop), however not the entire site.

It is also worth noting that although the Racecourse Luas Stop is within 50m of the Study Area boundary, it is not an active and functioning Luas Stop. Therefore, the Study Area is currently not classified under as 'High Capacity Public Transport Node or Interchange'.

13.4 Car Parking in the Context of the Racecourse South

The Racecourse South site is served by the high-capacity Luas Green Line, with proposals under this LTP to also include front-loading the provision of a reliable bus service and the future use of the Racecourse Luas Stop. As a result, it is recommended that the future Racecourse South neighbourhood shall be characterised as a *High-Capacity Public Transport Node or Interchange*.

Furthermore, based on commonly applied planning practices to car parking to compact, dense, accessible places with excellent public transport connectivity in Ireland and further afield, the LTP recommends that a policy of a restricted maximum car parking standard is applied to the overall Racecourse South. This is discussed in detail in the next sections.

13.5 Car Parking Standards

13.5.1 Approach to Car Parking Standards

This LTP proposes that car parking in the Racecourse South is minimised, substantially reduced or wholly eliminated based on the *Sustainable Residential Development and Compact Settlements – Guidelines for Planning Authorities*.

This recommendation is made with the assumption that a new Active Travel Bridge will be **constructed**, and that the Racecourse Luas Stop will be **opened** for use in keeping with a '*High- Capacity Public Transport Node or Interchange'* under the *Sustainable Residential Development and Compact Settlements – Guidelines.*

In addition to the guidelines, the recommendation of minimising, substantially reducing or wholly eliminating car parking in the Racecourse South lands is based on the following reasons:

Public Transport Accessibility Levels

Once the **Racecourse Luas stop** is opened, the site would be a highly accessible development with high-frequency rail services, and local bus services. Opening this Luas stop would characterise the Racecourse South as a 'High-Capacity Public Transport Node or Interchange', and therefore the minimisation of car parking provision would apply.

Access to Services

The construction of the **Ballyogan Active Travel Bridge** would effectively shorten the walking distance between the Study Area and the Ballyogan Wood Luas and bus stops from a 15-minute walk to a 5-minute walk.

This bridge would act as enabling infrastructure, unlocking the development potential of the Racecourse South lands as a compact neighbourhood. Relative accessibility of services as a result of this bridge and public transport interventions would be improved, therefore there is a reduced need for a car to access services in nearby neighbourhoods.

Site Constraints

The more space dedicated to car parking will detract from the **space to develop** on Racecourse South lands, which is already a relatively constrained site.

Mode Share Targets

Having a ratio of more than 1 car parking space per unit is inconsistent with the **mode share targets** for travel to work, school or college for both the County and consequently for the Racecourse South. Mode share targets for sustainable modes (walking, cycling and public transport) is 70%, versus 30% private car.

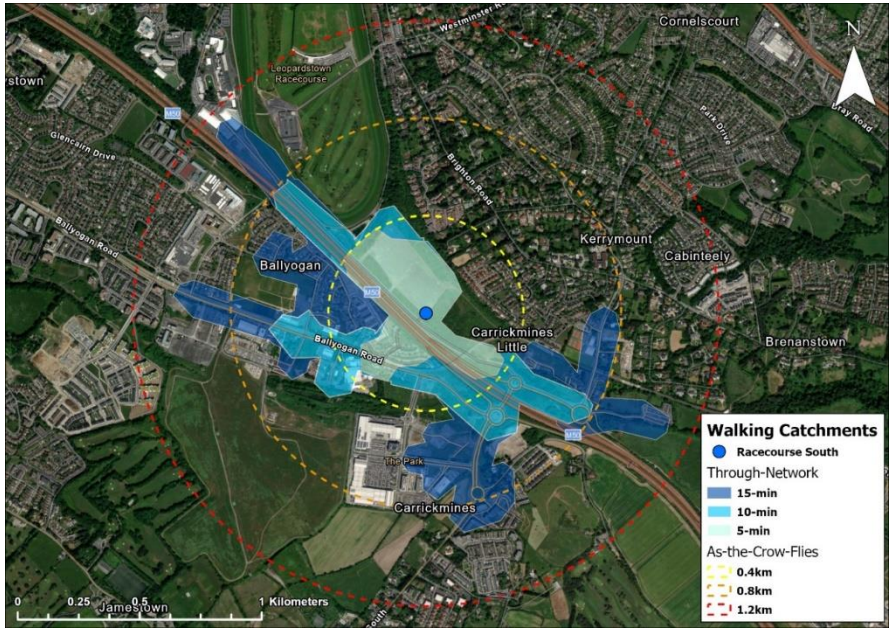


Figure 13-1 Walking Catchments between the Study Area and existing Luas Stops, with the Ballyogan Active Travel Bridge.

LDA Cost Rental in the Racecourse South

Parking could be a **separate cost**, decoupled from rent, adding an increased cost to residents who want parking provision as opposed to being borne by all.

Additionally, the more space given to car parking in an already a relatively **constrained site**, the less space there would be available for

the development of land with high value use (such as residential use, health services, or recreational uses).

Measure PM 1

Approach to Car Parking Standards

Dún Laoghaire Rathdown County Council, the NTA, TII, the LDA/ developers and other relevant stakeholders will seek to ensure that the car parking standards for the Study Area will be considered based on the following criteria:

- Level of public transport accessibility including new Luas Station and bus services.
- Proximity of essential services including schools, shops and medical centres.
- Provision of high-quality active travel infrastructure including bridges to adjoining neighbourhood and District centres.
- Maximising the Site's ability to provide housing, mixed-use, community uses and open space.
- Final agreed composition of the unit sizes.
- Future availability of the redeveloped Carrickmines P+R to provide a limited portion of resident car parking; and
- Introduction of car clubs – as part of mobility hub and mobility point provision – to cater for the needs of residents that require a car occasionally but do not wish to own one.

13.6 Car Parking Management

13.6.1 Approach to Car Parking

DMURS acknowledges the importance of off-street parking in developments with higher densities to ensure that parked vehicles do not dominate public areas. In this regard, DMURS *recommends* that where off-street or in-curtilage parking is provided it should be designed to integrate into the building envelope to maximise efficiency, and to reduce the visual impact of parked cars.

Considering that the Racecourse South is a relatively compact site, consolidating car parking will be required in order to maximise space for land with high value use (such as residential use, educational and health services, or recreational uses).

This section presents several potential approaches to car parking management in the Racecourse South. Each approach should be further assessed and considered in the preparation of the Racecourse South Masterplan.

Measure PM 2

Approach to Car Parking Management

Dún Laoghaire- Rathdown County Council will work with the NTA, TII, the LDA/ developers and other relevant stakeholders, to ensure that feasibility studies are carried out in the master planning stage assessing the approach to car parking management. This shall include an assessment of the most appropriate location and composition of (a) Mobility Hub(s) which would accommodate clusters of consolidated car parking.

13.7 Mobility Hubs and Mobility Points

13.7.1 What is a Mobility Hub?

Mobility hubs are an increasing feature as part of best practice regeneration-led proposals across European cities. The basic premise is that mobility hubs are **directly connected to public transport and walking and cycling networks**, providing a focal point in the transportation network that seamlessly integrates different modes to maximise first-mile-last-mile connectivity.

The concept is based around a need to reduce the land take required for both surface and off-street car parking in cities.

Mobility hubs support the 'parking at distance' principle which prioritises sustainable transport options whilst maintaining access to private car parking for those that really need it. In this way, they can support low-car or car-lite residential developments and neighbourhoods.

There is no 'one-size-fits-all' in terms of what form a mobility hub might take; it should be responsive to the needs of the context of the development it serves. In many cases across Europe, mobility hubs are multi-storey car parks that are wrapped around by higher value active land uses such as apartment blocks, workplaces or retail uses. Some mobility hubs (see **Section 13.7.2**) enable active uses such as rooftop playgrounds and creative workplaces. Others are standalone structures to allow for adaptive re-use in the future.

Typically, active uses front pedestrian areas whereas vehicle access points are located to the rear in lower place value roads. A typical arrangement could include a parking garage provided as part of a mixed-use development including active ground floor uses including cafes and metro-style supermarket.

Figure 13-2: Mobility Hub in Vienna, with car sharing systems, public transport interchanges, bike sharing systems and car parking spaces.

Mobility Hubs typically include:

- Sheltered, secure bike parking
- Bike repair station
- Bike-sharing & Car sharing systems
- Bus stops
- EV charge points for bikes & scooters
- Electric Vehicle Charging Points (EVCP)
- Public toilets
- Consolidated waste collection; and
- Parcel collections points providing an alternative to last-mile delivery.

Mobility Hubs can potentially be instigated by a Local Authority or as part of a Public Private Partnership with a landowner and/or car park operator. Mobility hubs should be located in areas that are served by

- Frequent public transport
- Quality walking and cycling links.

Prices for car parking spaces within these hubs are typically decoupled from that of units ensuring that while parking is available for those willing to pay for it, cheaper housing, combined with the availability of alternatives to car ownership - sometimes referred to as Mobility as a Service (MaaS) or Access not Ownership - is available for those that require a car only on an occasional basis, if at all.

Construction costs are therefore typically lower for developers and local authorities, as the land-take required for car parking provision is minimised enabling more productive uses of land in the form of additional housing or live/work units.

13.7.2 Examples of Mobility Hubs

Vauban, Freiburg, Germany

A key principle of Vauban's Masterplan (see **Chapter 4 – Case Studies** for further details) was that car use should be made less convenient than active and sustainable transport for residents. This was employed by not providing on-street / own-door parking space and quiet streets.

Figure 13-3: Solar-powered car park in Vauban, 'Solargarage Vauban.'

Parking is separated from the majority of housing units with three multi-storey garages located on the fringe of the site. Residents of parking-free streets must purchase a space in one of these garages as on-street parking is restricted.

While space was set-aside for the minimum parking requirement, it did not need to be fully realised until the demand matched. As a result, land that had been identified for a fourth carpark, has been since turned into a community garden due to lack of demand.

See **Section 12.5.3** for a map of Vauban, showing the Mobility Hub car parks located at the periphery of the neighbourhood, and the network of residential streets which are referred to as stellplatzfrei – 'free from parking' streets.

Nordhavn, Copenhagen (Denmark)

A key element of the vision and concept of Nordhavn, Copenhagen is to make private car use much less convenient than sustainable modes, through the principle of 'the 5-Minute City' and multi-functional parking areas. Nordhavn's mobility hub, which is in the form of a 'Park'n'Play' multi-storey car park, is a unique car park that redefines the traditional car park design.

The Park n' Play incorporates green facades and a rooftop playground. The exterior is made up of shelves of planting and stairways with handrails that the architects call the 'red thread,' leading visitors up to the roof of the car park. This maximises the structure and turns it into something playful and a landmark feature.

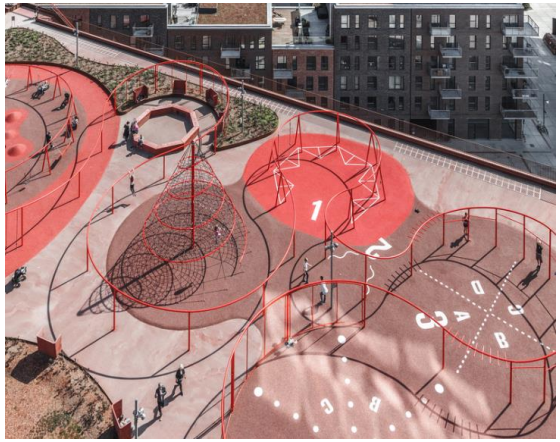


Figure 13-4: Rooftop playground in the Park 'n' Play Multi-Storey Mobility Hub. Source: Jaja Architects.

13.7.3 Mobility Hubs in the Context of the Racecourse South

Further assessments are required to understand the preferred composition and location of mobility hubs in the Racecourse South. Based on the above case studies, mobility hubs would be best located at the neighbourhood's main access points and / or near high-frequency public transport stops. This would ensure that vehicles entering the neighbourhood are instantly directed towards the mobility hubs, reducing vehicular movements within the internal street network which should be designed to prioritise pedestrians and cyclists.

The LTP recommends that locating a mobility hub at or near the Racecourse Luas Stop is explored by the master planning team. This multi-modal interchange point could include shared micro-mobility points such as e-bikes, cargo bikes and e-scooters. These would be co-located adjacent to the main pedestrian and cycling entrance of the Hub, but external to the Hub for general public use and ease of access.

The design of the Hub could incorporate public and community amenities such as a rooftop terrace/viewing platform, green infrastructure or public art, creating an attractive focal point. In addition to residential car parking spaces, mobility hubs in the Racecourse South include a mix of the following elements:

- Car rental / club spaces
- High-quality bicycle parking
- End-of-trip facilities
- Electric vehicle charging points

The provision of mobility hubs provides several obvious opportunities for the Racecourse South, including:

Contribution to Sustainable Mode Share Targets

DLRCC's mode share target is 70% for sustainable modes. By prioritising walking, cycling, public transport accessibility and providing viable alternatives to private car ownership, the likelihood is that sustainable transport becomes an **instinctive choice**.

Reduced Land Take

Consolidating car parking areas reduces the need to provide on-street parking for individual residential units **freeing up land for more productive uses** including more housing units, commercial activity and public realm improvements. This is particularly relevant to the Racecourse South where the supply of land is relatively constrained.

Compliance with National Policy

The *Sustainable Residential Development and Compact Settlements – Guidelines for Planning Authorities* notes that car parking "*should be minimised, substantially reduced or wholly eliminated*" at locations that have good access to public transport. The provision of mobility hubs in the Racecourse South satisfies several requirements for low parking provision and high-quality cycle parking within reach of public transport.

More Affordable Homes

The price of parking is typically decoupled from the cost of the home. Therefore, **cheaper housing is available** to those with wish to purchase / rent a home but not a parking space. This is particularly relevant to the Study Area as the LDA intends to build cost-rental homes on the site.

Contribution to Place-making Objectives

Access points into the hubs should be located in areas that are less attractive for residential / employment uses – e.g., aspect facing distributor roads – and should support **active frontages**. Mobility hubs may be best located on the western boundary of the Study Area where they can contribute to the reduction of noise from the M50.

Support People-Friendly Streets

Consolidating car parking in off-street locations ensures that more street space is available for active travel infrastructure, landscaping, play areas, etc. Mobility hubs allow space to be organised in a way that **creates a better experience** for people walking, cycling and taking public transport.

Seamless End-to-End Trips

Mobility hubs boost convenience for **multi-modal trips**, enabling a seamless switch between different transport modes, e.g., taking public transport to a hub & using a rental bike for the trip home. Providing high-quality bicycle parking and bike share schemes at mobility hubs in the Racecourse South will facilitate these types of trips.

13.7.4 Mobility Points

Mobility points differ from mobility hubs in that they are smaller scale, typically on-street interventions entailing the co-location of sustainable transport measures near public transport stops. At a minimum, they should include cycle parking and car club spaces but can be expanded to include bus stops, E.V. Charge Points, shared bike schemes and seating.

Mobility points should be visible and accessible to residents and visitors, but care must be taken to ensure that they are not sited in areas of high-pedestrian movement.

Suitable locations for mobility points in the Study Area may include residential streets off the main thoroughfare that are easily

Measure PM 3

Mobility Hubs

Dún Laoghaire- Rathdown County Council will seek to ensure that the consideration of Mobility Hub car parking in any future development of the Racecourse South Lands shall examine in addition to residential and visitor parking spaces, sheltered, secure bike parking including parking for adaptive and cargo bikes , and end-of-trip facilities. It should also include micromobility share schemes and charging points as well as car rental / club spaces. *(The exact form of a Mobility Hub is dependent on the outcome of the masterplan process).*

Measure PM 4

Mobility Points

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/ s of the Racecourse South Lands to undertake a feasibility study to assess the most - suitable locations for Mobility Points. These Mobility Points should include consideration of the following:

- Car club vehicles
- Bike-share schemes
- Public bicycle parking
- EV-charging points

accessible and have available space so that the mobility points does not form a barrier against pedestrian and cyclist movement.

Figure 13-5 The first mobility point in Ireland in Blanchardstown – with 5 parking bays with specific colour-coordinated functions including age-friendly, disabled, electric vehicle charging, bike racks and car sharing. Source: Fingal Co. Co.

13.8 On-Street Car Parking

The provision of a carefully managed on-street parking system can support accessibility for those with additional accessibility requirements. However, on-street parking can also lead to traffic circulating looking for a parking space, contributing to congestion and pollution.

Furthermore, on-street parking takes away valuable public space that could be used to provide wide footpaths, cycle lanes, plant street trees or accommodate green infrastructure, street furniture or play areas.

Therefore, where provided, the LTP recommends minimising on-street car parking provision, in favour of off-street parking. Where provided, on-street parking should support a hierarchy of parking need, prioritising the needs of disabled users and set-down.

Measure PM 5

On-Street Parking

Dún Laoghaire- Rathdown County Council, the LDA/developers and other relevant stakeholders of the Racecourse South Lands will seek to ensure that a hierarchy of parking need is established for on- street parking that prioritises the needs of users with additional accessibility requirements, and delivery and servicing needs.

13.9 Carrickmines Park & Ride

Carrickmines Luas Stop is supported by the Carrickmines Park and Ride, (P&R) located to the south of the Racecourse South lands. This rail-based P&R facilitates 352 car parking spaces, including 13 Blue Badge spaces and 5 EV Charging Points. The P&R is accessed from a turn off at Carrickmines South Roundabout, with a pathway leading to the northbound Luas platform.

Currently, this is a temporary surface car park, however it is understood that the P&R may be redeveloped as a multi-storey car park in future years, as stated in the Cherrywood SDZ Planning Scheme. This is to

facilitate an increase in car parking and car charging facilities, and improved transport interchange arrangements.

This proposal is supported in this LTP for the following reasons, as it would:

- Provide some additional capacity for residents of the Racecourse South that may own a car, but do not necessarily require one (Parking at Distance principle).
- Help consolidate parking and free up land for redevelopment for high value use such as commercial / residential in the surrounding area.
- Enable last-mile trips to be made more sustainably.
- Provide an opportunity for district heating centre / solar etc.
- Provide parking for eventgoers to Leopardstown Racecourse who wish to avail of the P&R facilities (including bus, Luas and active travel facilities), separate to any private parking provided by Leopardstown Racecourse.

Measure PM 6

Carrickmines Park and Ride

To facilitate the future development of the Racecourse South Lands, Dún Laoghaire -Rathdown County Council will support the development of the Carrickmines Park and Ride as a multi - storey car park, as part of the Cherrywood SDZ Planning Scheme, and in line with RPO 8.14 of the *RSES* for the Eastern and Midlands Region.

Additionally, the *RSES* identifies the Carrickmines P&R as one of eight P&R in the area due for new and enhanced P&R facilities (Objective 8.14).

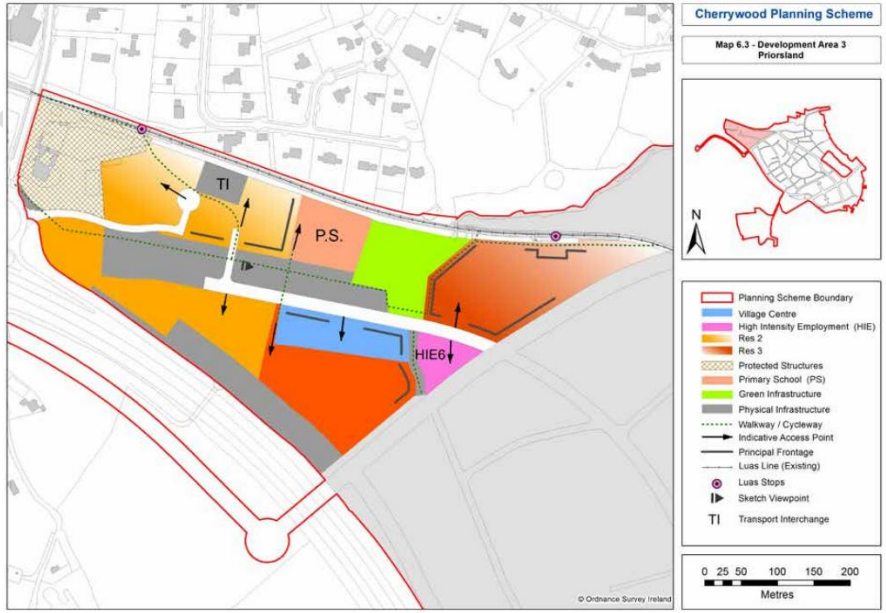


Figure 13-7 *Development Area 3: Priorsland* of the Cherrywood SDZ Planning Scheme. The Carrickmines Park and Ride is identified in grey as T.I. (Transport Interchange).

Figure 13-6 Existing Park and Ride at the Carrickmines Luas P&R.

14 Bicycle Parking

14.1 Overview

A lack of appropriate bicycle parking facilities is often cited as a barrier to cycling / bike ownership. Therefore, a high level of secure and accessible bicycle parking for all types of micromobility will be critical to achieve the 70% non-car mode share targets in the Racecourse South.

Different types of cycle parking solutions are required to cater for different types of users depending on the location and trip purpose such as short and long-stay parking. Cycle parking should also make appropriate provision for different designs of bicycles and other forms of micromobility. In general, cycle parking should be:

- **Fit for Purpose:** Meeting current and future demand, with a balance of short and long stay provision for all types of cycle.
- **Secure:** Stands in visible, well-lit places with high levels of natural surveillance
- **Well-located:** Convenient, accessible, as close as possible to the destination and sheltered from the elements

DLRCC's *Standards for Cycle Parking and associated Cycle Facilities for New Developments* outlines the minimum standards for cycle parking in residential, non-residential developments and public uses. The *DLRDCP 2022-2028* states that in car parking **Zone 1** and **2**, these standards should be exceeded. Additionally, the Plan requires that new residential developments of 5 units or more, and non-residential type developments of 400 square metres or over to submit a Cycle Audit as part of the planning application.

Measure BP 1

Approach to Bicycle Parking

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands to:

- Deliver both short-stay and long-stay public cycle parking throughout Racecourse South at key destinations such as outside commercial premises (cafés, express supermarkets), health centres, educational institutions and other non - residential developments.
- Consider innovative practices such as dedicated public off-street bike parking hubs that are secure, sheltered and easily accessed.
- Consider the colocation of cycle parking with other forms of sustainable transport infrastructure through the development of Mobility Points.

14.2 Short-Stay Bicycle Parking

Short-stay bicycle parking is designed for ease of use by the public and visitors to a development. Such bicycle parking spaces should be located in highly visible areas with good passive surveillance, which are easy to access and well lit. They should ideally be situated no further than 25m from main entry points. The *DLRCDP* notes that green roofs should also be considered in the design of standalone cycle parking shelters.

14.3 Long-Stay Bicycle Parking

Long-stay bicycle parking is designed for residents of private developments, or commuters, defined as more than 3 hours duration by the *DLRCDP 2022-2028*. They should ideally be located no further than 50 metres from main entry points. Individual bike lockers and cycle hubs offer security to cyclists and provide innovative solutions to cycle parking requirements for longer periods of time, particularly where internal storage space is limited. End-of-trip facilities could be provided, including bicycle lockers, changing facilities and repair stations. See **Figure 14-1** and **Figure 14-3** for examples of a bicycle hubs.

Figure 14-1 (left) Leyton Cycle Park & Go, a high-capacity and secure bicycle hub in London. Source: Waltham Forest Council.
Figure 14-2 (right) Bike parking and lockers in a Limerick Multi Storey Car Park.

14.4 On-Street Bicycle Parking

In a street environment, cycle stands should be located in space taken from the carriageway wherever possible, inset or with island protection as necessary. Where this is not possible, cycle parking on the footpath should be located in an identified zone adjacent to the carriageway, ensuring at least 1.8m is left available for pedestrians wherever possible.

14.5 Bicycle parking within Multi-Storey Car Parks

The *DLRCDP* notes that any cycle parking located within a multi-story car park must be on the ground floor, completely segregated from vehicular traffic. Cyclists must also be segregated from traffic when entering / exiting the car park, and therefore must have designated access points.

Measure BP 2
Bicycle Parking: Multi-Modal Interchange Point

Dún Laoghaire- Rathdown County Council will work with relevant stakeholders, including the developer/ s of the Racecourse South Lands to examine the feasibility of providing dedicated, high -quality cycle/ micromobility parking hubs in key destinations such as the Racecourse Luas Stop, which is envisaged to play a significant role as a multi-modal interchange.

Figure 14-3 Green-roofed bicycle shelters can be secure and enclosed such as in private developments (left), or open-fronted in public areas.

15 Supporting Measures

15.1 Overview

This chapter provides supporting measures to build on recommendations made in Chapters 8 to 14.

15.2 Micromobility and Shared Schemes

More recent innovations to the city mobility toolkit include e-bikes and other forms of micromobility including scooters and e-scooters. These are increasingly popular but to date, remain largely in private ownership.

However, given recent changes to legislation, both are highly likely that these will become increasingly part of the shared mobility systems network usually referred to as Mobility as a Service (MaaS). Given that around 50% of all trips in Ireland are 6km or less (CSO National Travel Survey 2016) there is undeniable potential for micro-mobility to enable more convenient and more flexible local mobility.

15.2.1 Shared Bike Schemes and E-Bikes/E- scooters

It is a policy of Dún Laoghaire-Rathdown County Council to support the provision of bike rental services (pedal, e-bike and other powered vehicles) across the County (Policy Objective T15: Bike Rental Schemes) and Dún Laoghaire already have a number of schemes available, including BleeperBike, Zipp Mobility, Moby Bikes, and most recently Bolt.

Providing bike rental schemes will promote more liveable towns through the provision of healthier modes of transport. Bike sharing scheme offers transport flexibility and convenience, and the scheme's visibility can help promote a culture of cycling. Bleeper additionally offer private e-bike schemes for organisations. This scheme includes e-bikes, e-cargo bikes and standard bikes, bike maintenance and liability insurance for a monthly fee.

E-bikes can significantly widen the catchment area for commuting and often require less end-of-trip facilities in terms of showers and lockers. Similarly, e-scooters are likely to become an increasing popular part of the mobility mix both for personal and shared use.

Figure 15-1 Moby Bike and Zipp Bike Rental Schemes

Furthermore, cargo bike schemes cater for a variety of uses, such as deliveries, street vending or used to carry children or pets. E-cargo bikes can play a major role in reducing commercial vehicles. A trial of cargo bikes took place in Dún Laoghaire in 2021 enabling local businesses to access e-cargo bikes at a discounted rate for 6 months as a delivery alternative to the van or car. A study on the trial found that businesses

were more likely to use cargo bikes for deliveries for short trips, as well as in dry conditions.

The LTP therefore recommends that e-cargo bikes shall be available to businesses within the Racecourse South lands for deliveries, alongside behavioural programmes to help prepare cargo bike riders with the capabilities to use the bikes in all conditions.

Figure 15-2 Dún Laoghaire-Rathdown County Council / BleeperBikes Cargo Bikes.

15.2.2 Car Clubs

It is a policy of Dún Laoghaire-Rathdown County Council to support the establishment and operation of car sharing schemes to facilitate an overall reduction in car journeys and car parking requirements (Policy Objective T18: Car Sharing Schemes).

Public car sharing is a model of car rental where people rent cars for short periods of time, often by the hour. They are important in urban areas in facilitating car-free or low-car developments. They are particularly attractive to customers who make only occasional use of a vehicle or are reconsidering the need for a second car.

Car sharing schemes can reduce the number of cars on the road and free up land traditionally used for parking spaces. Participation in such schemes can often be more cost effective than owning a private car. Vehicles provided by car clubs are often new and thereby greener and more environmentally friendly than private cars, which on average tend to be older. A limited number of GoCar Club Bases are located near the Racecourse South lands, with one in Foxrock and one in Carrickmines Retail Park. There are several Yuko Car Club Bases located in Sandyford Business District, and one Enterprise Car Club located in Kill of the Grange

Measure SM 1

Micromobility and Shared Schemes

Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands, bike rental companies and car clubs to:

- Establish shared mobility schemes in the Racecourse South.
- Proactively ensure careful siting of dedicated e-bike and e-scooter parking areas at key destinations that do not inhibit pedestrian movement (e.g., Mobility Hubs, Luas & bus stops).

15.3 Wayfinding

Wayfinding, or legibility, relates to how easily people can find their way around an area. For pedestrians and cyclists this is of particular importance as they are more likely to move through an area if the route

is clear. Lack of awareness of routes and distances to destinations can be a barrier to walking and cycling for tourists/visitors, and for those with intellectual or cognitive disabilities. DMURS provides guidance on wayfinding, as well as several wayfinding techniques such as visual cues (i.e., landmarks), surface treatments, lighting, sight lines and, where appropriate, signage. It is important that wayfinding techniques do not contribute to street clutter.

Figure 15-3 Example of Wayfinding in Dún Laoghaire (left), and Wayfinding from Adelaide City and Parklands Signage Strategy (right).

Measure SM 2

Wayfinding

Dún Laoghaire-Rathdown County Council, the NTA, TII and future developers of the Racecourse South Lands will seek to ensure that a consistent wayfinding system across the neighbourhood is introduced.

15.4 Universal Design

Universal Design is the design of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability, including physical, cognitive and sensory. The principles of Universal Design should be followed in the design of the public realm and streetscape throughout the Racecourse South.

Transport is aimed at serving all sectors of society and people's access to opportunities to work, get an education or partake in other activities should not be compromised by the design of the transport environment.

The features of universal design in the built environment are all encompassing and can include high-quality footpaths, tactile paving, raised crossings, sufficient provision of places to rest, public toilets, a reduction in street clutter, shade and shelter, a reduction in conflict between modes, etc.

The idea of accessibility in public space also broadens to include people who are neurodiverse, such as those with autism, or have a cognitive impairment, such as dementia. Aspects of public realm design that should be considered to make it more accessible to all include clear wayfinding, legible and permeable street networks, clear sightlines, contrasting pavement materials, good quality lighting, soft landscaping, and/or calm and quiet place to pause such as a sensory garden.

National guidance documents such as DMURS, the National Disability Authority's (NDA) *Centre for Excellence in Universal Design* should be used to ensure that the street network of the Racecourse South is accessible to all.

Measure SM 3

Accessibility

Dún Laoghaire-Rathdown County Council will seek to ensure that future developments in the Racecourse South Lands, including the public realm and any active travel networks, are accessible to all. The following guidance should be followed:

- *Design Manual for Urban Roads and Streets (DMURS)*
- *NTA's Infrastructure Equality Guidance*
- *Centre for Excellence in Universal Design (National Disability Authority)*
- *Age-Friendly Ireland*

15.4.1 Safety in Public Spaces

It is also important for our public spaces and transport networks to be designed in such a way as that all individuals, regardless of their age, gender, sexuality, or ability feel safe and welcome. There are many initiatives and policies promoted nationally such as TII's *Travelling in a Woman's Shoes*, and the Healthy Streets Approach.

Our public realm and transport network is not neutral and is often a contested space. For example, women and men have different mobility realities. Global research by organisations such as the UN show that women tend to have more complex patterns of mobility characterised by trip chaining (making numerous small trips as part of a larger journey such as running errands and buying groceries on the way to work) and caregiving duties.

Globally, personal safety is the most widespread concern for women when travelling. Women worry about their safety when travelling alone, at night, waiting in or moving through empty or isolated locations and in poorly lit or overcrowded transport spaces.

Travelling in a Woman's Shoes was produced by Transport Infrastructure Ireland (TII) in 2020 and highlighted these realities for women in an Irish context. It included a call to action to consider women's needs in the formation of Ireland's future transport policy and infrastructure provision. The following aspects of design should be considered in the context of existing and new public realm and transport schemes:

Good Quality Lighting

Dark or poorly lit spaces, including poor lighting such as high, overhead lighting that casts downward shadows on streets and the faces of passers-by, amplifies the perception of a space being unsafe.

Active Ground Floor Frontage

Vacancy and dereliction, blank walls, fencing and a general lack of active frontage reduces passive surveillance of public spaces or "eyes on the street". This can create feelings of isolation and loneliness, especially at night time.

Clear Sightlines

Perceptions of safety increase markedly if people can see ahead and around them, and if other people are visible to them.

Legibility and Wayfinding

Legible design enhances safety because it allows people to orientate themselves and gives them greater control over their environment. Feelings of apprehension and insecurity increase when people do not have a clear understanding of the physical layout of the area that they are in.

Citizen Engagement, Participation and Co-Creation

Engaging all members of the community in the design of public spaces ensures a wide range of views and perspectives can influence the design process and fosters a sense of ownership and pride in the space which ultimately leads to greater design solutions and buy-in.

Plan International, study of women in Dublin 2018

6 in 10

women don't feel safe taking the bus.

47%

of women will choose a longer walking route if they perceive it as safer.

Figure 15-4 A well-lit accessible taxi rank with seating. Source: Centre for Excellence in Universal Design.

Measure SM 4

Safety in Public Spaces

Dún Laoghaire- Rathdown County Council will seek to ensure that for future developments in the Racecourse South Lands, all streetscape and public realm proposals are cognisant of the following principles of Universal Design. Dún Laoghaire-Rathdown County Council will also consider the following elements to improve the safety of public space and ensure that all members of the community feel safe:

- Good quality lighting
- Active ground floor frontage
- Legibility and wayfinding – provide clear sightlines through

15.5 Mobility Management Plans

Travel plans are long-term management plans aimed at promoting and delivering sustainable transport objectives through positive action, formulated in a Travel Plan document that is regularly reviewed. They can be implemented at various locations and at varying scales, e.g., workplaces, schools and neighbourhoods. They comprise a highly personalised approach aimed at engaging a group of people, making them think about their travel choices, providing them with full information, and encouraging and incentivising the use of alternatives.

Travel Plans can help encourage behavioural change, making people aware of the range of travel choices available for the variety of trips which they make on a daily basis and encouraging the use of more

sustainable modes where feasible, as alternatives to single occupancy private car use.

Dún Laoghaire-Rathdown County Council Development Plan 2022-2028 (*DLRCDP*) requires a Travel Plan for all developments that generate significant trip demand (Policy Objective T18: Travel Plans). This Travel Plan must seek to reduce reliance on car-based travel and encourage more sustainable modes of transport over the lifetime of a development.

Developments that require Travel Plans include those that meet one or more of the thresholds which are set out in A*ppendix 3: Development Management Thresholds* of the *County Development Plan 2022-2028*. This includes:

- 100 or more residential units
- All educational developments
- Any development proposing 100 or more car parking spaces or generating 100 or more trips in the peak hours
- Leisure facilities including cinemas in excess of 1,000 sq.m.

Transport for London's (TfL) provides guidance on what general travel plans should contain.

15.5.1 School Travel Plans

In all cases, a School Travel Plan should be provided with an application for any school development in the Racecourse South to encourage healthy and environmentally sustainable travel choices. See the following guidance document: Travel Plan Guidelines, 2020).

15.5.2 Residential Travel Plans

A Travel plan is required in residential developments in that have 100 units or more. These are long-term plans aimed at reducing the number of car trips and encouraging the use of sustainable modes of travel. This could include measures to encourage cycling / walking to work, education and recreational activities, providing secure and sheltered bicycle parking, and providing bike share and car sharing opportunities.

15.5.3 Workplace Travel Plans

Workplace Travel Plans contain a package of measures to promote / support sustainable travel patterns for employees. DLRCC note the following as key benefits of Workplace Travel Plans:

Employer Benefits:

- Healthier less stressed workforce and reduced sick leave
- More motivated and productive workforce
- Improved travel choices for staff
- Reduced costs and demand on car

Employee Benefits:

- More travel choices and cheaper travel
- Better cycling facilities
- Healthier lifestyle and less stress
- More flexible work practices

Community Benefits:

- Reduced travel congestion and improved air quality
- More information of travel choices
- Improved journey times
- More cycle parking

See also *Measure INT12 – Residential Travel Planning* in the *GDA Transport Strategy*

15.5.4 Event Travel Plans

The Study Area is situated to the immediate south of Leopardstown Racecourse. Leopardstown Racecourse is one of Europe's premier racetracks and a major leisure facility in the County. Due to their proximity, careful event planning is required to mitigate any amenity impact on the new residential community in the Racecourse South.

Additionally, any development of the Racecourse South must support the status of and continued viability of Leopardstown Racecourse, of which there are approx. 22 large events throughout the year. There are significant opportunities to maximise the planned investment in the Luas, bus services and walking and cycling infrastructure to support any future development of Leopardstown Racecourse.

Furthermore, the additional capacity planned for Carrickmines P&R will provide alternative options for those who wish to avail of P&R services and commute to events sustainably via bus, Luas or walking/cycling – separate from private parking provided by Leopardstown. This will ensure that the Racecourse South will have significant role in positively influencing last-mile journeys to events.

Event Travel Plans should include mode share targets for sustainable transport for the arrival of patrons to the venue. Information should be provided on public transport, bicycle parking, on the location of docking stations for bike share schemes. Crucially, consideration should be given to those with mobility needs.

Measure SM 5

Mobility Management Plans

Dún Laoghaire- Rathdown County Council will seek to ensure that future developers on the Racecourse South will include Travel Plans in planning applications for developments that meet one or more of thresholds outlined in Appendix 3: Development Management Thresholds of the *County Development Plan 2022-2028*.

For developments below these thresholds, developers should provide Travel Plans where Dún Laoghaire-Rathdown County Council is of the opinion that one is required.

Measure SM 6

Event Travel Planning

Dún Laoghaire- Rathdown County Council will seek to ensure that Event Travel Plans are made to facilitate large events in the area, including at Leopardstown Racecourse, and to encourage the use of sustainable modes of transport to and from these events. Event Travel Plans should include at a minimum:

- A designated Racecourse Event Mobility Plan Coordinator.
- Sustainable mode share targets for the arrival of patrons to the venue.
- Details on the use of the Carrickmines P&R and Racecourse Luas Stop.
- Consideration of shuttle services to the venue.
- Consideration of those with mobility needs.
- Provide bicycle parking information, as well as information on the location of docking stations for bike share schemes.

Rented bikes (A) & personal bikes (B) parked within walking distance of the stadium.

Electric buses (bottom) and cyclists on their way to the stadium.

Formula 1 Grand Prix, Zandvoort, Netherlands

The 2021 Formula 1 Dutch Grand Prix in Zandvoort saw the creation of the first mobility plan for the event.

Of the 100.000 people who attended the 2023 Dutch Grand Prix, **97% of attendees used sustainable transport modes**.

Event organisers closed public roads, meaning **over 45,000 people travelled to the Grand Prix by bike**.

'Park and Bike' spots were available for those who would drive for the first leg and cycle for the last leg of their journeys.

A **train ran every 30 minutes** from Amsterdam Central Station, and a fleet of electric buses carried fans to stops just outside of the stadium.

Shuttle bus services were also provided from hotels to the stadium.

15.6 Public Art

Street art can contribute to the production of a high quality street environment for pedestrians and cyclists. Murals and paintings can add meaning to towns and cities, and can reflect the local culture by producing unique landmarks.

For instance, the artist of the 'Bookshelf' mural painted in Utrecht (Netherlands) asked local residents about their favourite book, which resulted in a painting with 49 book covers in seven different languages. This mural is now synonymous with the street as painted footsteps, painted games on footpaths, and murals on railway bridges etc.

Figure 15-5 Mural on Amsterdamsestraatweg in Utrecht, Netherlands. Source: DBFL.

Measure SM 7

Public Art

Dún Laoghaire-Rathdown County Council will work with local community groups / artists and other stakeholders to introduce colour and street art throughout the neighbourhood of the Racecourse South. This shall be subject to disability proofing.

15.7 Sustainable Urban Drainage Systems (SuDS)

The LTP recommends that Sustainable Urban Drainage Systems (SuDS) and other Nature Based Solutions (NBS) shall be introduced wherever possible in the Racecourse South. Urban environments often limit space available for natural habitats, fauna and flora, generating a negative impact on biodiversity and increasing the pressure on balanced environment. SuDS can mitigate these negative impacts.

SuDS can sequester carbon, reduce the risk of flooding and improve the quality of water that enters our watercourses. SuDS also add significant value communities, providing cleaner air, enhancing biodiversity, and creating more beautiful green spaces.

The NTA's advice note *for Greening and Nature-based SuDS (Sustainable Urban Drainage Systems) for Active Travel Scheme*s provides inspiration on potential SuDS interventions, as well as practical information in relation to dimensions, planting, challenges, and potential solutions.

Appendix 7: Sustainable Drainage System Measures of the *DLRCDP 2022-2028* sets out the SuDS requirements for developments in Dún Laoghaire. Additionally, proposals for green roofs must meet the requirements set out in *Appendix 7.2: Green Roof Policy*.

As an urban environment, SuDS need to be considered in the Racecourse South to provide Green Infrastructure connections to the identified Green Infrastructure Corridors 4 and 6. Furthermore, the use of SuDS will contribute to the Racecourse South Green Ring as proposed by the LTP.

As the Racecourse/ Carrickmines Stream flows north-west to south-east of the Racecourse South alongside the M50, there is an opportunity to integrate SuDS interventions with the existing watercourse.

Figure 15-6 Before and After the installation of a Rain Garden at Green Lane / Pollerton Road, Carlow.

SuDS Interventions in the Racecourse South could include:

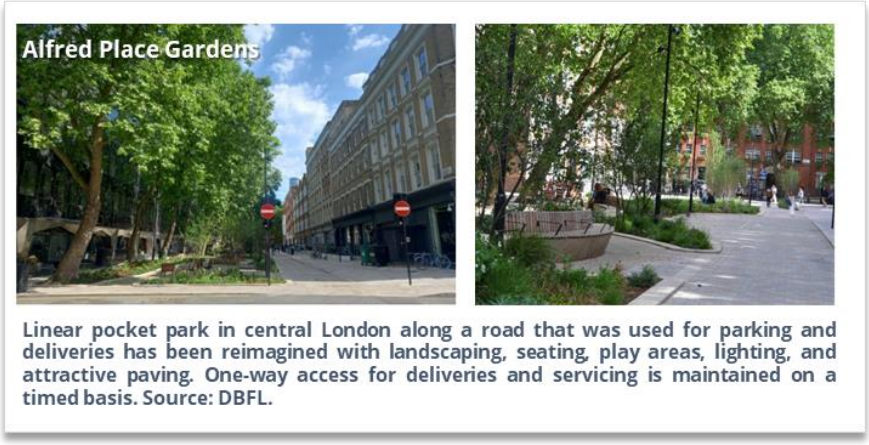
- Creating linear **Rain Gardens** or **Bioswales** (sloped rain gardens) to help improve surface water management whilst performing a range of other functions (amenity, reduced pollution and improved biodiversity).
- **Planting trees** of suitable species, size and form, consistently spread along internal streets.

- Considering **Green Walls** where screening of unsightly structures or spaces is required. Considering reinforced grass on on-street car parking spaces.
- Consider also **Green Roofs** or **Blue Roofs** on residential developments to manage rainwater run-off.
- Incorporating **hanging baskets**, on streetlights and/or shop fronts where suitable, for colourful season display
- Including **raised planting beds** with integral seating (**parklets**), particularly in areas where it is necessary to incorporate underground services.
- Consider **Wildflower Meadows** in throughout the Racecourse South. Otherwise unused mown grass areas can instead be interesting community spaces that are full of colour and wildlife. Mown paths and break out spaces invite people to wander through them. They also contribute to reducing residential estate's carbon footprints, reducing water runoff and grass maintenance costs, and providing natural play and recreation.
- Lastly, other **Biodiversity Enhancement Features** should also be considered, such as nesting boxes for birds, bee banks and bug hotels. These have environmental benefits, but also social benefits for health and wellbeing and can increase civic pride among communities.

Measure SM 8

Sustainable Urban Drainage Systems

Dún Laoghaire- Rathdown County Council will seek to ensure that the appropriate SuDS elements will be incorporated into any future development in the Racecourse South Lands.



Linear pocket park in central London along a road that was used for parking and deliveries has been reimagined with landscaping, seating, play areas, lighting, and attractive paving. One-way access for deliveries and servicing is maintained on a timed basis. Source: DBFL.

Figure 15-7 A Parklet along Sallynoggin Rd in Dún Laoghaire. Source: Dún Laoghaire-Rathdown County Council

Figure 15-8 The Dunkettle to Carrigtwohill Cycleway Scheme, with SuDS in the form of a pollinator corridor. Source: Cork County Council

Part C

Implementation and Outcomes

16 Transport Modelling Assessment

16.1 Overview

As part of the development of the Racecourse South ABTA, a multi-tiered modelling process was undertaken. The purposes of this modelling framework is to sense-check and validate the LTP proposals and identify any additional measures that might be needed to mitigate any negative impacts on the transport network, or further increase modal shift. This process is in accordance with latest guidance, including:

- TII / NTA ABTA Guidance Notes (TII Publication 2018)
- NTA's ABTA 'How-To Guide' Guidance Document (2021)
- 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA 2022)
- 'TTA Guidelines' (TII 2014)
- Cycle Design Manual (NTA 2023)
- Project Appraisal Guidelines (TII 2016)

At the request of Dún Laoghaire-Rathdown County Council, 10 no. junctions were modelled for the proposals outlined in the Racecourse South Lands and Kiltiernan-Glenamuck LTPs. These junctions are illustrated in **Figure 16-1**. The M50 Junction 15 is particularly important to the Racecourse South LTP (Junctions 6, 7 and 8), with surrounding junctions at point 5, 9 and 10 also included to assess any knock-on impacts.

A series of more detailed Technical Notes covering the modelling analysis has been prepared on the following junctions:

- Junction 1 - Enniskerry Road / Glenamuck Road
- Junction 2 - Enniskerry Road / Bishop's Lane
- Junction 3 - Enniskerry Road / Ballycorus Road
- Junction 4 - Enniskerry Road / Glebe Road
- Junction 5 - Glenamuck Road / Golf Lane
- Junction 9 - Ballyogan Road / Ballyogan Link Road
- Junction 10 - Brighton Road / Brennanstown Road
- M50 Junction 15 Interchange Modeling Assessment

16.2 Methodology

The NTA's **Eastern Regional Model** (ERM) was the primary modelling tool and provided the overarching information on forecast travel demand for each mode of transport, as well as a series of **Local Junction Models**.

Figure 16-1: Junctions Assessed as part of the DLR ABTAs.

The Transport Modelling Assessment assumed the following scenarios:

- **Existing Baseline Conditions (2024)**: The existing baseline scenario.
- **Future 'Do Minimum' Scenarios**: These are future year models developed without the Strategy's proposals. Typically, a 'Do Minimum' model includes any known permanent improvements or changes to the road or public transport network that have taken place, been approved, or are planned for implementation. These models are important to form the reference case by which to compare the 'Do Strategy' scenarios.
- **Future 'Do Strategy' Scenarios**: These are future year models developed with the Strategy's proposals on top of 'Do Minimum' conditions. The assessment years were 2028 (post-GDRS Opening Year) and 2042 (aligning with *GDA Transport Strategy's* horizon year).
- All future scenarios take into account the projected growth and development of the Racecourse South lands in line with the *DLR County Development Plan 2022-2028* land use objectives.
- To account for the likelihood of a percentage of the population working remotely in future, the modelling process also incorporates an additional variation into its base model.
- A sensitivity analysis of the M50 Junction 15 Interchange only was undertaken using the TRANSYT Model. This high-level sensitivity analysis assumed that the future car share in the Racecourse South Lands increases to 50% from 30%. This implies a growth of 67% over the generation and attraction vehicular trips to/from the Racecourse South Lands for all the future years from the ERM results.

16.3 Summary of Key Transport Modelling Findings

The transport modelling assessment found that the M50 Junction 15 interchange continues to operate within capacity across all future scenarios that were tested. All three roundabouts which make up Junction 15 continue to function effectively with increased trip rates from the Racecourse South and proposed signalised crossings. Some of the key findings for each roundabout are summarised overleaf.

This was a high-level assessment and does not preclude further analysis that may be carried out as part of detailed design and implementation of future active travel upgrade measures.

Any proposals for M50 Junction 15 are subject to consultation and agreement with TII and the NTA, and must be in accordance with national policy and comply with TII Publications.

Figure 16-2: Map illustrating the Signalised M50 Junction 15 (Carrickmines Interchange), the Carrickmines Interchange Overbridge and the Junction's Three Roundabouts.

1. **Carrickmines South Roundabout** *(Junction 8 in Figure 16-1).*
   - Operates within capacity across all scenarios.
   - **Arm 1** (Glenamuck Road North) experiences the highest Degree of Saturation (DoS) in the 2042 Do Strategy scenario with up to 88%, corresponding to 6.02 Passenger Car Units (pcus) Mean Max. Queue (MMQ) during the AM Peak.
   - **Arm 4** (Local Link) consistently exhibited the lowest DoS, with 25% during the PM Peak and only 6% during the AM Peak.
2. **Carrickmines North Roundabout** *(Junction 7 in Figure 16-1).*
   - Operates within capacity across all scenarios.
   - **Arm 3** (Local Link) has the lowest DoS under 10% - this connects to the M50 Parallel Road.
   - **Arm 1** (Glenamuck Road North) is the highest DoS of 88%
3. **Glenamuck Road North Roundabout** *(Junction 6 in Figure 16-1).*
   - Operates within capacity across all scenarios.
   - Highest DoS recorded: 68% on **Arm 5** (M50 Link E) in the year 2028 without any transport interventions (AM peak). This reduces to 46% for the 2028 Do-Strategy.
   - Traffic demand on **Arm 1**, **Arm 2**, and **Arm 5** is projected to increase between 2024 and 2042 during both the AM and PM Peaks.

16.3.1 Sensitivity Analysis

A high-level sensitivity analysis was undertaken for the M50 Junction 15 that assumed a higher car mode share of 50%. The analysis found that, whilst this increase in vehicles had little material impact on Junction 15, it reinforced the need to introduce signalisation (as per Measure RN 9) to give more time for full clearance of the junction and to ensure its more efficient operation.

16.4 Modal Split

The below outlines the modal split of the Racecourse South Lands during a typical 24-hour period using the results of the ERM.

Car Trips

Car trips reduce in future years from 57% in Base 2024, to 53%-54% in 2028, and 51%-52% in 2042.

Public Transport

Public Transport increases from 19% to 21%-23% in 2028, and decreases to 20%-21% in 2042, remaining consistent throughout the assessment years.

The Active Modes increase over time from 24% in 2024, to 29% in DS2042, showing steady uptake of walking and cycling.

The Do-Strategy scenarios show a slight decrease in public transport and car usage, while travel by active modes increase. This is likely related to the increase of local attractions with higher employment and education centres, and residents travelling shorter distances.

16.5 Working From Home

The updated models now include a variation to account for the likelihood of a degree of remote working in the future. Applying this variation to the base model, this scenario suggested a reduction use of the private car from 53% in 2024 to 51% in DS2028, and DS2042. Active modes show similar results with an increase in share by 4% from 24% in 2024 to 28% in 2042.

16.5.1 Modelling Limitations and Additional Measures

The implementation of the transport proposals and measures set out in the Racecourse South Lands LTP are expected to support the sustainable development of the site as envisaged by the *DLR County Development Plan*'s land use zoning objectives, with no significant negative impacts expected in and around the Study Area as a result.

Future development proposals will be subject to Transport and Traffic Assessments and Mobility Management Plans to identify and mitigate any impacts on the operation of Junction 15 and the wider network.

It is considered likely that a higher level of active travel and public transport mode shares is possible than that projected by the modelling assessment for the Racecourse South Lands. Many 'soft' behavioural change measures such as mobility management plans are not included in the model, but can positively influence travel behaviour, particularly in the case of a Transit-Oriented Development such as Racecourse South.

17 Implementation and Outcomes

17.1 Overview

This ABTA examines the transport network in and around the Racecourse South Lands near Carrickmines to provide a supportive, evidence-based analysis to meet Specific Local Objective (SLO) 143 of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028.*

The proposed recommendations are based on the transport objectives as mentioned in **Chapter 5 – Racecourse South Transport Objectives.**

1. Prioritise **high-quality public transport options** that facilitates **best practice Transit Oriented Development Principles**.
2. Support a **fully permeable 10-Minute Neighbourhood** for that prioritises movement by active travel modes through the use of filtered permeability measures.
3. Address community severance by developing **strategic pedestrian & cycling connections** on important permeability desire lines between the Study Area & surrounding neighbourhoods.
4. Develop **appropriate car parking management practices** that align with prevailing national and regional policy.
5. Safeguard the **strategic function of the M50 motorway network** and **Junction 15**.

Recommendations are based on analysis and the transport objectives. Before construction or implementation, they would need to be examined on their own merits and be subjected to the rigorous analysis requirements of the Public Spending Code (PSC) and the Transport Appraisal Framework (TAF).

The recommendations will require individual feasibility studies, environmental, archaeological, and architectural assessments, detailed design and any other relevant statutory procedures and consultation with relevant statutory stakeholders, as appropriate. Design Standards are rapidly changing, as evidenced by the recent introduction of the NTA's new *Cycle Design Manual,* and any projects must conform to the most recent design standards.

17.2 Collaboration

The successful delivery of the recommendations set out in this ABTA will require collaboration between a broad range of stakeholders. This includes stakeholders from various Dún Laoghaire-Rathdown County Council departments, National Transport Authority (NTA), and the Land Development Agency (LDA).

Due to the Racecourse South Lands' proximity to Leopardstown Racecourse, it is essential that collaboration is sought also with Horse Racing Ireland (HRI), as well as the wider community. Of particular importance will be collaboration with Transport Infrastructure Ireland (TII) to ensure that the Racecourse Luas Stop is operational for future residents of the Racecourse South and to protect the strategic function of the M50 motorway and Junction 15.

It is acknowledged that each measure recommended will require to be appraised individually in terms of feasibility, design, planning, approval and funding.

17.3 Implementation and Timeframes

This section suggests a prioritisation of projects and recommendations to enable the creation of a cohesive and connected transport network for all users. The following pages set out potential timelines for the implementation of the proposed projects. An indicative implementation plan is set out in **Table 17-1**. Timescales are defined as follows, and are consistent with the modelling approach outlined in the Transport Modelling Report:

- **Short term (up to 2028):** Measures intended to begin / go under construction before 2028, during the current *Dún Laoghaire-Rathdown County Development Plan* 2022-2028.
- **Medium term (up to 2035):** Measures intended for implementation before 2035.
- **Long term (up to 2042):** Measures intended to be completed by 2042 to correspond to the *Greater Dublin Area Transport Strategy 2022-2042*.

The pace of implementation of some of the recommendations and projects set out in this ABTA will be dedicated by the level of available funding and the length of time to deliver schemes through the planning process. Some of the more complex recommendations, such as the delivery of a new pedestrian and cycling bridge, are likely to be medium to long-term projects and will entail close cooperation between multiple stakeholders. Nevertheless, these projects are essential for ensuring that sustainable transportation habits are encouraged.

A transformation of how we travel is required for our own health and the health of the planet, as expressed in the *Climate Action Plan (CAP)*. The *CAP24* necessitates the provision of high-quality public transport, cycling and walking infrastructure to reduce reliance on private cars. For new developments specifically, the *CAP24* emphasises the significance of establishing sustainable travel practices at planning and design stage.

Aside from capital investment, the implementation of the projects suggested in this ABTA will incur on-going costs. Other forms of supplementary funding and agreements could be sought including:

- NTA's Active Travel Investment Programme.
- Development contributions for strategic transport infrastructure.
- Site-specific development contributions and/or; and
- Land agreements through the development management process to facilitate footpath widening, cycle lane provision, or public transport provision.

17.3.1 Long-term

As the Racecourse South develops long-term, it is important that the necessary active travel, public transport, car parking management and road infrastructure is there to support it as outlined in Table 17-1.

17.3.2 Short-Medium Term

It is essential that certain infrastructure and services are delivered in the earlier stages of development of the Racecourse South. Most notably, the new active travel bridge and the provision of high-capacity and accessible public transport (Luas and bus services) will be critical enablers of development.

Dún Laoghaire- Rathdown County Council will therefore work with stakeholders, in particular TII and the NTA to bring forward key public

transport projects and funding resources in order to facilitate timely and successful implementation in support of the development of the Racecourse South lands.

17.3.3 What will success look like?

By 2042, the Racecourse South will be a thriving and attractive neighbourhood that prioritises the safety and movement of pedestrians and cyclists. At its core it will be a pleasant, walkable and enjoyable place to live, visit and spend time in. Its neighbourhood centre, which includes a vibrant café, well-located convenience store and main plaza, as well as its open spaces and natural amenities will draw people to it because it will be a place that people want to go.

The Racecourse South Green Ring and GDA greenway links will enhance local biodiversity, and will be supported by internal SuDS interventions. Strategic pedestrian and cycling linkages will complement the greenway and internal active travel network, and will enhance the quality of life and attractiveness of the neighbourhood.

As all new infrastructure will be planned and designed from the outset to prioritise sustainable transport and mobility, a significant portion of trips within the Racecourse South will likely be made by foot, bicycle, public transport or by accessible and inclusive shared micromobility schemes.

Most people will be able to walk, cycle, or take public transport to work and education. Longer trips will be made by the new bus service, accessed from Mobility Hubs or bus terminal / interchange, and by the Luas, accessed at the conveniently-located Racecourse Luas Stop in the south of the neighbourhood.

The Racecourse South transport system will support the local economy by connecting to high-density employment areas, and support the growing population of neighbouring areas such as Foxrock, Ballyogan and Carrickmines. The new and improved transport system will also benefit local events at Leopardstown Racecourse.

Severance resulting from the M50 will be a thing of the past. Sustainable transport bridges will offer a safe passage for pedestrians, cyclists and public transport users across the motorway, addressing key permeability desire lines.

The area around the Racecourse South Lands will be better prepared for the impact of Climate Change due to the cooling effect of greenery throughout the neighbourhood. The reliance on walking and cycling for daily trips will free residents from individual carbon emissions and fluctuations in fuel prices that would otherwise impact their everyday lives.

Table 17-1 Implementation Table. *Some of the following measures are policies that should be carried through from short to long term implementation phases.*

No.	Measure	Short term (up to 2028)	Medium term (up to 2035)	Long term (up to 2042)
Active Travel				
AT 1	GDA Cycle Network Plan	■	■	■
AT 2	Brighton Place Strategic Link	■	■	
AT 3	Racecourse South Green Ring	■	■	
AT 4	Supporting Permeability Links	■	■	■
AT 5	Internal Pedestrian and Cycling Network	■	■	■
AT 6	Mode Share Targets	■	■	■
M50 Crossings				
BR 1	Leopardstown Racecourse Overbridge	■	■	
BR 2	New Pedestrian and Cycle Bridge		■	■
Luas				
LR 1	Improving Accessibility to Existing Stops	■	■	
LR 2	Opening the Racecourse Luas Stop		■	■
LR 3	Racecourse Luas Stop: Accessibility		■	■
LR 4	Racecourse Luas Stop: Integration with the Public Realm		■	■
LR 5	Racecourse Luas Stop: Interchange Facilities		■	■
Bus				
B 1	BusConnects Dublin – Local Routes	■	■	
B 2	M50 Parallel Road Bus Service – Long Term Measure			■
B 3	North-South Bus Service – Long Term Measure			■
B 4	Bus Stops and Shelters	■	■	■
Road and Street Network				
RN 1	M50 Parallel Road Ownership and Use	■		
RN 2	National Roads Requirements	■	■	■
RN 3	Racecourse South Access Road	■	■	

No.	Measure	Short term (up to 2028)	Medium term (up to 2035)	Long term (up to 2042)
Road and Street Network (continued)				
RN 4	Ballyogan Grove / Castle View	■	■	
RN 5	New Access Road – Ballyogan Grove Upper			■
RN 6	M50 Parallel Road Upgrades	■	■	
RN 7	Internal Street Network	■	■	■
RN 8	Speed Limits	■	■	■
RN 9	Carrickmines Interchange Overbridge	■	■	
RN 10	Protection of the Strategic Transport Function of J15	■	■	■
Car Parking				
PM 1	Approach to Car Parking Standards	■	■	■
PM 2	Approach to Car Parking Management	■	■	■
PM 3	Mobility Hubs		■	■
PM 4	Mobility Points		■	■
PM 5	On-Street Car Parking		■	■
PM 6	Carrickmines Park and Ride		■	■
Bicycle Parking				
BP 1	Approach to Bicycle Parking	■	■	■
BP 2	Bicycle Parking: Multi-Modal Interchange Point	■	■	■
Supporting Measures				
SM 1	Micromobility and Shared Schemes	■	■	■
SM 2	Wayfinding	■	■	■
SM 3	Accessibility	■	■	■
SM 4	Safety in Public Spaces	■	■	■
SM 5	Mobility Management Plans	■	■	■
SM 6	Event Travel Planning	■	■	■
SM 7	Public Art	■	■	■
SM 8	Sustainable Urban Drainage Systems	■	■	■

Appendix A

Summary of Measures

Active Travel Measures	
AT 1	**GDA Cycle Network Plan** Dún Laoghaire-Rathdown County Council will work in collaboration with the NTA, TII and other relevant stakeholders to deliver the proposed routes under the GDA Cycle Network Plan, with an amendment to the Carrickmines Interchange Overbridge Link to utilise the proposed Ballyogan Active Travel Bridge instead of the Luas bridge.
AT 2	**Brighton Place Strategic Link** Dún Laoghaire-Rathdown County Council will work with relevant stakeholders to ensure that the Brighton Place Strategic Link is delivered, and the public right-of-way comes into effect via the old Harcourt Street Railway Line Bridge.
AT 3	**Racecourse South Green Ring** Dún Laoghaire-Rathdown County Council will work with relevant stakeholders to ensure that a Green ring / Greenway is delivered around the Racecourse South Lands, to align with the GDA Cycle Network Sandyford / Harcourt St Railway Line Greenway and the old Harcourt Street Railway Line bridge into Brighton Wood.
AT 4	**Supporting Permeability Links** In the preparation of the Masterplan for the Racecourse South Lands, Dún Laoghaire-Rathdown County Council will seek to engage with the NTA, TII, the developer/s and other relevant stakeholders, to develop additional permeability links between residential blocks, public transport stops and key services to support the internal and external active travel network.
AT 5	**Internal Pedestrian and Cycling Network** Dún Laoghaire- Rathdown County Council will work with relevant stakeholders, including the NTA, TII, as well as the developer/ s, to ensure that the Masterplan of the Racecourse South Lands delivers a safe and attractive internal active travel network. This will include consideration of the following: • Fietsstraat principle - with low speed limits & speed bumps for motor vehicles • Use of filtered permeability measures • Complementing residential streets with pocket parks and open green spaces.
AT 6	**Mode Share Targets** Dún Laoghaire-Rathdown County Council will seek to promote and facilitate sustainable transport modes in the Racecourse South Lands to meet the recommended mode share targets of 70 % sustainable modes (walking, cycling, other micromobility and public transport) (see also DLRCDP Objective T4).

M50 Crossing Measures	
BR 1	**Leopardstown Racecourse Overbridge** Dún Laoghaire-Rathdown County Council will seek to engage with HRI, the NTA, TII, the LDA/developers and other relevant stakeholders regarding the potential future use of the Leopardstown Racecourse Overbridge as a method of overcoming the severance of the M50. This engagement should seek to assess the use of modal filters to restrict access to pedestrians and cyclists, subject to compliance with TII Publications.
BR 2	**New Pedestrian / Cycle Bridge** As a means of overcoming the severance of the M50 for pedestrians and cyclists, Dún Laoghaire-Rathdown County Council will seek to engage with the NTA, TII, and other relevant stakeholders where necessary, to: • Undertake a full engineering assessment of providing a pedestrian & cycle bridge in the location identified by the Ballyogan and Environs Local Area Plan's Site Development Framework (SDF) Objective 5, with a view to its development within the short-medium term (Ballyogan Active Travel Bridge).

Luas Measures	
LR 1	**Improving Accessibility to Existing Stops** Dún Laoghaire-Rathdown County Council will seek to engage with the NTA, TII and other relevant stakeholders to ensure that accessibility to the Ballyogan Wood and Carrickmines Luas Stop is improved in accordance with national policy and guidance having regard to TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*.
LR 2	**Opening the Racecourse Luas Stop** Dún Laoghaire- Rathdown County Council will work with the NTA, TII , the LDA/ developers and other relevant stakeholders to ensure that the Racecourse Luas Stop, as an early enabler of the Racecourse South, is operational in the short to medium term, in accordance with TII's technical and operational requirements and in advance of the opening of the first phase of residential development.
LR 3	**Racecourse Luas Stop: Accessibility** Dún Laoghaire- Rathdown County Council will seek to engage with relevant stakeholders on accessibility to the Racecourse Luas Stop including the provision of pedestrian paths that follow desire lines between residential / commercial / public spaces and the Stop, subject to compliance with TII' s *Code of engineering practice for works on, near, or adjacent the Luas light rail system* and with regard to other TII Publications, *DMURS* and the NTA' s *Cycle Design Manual*.
LR 4	**Racecourse Luas Stop: Integration with the Public Realm** Dún Laoghaire-Rathdown County Council will work with the NTA, TII, and other relevant stakeholders in the design of Racecourse Luas Stop to allow for a safe transition between the stop and the public plaza (SDF Objective 2), residential and commercial structures. Design integration of the public plaza, and general public realm with the Racecourse Luas Stop shall have regard to: • *Light Rail Environment – Technical Guidelines for Development, TII Publication PD-PDV-000; and shall observe* • *TII's Code of engineering practice for works on, near, or adjacent the Luas light rail system.*

LR 5	**Racecourse Luas Stop: Interchange Facilities** Dún Laoghaire-Rathdown County Council supports the development of a multi-modal interchange point at an appropriate distance to the Racecourse Luas Stop and identified plaza (SDF Ob. 2). This should include consideration of the following: • Provision for a future bus stop / set-down area • Bicycle parking • Bicycle sharing schemes • Car sharing bases • Drop-off / pick-up parking spaces

Bus Measures

B 1	**BusConnects Dublin - Local Routes** Dún Laoghaire-Rathdown County Council will liaise with the NTA in the roll out and delivery of the L26 and L27 routes (planned as part of BusConnects) in the short to medium term, in advance of the first residents of the Racecourse South moving in.
B 2	**M50 Parallel Road Bus Service - Potential Long Term Measure** Dún Laoghaire-Rathdown County Council will liaise with the NTA Service Planning Team, TII, HRI and other relevant stakeholders with a view to considering the potential provision of a future bus service to directly serve the Racecourse South lands via M50 Parallel Road in the longer-term.
B 3	**North-South Bus Service – Potential Long Term Measure** Dún Laoghaire-Rathdown County Council will liaise with the NTA Service Planning Team, TII and other relevant stakeholders with a long-term view to: • Consider introducing a new N-S- bus route from Priorsland northwards to Leopardstown Road via the M50 Parallel Road. • Consider introducing a bus gate between Priorsland and the Carrickmines P&R. to facilitate bus & active travel movement-only between Junction 15 and Cherrywood.
B 4	**Bus Stops and Shelters** Dún Laoghaire-Rathdown County Council will liaise with the NTA on bus shelters that accompany a future bus service on the M50 Parallel Road and within the Racecourse South on first / last mile connections, Real Time Information (RTI), seating, lighting and GI / landscaping, where relevant and applicable.

Road and Street Network Measures

RN 1	**M50 Parallel Road Ownership and Use** Dún Laoghaire- Rathdown County Council will seek to engage with HRI and other relevant stakeholders such as TII and the NTA with a view to taking in charge and formalising the public use of the M50 Parallel Road.

RN 2	**National Roads Requirements** Dún Laoghaire-Rathdown County Council will work with TII and the NTA and other relevant stakeholders to facilitate the protection of the M50 motorway and its associated Junction 15 in accordance with DoECLG 'Spatial Planning and National Roads Guidelines for Planning Authorities' (2012) and in compliance with TII Publications.
RN 3	**Racecourse South Access Road** Dún Laoghaire-Rathdown County Council will seek to engage with HRI, the NTA, TII, the developer/s and other relevant stakeholders to ensure the following in relation to access to the Racecourse South: • Access northwards through the South County Business Park and Leopardstown Racecourse is permitted for all modes; and • Dún Laoghaire-Rathdown County Council will engage with HRI, the NTA, TII, the developer/s and other relevant stakeholders to assess the feasibility of prioritising bus movement on the M50 Parallel Road by use of a bus gate.
RN 4	**Ballyogan Grove / Castle View** Future development of the Racecourse South shall ensure that Ballyogan Grove / View provides a service road function to both facilitate pedestrian and cycle movement between Glenamuck Road and the M50 Parallel Road, and to provide access to the Racecourse Luas Stop for maintenance purposes.
RN 5	**New Access Road - Ballyogan Grove Upper** A new access road may be required to the north of the Racecourse Luas stop in the medium to long term. Assessments should be undertaken by the master planning team and or the developers prior to development of the Racecourse South Lands to assess the feasibility of the construction of a new road north of Ballyogan Grove. The following should be assessed at a minimum: • Impact on the receiving natural environment • Impact on existing residents in Castle View • Impact on the safe operation of the Luas
RN 6	**M50 Parallel Road Upgrades** Dún Laoghaire-Rathdown County Council will consider the following alterations to the M50 Parallel Road – to facilitate the development of the Racecourse South Lands: • Reduce the speed limit and consider traffic calming measures. • Deliver cycling infrastructure along the entire length of the road: - Two-way cycle track on the north-eastern side of the road – min. 3.5m total width - Widen existing footpath on north-eastern side of the road to allow space for bus stops, benches and wayfinding elements - Min. 1.5m wide buffer separating the cycling facilities from vehicular traffic • Include landscaping & placemaking elements (planters, street trees)
RN 7	**Internal Street Network** Any future development in the Racecourse South Lands should deliver an internal street network and placemaking strategy within the final agreed masterplan that is cognisant of the following general principles;

	• Establish a street hierarchy whereby the majority of the integrated street network within the Racecourse South consists of Local Streets that are residential in character and designed for low speeds. • Establish a Link Street as the main thoroughfare to provide direct access to the M50 Parallel Road and between local residential streets. • Restrict car movement to residential streets for pick-up / drop-off only, however, allow access to disabled parking spaces on the streets. • Establish physical barriers to restrict car access pedestrian and cyclist only streets. • Providing SUDS and GI as part of the Internal Road Network.
RN 8	**Speed Limits** Dún Laoghaire-Rathdown County Council will liaise with the Department of Transport (DoT) to ensure that all speed limits within the Racecourse South Lands are aligned with future DoT publications regarding the National Speed Limit Review , and apply the recommended speed limits for each road and street.
RN 9	**Carrickmines Interchange Overbridge** Dún Laoghaire-Rathdown County Council will engage with relevant stakeholders, in particular TII and the NTA, to upgrade the pedestrian and cycling facilities on each roundabout at Junction 15, which is part of the national road network and therefore subject to the DoECLG's 'Spatial Planning and National Roads Guidelines for Planning Authorities' (2012), with the aim of ensuring that a coherent, safe and direct route is provided for active travel modes between the Racecourse South and south of the M50. The locations of necessary controlled crossing points and modifications to the active travel infrastructure will be subject to feasibility technical assessments. Any modifications to the existing layout of the junction must take account of areas currently managed by the Motorway Maintenance and Renewal Contracts (MMaRC), comply with TII Publications and algin with the NTA's *Cycle Design Manual 2023.*
RN 10	**Protection of the Strategic Transport Function of Junction 15** Dún Laoghaire County Council will work with TII to ensure that the strategic transport function of the Carrickmines Interchange Overbridge which is part of the national road network is protected, and any future works are in accordance with TII's Publication and the DoECLG's *Spatial Planning and National Roads Guidelines for Planning Authorities (2012).*

Car Parking Measures

PM 1	**Approach to Car Parking Standards** Dún Laoghaire Rathdown County Council, the NTA, TII, the LDA/ developers and other relevant stakeholders will seek to ensure that the car parking standards for the Study Area will be considered based on the following criteria: • Level of public transport accessibility including new Luas Station and bus services. • Proximity of essential services including schools, shops and medical centres. • Provision of high- quality active travel infrastructure including bridges to neighbourhood and District centres.

	• Maximising the Site's ability to provide housing, mixed-use, community uses and open space. • Final agreed composition of the unit sizes. • Future availability of the redeveloped Carrickmines P+R to provide a limited portion of resident car parking; and • Introduction of car clubs – as part of mobility hub and mobility point provision – to cater for the needs of residents that require a car occasionally but do not wish to own one.
PM 2	**Approach to Car Parking Management** Dún Laoghaire-Rathdown County Council will work with the NTA, TII, the LDA/developers and other relevant stakeholders, to ensure that feasibility studies are carried out in the master planning stage assessing the approach to car parking management. This shall include an assessment of the most appropriate location and composition of (a) Hub(s) which would accommodate clusters of consolidated car parking.
PM 3	**Mobility Hubs** Dún Laoghaire- Rathdown County Council will seek to ensure that the consideration of Mobility Hub car parking in any future development of the Racecourse South Lands shall examine in addition to residential and visitor parking spaces, sheltered, secure bike parking including parking for adaptive and cargo bikes, and end- of-trip facilities. It should also include micromobility share schemes and charging points as well as car rental / club spaces .*(The exact form of a Mobility Hub is dependent on the outcome of the masterplan process).*
PM 4	**Mobility Points** Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands to undertake a feasibility study to assess the most-suitable locations for Mobility Points. The Mobility Points should include an assessment of the following at a minimum: • Car club vehicles • Bike-share schemes • Public bicycle parking • EV-charging points
PM 5	**On-Street Parking** Dún Laoghaire- Rathdown County Council, the LDA/ developers and other relevant stakeholders of the Racecourse South Lands will seek to ensure that a hierarchy of parking need is established for on- street parking that prioritises the needs of users with additional accessibility requirements, and delivery and servicing needs.
PM 6	**Carrickmines Park and Ride** To facilitate the future development of the Racecourse South Lands, Dún Laoghaire - Rathdown County Council will support the development of the Carrickmines Park and Ride as a multi - storey car park, as part of the Cherrywood SDZ Planning Scheme, and in line with RPO 8.14 of the *RSES* for the Eastern and Midlands Region.

Bicycle Parking Measures	
BP 1	**Approach to Bicycle Parking**

	Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands to: • Deliver both short-stay and long-stay public cycle parking throughout Racecourse South at key destinations such as outside commercial premises (cafés, express supermarkets), health centres, educational institutions and other non-residential developments. • Consider innovative practices such as dedicated public off-street bike parking hubs that are secure, sheltered and easily accessed. • Consider the colocation of cycle parking with other forms of sustainable transport infrastructure through the development of Mobility Points.
BP 2	**Bicycle Parking: Multi-Modal Interchange Point** Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands to examine the feasibility of providing dedicated, high-quality cycle/micromobility parking hubs in key destinations such as the Racecourse Luas Stop, which is envisaged to play a significant role as a multi -modal interchange.

Supporting Measures	
SM 1	**Micromobility and Shared Schemes** Dún Laoghaire-Rathdown County Council will work with relevant stakeholders, including the developer/s of the Racecourse South Lands, bike rental companies and car clubs to: • Establish shared mobility schemes in the Racecourse South. • Proactively ensure careful siting of dedicated e-bike and e-scooter parking areas at key destinations that do not inhibit pedestrian movement (e.g., Mobility Hubs, Luas & bus stops).
SM 2	**Wayfinding** Dún Laoghaire-Rathdown County Council, the NTA, TII and future developers of the Racecourse South Lands will seek to ensure that a consistent wayfinding system across the neighbourhood is introduced.
SM 3	**Accessibility** Dún Laoghaire-Rathdown County Council will seek to ensure that future developments in the Racecourse South Lands, including the public realm and any active travel networks, are accessible to all. The following guidance should be followed: • *Design Manual for Urban Roads and Streets (DMURS)* • *NTA's Infrastructure Equality Guidance* • *Centre for Excellence in Universal Design (National Disability Authority)* • *Age-Friendly Ireland* • *Safe Routes to School* • *Child Friendly Cities & Communities Handbook*
	Safety in Public Spaces

SM 4	Dún Laoghaire-Rathdown County Council will seek to ensure that for future developments in the Racecourse South Lands, all streetscape and public realm proposals are cognisant of the following principles of Universal Design. Dún Laoghaire-Rathdown County Council will also consider the following elements to improve the safety of public space and ensure that all members of the community feel safe: • Good quality lighting • Active ground floor frontage • Legibility and wayfinding – provide clear sightlines through a space
SM 5	**Mobility Management Plans** Dún Laoghaire-Rathdown County Council will seek to ensure that future developers on the Racecourse South will include Travel Plans in planning applications for developments that meet one or more of thresholds outlined in Appendix 3: Development Management Thresholds of the *County Development Plan 2022-2028*. For developments below these thresholds, developers should provide Travel Plans where Dún Laoghaire-Rathdown County Council is of the opinion that one is required.
SM 6	**Event Travel Planning** Dún Laoghaire-Rathdown County Council will seek to ensure that Event Travel Plans are made to facilitate large events in the area, including at Leopardstown Racecourse, and to encourage the use of sustainable modes of transport to and from these events. Event Travel Plans should include at a minimum: • A designated Racecourse Event Mobility Plan Coordinator. • Sustainable mode share targets for the arrival of patrons to the venue. • Details on the use of the Carrickmines P&R and Racecourse Luas Stop. • Consideration of shuttle services to the venue. • Consideration of those with mobility needs. • Provide bicycle parking information, as well as information on the location of docking stations for bike share schemes.
SM 7	**Public Art** Dún Laoghaire-Rathdown County Council will work with local community groups / artists and other stakeholders to introduce colour and street art throughout the neighbourhood of the Racecourse South. This shall be subject to disability proofing.
SM 8	**Sustainable Urban Drainage Systems** Dún Laoghaire-Rathdown County Council will seek to ensure that the appropriate SuDS elements will be incorporated into any future development in the Racecourse South Lands.