Residential Development at Leopardstown Road Transport Statement

10.02.2025

TENT ENGINEERING

Site Address:

Residential Development at
Leopardstown Road,
Sandyford,
Dublin 18

TENT ENGINEERING

Revision and Review

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PURPOSE

- [ ] P1 Information
- [ ] P2 Coordination
- [x] P3 Planning
- [ ] P4 Building Control
- [ ] P5 Pre-tender
- [ ] P6 Tender
- [ ] P7 Construction

ACCEPTANCE (BY OTHERS)

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- [ ] A Accepted
- [ ] B Accepted subject to comments
- [ ] C Rejected
- [ ] D Acceptance not required

Accepted by

REVISION(S)

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Contents

1 Introduction

1.1 Background

Tent Engineering have been commissioned to prepare a transport statement in support of a proposed residential development on lands located at Leopardstown Road, Sandyford, Dublin 18.

This development has been prepared under Section 179A of the Planning and Development act. It is delivering 80 units within two blocks. The blocks vary in height, reaching up to 6 storeys.

- Block 01 comprises 10 two-bedroom units designed for 4 occupants and 10 three-bedroom duplex units designed for 5 occupants.
- Block 02 features 30 one-bedroom apartments and 30 two-bedroom apartments.

All associated internal and external amenity space, car and cycle parking, landscaping, bin stores, service provision and vehicular and pedestrian accesses are also proposed.

This report has been produced to address potential concerns that the local planning authority may have pertaining to the level of influence of the proposed development upon the local transportation system.

This transport statement confirms that the construction and full occupation of the scheme will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

Based on our study, we believe that there are no adverse traffic/transportation capacity or operation issues associated with the construction and occupation of the proposed development that would prevent planning permission being granted.

1.2 Assessment Context

Best practice guidance indicates that in some cases, the transport issues arising out of development proposals may not require a full Traffic and Transport Assessment (TTA) to inform the process adequately and identify suitable mitigation. In such instances, it has increasingly become common practice to produce a simplified report in the form of a Transport Statement (TS). There may also be situations where the transport issues relating to a development proposal are quite small and limited, and no formal assessment is deemed necessary.

With the objective of quantifying the scale of assessment required for the subject development proposals, Tent have made reference to the following guidance;

- Traffic and Transport Assessment Guidelines (May 2014) by the NRA / TII;
- Traffic Management Guidelines Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- Guidelines for Traffic Impact Assessments The Institution of Highways and Transportation (1994);
- Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities Department of Housing, Planning and Local Government (2018); and
- Dun Laoghaire Rathdown Development Plan 2022 - 2028

In each of the above guidance documentation, development thresholds (several of which are common to all) for various key land uses are presented above in which a full TTA is required as a mater of course. In the context of the subject site proposals these thresholds include;

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road;
- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive; or
- Residential development in excess of 200 dwellings.

In situations where these established thresholds are not met (e.g. the development is smaller and / or is predicted to generate a sub-threshold impact) the NRA / TII guidance suggests that where National Roads are impacted it may still prove prudent to undertake a full TIA when the following sub-threshold impacts are forecast;

- 100 vehicle trips in / out combined in the peak hours for the proposed development;
- Development traffic exceeds 10% of turning movements at junctions with and on National Roads;
- 100 dwellings within urban areas with a population equal to or greater than 30,000; or
- More than 100 on-site parking spaces form part of the proposals.

The proposed development, consisting of 80 units on the site, is expected to fall below all relevant best practice thresholds for a Traffic Impact Assessment (TIA), as fewer than 100 individual units and fewer than 100 on-site parking spaces are provided. Following a traffic count survey, it was determined that the development's traffic contribution remains under 5%. Accordingly, Tent Engineering has concluded that a TIA is not required for this development.

This TS seeks to set out the transport issues relating to the proposed residential development site (existing conditions), provides an overview of the transport and traffic aspects of the development proposals, in addition to quantifying the specific impact that is likely to be generated as a result of the proposed development upon the local road network. This information will enable the local authority to gain a full appreciation of the subject proposals during the planning process.

1.3 Report Structure

As introduced above, this transport statement report seeks to clarify the potential level of influence generated by the proposed development upon the local road network and subsequently ascertain the existing and future operational performance of the local transport system. The structure of the report responds to the various stages of this exercise including the key tasks summarised below.

Chapter 2 of this report describes the existing conditions at the proposed development site and surrounding area.

Chapter 3 outlines the relevant policies, guidelines, and standards that inform the transportation planning and decision-making process.

Chapter 4 assesses the ease of reaching destinations within the study area and evaluates the effectiveness of transportation infrastructure in providing access to key services, facilities, and activities

Chapter 5 outlines planned improvements and developments in transportation infrastructure aimed at addressing existing challenges, accommodating future growth, and enhancing the efficiency, safety, and sustainability of the transportation network.

Chapter 6 analyses the potential transportation impacts associated with a proposed development project.

Chapter 7 evaluates the potential impacts of a proposed development or project on the surrounding transportation network.

Chapter 8 refers to the Management Mobility Plan undertaken for the site.

Finally, **chapter 9** provides a concise overview of the key findings, recommendations, and implications discussed throughout the report.

2 Receiving Environment

2.1 Land Use

The subject site is situated on the former grounds of a quarry, the site functioned as a quarry until the construction of the M50 motorway began in the 1990s, leading to the redevelopment of the land.

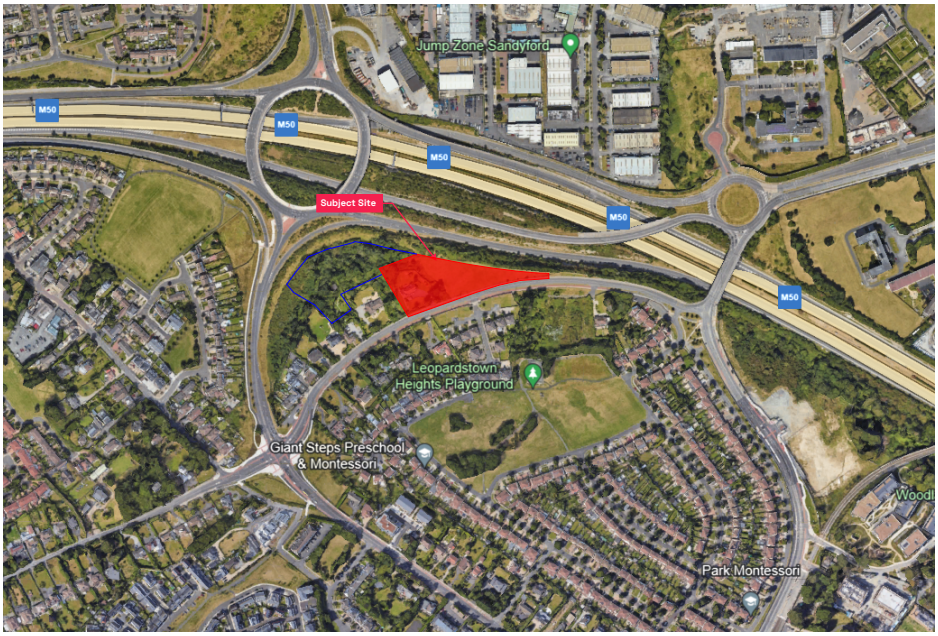
The subject red line boundary encompasses a greenfield site. The surrounding area primarily comprises of business parks, retail establishments, and residential settlements, with most of the residences being single-family homes.

2.2 Location

The general location of the subject site in relation to the surrounding road network is illustrated in Figure 2.1 below whilst Figure 2.2 shows the extent of the subject development plot. The development site is located on the Leopardstown Road in the Sandyford area of Dublin. It is located approximately 8km to the South of Dublin City Centre. It is bounded to the North by the M50 motorway, to the west by a residential dwelling and to the south and east by Leopardstown Road.

Fig 2.1 - Site Location in Relation to the Regional Road

Fig 2.2 - Site Location in Relation to the Local Road Network



3 Policy Framework and Standards

3.1 Local Policy

Dun-Laoghaire Rathdown County Council Development Plan 2022-2028

Dun-Laoghaire Rathdown County Council's Development Plan 2022 - 2028 sets out a shared vision that will shape the future growth in the County over the next six years. This Plan outlines various transport related policies and objectives to be implemented during the period of the Plan. The policies and objectives relevant to this application are described below.

5.5.1 Policy Objective T4: Development of Sustainable Travel and Transport: It is a Policy Objective to promote, facilitate, and cooperate with other transport agencies in securing the implementation of the transport strategy for the County and the wider Metropolitan Area, as set out in the Department of Transport's Smarter Travel: A Sustainable Transport Future 2009–2020 and its subsequent updates, as well as the NTA's Transport Strategy for the Greater Dublin Area 2016–2035 and its subsequent updates, the RSES, and the MASP. (Consistent with NPOs 26 and 64 of the NPF and RPOs 5.2, 5.3, 8.4, 8.7, 8.8, and 8.9 of the RSES)

5.5.3 Policy Objective T6: Quality Bus Network/ Bus Connects: It is a Policy Objective to cooperate with the NTA and other relevant agencies to facilitate the implementation of the bus network measures as outlined in the NTA's Greater Dublin Area Transport 2016-2035 and Integrated Implementation Plan 2019-2024, as well as the BusConnects Programme. Additionally, the objective includes extending the bus network to other areas where appropriate, subject to design, environmental assessment, public consultation, approval, finance, and resources. (Consistent with RPO 8.9 of the RSES)

5.6.1 Policy Objective T11: Walking and Cycling: It is a Policy Objective to secure the development of a high-quality, fully connected, and inclusive walking and cycling network across the County. This includes integrating walking, cycling, and physical activity with placemaking and enhancing public realm permeability. (Consistent with NPO 27 and 64 of the NPF and RPO 5.2 of the RSES)

5.6.2 Policy Objective T12: Footways and Pedestrian Routes: It is a Policy Objective to maintain and expand the footway and pedestrian route network to provide accessible and safe pedestrian routes within the County, in accordance with best accessibility practice. (Consistent with NPO 27 and 64 of the NPF and RPO 5.3 of the RSES).

5.7.3 Policy Objective T18: Car Sharing Schemes: It is a Policy Objective to support the setup and operation of car sharing schemes to facilitate an overall reduction in car journeys and car parking requirements.

5.7.4 Policy Objective T19: Car Parking Standards: It is a Policy Objective to manage car parking as part of the overall strategic transport needs of the County in accordance with the parking standards set out in Section 12.4.5.

5.7.6 Policy Objective T21: Park and Ride: It is a Policy Objective to liaise with the Park and Ride Office of the NTA to facilitate the provision of Park and Ride facilities, both short-term and long-term. This includes providing suitable electric charging structures and adequate cycle parking in appropriate locations along strategic transport corridors, such as Woodbrook and Carrickmines, as well as other suitable sites to be identified with the NTA Park and Ride Office. This is subject to the outcome of environmental assessment and planning approval. (Consistent with RPO 8.14 of the RSES)

5.8.2 Policy Objective T24: Motorway and National Routes: It is a Policy Objective to promote, facilitate, and cooperate with relevant transport bodies, authorities, and agencies to secure improvements to the County's Motorway and National road network. The goal is to provide, protect, and maintain the safe and efficient movement of people and goods both within and through Dún Laoghaire-Rathdown.

Sections 12.4.5 & 12.4.6 of the Development plan set out the car and cycle parking standards respectively. The plan states that car parking standards are maximum in nature and may be reduced where other modes of transport provide sufficient mobility for residents. Alternative solutions will also be considered such as residential car clubs where there are site constraints. The cycle parking provided must in a secure and accessible location.

Regarding car parking provisions, the site is located in Zone 2, where parking is limited as follows: 1 space per 1-bedroom housing or apartment unit, 1 space per 2-bedroom housing or apartment unit, and 2 spaces per 3-bedroom housing or apartment unit. The total provision of car parking spaces on site is 64.

Regarding bicycle parking, the plan provides 156 spaces, including 4 non-standard bike spaces located between two stores. This exceeds DLR's requirements and aligns with the Compact Settlements Guidelines. Additionally, 8 short-stay spaces will be provided in front of Block 2 to accommodate visitors.

3.2 Regional Policy

Transport Strategy for the Greater Dublin Area 2016-2035

The National Transport Authority's Transport Strategy for the Greater Dublin Area (GDA) was adopted in April 2016.

The strategic purpose of the document is "to contribute to the economic, social and cultural progress of the Greater Dublin Area" by providing for the efficient, effective and sustainable movement of people and goods.

The GDA has been divided into radial and orbital transport corridors, with the existing and proposed development falling in proximity to the M50 orbital transport corridor from where all the radial corridors start from. Therefore, the infrastructure proposed for each corridor will benefit the M50 orbital corridor which includes improvements to:

- Heavy Rail Infrastructure;
- Light Rail Infrastructure
- Bus Infrastructure
- Cycling Infrastructure
- Walking
- Road Network

Greater Dublin Area Cycle Network Plan (2013)

The National Transport Authority published the 'Greater Dublin Area Cycle Network Plan' in December 2013, which identifies the planned cycle network for the GDA.

In proximity to the site, a section the of the Carrickmines Greenway passes by the site potentially connecting the site to Carrickmines to the south and Ballybrack/ Shankill to the east.

A primary cycle route connects the site to the city centre while a secondary route connects the site from South Dublin to the wider surrounding area. It is intended that in future these routes would be upgraded to meet the required standards thus providing a high-quality cycle network near the site.

Bus Connects

The BusConnects proposal, published in July 2018 by the National Transport Authority, aims to overhaul the existing bus system in Dublin by**:**

- Redesigning the bus network to provide a more efficient network, connecting more places and carrying more passengers;
- Introducing Bus Rapid Transit on a number of routes;
- Improving bus priority infrastructure including provision of 220km of bus lanes;
- Improving payment systems; and
- Improving livery and bus stops.

This scheme will also deliver improvements to the cycle network through the provision of approximately 200km of cycle lanes which will be largely segregated from other traffic along these corridors.

Bus Connects will result in changes to bus services across the city, and it is expected that it will vastly improve the bus system in the Greater Dublin Area. The proposed development is located in Sandyford and will be set to significantly benefit from the planned changes. Specifically, Route 44, which passes by the site, will provide direct connectivity from Enniskerry to DCU. Additionally, the 47 Dublin Bus Route, also passing the site, will offer a connection to Sandyford Business Park and Sandyford Luas Station.

3.3 National Planning

National Planning Framework

Project Ireland 2040 National Planning Framework (NPF) was published by the Government of Ireland in 2018. The NPF is the Governments' high-level strategic plan for shaping the future growth and development of Ireland to 2040.

The NPF priorities ten National Strategic Outcomes outlined below:

1. Compact Growth
2. Enhanced Regional Accessibility
3. Strengthened Rural Economies and Communities
4. Sustainable Mobility
5. A Strong Economy supported by Enterprise, Innovation and Skills
6. High-Quality International Connectivity
7. Enhanced Amenity and Heritage
8. Transition to a Low Carbon and Climate Resilient Society
9. Sustainable Management of Water, Waste and other Environmental Resources
10. Access to Quality Childcare, Education and Health Services

Smarter Travel 2009-2020

In February 2009, 'Smarter Travel -A Sustainable Transport Future: A New Transport Policy for Ireland 2009-2020' was published by the now Department of Transport, Tourism and Sport, setting out the vision of a sustainable transport future in 2020. This policy document proposes an alternative to the existing trends - which have resulted in increased traffic congestion and a loss in economic competitiveness. It sets out measures aimed at increasing the share of the population walking, cycling, using public transport and leaving their cars at home by 2020. Through this framework, the Government aims to reduce the national car-based share of total commuting trips from the current average of 65% to 45%.

The fundamental objective underpinning this policy document is the provision of a high quality, integrated and sustainable travel and transport infrastructure that supports the movement of goods and people, which in turn will ensure continued Irish competitiveness. This translates into goals, actions and objectives seeking to ensure the availability of sustainable transport alternatives to most of the population.

The 49 actions in the "Smarter Travel" Transport Policy document can be grouped under four key headings, as follows:

- Actions to reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment and the use of pricing mechanisms or fiscal measures to encourage behavioural change;
- Actions aimed at ensuring that alternatives to the car are more widely available, mainly through improved and more accessible public transport and through investment in cycling and walking;
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving, and alternative technologies; and
- Actions aimed at strengthening institutional arrangements to deliver the targets.

National Cycle Policy Framework 2009-2020

The National Cycle Policy Framework (as part of Smarter Travel -A Sustainable Transport Future 2009) outlines national policy for cycling, in order to create a stronger cycling society, and a friendlier environment for cycling. The policy document sets an average national target of 10% of all trips by bicycle by 2020 and equally recognises the need for continuing promotion and integration of cycle networks in the state.

Design Manual for Urban Roads and Streets

The Design Manual for Urban Roads and Streets (DMURS), published by Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Government, 2019, provides guidance relating to the design of urban roads and streets.

It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes regarding networks and individual streets.

DMURS aims to re-balance the transport modes and place the pedestrian and cyclist ahead of the vehicle when examining the street. The pedestrian perspective focuses on:

- Connectivity and legibility: where traffic movement is not given priority over pedestrians.
- Comfort: increased width and reduced clutter on footpaths. Promotion of passive surveillance and active street edges to help pedestrians feel less isolated and vulnerable.
- Safety: by designing a street with a perceived increase level of risk for drivers encourages reduced speed. Therefore, designing a street for pedestrian comfort will naturally be designed for reduced vehicle speed

Integrated approaches incorporate elements of urban design and landscaping that instinctively alter behaviour, thus reducing the necessity for more conventional measures (such as physical barriers and the road geometry) alone to manage behaviour. Streets and junctions are more compact, providing better value for money. Consequently, there are four Key Design Principles which are presented in DMURS. These are:

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

Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities

This document, published by the Department Housing, Planning and Local Government in March 2018, provides direction for local authorities taking account of the current and future need for housing in line with the National Planning Framework (NPF) and Project Ireland 2040.

The document outlines a number of Specific Planning Policy Requirements (SPPRs) which planning authorities and An Bord Pleanála are required to apply in carrying out their functions and supersedes the previous guidance issued in 2015.

In relation to traffic and transport, the guidelines address the requirements for car parking in areas with greater mobility options and higher levels of accessibility. For large scale, higher density residential developments located within an accessible urban location the guidelines state that "*the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances.*" The criteria for these locations are to be within a 15-minute walk of the city centre, 10 min. walk to rail or tram or 5-minute walk to high frequency (10min peak hour frequency) bus services. Other considerations are walking proximity to "*significant employment centres, that may include hospitals and third level institutions.*"

These reductions in parking standards for developments in suitable locations are a direct application of Objective 13 of the NPF - National Planning Framework which states "*There should also generally be no car parking requirement for new developments in or near the centres of the five cities, and a significantly reduced requirement in the inner suburbs of all five*".

The guidelines also emphasise the importance of cycling as a mode and the provision of cycle facilities in new developments. The guidelines recommend a general minimum standard of 1 cycle storage space per unit. Visitor parking is also recommended at a ratio of 1 space per 5 units. Any proposed deviations from these standards are at the discretion of the planning authority and shall be justified by factors such as location, quality of facilities proposed and flexibility for future enhancement/enlargement.

4 Accessibility

4.1 Introduction

This section of the document presents the accessibility and receiving environment around the proposed development and presents the existing pedestrian, cyclist, public transport conditions as well as the local road network.

The site is considered to have excellent accessibility credentials.

Road Network

The site, located at Leopardstown Road, consists of a greenfield plot with no existing dwellings. Planning permission is being sought for the construction of 80 units within 2 blocks. The blocks vary in height, reaching up to 6 storeys.

The arterial roads surrounding the development, Leopardstown Road and Kilgobbin Road have speed limits of 50km/h.

Existing Cycle and Pedestrian Facilities

Currently there are dedicated pedestrian facilities and shared bus and cycle lanes at Leapardstown Road with vehicular traffic in the vicinity of the subject development site.

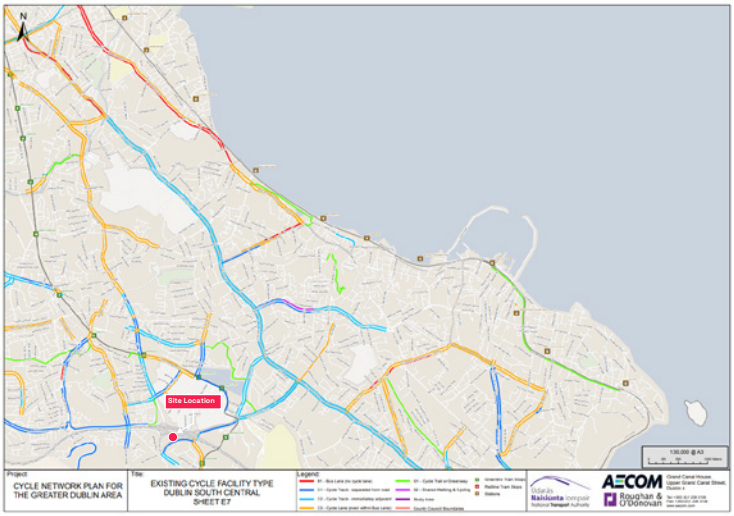
Located approx. 300m to the south-west is a dedicated signal-controlled pedestrian crossing.

Existing GDA Cycle Network Facilities

The GDA Cycle Network Plan outlines the existing cycle facilities in place throughout County Dublin and the Greater Dublin Area. The map illustrated in Figure 4.2 below shows an extract of the existing cycle facilities in proximity to the proposed development site. The site currently benefits from a dedicated 'C1' cycle lane, separate from Leopardstown Road, that extends all the way to Sandyford Luas Station.

Fig 4.1 - Pedestrian and Cycle Facilities on Leapardstown Road (South of subject site)

Fig 4.2 - Existing Cycle Network



4.2 Pedestrian Accessibility

The site area includes numerous amenities including Leopardstown Heights Playground which can be accessed within a 5 minute walk around the area.

Numerous shops and Montessori schools are all accessible within a 10-minute walk from the site.

Within 15-20 minute walking, the entirety of Sandyford Business Park is accessible which includes financial services, shops, retail stores, personal services etc.

The nearest Luas station to the site is Sandyford Luas Station, approximately 25 minutes to the north.

Stepaside, Leopardstown, and Ballyogan are all within a 30-minute walk from the site.

Figures 4.3 and 4.4 below illustrate the walking catchment area in 5-minute intervals.

It can be concluded that the site is highly accessible on foot.

Fig 4.3 - Walking Catchment

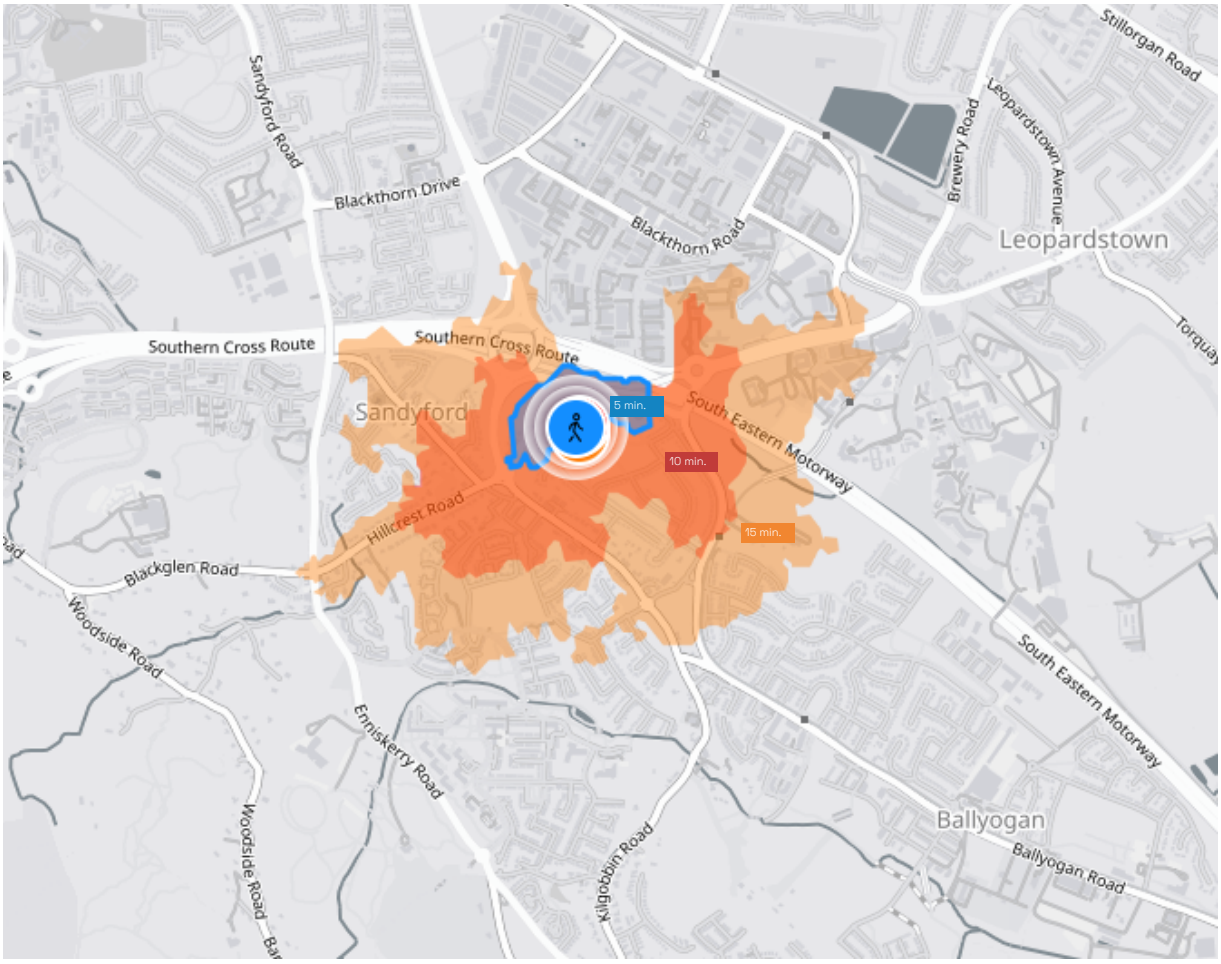
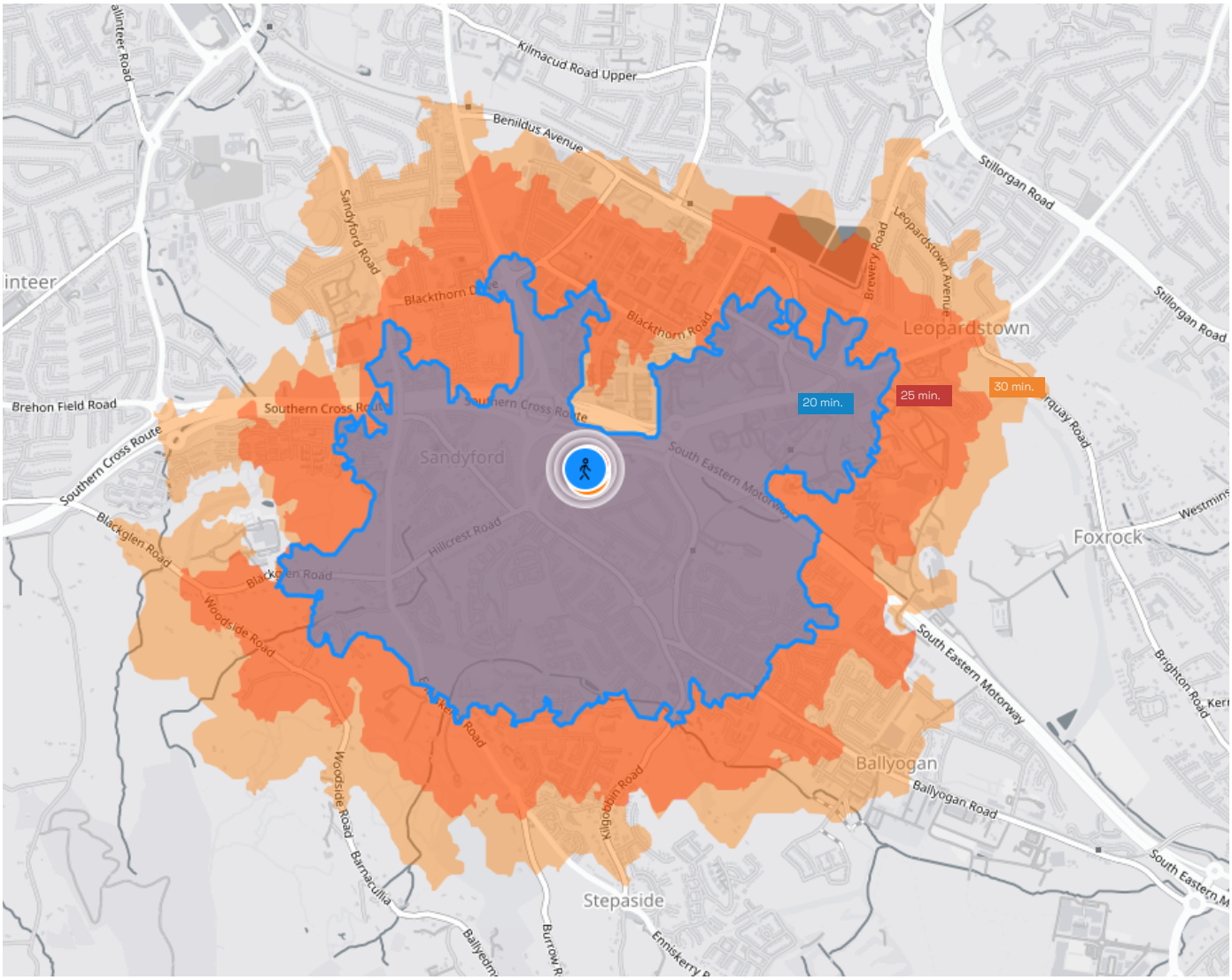


Fig 4.4 - Walking Catchment



4.3 Cycling Accessibility

The site is easily accessible by bike, with dedicated cycle lanes present along Leopardstown Road.

Figures 4.5 and 4.6 below shows the cycling catchment accessible from the subject site from 5 to 30 minutes of cycling.

Within 5 minutes of cycling, Sandyford Business Park can be accessed.

Within 10 minutes of cycling Sandyford Luas Station can be reached.

In 15 minutes of cycling Dundrum Town Shopping Centre is easily accessible.

After 20 minutes of cycling University College Dublin (UCD) and Dun Laoghaire is easily accessible.

In a 25/30 minute cycle, the majority of Dublin City centre area and south Dublin can be reached.

Fig 4.5 - Cycling Catchment

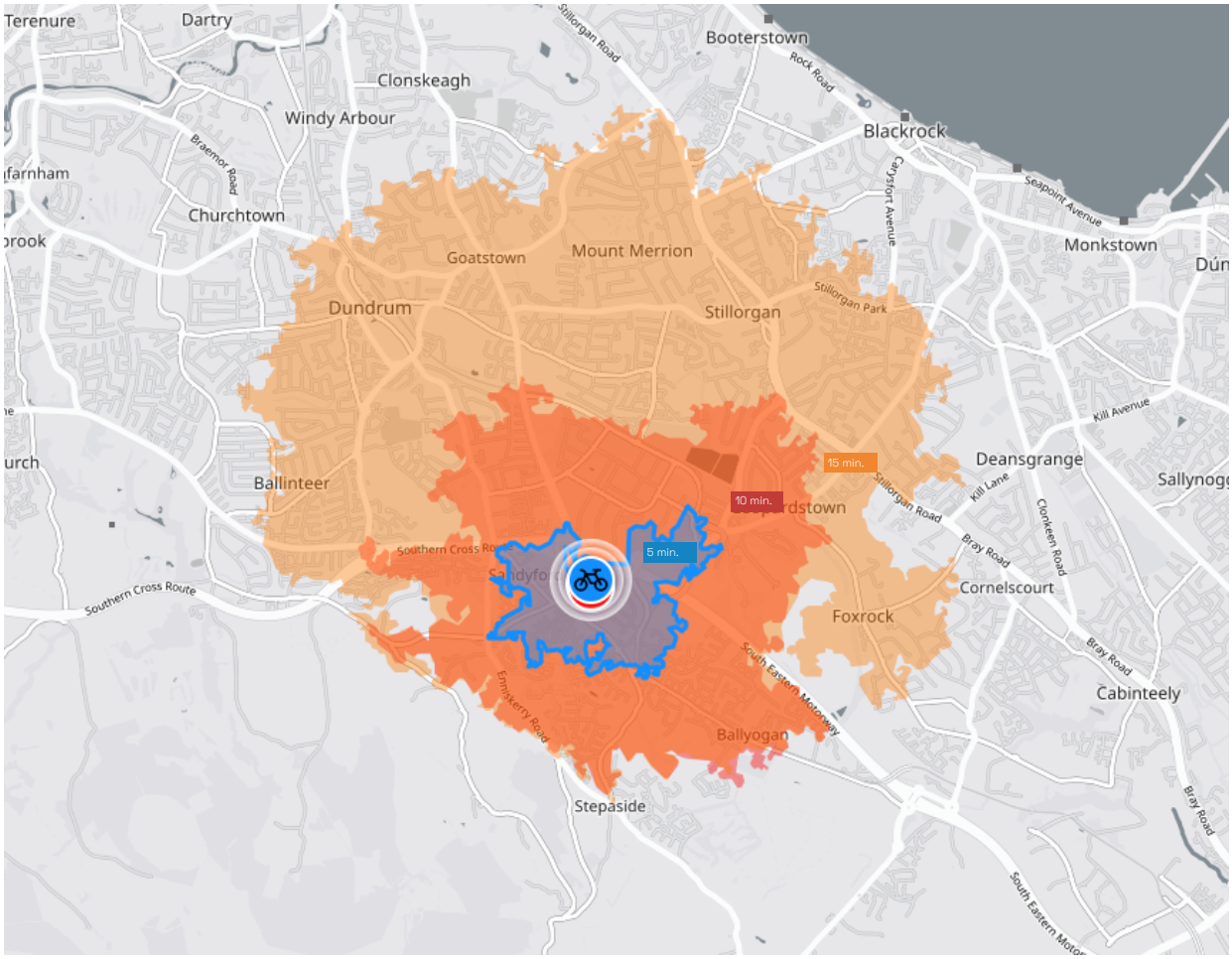
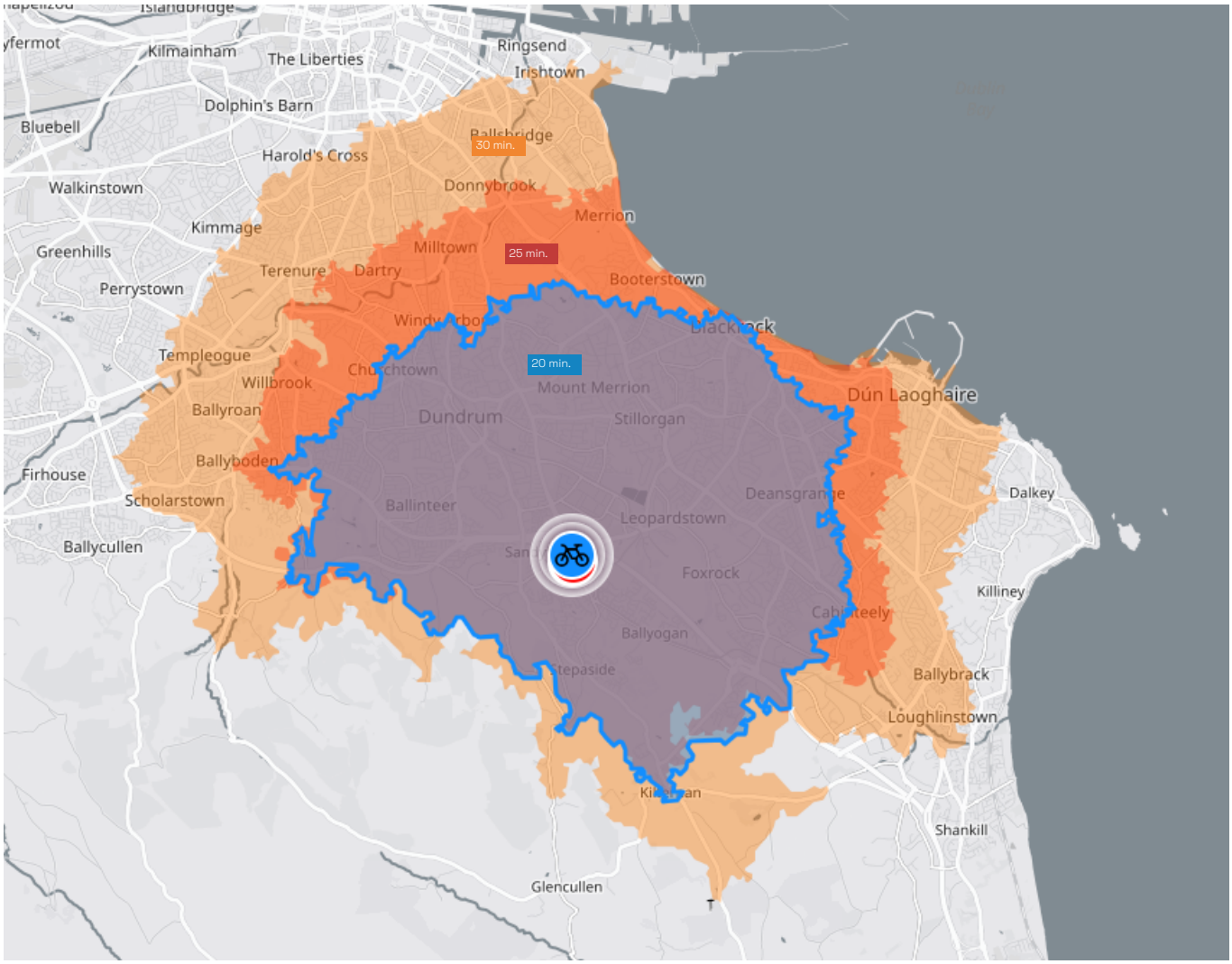


Fig 4.6 - Cycling Catchment



4.4 Public Transport Accessibility

Public Transport Bus

The subject site is well-served by public transport, with Dublin Bus Routes 11, 44, 47, 114, and S8, as well as the 700 airport bus, all operating within a 1.5 km radius of the site.

The bus stops serving these existing bus service routes are illustrated below in Figure 4.7 which outline the location of each bus stop in relation to the proposed development site.

Table 4.1 below outlines the frequency of the bus services during the weekday AM peak hour & Inter peak as well as the weekend services. Bases on the frequencies outlined the site is an "accessible urban location" as defined by the DHPLG apartment guidelines.

Public Transport Bus Accessibility

Figures 4.3 and 4.4 above shows the walking catchments accessible from the subject site while figures 4.8a, 4.8b and 4.8c shows the public transport catchments for 30, 45 and 60 minutes.

Within 30 minutes by public transport, you can easily reach various Dublin suburbs, including Dun Laoghaire, Cabinteely, and Blackrock, as well as Dublin City Centre.

The Liberties, Loughlinstown and Donnybrook regions among others are all accessible within 45 minutes of travel.

Within a 60-minute journey south, you can reach the Bray and Shankill areas. To the north, you can access the north inner city of Dublin.

Fig 4.7 - Bus Stops in Close Proximity to the Subject Site

Table 4.1 Bus Service Frequency (min)

Route No.	Route	Weekdays		Weekend	
		AM Peak	Interpeak	Saturday	Sunday
11	Wadelai Park - Sandyford Business District	10 - 15	15 - 20	15 - 20	20-30
44	DCU - Enniskerry	10 - 15	15 - 20	15 - 20	20-30
47	Poolbeg - Belarmine	15 - 20	20 - 30	20 - 30	30
114	Blackrock - Ticknock	15 - 20	20 - 30	20 - 30	30
700	Airport to Dublin City Centre & Leapardstown	15 - 20	20 - 30	20 - 30	30
S8	Kingswood Avenue - Dun Laoghaire Stn	15 - 20	20 - 30	20 - 30	30

Fig 4.8a - 30 minute travel time from site

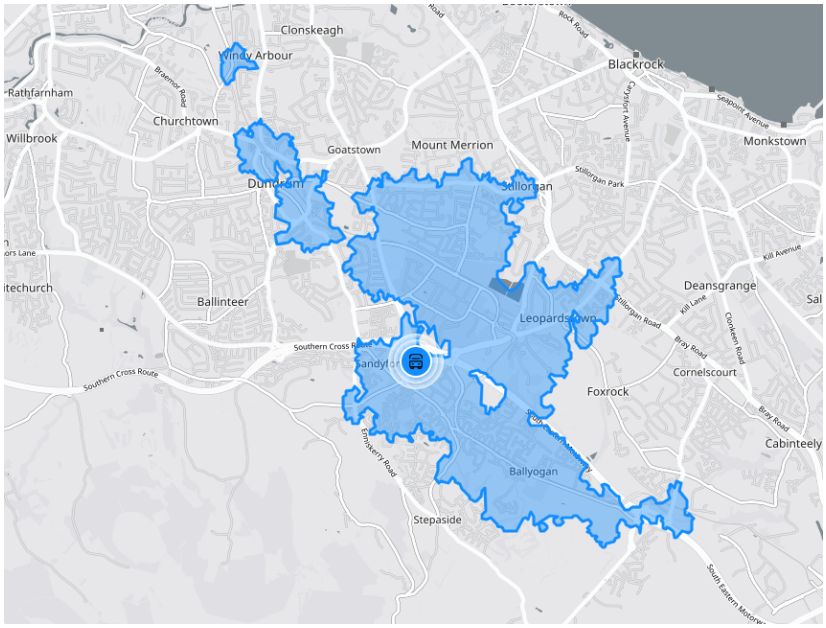


Fig 4.8b - 45 minute travel time from site

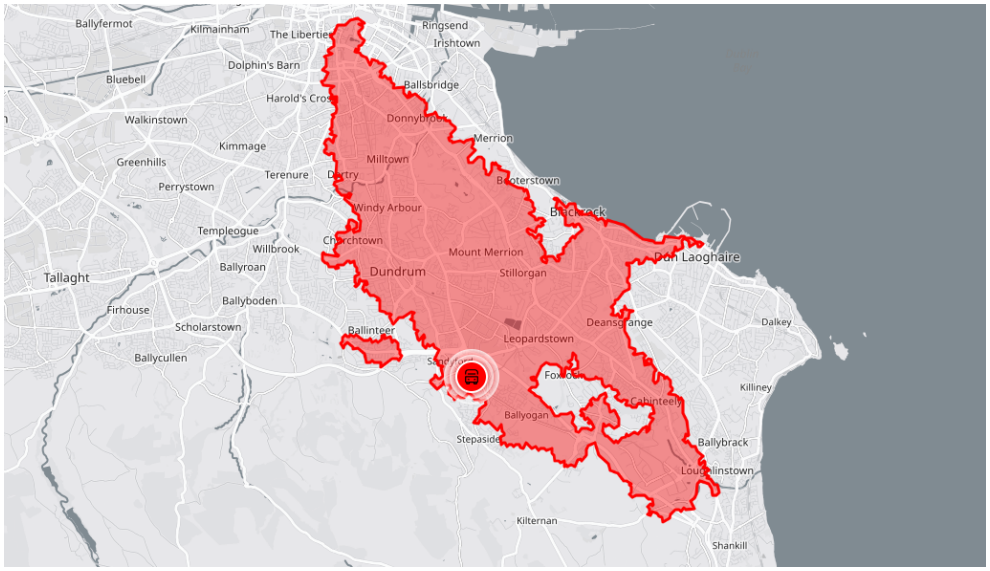
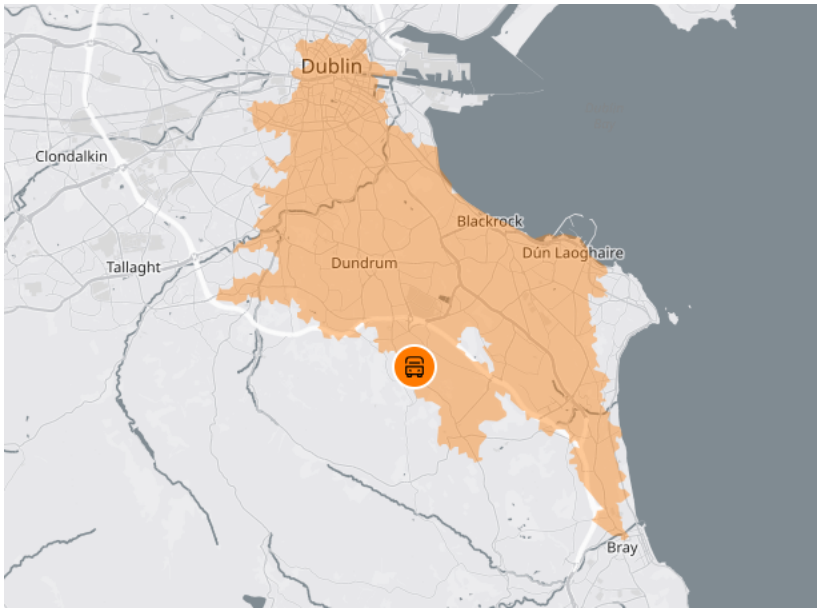


Fig 4.8c - 60 minute travel time from site



Public Transport LUAS

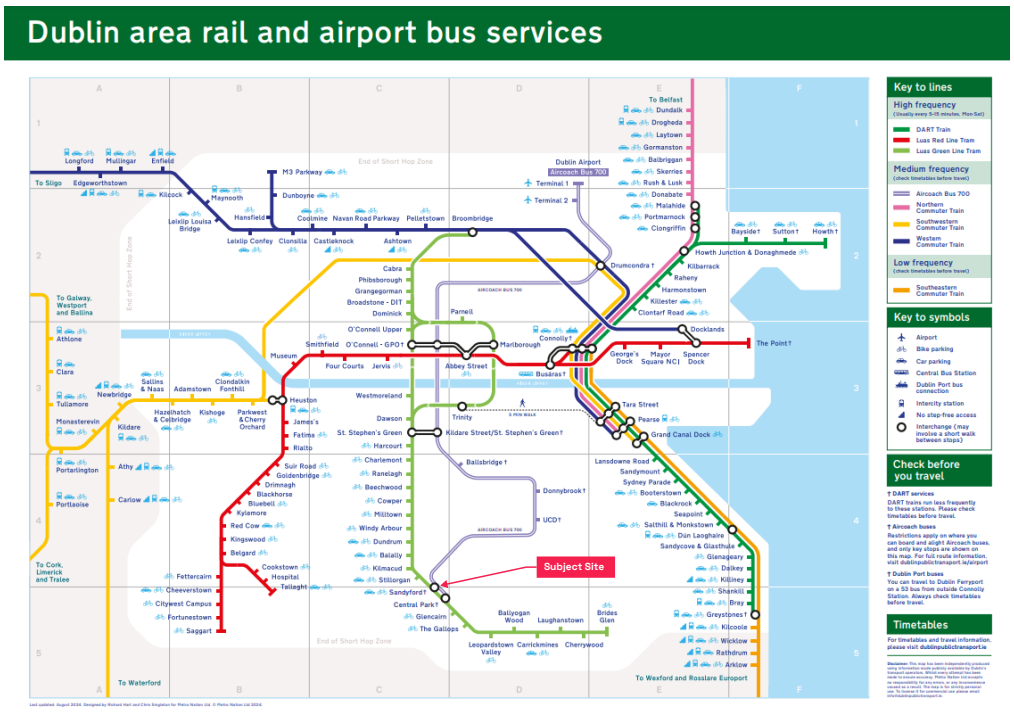
The closest Luas stop to the development is Sandyford Luas Station, located c. 25mins walking to the North.

The Luas offers good connectivity with Dublin City Centre, with a 40-minute ride from Sandyford to Westmoreland Stop. The Luas operates from 5:30 AM to 11:30 PM midweek. At peak times, there is a Luas every 4-7 minutes, and at off-peak times this drops to approximately 7-10 minutes.
The standard adult Luas ticket with a Leap Card varies from €2.30 to €3.60 and for students varies from €1.15 to €1.80.

Table 4.2. - LUAS and Commutor Train Line Frequency (min.)

Route No.	Route	Weekdays		Weekend/ BH	
		PM Peak	Interpeak	Saturday	Sunday
Luas - Green Line	Sandyford - Broombridge	4-7	7-10	7-10	10-15
Luas - Green Line	Brides Glen - Broombridge	4-7	7-10	7-10	10-15
Luas - Green Line	Brides Glen - Parnell	4-7	7-10	7-10	10-15[1]

Figure 4.9 - Map of Existing LUAS Network



4.5 Car Sharing

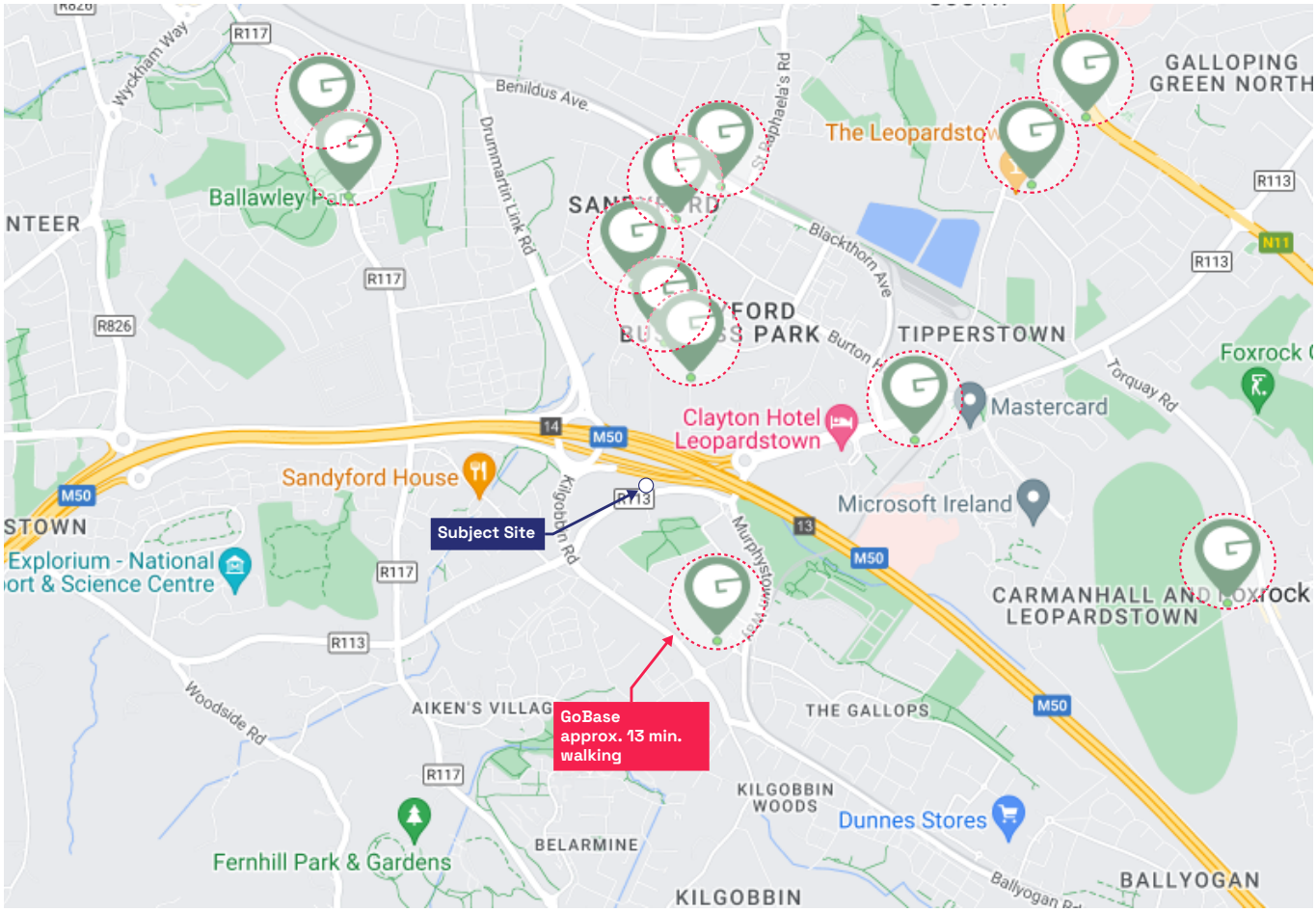
It is acknowledged that residents, such as young people, that do not own a car, may require the use of a car on certain occasions. GoCar (among other car sharing operators) offers a cost-effective, hassle-free, and greener alternative to car ownership and traditional vehicle hire in Dublin. The car sharing service allows users to view the availability of cars at designated parking bays throughout the country via a mobile application, where they can unlock and start driving their selected car on the spot.

The nearest bay is located in Glencairn Park & Ride, c. 950m (13 min. walk) to the south of the site. Cars can be reserved by the hour, day or even longer. The price of the journey depends upon the vehicle type, the duration of the reservation and the miles driven, but starts at around €10 an hour with 50 free kilometres included.

Figure 4.10 shows additional locations in the vicinity of the site that GoCar currently operate in.

It is considered that car sharing could therefore be a highly attractive facility for residents who require occasional private car use, therefore, minimising the traffic impact.

Figure 4.10 - Car Sharing Bays in the Vicinity of the Site



4.6 Access to Local Amenities

The proposed development site is very well placed in terms of the availability of local amenities providing an area of comprehensive range of facilities which will be accessible to future residents of the subject site, these include supermarkets, restaurants and many retail opportunities.

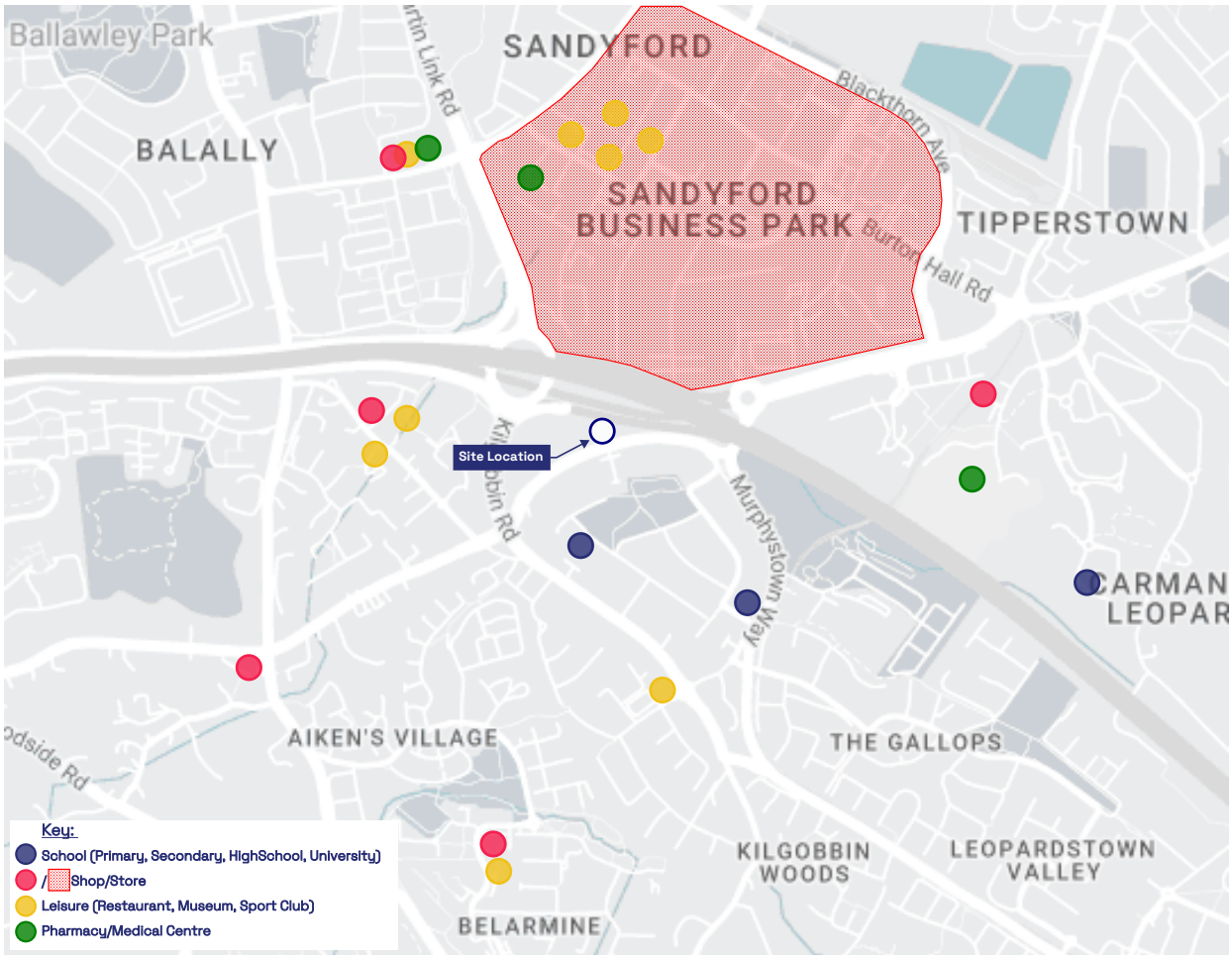
Restaurants, takeaways, and Montessori schools are just an 8-minute walk to the west, with Park Montessori approximately 650 meters to the south.

The area also provides access to pharmacies, healthcare services, and hospitals. Notably, Balally Pharmacy is within 1.5 km, and The Beacon, one of Ireland's largest private hospitals, is located just 1.4 km away.

Additionally, the site benefits from excellent access to leisure and shopping facilities. Within 1 km, Sandyford Business Park offers a variety of local shops, cafes, and restaurants (highlighted in figure 4.11).

Figure 4.11 below shows indicatively the subject site's location in relation to the aforementioned amenities among others.

Figure 4.11 - Subject Site Local Amenities



5 Proposed Transport Infrastructure

Cycle Network Proposal

In December 2013 the NTA published the report entitled Greater Dublin Area Cycle Network Plan. The report summarises the findings of a comprehensive body of work detailing a proposed Cycle Network incorporating Urban, Inter-urban and Green-route networks covering the six county council areas that together form the defined Greater Dublin Area (GDA).

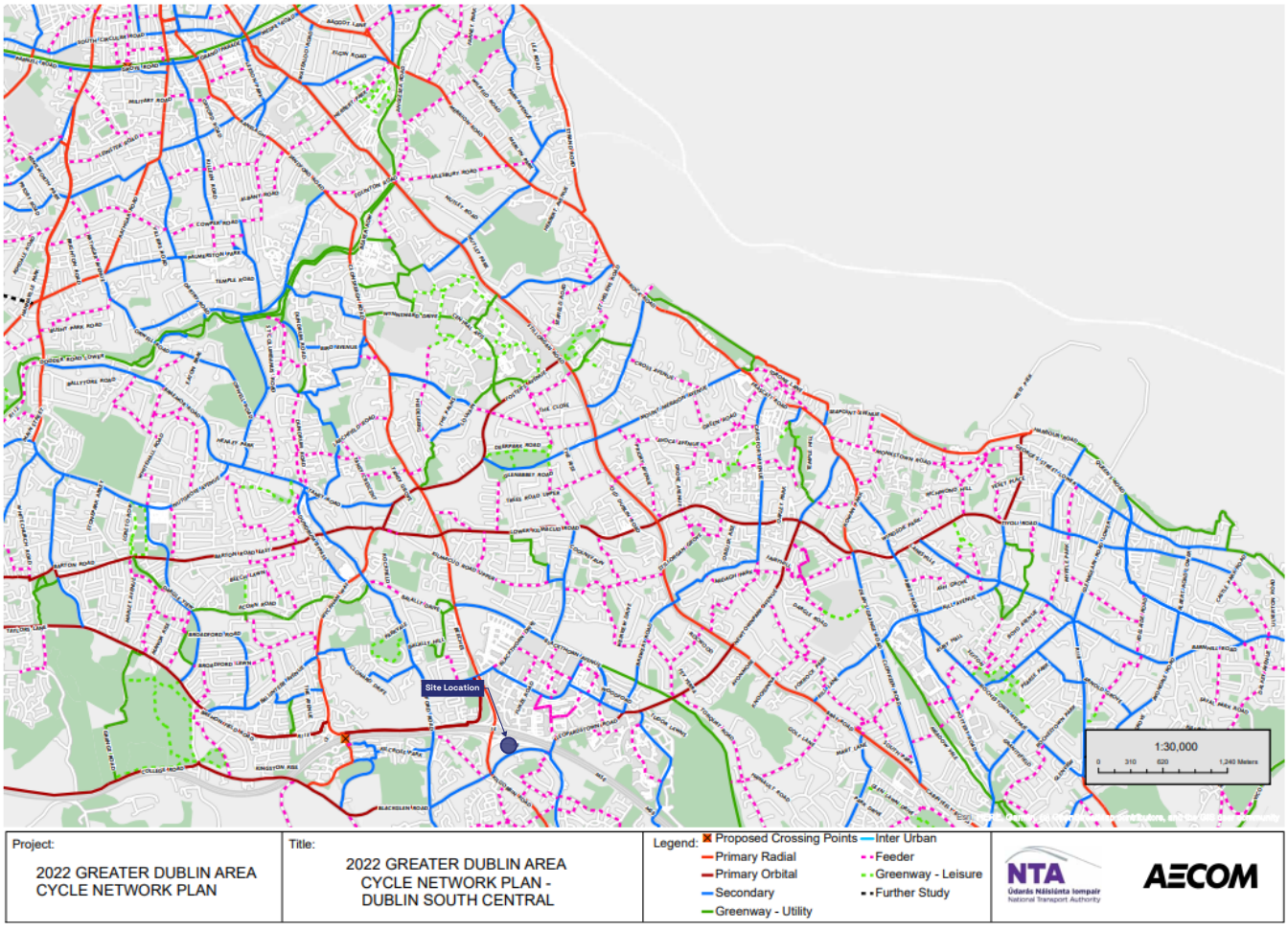
The Greater Dublin Area Cycle Network Plan sets out a 10-year strategy to expand the urban cycle network from 500km to 2,480km. The overarching ambition of the plan is to increase the national cycle mode share to 10% by 2020.

The network will consist of a series of primary, secondary and feeder routes as well as green ways routes. These routes will comprise of a mix of cycle tracks and lanes, cycleways and infrastructure-free cycle routes in low traffic environments.

The proposed cycle network near to the development is shown below, In proximity to the site, the Carrickmines Greenway passes by the site, connecting the site to Carrickmines in the south and Ballybrack/ Shankill to the east.

A primary cycle route connects the site to the city centre while a secondary route connects the site from South Dublin to the wider surrounding area. It is intended that in future these routes would be upgraded to meet the required standards thus providing a high-quality cycle network near the site as shown in Figure 5.1. The implementation of the above cycle infrastructure schemes by the local authority will be subject to further design, public consultation, approval, and importantly availability of funding and resources.

Figure 5.1. - Proposed Cycle Infrastructure



Public Transport Proposals - BusConnects

Figure 5.2 shows the proposed BusConnects network in the vicinity of the site as part of the New Dublin Area Bus Network scheme. The scheme aims to overhaul the existing bus system in Dublin by:

- Redesigning the bus network to provide a more efficient network, connecting more places and carrying more passengers
- Introducing Bus Rapid Transit on a number of routes
- Improving bus priority infrastructure including provision of 230km of bus lanes
- Improving payment systems; and
- Improving livery and bus stops.

The nearest bus stops to the site are located c.350m to the West of the site along Murphystown Way. Table 4.1 details the services that call at these stops, and their associated frequencies.

These buses provide access to useful city centre destinations in Dublin, as well as many of the surrounding areas.

It is noted that the provision of bus services will change over time in response to current circumstances. The bus times are accurate at the time of writing, whereas up-to-date bus times can be found on Dublin Bus' and Go Ahead Ireland's websites: dublinbus.ie/Your-Journey1/Timetables/ and goaheadireland.ie/services.

On the above basis, it can be considered that the site is highly accessible by bus.

Figure 5.2 - BusConnect Proposal

6 Transport Characteristics of the Proposed Development

6.1 Proposed Development

The proposed development is for a Section 179A of the Planning and Development Act delivering 80 residential units within two blocks. The blocks range in height up to 6 storeys. The site is located at Leopardstown Road, Sandyford in Dublin.

All associated internal and external amenity space, car and cycle parking, landscaping, bin stores, service provision and vehicular and pedestrian accesses are also proposed.

6.2 Pedestrian and Cyclist Access

The main access for pedestrian is provided for residents via Leapardstown Road. Figure 6.1 outlines the main access points at the ground level.

The requirements for bicycle parking, as presented in the Dun-Laoghaire Rathdown County Council Development Plan, are presented in Table 6.1.

The site is located within zone 2 and in this case a maximum of 80 residential spaces (long term) would be required plus 16 spaces (short term) for visitors plus an additional 2 cargo bike spaces and 2 e-bike spaces.

Table 6.1 - Bicycle Parking Requirements

DLR Parking Requirements		
Land Use	Long Stay	Short Stay
Apartments	1 space per unit	1 space per 5 units
2 Bed Unit	1 space per unit	1 space per 5 units
3 Bed Duplex Unit	1 space per unit	1 space per 5 units

A minimum number of 96 bicycle parking spaces should be provided for the development. These are comprising 156 long term spaces which includes 2 e-bike spaces and 2 cargo bike spaces and 8 short term spaces. These bicycle parking spaces are provided in a dedicated areas as shown in Fig. 6.1.

Cyclists can access the bicycle parking spaces via the main site entrance onto Leopardstown Road.

It is deemed that the overall level of cycle parking is of an order that will facilitate and encourage future residents to significantly uptake cycling for utility and recreational purposes, the majority enclosed within the dedicated cycle stores.

Guided by the "DLR Standards for Cycle Parking and associated Cycling Facilities for New Developments 2018", the subsequent principles for cycle parking storage are as follows:

(i) General Principles for Larger Sites: On larger sites: Cycle parking should be distributed throughout the site rather than concentrated in one area. This also applies to visitor/customer bike parking as well as staff bike parking. Cycle stands should be located in secure private or indoor spaces or in visible, well-lit places that have high levels of natural surveillance.

(ii) General Gradients: The gradients of roads and access routes within development sites should follow the National Cycle Manual. Cycle stands should not be placed sideways on ground with a slope greater than 2 degrees.

(iii) Access: Routes to cycle parking should be of a high standard and should not compromise personal safety. Private access routes between or behind buildings should be at least 1.5m wide (preferably 2.0m). A reduced width of 1.2m is acceptable for short distances (less than 10m).

(iv) Steps: Steps should not be used for cyclist access. Where unavoidable, steps should be equipped with wheel channels that allow cyclists to pass each other. Pedestrian needs should be considered during design. Cyclists should not be expected to use escalators, but moving sidewalks may be used with approval from the Planning Authority.

(v) Headroom: A minimum headroom of 2.4m should be provided wherever cyclists are expected to ride, including access to cycle parking in multi-storey or underground car parks.

(vi) Compounds: Lockable compounds should be used for long-term bike parking, preferably with smart card or proximity key access. Keypads may be used if managed with regular combination changes. No aperture in the compound should allow a bike to be passed through it. Sheffield cycle stands should be provided within compounds for added security.

(vii) Bike Lockers: Lockers accommodating various bike types can be an effective solution, especially for small numbers of bikes. However, they require active management for allocation, key issuance (smart card or proximity key preferred), and usage monitoring.

(viii) Doors: Doors used by cyclists with their bikes should be at least 1.2m wide and preferably electronically operated via automatic detection or push button located 3m from the door.

(ix) Signage: Clear signage should guide cyclists to parking areas, encouraging the use of designated parking and preventing bike parking on railings, posts, etc.

(x) Lighting: Cycle parking areas should be well-lit for ease of bike access and security. Parking areas should not be obstructed by landscaping or planting.

(xi) Natural/Passive Surveillance: Cycle parking, including visitor/customer parking, should be in locations with high visibility, either from passers-by or adjacent buildings.

(xii) CCTV: CCTV systems should cover cycle parking areas to enhance both bike and personal security.

(xiii) Public Realm: Cycle parking stands should be aesthetically pleasing and fit for purpose, reflecting the surroundings and located close to destinations.

Figure 6.1 outlines the minimum standards (sum of both short-stay and long-stay) of cycle parking provision that will be sought for residential developments within Dún Laoghaire-Rathdown County Council.

Figure 6.1 - Cycle Parking Standards for Residential Developments for Zones 1 & 2

Residential Development type	1 short stay (visitor) parking space per: (Minimum of 2 spaces)	1 long stay parking space per: (Minimum of 2 spaces)
Apartments, Flats, Sheltered housing	5 units	1 unit
Houses - 2 bed dwelling	5 units	1 unit
Houses - 3+ bed dwelling	5 units	1 unit
Sheltered housing	5 units	1 unit
Student Accommodation	5 bedrooms	2 bedrooms

6.3 Car Parking

The Development Plan outlines car parking standards for new developments, detailing the required off-street parking for residential and non-residential land uses in Table 12.5. Section 12.4.5.1 indicates Parking Zone requirements.

Parking zones have differing requirements for vehicular parking based on their proximity to public transport services. Notably, Zone 1 mandates a maximum of 80 parking spaces, while Zone 2 requires a maximum of 89 spaces to accommodate the entire scheme. The site is considered in “Zone 2”.

For car parking spaces in “Zone 2”;

- For 1-2 bedroom units: 1 space per unit
- For 3-3+ bedroom units : 2 spaces per unit

The proposed allocation of 64 car parking spaces is deemed adequate to serve the development. This includes accessible resident spaces in line with section 12.4.5.3 in the development plan. Specifically, 64 long-term resident spaces are provided, including 13 EV charging spaces and 3 accessible spaces.

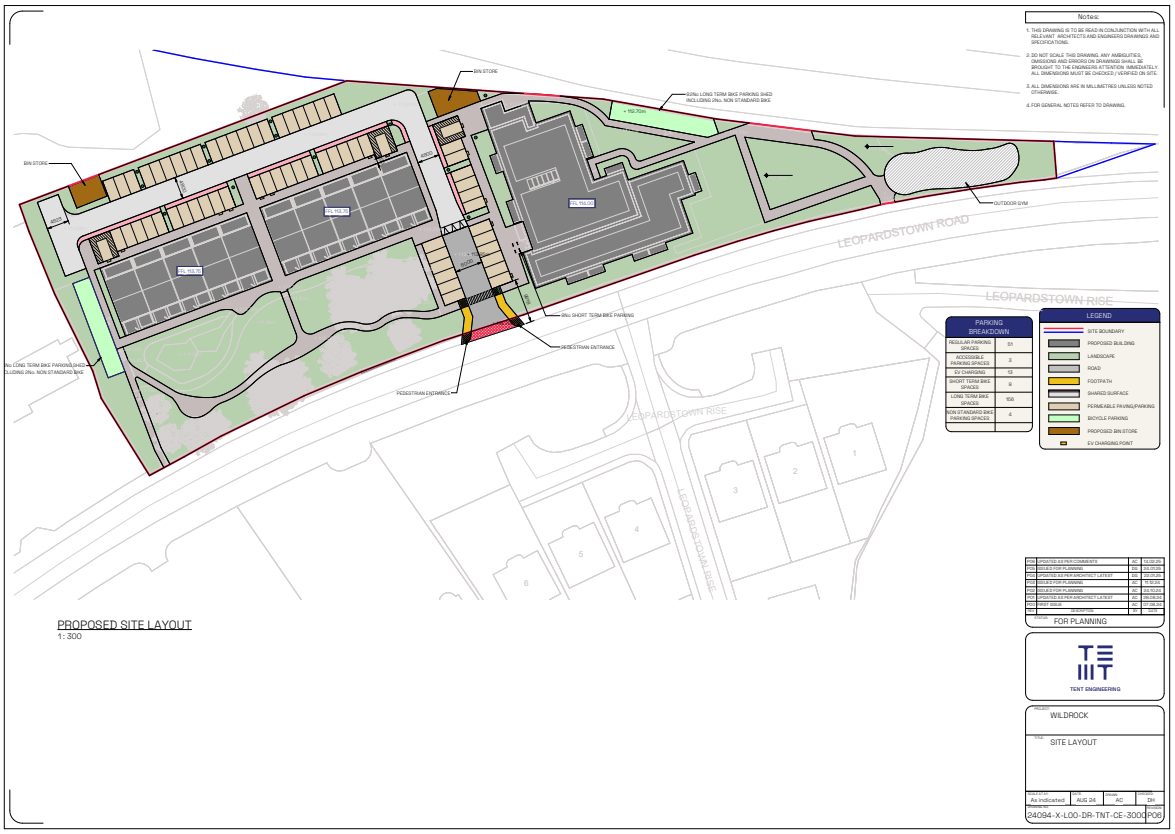
The development plan sets out a requirement for a maximum of 89 spaces. This scheme provides 64 spaces. This is circa. 72% of the maximum and appropriate for this highly accessible site.

Given the relatively low parking requirement for the site, the impact on the local road network is considered negligible.

The Framework Mobility Management Plan (Section 8) has outlines measures to liaise with residents and engage with such car sharing companies should the need for increased provision in the area be determined.

DLR Parking Requirements (Zone 2)		
Land Use	Long Stay	Short Stay
1 Bed Apartment	1 space per unit	Not Specified
2 Bed Apartment	1 space per unit	Not Specified
3 Bed Apartment	2 space per unit	Not Specified
1 Bed Unit	1 space per unit	Not Specified
2 Bed Unit	1 space per unit	Not Specified
3 Bed Duplex	2 spaces per unit	Not Specified

Fig. 6.2 - Site General Arrangements



6.4 Bike Parking Plan

The development includes a total of 156 bicycle parking spaces, consisting of 156 mixed long and short term spaces (mix of Sheffield stands and stacked Shed storage) which includes 4 non-standard bike spaces. These are split between 2 covered, locked and secured stores in addition to the private bike space allocated for each unit with ground floor access. 8 Sheffield stands are providing visitor spaces. This provision is considered sufficient to meet the bicycle parking needs of the development.

- **Long Stay Parking:** These are allocated to the residents and are located in secure, dedicated areas within the development. The parking facilities will include cycle cages and lockers to ensure security and ease of access. A dedicated bike lock-up unit will provide residents with ample bike parking space.
- **Short Stay Parking:** These are strategically located beside the apartment building entrance to ensure convenience and accessibility for short-term use.
- **Design Considerations:** All bicycle parking facilities are designed to be high quality, attractive, well-located, easily accessible and secure by design, adhering to the standards set forth in the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities.

6.4.1 Security and Management of Bike Parking

The development includes secure communal bike parking facilities specifically designed for residents of upper level duplexes. These facilities will be located in easily accessible, central areas within the development to ensure convenience for residents. Each communal bike parking area will be covered to protect bicycles from weather conditions and will feature robust bike racks that provide secure locking points. These bike parking areas are designed to accommodate larger bikes such as cargo bikes and e-bikes, ensuring ample space and sturdy racks capable of supporting the additional weight and size of these bicycles.

The units will benefit from dedicated communal bike parking areas located within a close proximity. These bike parking areas will be designed to accommodate the needs of the residents, providing ample space and secure bike racks.

To accommodate visitors, external Sheffield stand units will be installed beside the entrance to the apartment block. These stands are renowned for their durability and ease of use, allowing visitors to securely lock their bicycles during their visit. The Sheffield stands will be placed in well-lit, visible areas to ensure safety and deter theft. Additionally, clear signage will be provided to direct visitors to these bike parking areas, making it convenient for them to find secure parking options.

Fig. 6.3 - Secure Communal Bike Parking

6.5 Car Parking Plan

- **Resident Parking:** The development provides a total of 64 car parking spaces, with one space allocated per 1-2 bedroom unit and two spaces per 3-bedroom or larger unit. This allocation represents 72% of the maximum allowable parking spaces, in accordance with the agreement reached with Dún Laoghaire-Rathdown County Council prior to the planning submission.
- **Accessible Parking:** A minimum of 4% of the provided car parking spaces will be reserved for wheelchair accessible spaces to ensure inclusivity and compliance with accessibility standards.

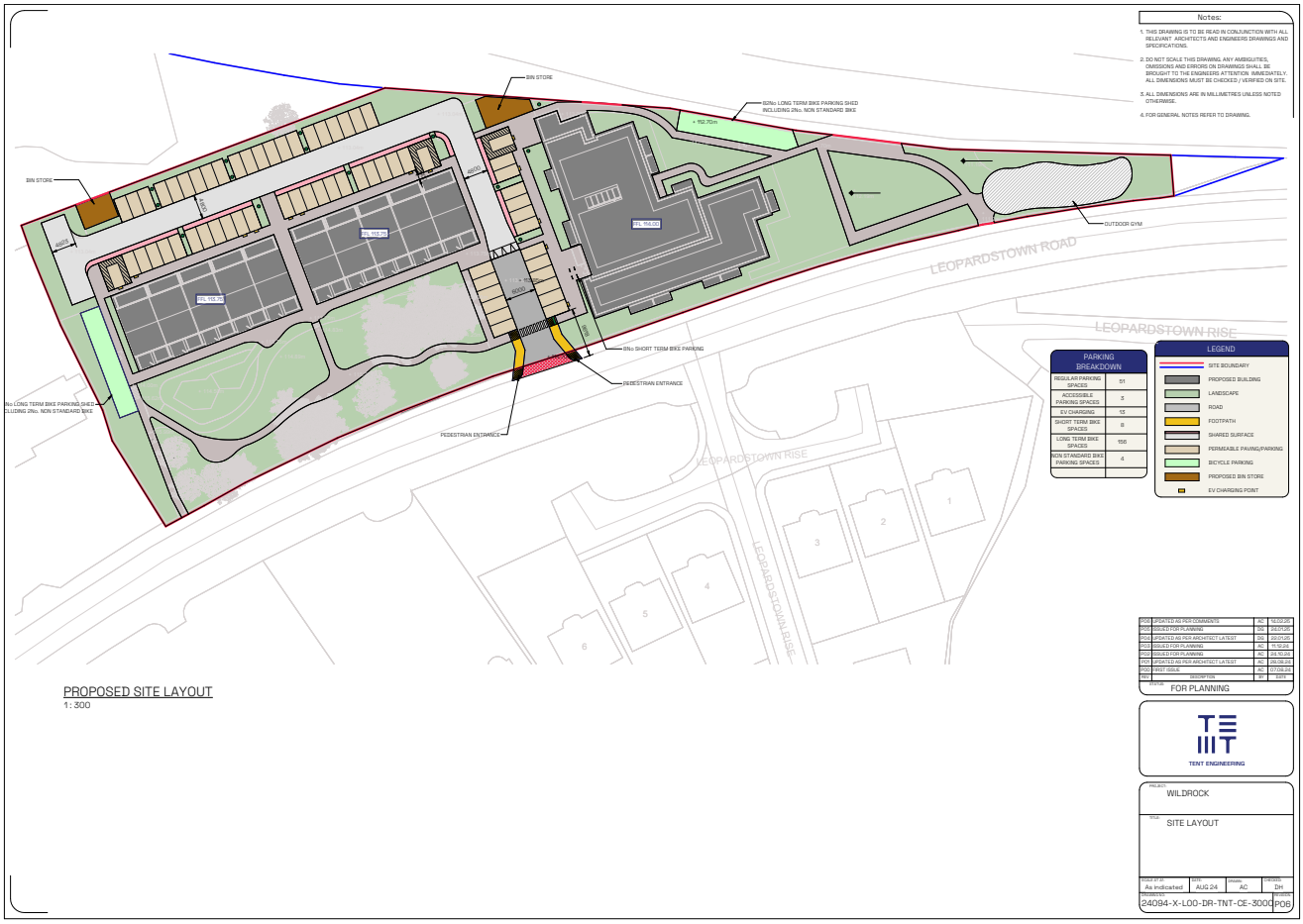
6.5.1 EV Charging Infastructure Plan

To address the requirements for electric vehicle (EV) charging, the proposed development includes a comprehensive EV charging infrastructure plan. A total of 13 EV charging points, at a rate of 1 charging point per 5 spaces, will be distributed throughout the development, ensuring accessibility for all residents and visitors.

The shared EV charging stations will be implemented to serve multiple parking bays efficiently. This shared approach minimizes the distance residents need to travel to access EV charging facilities and ensures that visitors have adequate access to charge their cars. Each charging station will be equipped with multiple charging points, providing flexibility and convenience for EV users.

Provision is also made for future expansion of the EV charging infrastructure to accommodate increased demand as more residents adopt electric vehicles. This future-proofing approach aligns with the sustainability goals and ensures long-term usability and satisfaction for the residents.

Fig. 6.4 - Parking Layout



6.5.2 Justification of Car Parking Provision

The proposed residential development at Leopardstown Road, Sandyford, Dublin 18, falls under Parking Zone 2, as per initial feedback from Dún Laoghaire-Rathdown County Council. In Zone 2, car parking standards are assessed on a 'normal' basis, unlike Zone 1, where parking is provided on a 'maximum' basis.

For this site, we are proposing a 72% parking provision in line with DLR's recommended target for Zone 2. This percentage reflects a balance between the required parking standards and the sustainable transport objectives set by the County Council. While the provision deviates from the full parking capacity, it adheres to the local authority's guidance not to reduce parking below the recommended 72% threshold.

DLR Assessment Criteria for Deviation from Car Parking Standards

In developing the car parking proposal, we have considered the key criteria set out by Dún Laoghaire-Rathdown County Council to justify any deviation from standard parking provisions:

- **Proximity to public transport services:** The site enjoys close access to high-frequency public transport services, including the nearby Luas Green Line and bus routes along Leopardstown Road and Kilgobbin Road. These roads provide strong interchange options for residents and visitors, supporting a reduced reliance on private cars.
- **Walking and cycling accessibility:** The site is well connected for pedestrians and cyclists, with existing infrastructure in place to encourage walking and cycling. The proposed development enhances these active travel modes by providing secure bike parking and improving local permeability, thus contributing to a shift away from car dependency.
- **Encouragement of a modal shift:** The development aligns with the Council's objective to safeguard investments in sustainable transport infrastructure and encourage a modal shift. The reduced car parking provision reflects this approach and complements the area's public transport facilities.
- **Car sharing and bike/e-bike sharing facilities:** With the growing availability of car-sharing services and bike-sharing schemes nearby, there is less necessity for extensive on-site car parking. These shared mobility options offer flexible and environmentally friendly alternatives to private car use.
- **Urban design and civic benefits:** The development has been designed to promote a vibrant urban environment with a focus on pedestrian-friendly spaces. Limiting car parking promotes street-level vibrancy and aligns with urban design principles that prioritize sustainable development and regeneration.
- **Robust Mobility Management Plan (MMP):** A **Mobility Management Plan** has been developed to encourage sustainable transport choices. The MMP includes initiatives to promote walking, cycling, and public transport use, further reducing the need for extensive car parking on-site.

7 Traffic Impact Assessment

The development provides 64 parking spaces. Based on Dún Laoghaire-Rathdown County Council standards, a slight shortfall in parking may require management strategies such as encouraging public transport use.

The additional traffic from the development is expected to have a minimal impact on the local road network. However, effective parking management and promoting sustainable transport options are recommended to continually encourage residents to, walk cycle or take public transport as a first preference transport mode.

7.1 Traffic Data Analysis

A detailed traffic data analysis was conducted for the residential development located at Leapardstown Road, by IDASO Ltd. The Automatic Traffic Count (ATC) survey, spanning from Tuesday 27th August to Monday 2nd September, captured a total of 61584 vehicle movements over the seven-day period. The analysis highlights a well-distributed and manageable traffic volume, averaging 8798 vehicles per day, with a peak of 9490 vehicles on Friday 30th August. These insights confirm the site's capacity to handle current traffic effectively, and the data will be beneficial in ensuring that the proposed development integrates smoothly with existing traffic patterns.

If we conservatively assume the 64 car spaces we are adding with this development generate 64 additional PCUs during the peak periods, of which 32 travel east and 32 travel west, the impact on this development is calculated to be 0.79% traveling east and 0.59% traveling west at peak times.

In summary, the development is considered to have a negligible impact on Leapardstown Road based on the worst-case assumptions set out above. It is noted within this report that the public transport links will likely see a reduced reliance on the car. In addition, the new habits related to remote working and flexible office hours will see the movement associated with cars from this development be less concentrated over the traditional peak AM and PM periods.

Detailed findings and analysis are available in Appendix E.

7.2 Road Safety Audit

A Road Safety Audit has been completed and is attached as Appendix C.

7.3 Construction Management Plan

Refer to appendix D for the Outline Construction Management Plan.

7.4 Public Transport Capacity Assessment

A public transport capacity study was completed for the site and intended use. Refer to appendix F for the extent of the full report.

The study has been informed by comprehensive bus and Luas occupancy surveys, and review of a range of planning stage documents.

Based on the findings of the public transport occupancy survey and analysis, it was found that residents of the proposed development would utilise ca. 0.27% and 0.33% of the total capacity of existing AM and PM peak hour public transport services respectively. Furthermore, it has been determined that local public transport services (bus and Luas) have ample capacity to accomodate such demand. As such, it is aparent that current public transport capacity is sufficient to accomodate additional demand generated by the proposed development.

7.5 Emergency Services Access

Emergency services will access the site directly off Leapardstown Road and enter the site. The access point, which can be reached in a forward gear, is deemed acceptable by our fire engineer. The fire tender will then complete a three-point turn in a zone closely coordinated with the landscape architect, allowing them to exit in a forward gear. This manoeuvre is tracked in Figure 7.1 below.

Figure 7.1 - Fire Tender Access 1

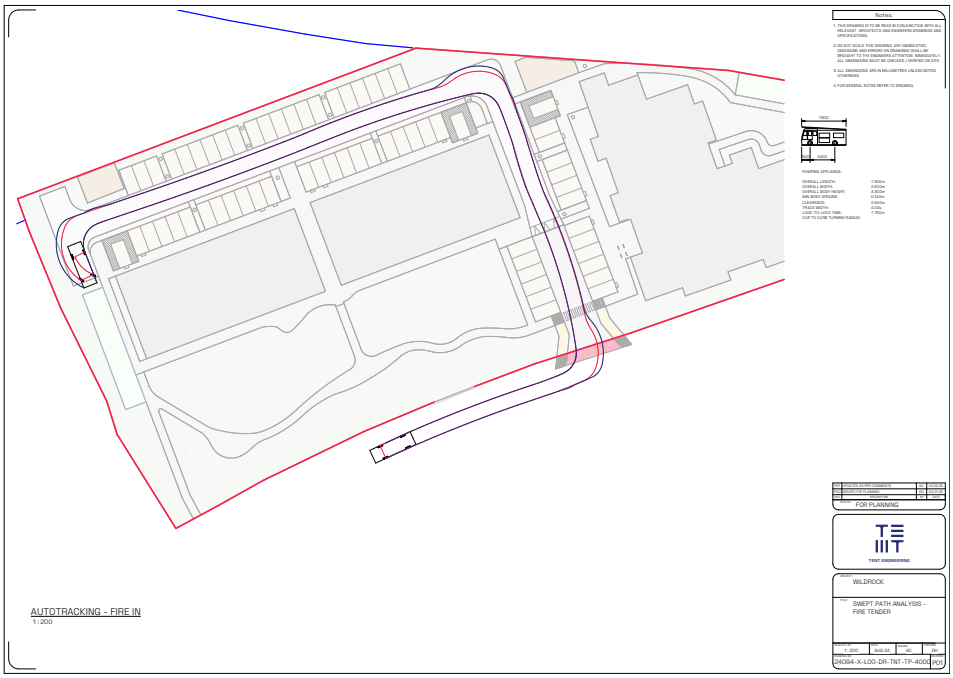
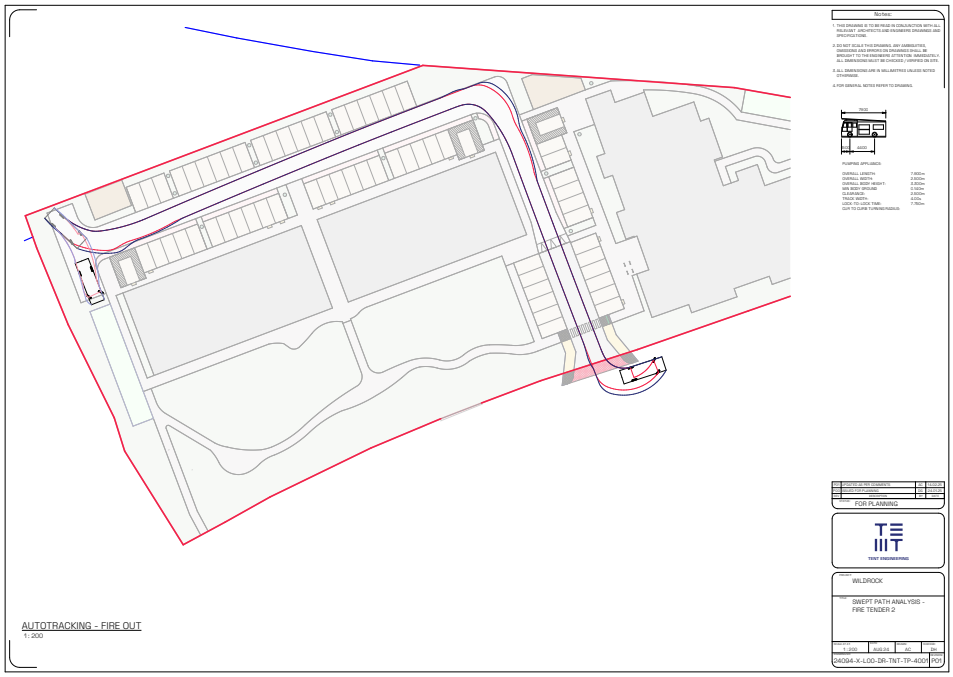


Figure 7.2 - Fire Tender Access 2



7.6 Servicing the Development

The development consists of 80 units. Given that the apartments have very limited servicing requirements, the primary issue is refuse collection. Each apartment and housing units has access to a managed bin storage area located on the ground floor. The Development Property Management Company will be responsible for moving the bins to a collection point weekly on the designated refuse collection day. Similar to the fire tender, the bin lorry will enter and exit in a forward gear. Refuse vehicle manoeuvres are tracked in figures 7.3 and 7.4 below.

Figure 7.3 - Bin Lorry Access 1

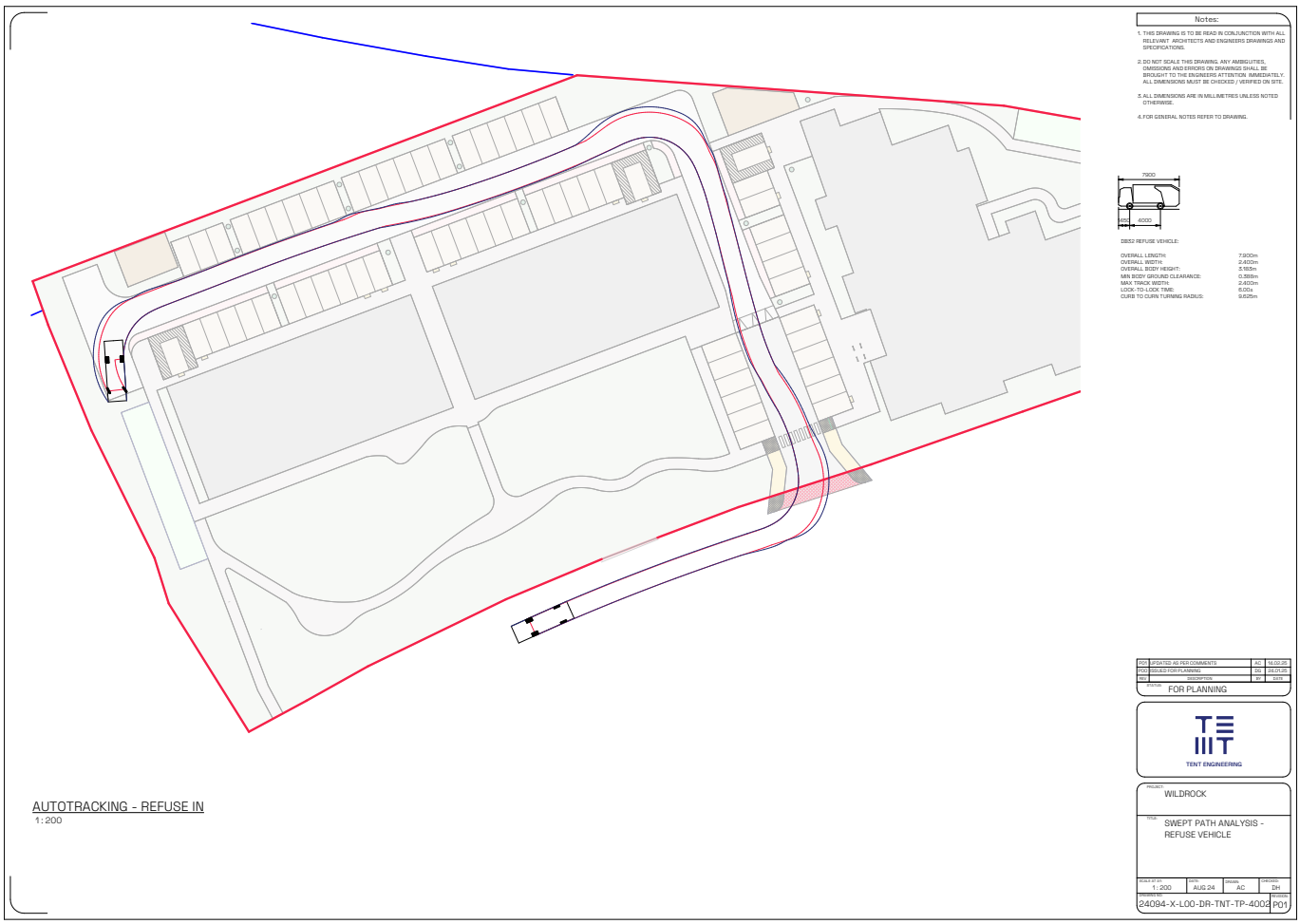
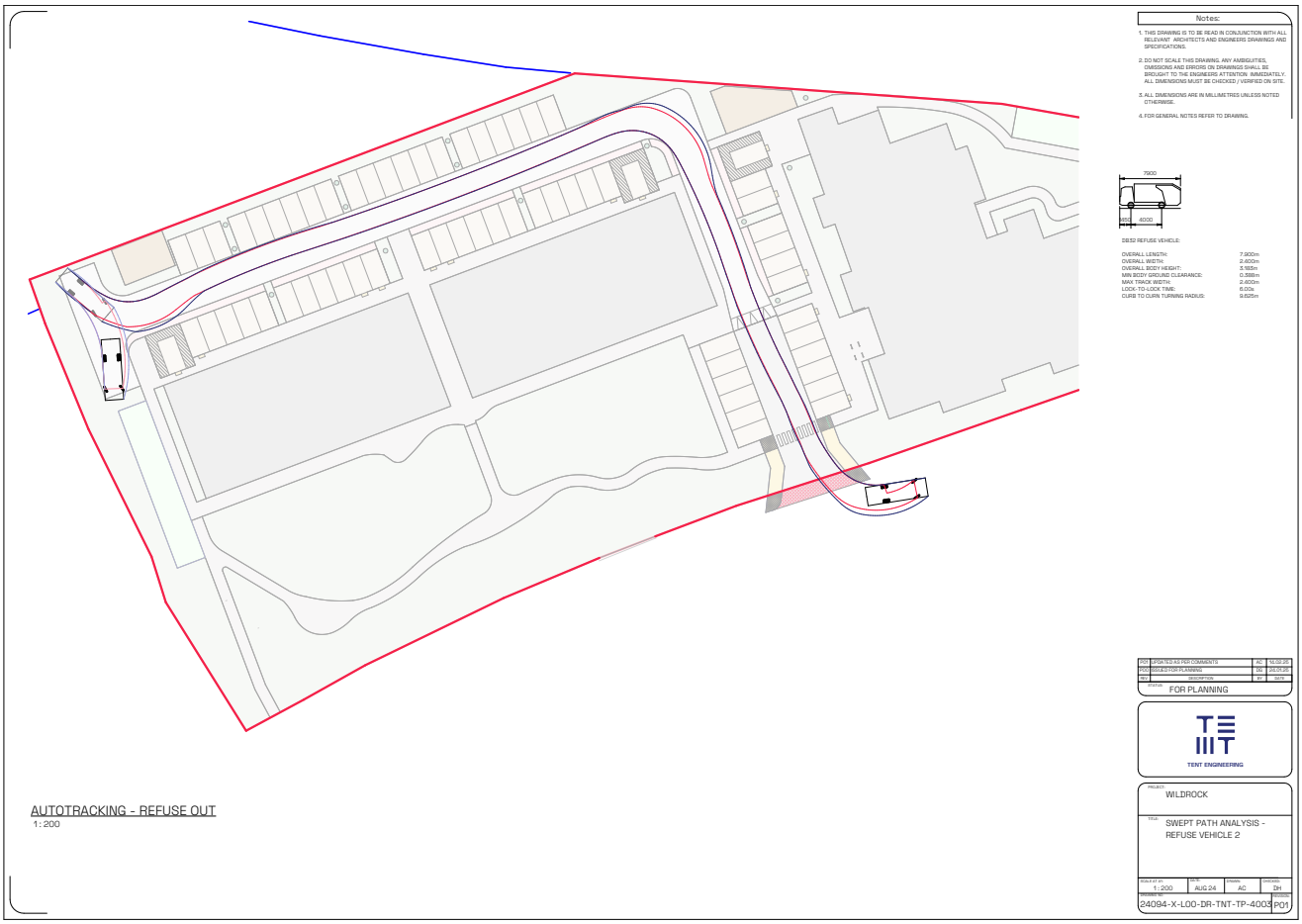


Figure 7.4 - Bin Lorry Access 2



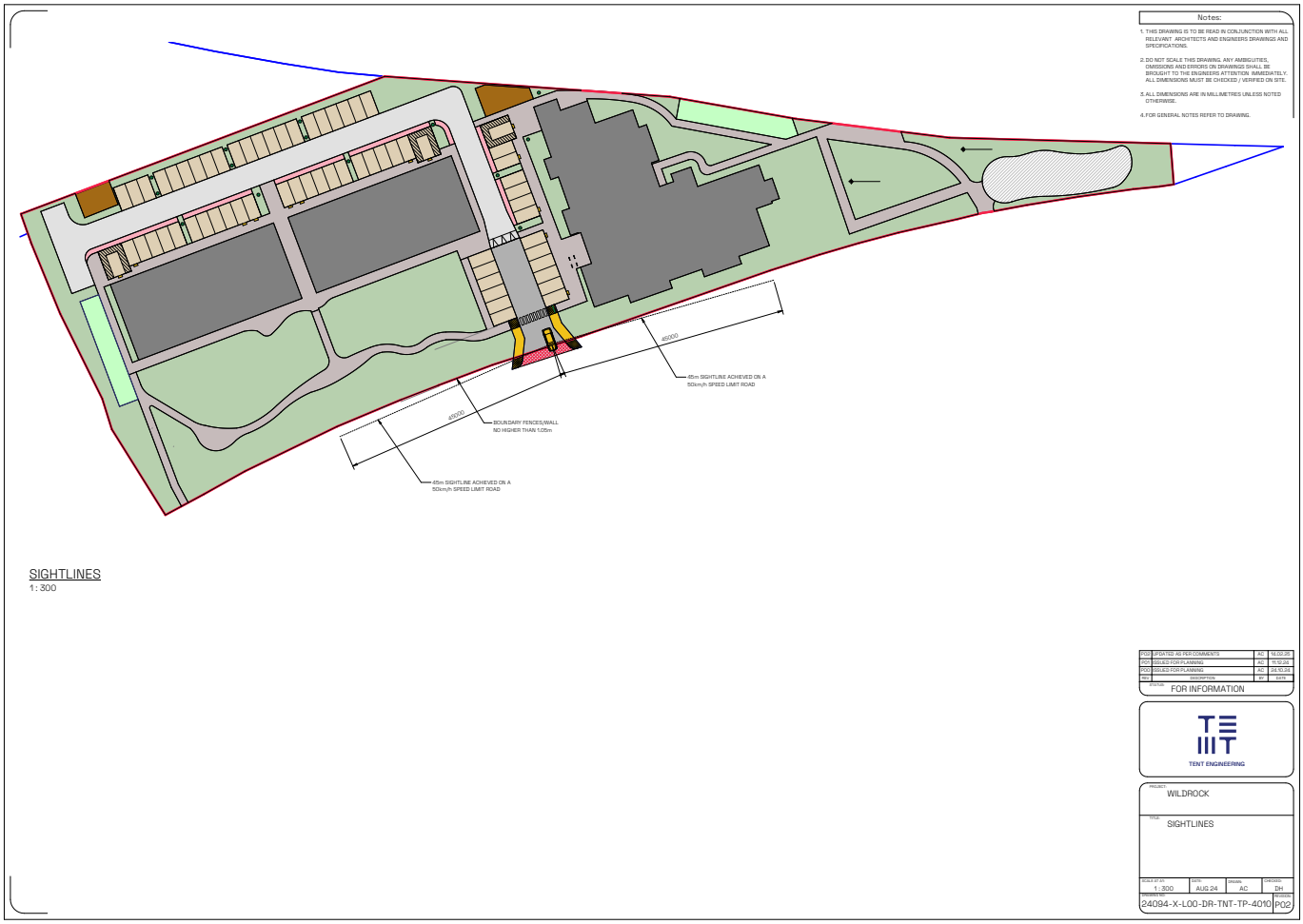
7.7 Sightliness and access

Sightlines have been tested for the site exit using the latest Bus Connects plans. These tests demonstrate that the sightlines are compliant for forward visibility of both oncoming vehicles and cyclists. This evaluation includes checks of the existing road layout as well as the proposed future Bus Connects layouts.

7.8 Future Bus Connects

Future Bus Connects plans have been studied, and it has been determined that the proposed application has no impact on these plans.

Figure 7.5 - Sightlines at Exit

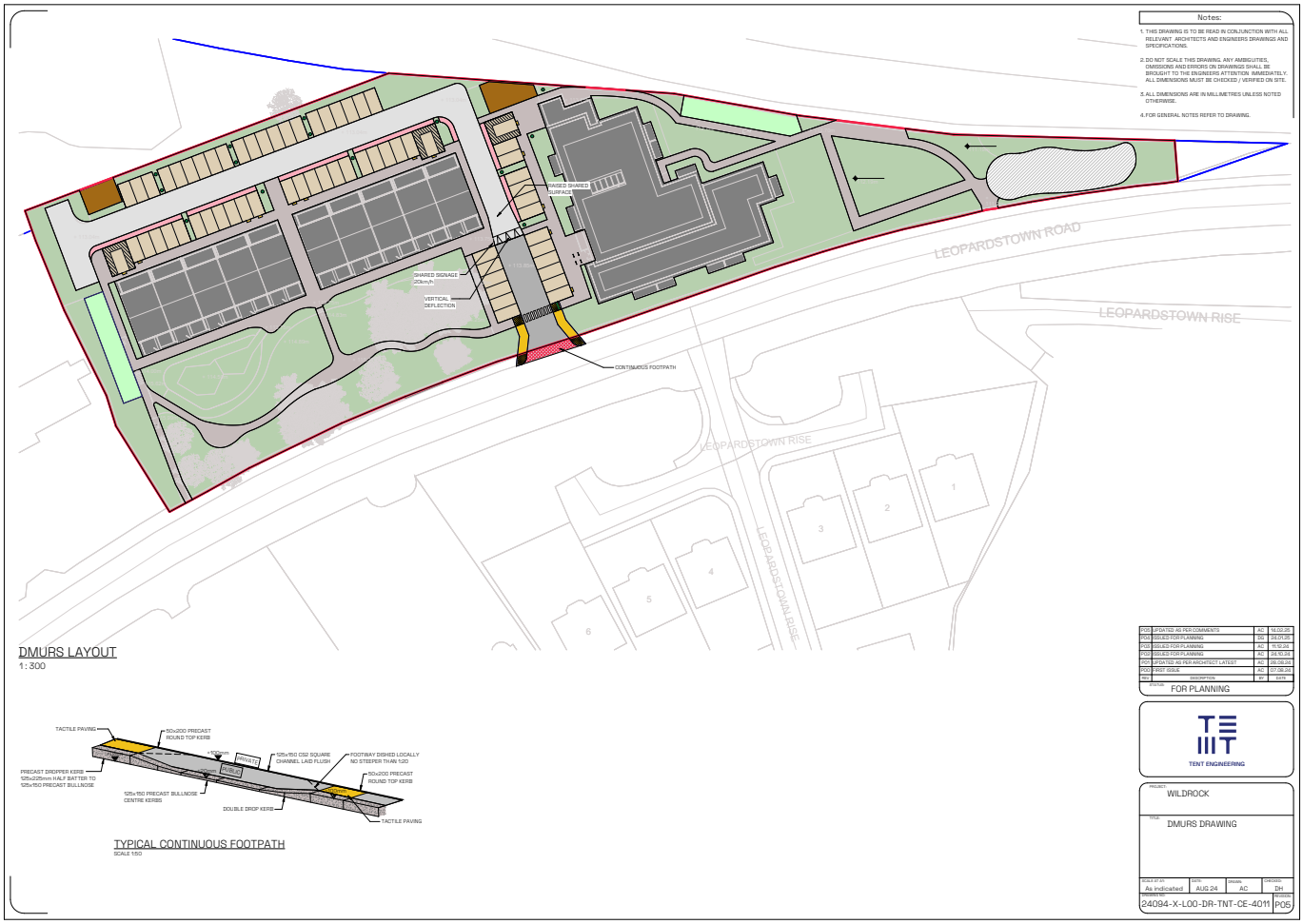


7.9 DMURS compliant access

It is proposed to design the access through the site to a DMURS compliant shared surface.

Details of the upgrades are shown in fig 7.6. This helps creates a low speed environment where pedestrians and cyclist have priority.

Figure 7.6 - Proposed DMURS Layout



8 Mobility Management Plan

Refer to the appendix for the Mobility Management Plan for the site.

9 Summary and Conclusion

9.1 Summary

This Transport Statement (TS) has been prepared in support of the proposed residential development on lands located at the residential development at Leopardstown Road, Sandyford, Dublin 18. The document assesses the transport planning context, accessibility, and transport characteristics of the proposed development.

The site is situated on Leopardstown Road in South Dublin, approximately 11 km from Dublin City Centre. It is bordered by private residences to the west, the Leopardstown Road to the south and east, and the M50 motorway to the north.

The site benefits from excellent sustainable transport links, including strong pedestrian and cycling infrastructure. Several bus routes and Luas stations are within walking distance, providing convenient connections to Dublin and the surrounding areas.

The proposed development consists of 80 residential units across two blocks, with heights reaching up to 6 storeys. Block 01 comprises 10 two-bedroom units designed for 4 occupants and 10 three-bedroom duplex units designed for 5 occupants. Block 02 features 30 one-bedroom apartments and 30 two-bedroom apartments. The development provides 156 secure long-term bicycle parking spaces for residents and 8 short-term spaces for visitors at ground level. Additionally, 64 car parking spaces are allocated to accommodate residents, visitors, individuals with disabilities, and parents with children.

9.2 Conclusion

The proposed development is not anticipated to have a detrimental impact on the local road network in terms of congestion and road safety.

In conclusion, it is considered that the development proposals are reasonable and appropriate for the location and that there are no reasons why the development proposal should not be granted planning permission on traffic and transport grounds.

10 Appendix A - Drawings

Notes:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

PARKING BREAKDOWN	
REGULAR PARKING SPACES	51
ACCESSIBLE PARKING SPACES	3
EV CHARGING	13
SHORT TERM BIKE SPACES	8
LONG TERM BIKE SPACES	166
NON STANDARD BIKE PARKING SPACES	4

LEGEND

- SITE BOUNDARY
- PROPOSED BUILDING
- LANDSCAPE
- ROAD
- FOOTPATH
- SHARED SURFACE
- PERMEABLE PAVING/PARKING
- BICYCLE PARKING
- PROPOSED BIN STORE
- EV CHARGING POINT

PROPOSED SITE LAYOUT

1 : 300

REV	DESCRIPTION	BY	DATE
P06	UPDATED AS PER COMMENTS	AC	14.02.25
P05	ISSUED FOR PLANNING	DG	24.01.25
P04	UPDATED AS PER ARCHITECT LATEST	DG	22.01.25
P03	ISSUED FOR PLANNING	AC	11.12.24
P02	ISSUED FOR PLANNING	AC	24.10.24
P01	UPDATED AS PER ARCHITECT LATEST	AC	28.08.24
P00	FIRST ISSUE	AC	07.08.24

STATUS: FOR PLANNING

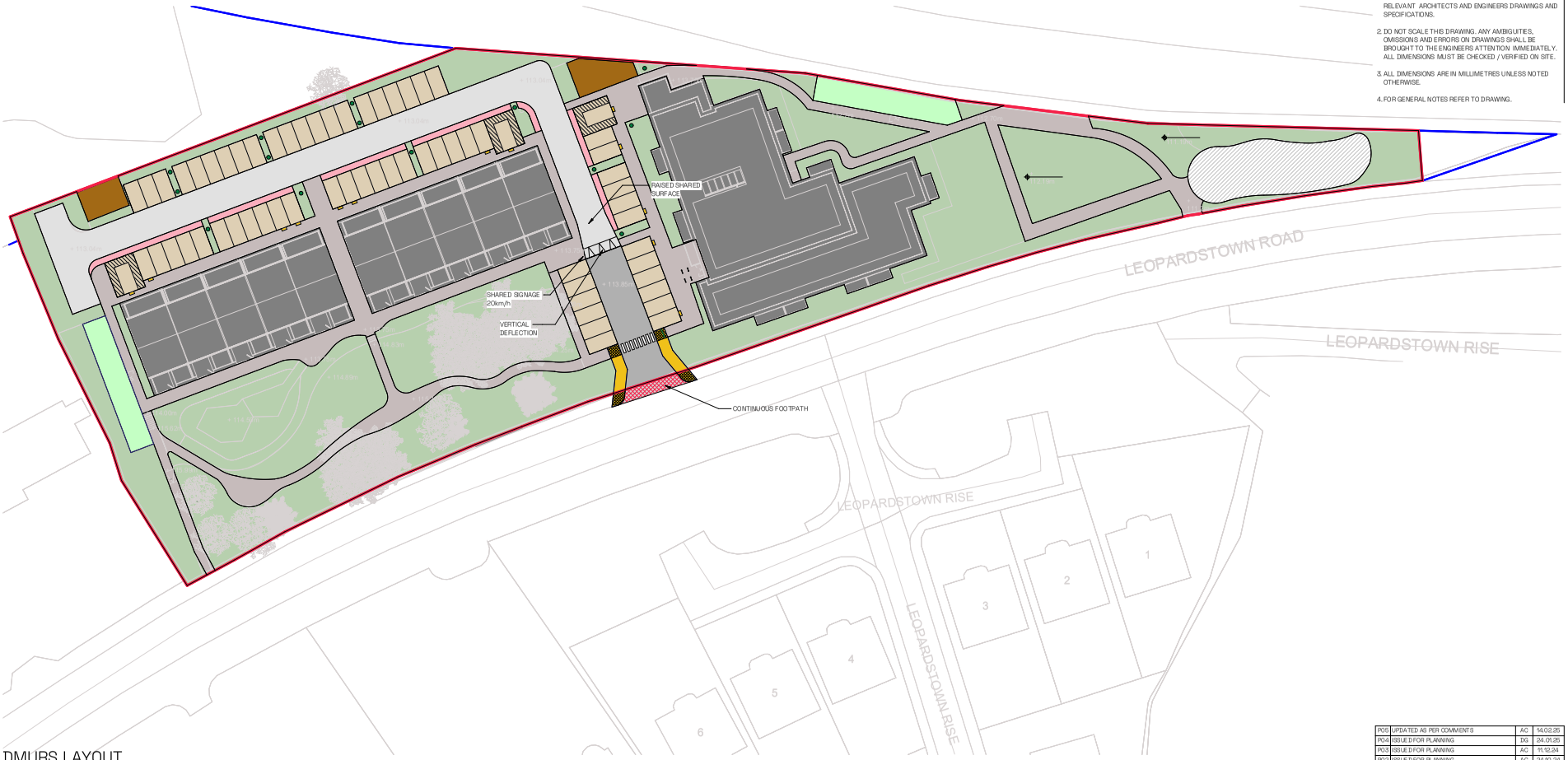
TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SITE LAYOUT

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
As indicated	AUG 24	AC	DH

DRAWING NO: 24094-X-L00-DR-TNT-CE-3000 REVISION: P06



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1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
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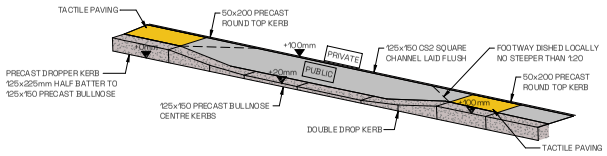
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

DMURS LAYOUT

1: 300



TYPICAL CONTINUOUS FOOTPATH

SCALE 1:50

REV	DESCRIPTION	BY	DATE
P05	UPDATED AS PER COMMENTS	AC	14.02.25
P04	ISSUED FOR PLANNING	DG	24.01.25
P03	ISSUED FOR PLANNING	AC	11.12.24
P02	ISSUED FOR PLANNING	AC	24.10.24
P01	UPDATED AS PER ARCHITECT LATEST	AC	28.08.24
P00	FIRST ISSUE	AC	07.08.24

STATUS: FOR PLANNING

TENT ENGINEERING

PROJECT: WILDROCK

TITLE: DMURS DRAWING

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
As indicated	AUG 24	AC	DH

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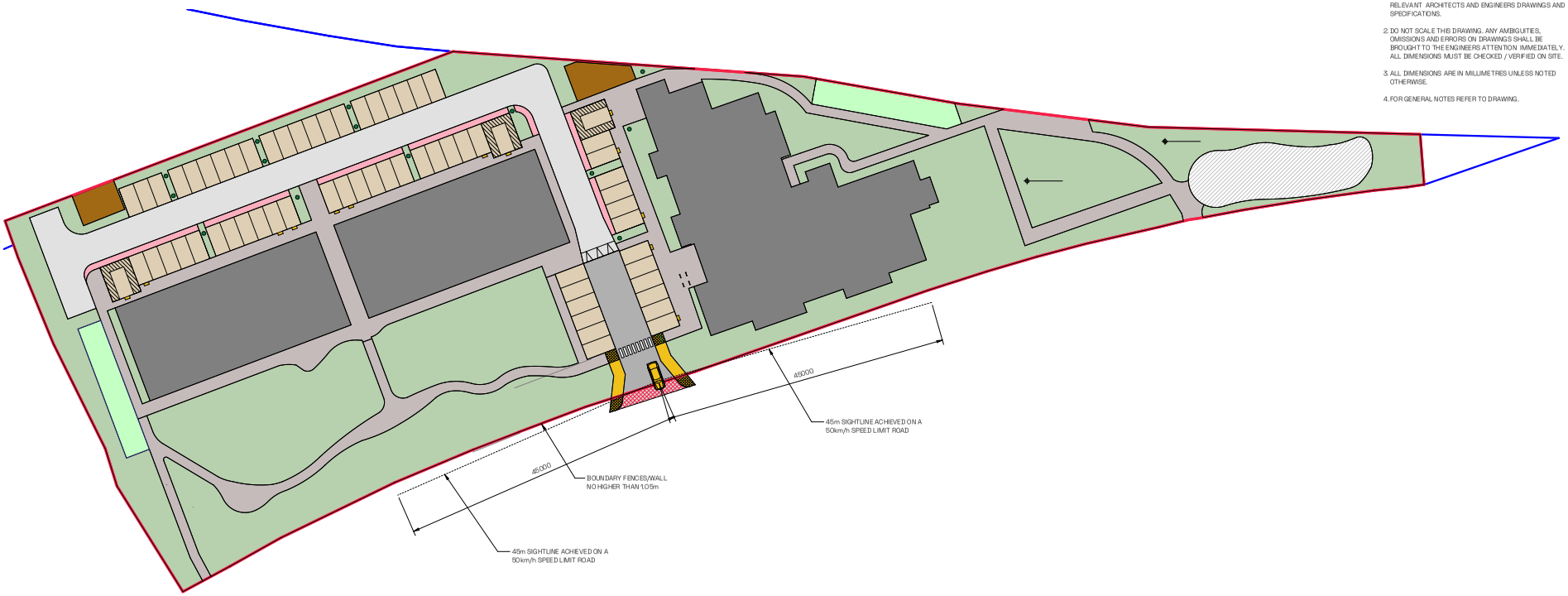

SIGHTLINES
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REV	DESCRIPTION	BY	DATE
P02	UPDATED AS PER COMMENTS	AC	14.02.25
P01	ISSUED FOR PLANNING	AC	11.12.24
P00	ISSUED FOR PLANNING	AC	24.10.24

STATUS: FOR INFORMATION

TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SIGHTLINES

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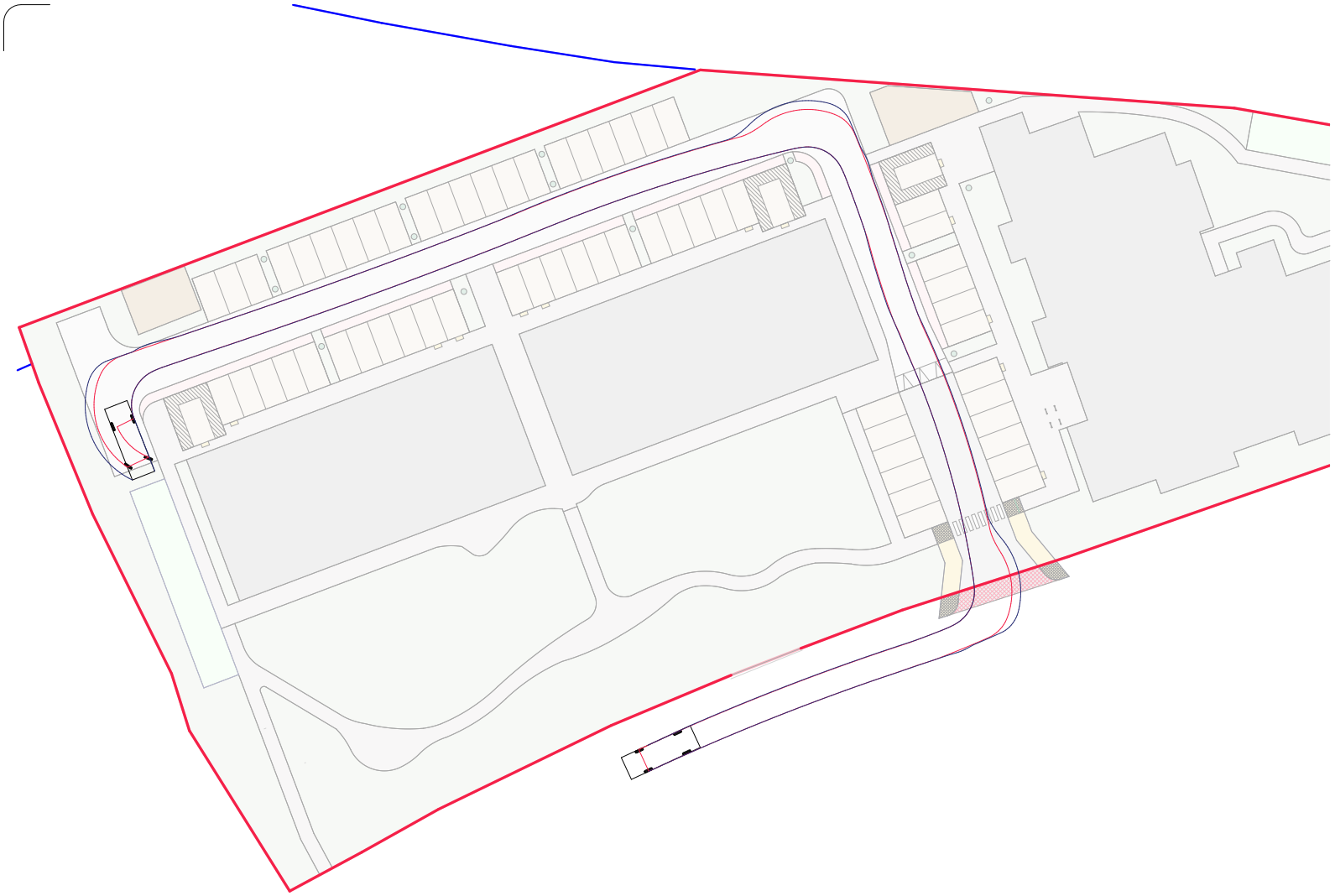

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PUMPING APPLIANCE:

OVERALL LENGTH:	7.900m
OVERALL WIDTH:	2.500m
OVERALL BODY HEIGHT:	3.300m
MIN BODY GROUND CLEARANCE:	0.140m
TRACK WIDTH:	2.500m
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CUR TO CURB TURNING RADIUS:	7.750m

REV	DESCRIPTION	BY	DATE
P01	UPDATED AS PER COMMENTS	AC	14.02.25
P00	ISSUED FOR PLANNING	DG	24.01.25

STATUS: FOR PLANNING

TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SWEPT PATH ANALYSIS - FIRE TENDER

SCALE AT A1	DATE	DRAWN	CHECKED
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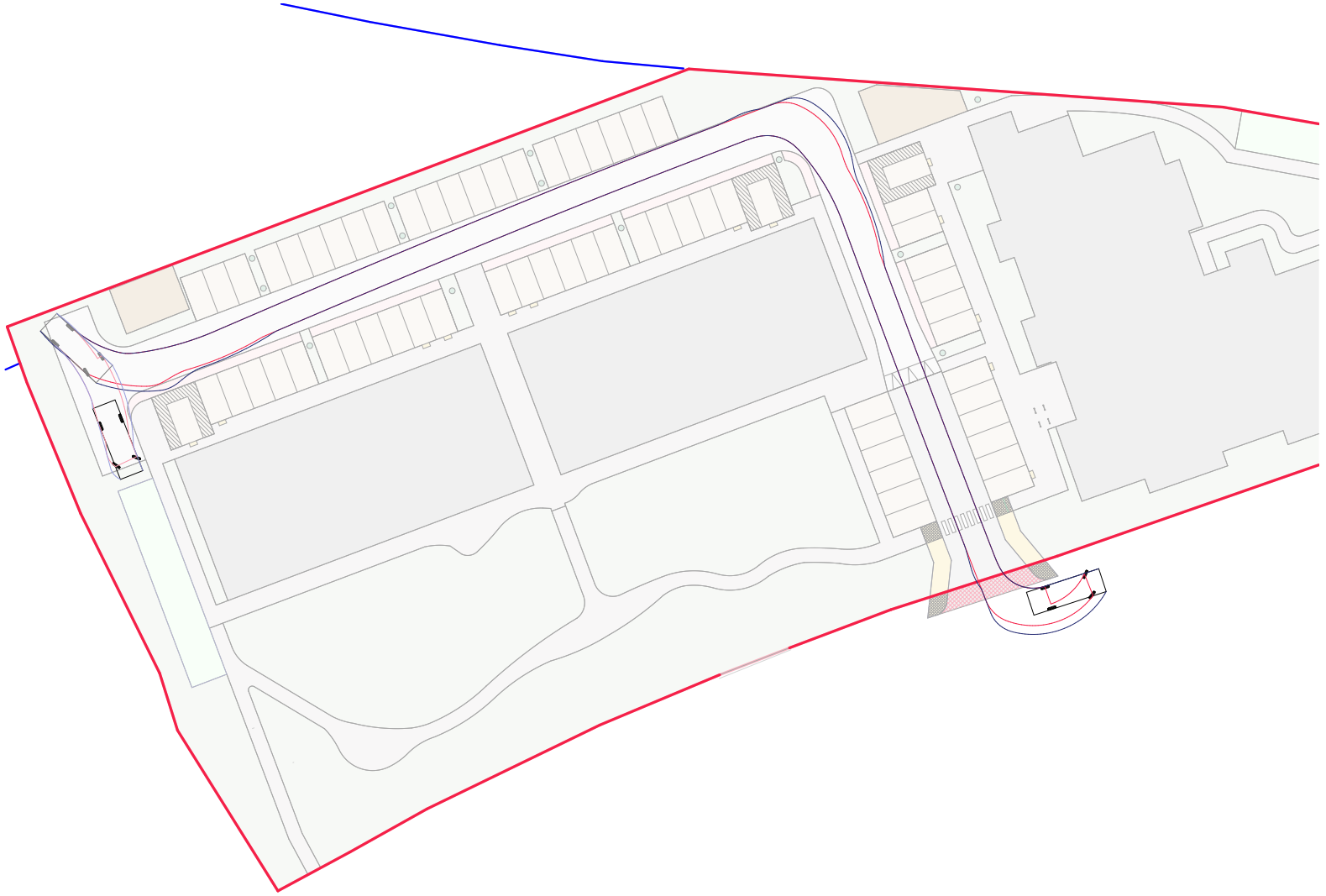
DRAWING NO: 24094-X-L00-DR-TNT-TP-4000 REVISION: P01



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TRACK WIDTH:	2.500m
LOCK-TO-LOCK TIME:	4.00s
CUR TO CURB TURNING RADIUS:	7.750m

REV	DESCRIPTION	BY	DATE
P01	UPDATED AS PER COMMENTS	AC	14.02.25
P00	ISSUED FOR PLANNING	DG	24.01.25

STATUS: FOR PLANNING

TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SWEPT PATH ANALYSIS - FIRE TENDER 2

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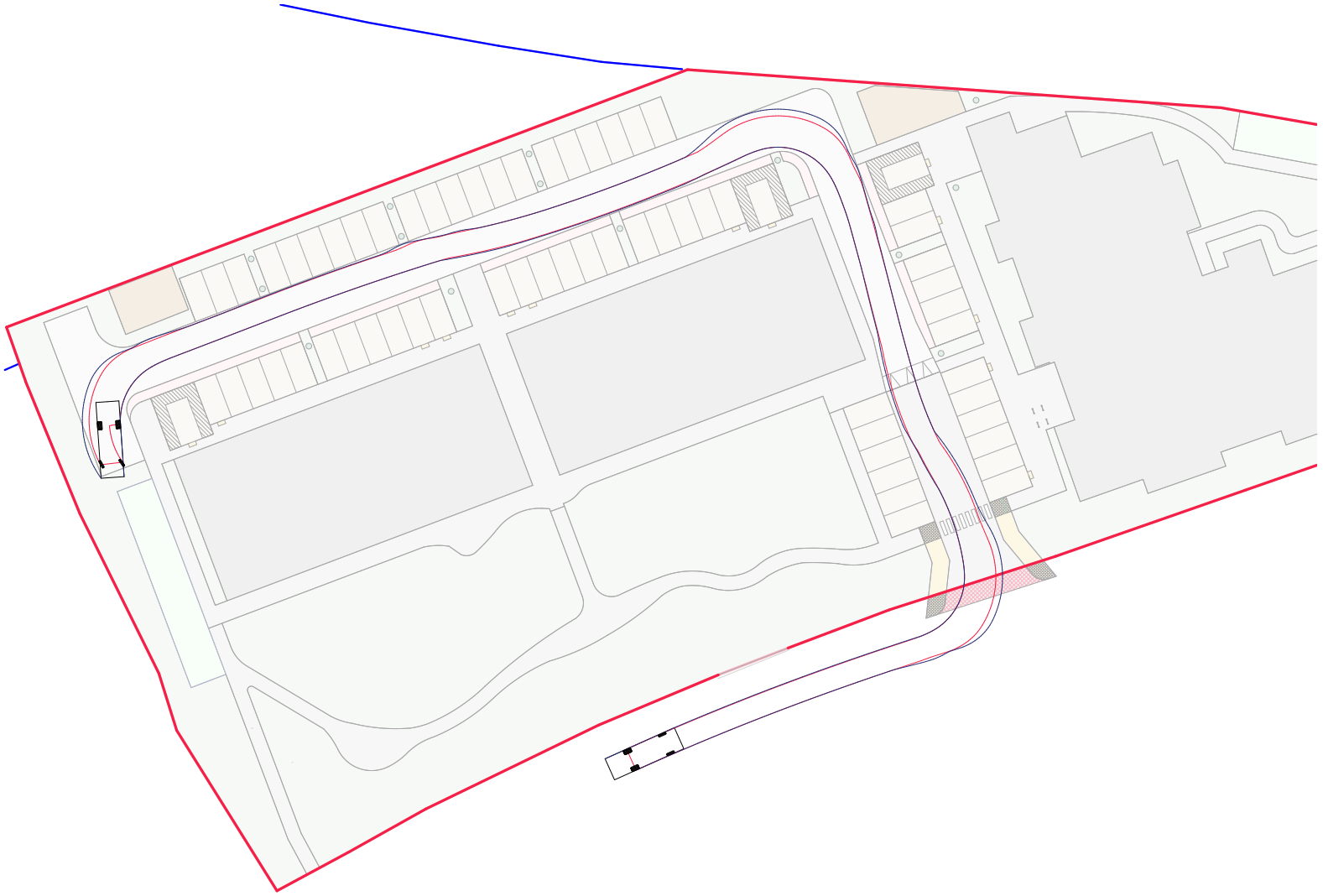

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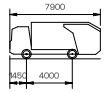

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MIN BODY GROUND CLEARANCE:	0.388m
MAX TRACK WIDTH:	2.400m
LOCK-TO-LOCK TIME:	6.00s
CURB TO CURN TURNING RADIUS:	9.625m

REV	DESCRIPTION	BY	DATE
P01	UPDATED AS PER COMMENTS	AC	14.02.25
P00	ISSUED FOR PLANNING	DG	24.01.25

STATUS: FOR PLANNING

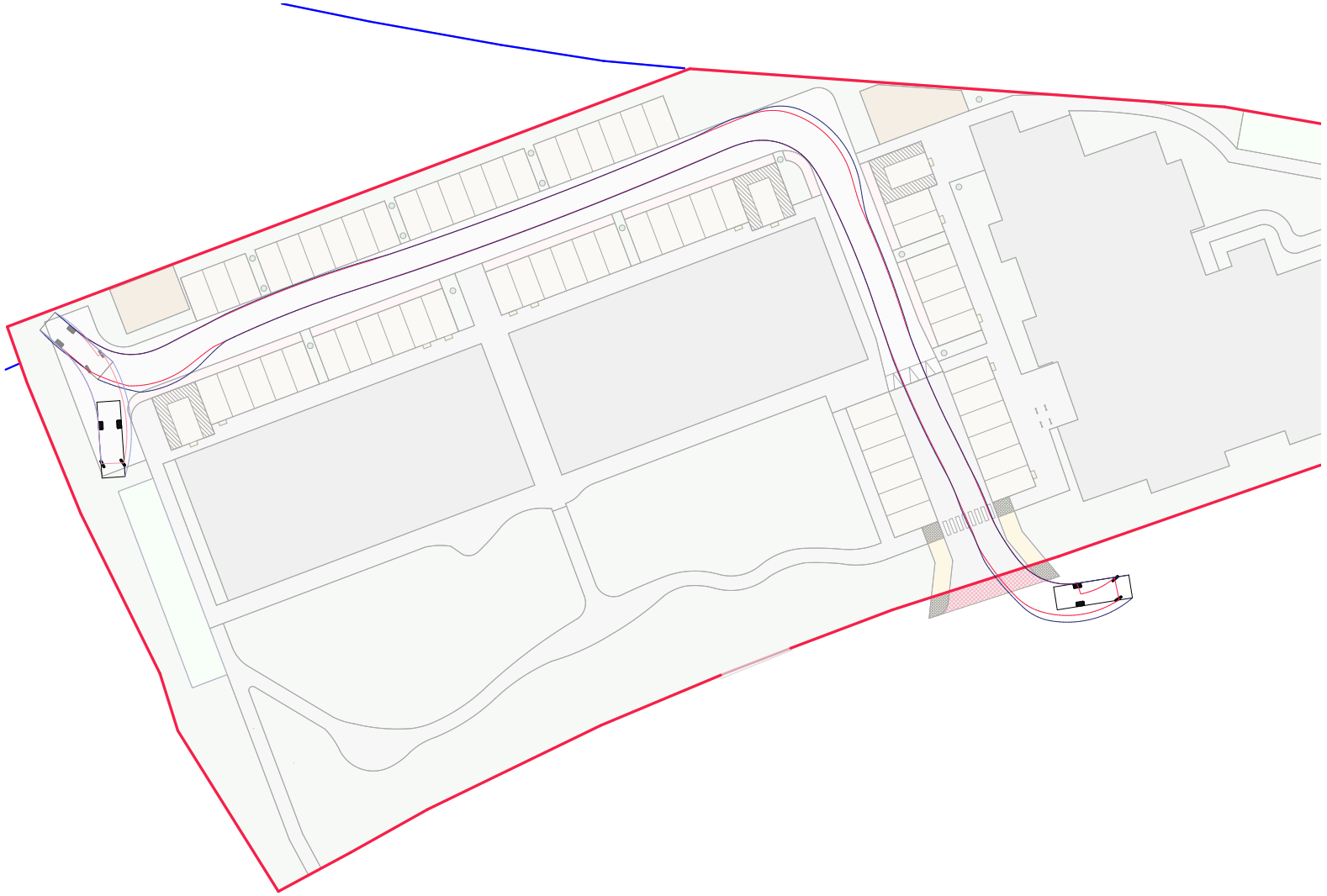
TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SWEPT PATH ANALYSIS - REFUSE VEHICLE

SCALE AT A1	DATE	DRAWN	CHECKED
1:200	AUG 24	AC	DH

DRAWING NO: 24094-X-L00-DR-TNT-TP-4002 REVISION: P01



AUTOTRACKING - REFUSE OUT
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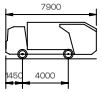

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LOCK-TO-LOCK TIME:	6.00s
CURB TO CURN TURNING RADIUS:	9.625m

REV	DESCRIPTION	BY	DATE
P01	UPDATED AS PER COMMENTS	AC	14.02.25
P00	ISSUED FOR PLANNING	DG	24.01.25

STATUS: FOR PLANNING

TENT ENGINEERING

PROJECT: WILDROCK

TITLE: SWEPT PATH ANALYSIS - REFUSE VEHICLE 2

SCALE AT A1	DATE	DRAWN	CHECKED
1:200	AUG 24	AC	DH

DRAWING NO: 24094-X-L00-DR-TNT-TP-4003 REVISION: P01

11 Appendix B - Mobility Management Plan

Residential Development at Leapardstown Road Outline Mobility Management Plan

10.02.2025

24093-X-XXX-RP-TNT-CE-0003

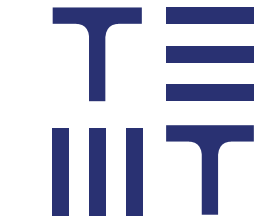
TENT ENGINEERING

Site Address:

Residential Development at Leopardstown Road,
Sandyford,
Dublin 18

Client Name:

Dún Laoghaire–Rathdown County Council


TENT ENGINEERING

Revision and Review

This report has been prepared for the sole benefit, use and information of the client. The liability of Tent Engineering with respect to the information contained in this report will not extend to any third party.

PURPOSE

- ☐ P1 Information
- ☐ P2 Coordination
- ☐ P3 Planning
- ☐ P4 Building Control
- ☐ P5 Pre-tender
- ☐ P6 Tender
- ☐ P7 Construction

ACCEPTANCE (BY OTHERS)

- ☐ S Issued
- ☐ A Accepted
- ☐ B Accepted subject to comments
- ☐ C Rejected
- ☐ D Acceptance not required

Accepted by

REVISION(S)

Rev.	Description	Date
00	1st Issue	13.10.2024
02	2nd Issue	10.02.2025

AUTHOR(S)

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32 Francis Street, Dublin
Co. Dublin, D08NN96

Contents

1 Existing Situation

1.1 Background

Tent Engineering has been appointed by Dún Laoghaire–Rathdown County Council to provide traffic and transport advice in relation to the proposed residential development of land along Leapardstown Road, Sandyford, Dublin 18 to provide a new residential development.

This Outline Mobility Management Plan (MMP) provides an assessment of the existing mobility issues accessing the site. It outlines the process of developing the Mobility Management Plan Strategy, and finally it examines the scope available for sustainable modes of transport to and from the site.

1.2 Site Context

The development site is located on the Leapardstown Road in the Sandyford area of Dublin. The site is currently occupied by a 2 storey private house that was seeked for demolition. The surrounding area primarily comprises of business parks, retail establishments, and residential settlements, with most of the residences being single-family homes. It is located approximately 8km to the south of Dublin City Centre. It is bounded to the North by the M50 motorway, to the west by a residential dwelling and to the south and east by Leapardstown Road.

Fig 1.1 - Site Location in Relation to the Regional Road

Fig 1.2 - Site Location in Relation to the Local Road Network

1.3 Summary of Developments Proposal

Refer to the transport statement report for full details of the site proposals. This document is intended to accompany it to provide details of the mobility management plans for the site.

1.4 What is a Mobility Management Plan?

A Mobility Management Plan (MMP) is defined by the National Transport Authority (NTA) as:

"A management tool that brings together transport and other staff and site management issues in a coordinated manner. A successful plan can help competitiveness by reducing transport costs for both the employer and staff and provide a more conducive working environment".

In essence, an MMP is intended to encourage people to choose alternative transport modes (such as public transport, walking, cycling and car share schemes) over single occupancy car use and, where possible, reduce the need to travel at all. Such a plan should include a range of measures designed to achieve this goal.

1.5 Document Purpose

An Outline MMP is the first stage of the mobility management process and is often prepared during the planning stage prior to the construction of the development. It includes a list of potential measures that could be implemented to affect modal choice, and a management strategy for producing a full Mobility Management Plan in the future.

The NTA strongly endorses the need for MMPs in order to reduce the impact of transport on the local environment, to improve accessibility and to encourage 'active travel' which improves peoples' health. According to the Dublin Transportation Office (DTO)'s (succeeded by the NTA in 2009) advice note titled 'Mobility Management Plans', an MMP should achieve the following targets:

- A reduction in car journeys to and from the work site
- An increase in the number of people who share their journeys by car
- A reduction in the need to travel, especially during the rush-hour periods
- Enabling staff to use alternative modes of transport

This document has been written in accordance with the above statement, and the following core guidance documents:

- National Planning Framework, Government of Ireland, 2018
- Smarter Travel -A Sustainable Transport Future: A New Transport Policy for Ireland 2009 - 2020, Department of Transport, Tourism and Sport, 2009
- Transport Strategy for the Greater Dublin Area (2016 - 2035), NTA, 2016
- Dun-Laoghaire Rathdown County Council's Development Plan 2022 - 2028.

1.6 Document Structure

Following this introductory section, **Section 2** of the report sets out keys aims and objectives for the mobility management process.

The accessibility of the site by sustainable modes of travel is assessed in **Section 2.** This includes the local road network and facilities for pedestrians, cyclists and public transport users. **Section 2** also considers the proposed servicing

Section 3 provides an insight on baseline mode share based on the most recent Census data arrangements.

Section 4 outlines various measures that will be considered to encourage maximum uptake in sustainable modes of travel, whereas **Section 5** outlines the Mobility Management Plan target strategy.

Section 6 concludes the report by providing details on the monitoring and review process, and the responsibility and management of the document.

Section 7 presents the proposed action plan for the implementation of the MMP.

2 Mobility Management Plan Benefits

2.1 Introduction

The benefits from an MMP can be loosely categorised under three main headings:

- Environmental Benefits
- Health Benefits; and,
- Financial Benefits

This section explores just some of the improvements which can be made during a successful mobility management process.

2.2 Environmental Benefits

Climate change is a global issue that affects all nations. According to the Environmental Protection Agency (EPA), Ireland's greenhouse gas (GHG) emissions have increased by 10.1% from 1990 to 2019. In 2019, the energy industries, transport and agriculture sectors accounted for 71.4% of total GHG emissions, with the transport sector accountable for 20.3% of total GHG emissions.

On a national scale, the government of Ireland has pledged to play its part in achieving its long-term goal of transitioning to a low-carbon, climate-resilient and environmentally sustainable economy by 2050, by setting the following targets by 2030:

- Cutting greenhouse gas emissions by at least 30%
- Reaching a target of at least 32.5% energy efficiency. and
- Delivering 70% renewable electricity

Encouraging people to make smarter choices in the way they travel can drastically reduce the impact that a particular development or organisation makes on the environment.

2.3 Health Benefits

A reduction in polluting vehicles on the roads surrounding the site will mean better air quality throughout the area. There are also well documented health benefits associated with active travel, and activity levels across Ireland could still be improved.

"54% of men and 38% of women aged 15 to 75+ are achieving the minimum level of activity recommended by the National Guidelines by being moderately active for at least 150 minutes a week. Almost two-thirds (61%) of those aged between 15 and 24 achieve this minimum level of activity. However this declines steadily across the life course to 18% of those aged 75 or older While the proportion that has a normal weight declines wit/1 age. The proportion that is overweight or obese rises with age. Among those aged between 15 and 24. 65% have a normal weight and 28% are overweight or obese. However. Among those aged 65 and older. 26% have a normal weight and 74% are overweight or obese."

Regular moderate physical activity (including walking and cycling), can help prevent and reduce the risk of cardiovascular disease, cancer, obesity, diabetes, stroke, mental health problems, high blood pressure, and musculoskeletal problems.

2.4 Financial Benefits

Although secondary to health and environmental benefits, there are also financial benefits to be gained from increasing active travel rates:

Estimates of the direct (health care) and indirect costs of physical inactivity (loss of economic output due to illness. Disease-related work disabilities or premature death) are alarming.

Physical inactivity has been estimated to cost each of the WH0 Region·s countries about €150-300 per citizen per year In a worst-case scenario this could imply a cost in Ireland of approximately €1.5 b1//1on per year .

Individuals can also benefit financially from travelling to and from a site with an MMP in place due to the improved range of transport options available, some of which may be more cost-effective than car travel.

In some circumstances, MMP measures can remove an individual's need for a car (or their household's need for a second car), removing the capital and on-going cost of car ownership.

An effective MMP can help encourage staff and visitors to lessen their environmental impact by reducing emissions from transport, lead a healthier and more active lifestyle, and reduce financial wastage.

2.5 Mutual Benefits

As demonstrated, there are multiple reasons as to why MMPs are important to modern society. The measures in this MMP will have a positive effect on the future staff and visitor. They must be communicated correctly.

"The motivations for an employer I developer to implement mobility management may include.

- The need to improve accessibility to the worksite for employees and customers, which may help in retaining staff and enhancing company image
- The desire to promote a more flexible working environment, and
- The desire to reduce costs associated with off site parking business mileage and other cost overheads.

2.6 Mobility Management Plan Aims & Objectives

Considering the above benefits, this MMP aims to:

- Reduce the need to travel;
- Discourage the use of unsustainable modes of transport and enable users of the site to make travel choices that benefit themselves and their community;
- Maximise social inclusion by making the site accessible to all members of the community; and
- Raise awareness of alternative modes of transport and thus encourage a modal shift towards more sustainable travel modes.

The aims of this MMP will be supported with the following objectives:

- Objective 1 - To increase the level of active travel (walking and cycling) to and from the site;
- Objective 2 - To increase the level of public transport use to and from the site;
- Objective 3 - To increase the level of car sharing to and from the site; and, in turn
- Objective 4 - To reduce single occupancy car travel to and from the site.

3 Existing Situation

3.1 Local Road Network

The proposed development is surrounded by a well-established road network.

Leopardstown Road (R113)

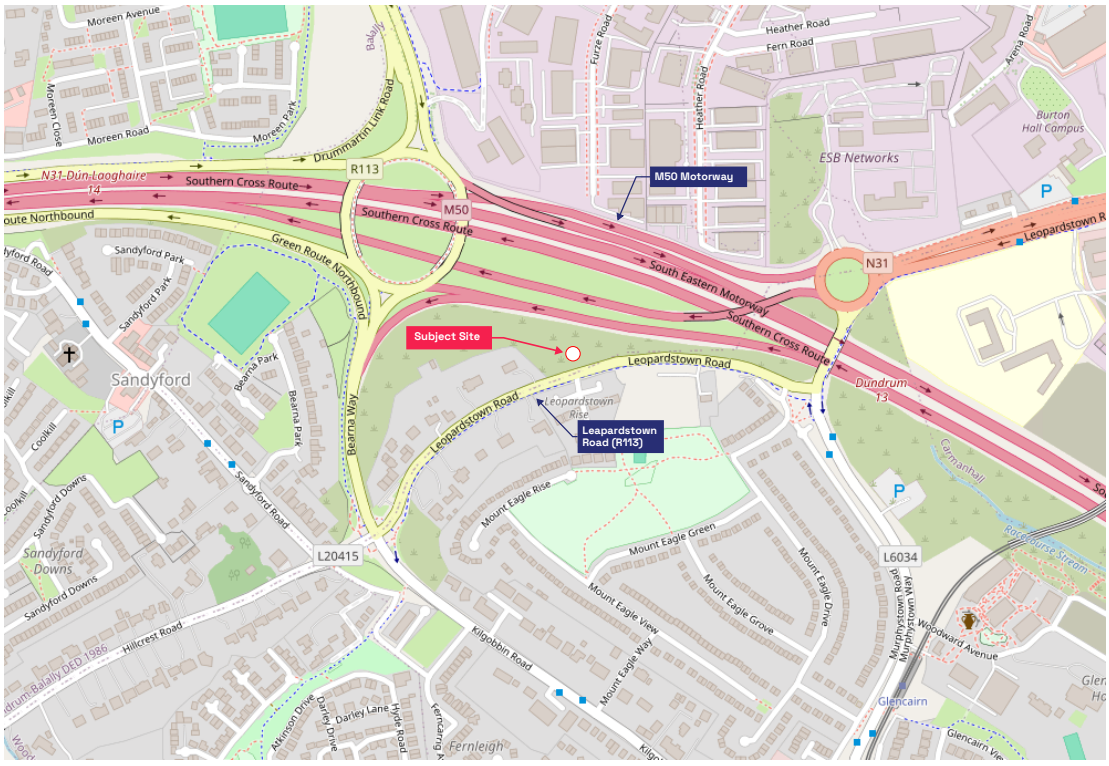
Leapardstown Road is a regional road subject to a 50km/h speed limit.

Footpaths are provided either side of the road measuring 1.5m in width and are well lit and maintained. Dedicated 'C1' cycle lanes, which are separate from Leopardstown Road are provided on the south side of the road. Amenities such as traffic lights, pedestrian crossings and bus stops are provided. These features enhance safety and accessibility for different modes of transportation.

M50 Motorway

The M50 Motorway is situated 100m to the north of the site. The M50 motorway encircles Dublin and services as an arterial route for both local and national traffic. Spanning approximately 45 kilometres, it connects all major routes leading into Dublin, including the M1, M2, M3, M4, M7, M11, and M9. The motorway features a combination of dual carriageways and three-lane segments and it operates with a speed limit of 100km/h.

Fig 3.1 - Local Road Network



3.2 Accessibility

A key element of national, regional, and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. It is important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian Accessibility
- Accessibility by Cycle; and
- Accessibility by Public Transport

This section also provides an overview on the local road network surrounding the site.

3.2.1 Pedestrian Infrastructure and Accessibility

Pedestrian infrastructure in the vicinity of the site is optimal, with 1.5m wide well-lit footpaths provided along both sides of Leapardstown Road.

There are signal controlled crossing facilities with dropped kerbs, tactile paving and central refuge islands located approximately 300m south-east of the site, were Leapardstown Road converges with Bearna Way.

Numerous shops and Montessori schools are all accessible within a 10-minute walk from the site.

Within 15-20 minute walking, the entirety of Sandyford Business Park is accessible which includes financial services, shops, retail stores, personal services etc.

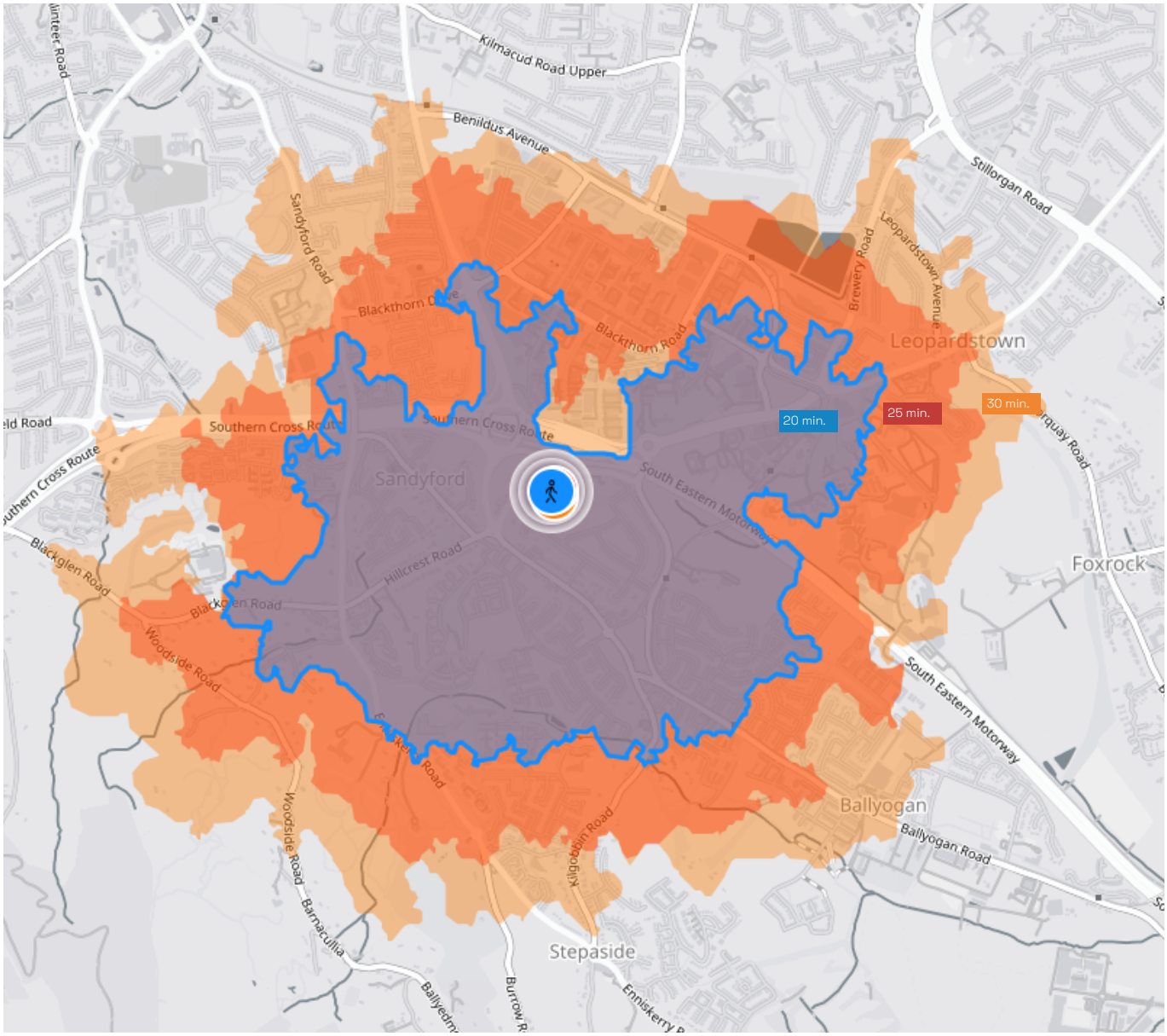
The nearest Luas station to the site is Sandyford Luas Station, approximately 25 minutes to the north.

Stepaside, Leopardstown, and Ballyogan are all within a 30-minute walk from the site.

Figures 4.3 and 4.4 below illustrate the walking catchment area in 5-minute intervals.

It can be concluded that the site is highly accessible on foot.

Fig 3.2 - Walking Catchment



3.2.2 Cycling Infrastructure and Accessibility

The site is currently accessible from dedicated 'C1' cycle lanes, which are separate from Leopardstown Road and are located to the south of the site. Figure 3.3 shows the site location in the context of the existing cycle network.

The site is situated adjacent to a local cycleway which links to the national cycleway surrounding Dublin City Centre.

Figure 3.4 illustrates the proposed cycle network and infrastructure improvements in the vicinity of the site extracted from the National Transport Authority's 'Greater Dublin Area Cycle Network Plan'.

The proposed cycle network near to the development is shown below, with the Carrickmines Greenway and a primary radial cycle lane route running along Bearna Way connecting the site to the City Centre as shown in Figure 3.4. The implementation of the above cycle infrastructure schemes by the local authority will be subject to further design, public consultation, approval, and importantly availability of funding and resources.

Within 5 minutes of cycling, Sandyford Business Park can be accessed.

Within 10 minutes of cycling Sandyford Luas Station can be reached.

In 15 minutes of cycling Dundrum Town Shopping Centre is easily accessible.

After 20 minutes of cycling University College Dublin (UCD) and Dun Laoghaire is easily accessible.

In a 25/30 minute cycle, the majority of Dublin City centre area and south Dublin can be reached.

Fig 3.3 - Existing Cycle Network

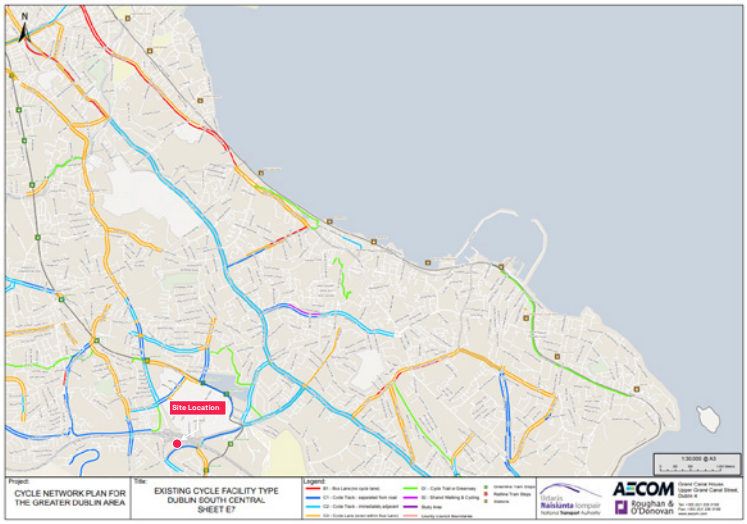
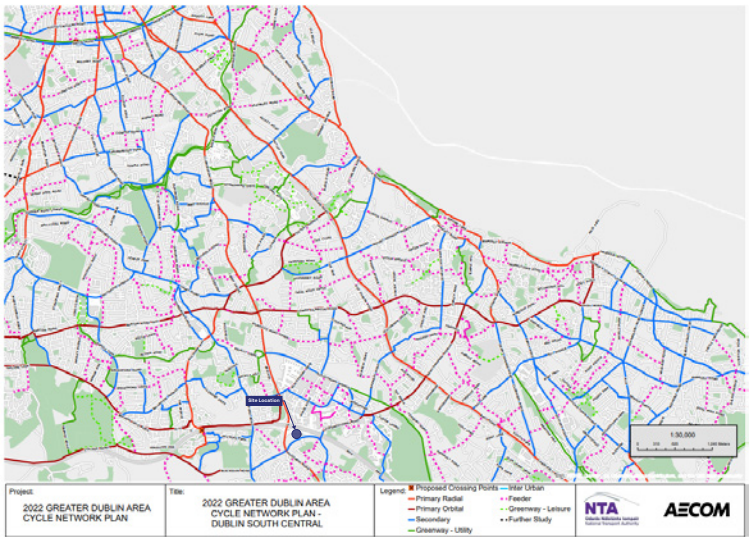


Fig 3.4 - Proposed Cycle Network



3.2.3 Public Transport Infrastructure and Accessibility

Bus Services

Figure 3.5 details the proposed Bus Connects network in the vicinity of the site as part of the New Dublin Area Bus Network scheme.

The New Dublin Area Bus Network scheme aims to overhaul the existing bus system in Dublin by:

- Redesigning the bus network to provide a more efficient network, connecting more places and carrying more passengers;
- Introducing Bus Rapid Transit on a number of routes:
- Improving bus priority infrastructure including provision of 230km of bus lanes;
- Improving payment systems; and
- Improving livery and bus stops.

Figure 3.5 - Proposed Bus Connects Routes

- The nearest bus stops to the site are located on Murphystown Way within 350m of the site. The southbound bus stop 7418 is located 350m to the east, whilst the northbound bus stop, 7416 is also located 350m to the east opposite bus stop 2818. Table 3.1 details the services that call at stops in the vicinity of the site and their associated frequencies.

It is noted that the provision of bus services will change over time in response to current circumstances. The bus times are accurate at the time of writing, whereas up-to-date bus times can be found on Dublin Bus' and Go Ahead Ireland's websites.

Table 3.1 - Bus Service Frequency (min)

Route No.	Route	Weekdays		Weekend	
		AM Peak	Interpeak	Saturday	Sunday
11	Wadelai Park - Sandyford Business District	10 - 15	15 - 20	15 - 20	20-30
44	DCU - Enniskerry	10 - 15	15 - 20	15 - 20	20-30
47	Poolbeg - Belarmine	15 - 20	20 - 30	20 - 30	30
114	Blackrock - Ticknock	15 - 20	20 - 30	20 - 30	30
700	Airport to Dublin City Centre & Leapardstown	15 - 20	20 - 30	20 - 30	30
S8	Kingswood Avenue - Dun Laoghaire Stn	15 - 20	20 - 30	20 - 30	30

3.2.4 Car Sharing

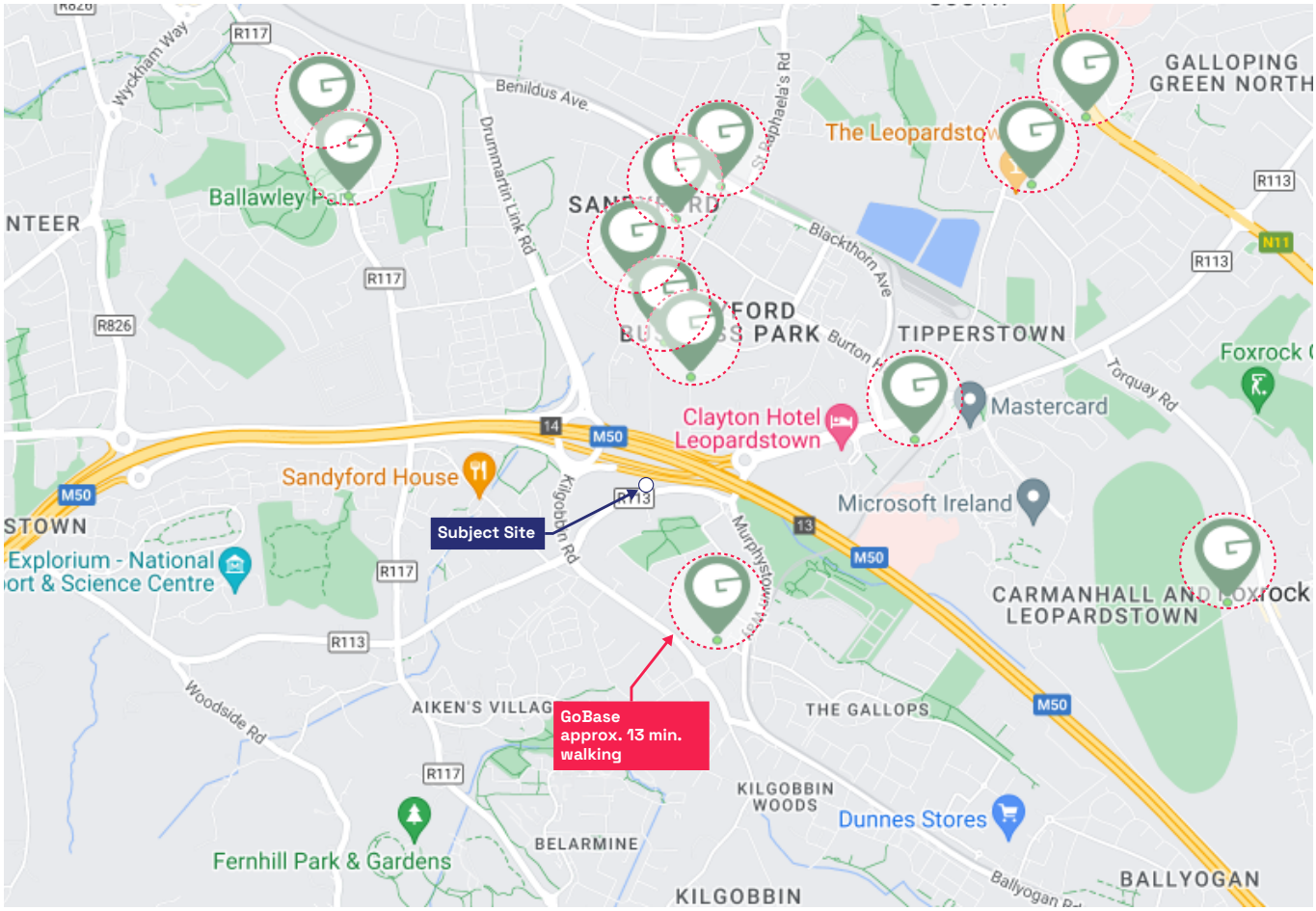
It is acknowledged that many residents that do not own a car may require the use of a car on certain occasions. GoCar (among other car sharing operators) offers a cost-effective, hassle-free, and greener alternative to car ownership and traditional vehicle hire in Dublin. The car sharing service allows users to view the availability of cars at designated parking bays throughout the country via a mobile application, where they can unlock and start driving their selected car on the spot.

The nearest bay is located in at Glencairn Park & Ride, c. 950m (13 min. walk) to the south of the site. Cars can be reserved by the hour, day or even longer. The price of the journey depends upon the vehicle type, the duration of the reservation and the miles driven, but starts at around €10 an hour with 50 free kilometres included.

Figure 3.6 shows additional locations in the vicinity of the site that GoCar currently operate in.

It is considered that car sharing could therefore be a highly attractive facility for residents who require occasional private car use, therefore, minimising the traffic impact.

Figure 3.6 - Local GoCar Bays



4 Mobility Management Measures

4.1 Introduction

Considering the level of accessibility, it is considered the vast majority of users will travel to/from the site via sustainable modes of travel.

One of the primary reasons for undertaking a modal split survey is to ensure the Mobility Management Plan is implemented as effectively as possible. For example, if the vast majority of residents and visitors already travel by public transport, it might be more worthwhile to promote measures encouraging walking and/or cycling. Notwithstanding, this section of the MMP sets out the measures that could be implemented in a full Mobility Management Plan for the proposals.

The measures are designed to encourage sustainable modes of travel. They are in line with the aims and benefits set out in Section 2 of this document and Over, at Work, Usually Resident and Present in the State 2011 to 2016', and filtered by means of travel for all aggregate town areas to establish a baseline for staff at the new development.

4.2 Mobility Management Coordinator (MMC)

A Mobility Management Coordinator (MMC) will be appointed for the site, and their contact details will be circulated to DLR County Council (DLRCC) and made available to staff and visitors at the site. Should the MMC change, DLRCC will be notified and the details of the incumbent MMC provided.

The duty of the MMC will be to take responsibility for ensuring that the various elements of the Plan are monitored and operate effectively to offer a genuine choice of travel modes. They will be the first point of contact in relation to travel issues. Additional responsibilities of the MMC are further detailed in Section 6 of this report.

4.3 Hard Measures

The development will be provided with 164 cycle parking spaces.

The development is located in a highly accessible area close to public transport hubs, Dublin's cycle network and existing car club bays.

4.4 Soft Measures

Welcome packs can be critical in influencing travel patterns from the outset. All new residents will be provided with a pack of information, either physically or digitally, comprising:

- Introduction to the MMP concept detailing objectives and aspirations including details of the MMC;
- Maps showing local walking / cycling routes and places of interest;
- Promote the Get Ireland Active website: getirelandactive.ie;
- Details of public transport (bus and rail) services, including timetables and routes.

As well as providing such travel information throughout the Welcome Packs, relevant information as set out above will be provided on notice boards in communal areas and the development website.

Measures to Encourage Walking

Walking is the most sustainable and accessible mode of travel. Any individual in relatively fair health can incorporate walking into part of their journey. It has been demonstrated within Section 3 of this MMP that there is a good level of pedestrian infrastructure in the surrounding area, with access to local services on foot. The following measures will be provided in order to encourage residents to walk:

- Promote / raise awareness of the health benefits of walking;
- Adequate lighting, landscaping and shelter to create pleasant pedestrian waiting areas;
- Marketing campaigns in line with "National Walking Day" and via schemes incorporating free issue pedometers and alarms;

- Promote the 2KM / 5KM from home tool to check walkable distances from the site: 2kmfromhome.com; and
- Promote the availability of walking information, including walking groups and useful tips and guidance, on the Get Ireland Walking website getirelandwalking.ie.

Measures to Encourage Cycling

It has been demonstrated throughout Section 3 of this MMP that the site is conducive to cycling. To encourage more staff and visitors to cycle, the following measures will be provided:

- Information on the local cycle network routes made available through the previously discussed welcome packs;
- Promoting the Cycle to Work scheme;
- Shower and changing room facilities to be provided
- Promote the availability of cycling information, including route maps and useful tips and guidance, on the Cycling Ireland website cyclingireland.ie;
- Initiating an informal "cycle buddy scheme";
- Promotion of events such as "National Bike Week"
- Promotion of local cycle stores; and
- Setting up of a development-wide Bicycle User Group (BUG)

Measures to Encourage Public Transport

It has been demonstrated throughout Section 3 of this MMP that the site is highly accessible by public transport, and that there are further opportunities for wider public transport travel throughout the Greater Dublin Area. The following measures will be provided in order to encourage more staff and visitors to travel by public transport:

- Distribute details of the Transport for Ireland Journey Planning tool (online and in the form of an mobile application: transportforireland.ie/journey-planner-app;
- Provide up to date bus details including timetables information in the welcome packs;
- Advertise any promotions/discounts offered by public transport operators;
- Provide wayfinding towards key transport nodes; and,
- Providing special offers for interest-free season ticket loans.

Cost awareness can be a contributing factor in the decision to travel by car or by public transport. Staff and visitors will be made aware of the savings that can be made by purchasing season and other ticket prices.

5 Targets

5.1 Introduction

Target setting is an important part of any Mobility Management Plan, providing a focus for the overall process and a measure against which the mobility management measures can be judged. This section sets out the target strategy and provides an overview of the data that should be collected as part of future travel surveys to inform the Mobility Management Plan once developed.

5.2 Data Collection and Analysis

In order to understand travel habits, a representative sample survey will be undertaken at three months following first operation. Staff and residents will be encouraged to participate, and the surveys would extract the following key information

- Place(s) of residence/study;
- Usual mode of travel and reason for modal choice;
- Attractiveness of various sustainable modes;
- Any barriers to sustainable modes; and
- Initiatives that would encourage staff and visitors to travel more sustainably.

Surveys could be distributed in two ways; electronically, and as paper copies.

Table 5.1 - Proposed Trip Generation Mode

Mode	Overall Modal Target
By Car (Private)	50%
Pedestrians	5%
Cyclists	15%
Public Transport	30%

Firstly, questions could be transferred to SurveyMonkey, which is an online survey service widely used by both private and public sector organisations for data collection. Staff would be sent this link in the early stages of operation and can simply click on it and get directed to an internet-based survey. Additionally, visitors can also be sent this link when they log into the site Wi-Fi service. All results can be recorded on a computer database for analysis.

Paper surveys could also made available to visitors across the site. Surveys could be printed and distributed at the reception areas. All the results could be manually transferred to the computer database for analysis alongside the electronic surveys.

The information obtained will be used to undertake a modal split analysis, whereby an answer rate of 50% could be considered a sufficient representation of staff across the site. These can be used to set SMART targets for the site, with an example provided in Table 5.1. Site users would then be surveyed annually from the initial survey.

5.3 Smart Targets

Once the travel surveys have been undertaken, it is possible to monitor modal splits so that the mobility management measures can be tailored to increase uptake of certain modes of travel. Modal split targets are set for a reduction in private car use offset by an increase in sustainable modes.

All performance indicator and modal split targets will be set through consultation with Dun-Laoghaire Rathdown County Council (DLRCC). The official targets will be SMART (Site-specific-Measurable-Achievable-Realistic-Time bound). The following phrases have been used to give a general indication of time-scales for the 'SMART' targets following the adoption of this Mobility Management Plan.

Table 5.1 illustrates the modal split targets.

As can be seen from the targets, there will be a large emphasis on encouraging residents to use public transport and cycle.

The above targets are indicative at the time of writing, and will be updated in future MMP versions once further travel surveys are undertaken. The updated MMP versions will include a comparative table containing updated modal split data in order to best understand travel habits, and shape effective measures.

The targets are considered to be realistic when taking into account the mobility management measures as detailed throughout Section 4 of this MMP.

6 Monitoring and Review

6.1 Introduction

This section of the report sets out the proposed management arrangements associated with the MMP. It also sets out the next steps with regards to converting this Outline MMP into a full Mobility Management Plan, which will be carried out for the life of the development.

6.2 Responsibility and Management

Overall responsibility for the MMP will lie with the appointed Mobility Management Coordinator (MMC). Following construction and full operation, the Outline MMP will need to be updated to a full Mobility Management Plan. This will involve the distribution of travel surveys. The survey information will enable analysis to be undertaken to establish final targets. It will also provide information on the reasons for modal splits and identify measures that may encourage a modal shift.

Adequate consultation and support from the developer is also required to ensure the smooth implementation of the MMP. A number of measures to be undertaken comprise

A commitment to actively pursue sustainable travel opportunities for the development;

Maintenance of walking facilities, lighting and any CCTV installations;

Support for an MMC in ways including, but not limited to, funding to enable them to fulfil their duties and deliver the MMP as intended; and

A commitment to actively promoting car-sharing and sustainable transport options at the site.

A MMP document should be considered as merely the starting point of the process. The implementation of a MMP is an on-going requirement and will require support and leadership in achieving its objectives.

6.3 Mobility Management Coordinator (MMC)

The MMC will take responsibility for ensuring that the various elements of the plan are monitored and operate effectively to offer a genuine choice of travel modes. Typical duties include:

- Leading on the delivery of the MMP;
- Representing the human face of the MMP and explaining its purpose and opportunities on offer
- Implementing and promoting sustainable travel measures to ensure a coordinated approach across the site as a whole;
- Promoting individual measures in the MMP and instigate a marketing campaign upon first operation of the site;
- Liaising with public transport operators and represent the operator at relevant forums;
- Administering the car share scheme;
- Monitoring the MMP and identifying trends in relation to the targets and reporting the findings to relevant parties (i.e. DLR County Council).

6.4 Monitoring and Evaluation

The monitoring of travel behaviour is vital to measure progress towards the targets and would be the responsibility of the appointed MMP. Apart from liaising with Dun-Laoghaire Rathdown County Council (DLRCC) on transport related matters, the main monitoring process will involve travel surveys as described in Section 5 above.

The results of each survey would be used to review progress against target modal splits, where the MMC will be required to calculate the percentage share of all travel modes to and from the site. Where targets are not met, remedial actions will be proposed, agreed and then monitored for effect.

Monitoring reports will be provided to officers at DLRCC every year following the receipt of the first surveys.

Monitoring will be carried out for a period of at least five years from the date of the baseline travel surveys or until agreed upon with DLRCC.

7 Action Plan

This section details the mechanisms by which the MMP will be secured and provides an Action Plan for the implementation of the identified measures including time frames and responsibilities.

Table 7.1 below sets out the proposed implementation plan for this MMP, explaining:

• How the management structure for the MMP will be established, associated time-frame and

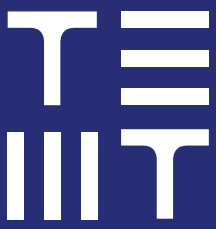
responsibility:

• The implementation of stated measures and initiatives;

The monitoring procedures and promotion of the MMP.

Table 7.1 - Action Plan

Action	Target Date	Responsibility
Appoint MMC	Within 3 months of commencement of marketing	Management
Produce Welcome Packs	Occupation of development	MMC
Undertake Initial Travel Surveys	Within 3 months of first appointment (to coincide with MMP launch)	MMC
Decide Modal Split Targets	Within one month of receiving the initial surveys	MMC in conjunction with DCC
Update IMMP to a full MMP	Within two months of agreeing modal splits with DLRCC	MCC
Present Annual Monitoring Report	Annually for at least five years following the agreement of targets with DLRCC	MCC



TENT ENGINEERING

Residential Development at Leapardstown Road Outline Mobility Management Plan

10.02.2025

24093-X-XXX-RP-TNT-CE-0003

TENT ENGINEERING

Site Address:

Residential Development at Leopardstown Road,
Sandyford,
Dublin 18

Client Name:

Dún Laoghaire–Rathdown County Council

12 Appendix C - Road Safety Audit

Title: **Stage 1 Road Safety Audit and**

DMURS Quality Audit,

For;

Proposed Residential Development, Leopardstown Road, Sandyford, Dublin 18.

Client: **TENT Engineering**

Date: **October 2024 – Updated February 2025**

Report reference: **2450R01- Rev 1**

VERSION: **FINAL**

Prepared By:

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CONTENTS SHEET

Contents

1.0 Introduction

This report was prepared in response to a request from Mr. Diarmuid Healy, TENT Engineering, for a Stage 1 Road Safety Audit and a DMURS Quality Audit for a proposed residential development scheme known as 'Wild Rock' off Leopardstown Road in Sandyford, Dublin 18. An original Audit was carried out in October 2024 but has been updated based on layout changes.

The Audit Team comprised of;

Team Leader:	**Norman Bruton**, BE CEng FIEI, Cert Comp RSA.
	TII Auditor Approval no. NB 168446
Team Member:	**Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng MIEI
	TII Auditor Approval no. OO1291756

The Audits involved the examination of drawings and other material provided and a site visit by both team members, on the 17th of October 2024. The weather at the time of the site visit was dry and the road surface was also dry.

The Stage 1 Road Safety Audit has been carried out in accordance with the requirements of TII Publication Number GE-STY-01024, dated December 2017.

The Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019 including Advice Notes. The Quality Audit is composed of a number of distinct audits which include an Accessibility Audit, a Walking Audit and a Cycling Audit (i.e. aspects of a Quality Audit carried out independent of the Design Team and generally included as appendices to the overall Audit).

Many issues raised in the Road Safety Audit would also be raised in the various aspects of the Quality Audit, however to avoid repetition items that are common to more than the Road Safety Audit have been included in a table at the start of Section 3.0 of this report.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme for road users.

If any of the recommendations within these audits are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observation are intended to be for information only. Written responses to Observations are not required.

The information supplied to the Audit Team is listed in **Appendix A.** The feedback form is contained in **Appendix B.** A plan drawing showing the problem locations is contained in **Appendix C**.

2.0 Background

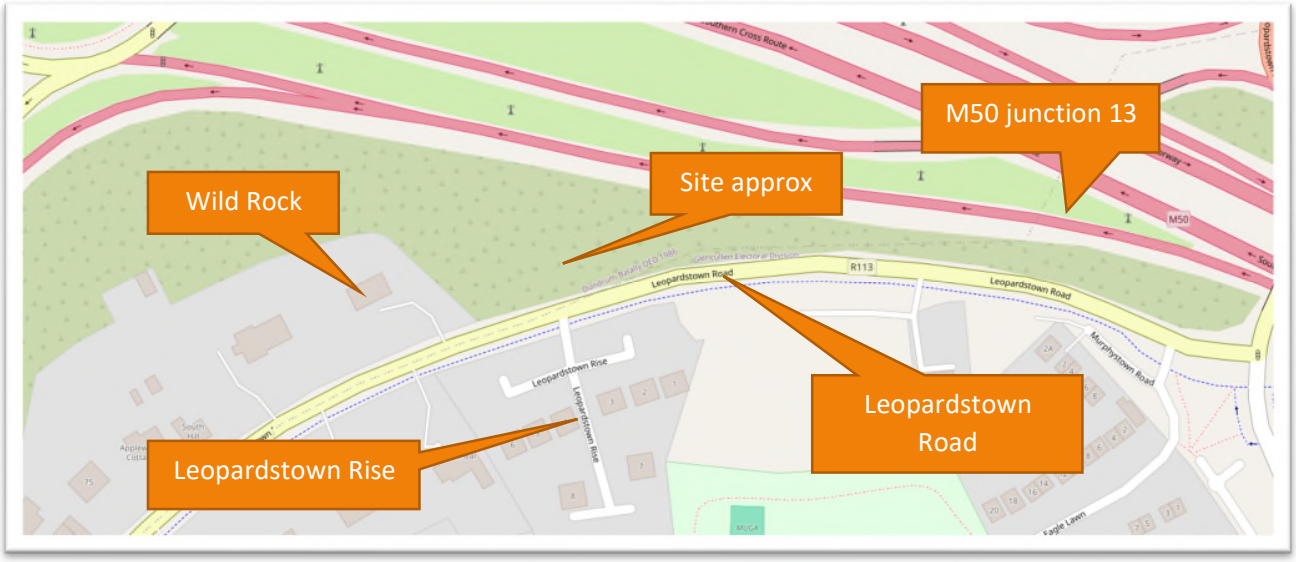
It is proposed to construct a residential housing scheme on the site of an existing house known as Wild Rock and a green field area adjacent to it off the R113, Leopardstown Road opposite Leopardstown Rise in Sandyford, Dublin 18.

Leopardstown Road is a single carriageway road with a footpath on both sides and with a two-way cycle track on the opposite side of the proposed development. It is lit.

The vehicular access with be at the existing access to the house.

No works are proposed on Leopardstown Road.

The site location is provided below.



Site Location Map (image courtesy of www.openstreetmaps.org)

Since the original audit was carried out in October 2024 the layout has changes somewhat (including parking being moved to the rear of the houses) and issues raised in the initial audit have been addressed in the design development. Issues raised in the original audit which has been satisfactorily addressed are not repeated in this report.

3.0 Issues Common to More Audits than RSA

Below is a summary table of problems raised in the Road Safety Audit that would also be raised in the Quality Audit however are not repeated for clarity and brevity.

Problem Reference	Road Safety Audit	Access Audit	Walking Audit	Cycling Audit
4.1	✓		✓	✓

4.0 Items Raised in This Stage 1 Road Safety Audit.

4.1 Problem

LOCATION

Drawing 24094-X-L00-DR-TNT-CE-3000 P05, Leopardstown Road.

PROBLEM

There will be a desire line for pedestrians and especially cyclists to cross Leopardstown Road to gain access to the two-way cycle track. No crossing facilities are provided. Although the speed limit is 50km/hr vehicles move relatively fast on this section of Leopardstown Road which could lead to collisions between crossing pedestrians and cyclists.

RECOMMENDATION

It is recommended that a suitable crossing facility be provided for pedestrians and cyclists and linking with the cycle track across the grassed verge.

5.0 Items Raised in This Stage 1 Quality Audit – Accessibility Audit.

No issues identified in this updated audit.

6.0 Items Raised in This Stage 1 Quality Audit – Walking Audit.

No issues identified in this updated audit.

7.0 Items Raised in This Stage 1 Quality Audit – Cycling Audit

No items raised.

8.0 Audit Statements.

Road Safety Audit Statement

We certify that we have examined the information provided and the site. The examination has been carried out with the sole purpose of identifying any features of the design which could be removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions which we would recommend should be studied for implementation. The audit has been carried out by the persons named below who have not been involved in any design work on this scheme as a member of the Design Team.

Quality Audit Statement

We certify that we have carried out this audit in accordance with DMURS for those areas independent of the Design team.

Norman Bruton **Signed:** _____

(Audit Team Leader) **Dated:** ___17-2-2025_____

Owen O'Reilly **Signed:** _____

(Audit Team Member) **Dated:** 17-2-2025_____

Appendix A

List of Material Supplied for this Road Safety Audit and Quality Audit;

Drawing 24094-X-L00-DR-TNT-TP-4003_SWEPT PATH ANALYSIS - REFUSE VEHICLE 2

Drawing 24094-X-L00-DR-TNT-TP-4010_SIGHTLINES

Drawing 24094-X-L00-DR-TNT-CE-3000_SITE LAYOUT

Drawing 24094-X-L00-DR-TNT-CE-4011_DMURS DRAWING

Drawing 24094-X-L00-DR-TNT-TP-4000_SWEPT PATH ANALYSIS - FIRE TENDER

Drawing 24094-X-L00-DR-TNT-TP-4001_SWEPT PATH ANALYSIS - FIRE TENDER 2

Drawing 24094-X-L00-DR-TNT-TP-4002_SWEPT PATH ANALYSIS - REFUSE VEHICLE

Appendix B

Feedback Forms (Road Safety Audit & Quality Audit)

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Wild Rock, Leopardstown Road

Stage: 1 Road Safety Audit
Date Audit (Site Visit) Completed: 17-10-2024

Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
4.1	yes	yes	Prior to construction DLR county council to implement required crossing point	Yes

Signed. **Date**18.02.25.
Design Team Leader

Signed..... **Date**...17-2-2025.....
Audit Team Leader

Signed..... **Date**18/2/25.....
Employer

QUALITY AUDIT FORM – FEEDBACK ON QUALITY AUDIT REPORT

Scheme: Wild Rock, Leopardstown Road

Quality Audit- Stage 1 (Planning Stage)
Date Audit (site visit) 17-10-2024

Paragraph No. in Quality Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
N/A	N/A	N/A	N/A	N/A

Signed……N/A…… **Date** ……
Design Team Leader

Signed……  **Date**: …17-2-2025…
Audit Team Leader

Signed……N/A…….. **Date**……..
Employer

Appendix C

Problem Location Plan.

LEOPARDSTOWN ROAD
LEOPARDSTOWN RISE
LEGEND
PARKING BREAKDOWN
4.1

13 Appendix D - Outline Construction Management Plan

Residential Development at Leopardstown Road Outline Construction Management Plan

10.02.2025

24094-X-XXX-RP-TNT-CE-0005

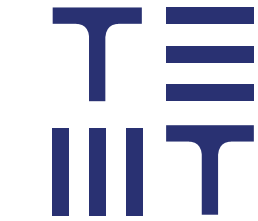
TENT ENGINEERING

Site Address:

Residential Development at Leopardstown Road,
Sandyford,
Dublin 18

Client Name:

Dún Laoghaire–Rathdown County Council


TENT ENGINEERING

Revision and Review

This report has been prepared for the sole benefit, use and information of the client. The liability of Tent Engineering with respect to the information contained in this report will not extend to any third party.

PURPOSE

- ☐ P1 Information
- ☐ P2 Coordination
- ☐ P3 Planning
- ☐ P4 Building Control
- ☐ P5 Pre-tender
- ☐ P6 Tender
- ☐ P7 Construction

ACCEPTANCE (BY OTHERS)

- ☐ S Issued
- ☐ A Accepted
- ☐ B Accepted subject to comments
- ☐ C Rejected
- ☐ D Acceptance not required

Accepted by

REVISION(S)

Rev.	Description	Date
00	1st Issue	13.10.2024
00	2nd Issue	10.02.2025

AUTHOR(S)

Name
Conor Edwards Civil Engineer

REVIEWER(S)

Name
Diarmuid Healy Co-founder, Director Structural Engineer
BEng (Hons) MIEI CEng MIStructE FIStructE

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32 Francis Street, Dublin
Co. Dublin, D08NN96

Contents

1 Introduction

Tent Engineering has been appointed by Dún Laoghaire–Rathdown County Council to provide an **Outline Construction Management Plan (OCMP)** in relation to the proposed residential development at Leopardstown Road, Sandyford, Dublin 18, D18 N6X6. The aim of this OCMP is to address issues that can arise during construction including noise and vibration, traffic management, working hours, pollution control, dust control, road cleaning, compound / public health facilities and staff parking, all associated with the construction works. This plan will be updated by the contractor and agreed with Dun Laoghaire Rathdown County Council (DLRCC) in advance of the construction phase.

This Outline Construction Management Plan (OCMP) has been prepared to give an overview of the processes to be employed during construction of this project. Prior to the on-site activities commencing, this plan will be revised by the appointed lead contractor and expanded to produce a Detailed Construction Management Plan, which shall incorporate:

- Operational Health & Safety (OH&S) Management Plan;
- Environmental Management Plan;
- Pedestrian and Traffic Management Plan.

The Construction Management Plan will be integrated into and implemented throughout the construction phases of the project to ensure the following:

- that all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials;
- that all waste materials generated by site activities, that cannot be reused on site, are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed permitted facilities in compliance with the Waste Management Acts 1996 to 2005.
- that any environmental impacts (noise, vibration, dust) of project construction work activities on receptors and properties located adjacent to the project work areas, and on the local receiving environment, are managed and controlled.

2 Receiving Environment

2.1 Land Use

The subject site is situated on the former grounds of a quarry, the site functioned as a quarry until the construction of the M50 motorway began in the 1990s, leading to the redevelopment of the land.

The subject site consists of a greenfield plot. The surrounding area primarily comprises of business parks, retail establishments, and residential settlements, with most of the residences being single-family homes.

2.2 Location

The general location of the subject site in relation to the surrounding road network is illustrated in Figure 2.1 below whilst Figure 2.2 shows the extent of the subject development plot. The development site is located on the Leopardstown Road in the Sandyford area of Dublin. It is located approximately 8km to the South of Dublin City Centre. It is bounded to the North by the M50 motorway, to the west by a residential dwelling and to the south and east by Leapardstown Road.

Fig 2.1 - Site Location in Relation to the Regional Road

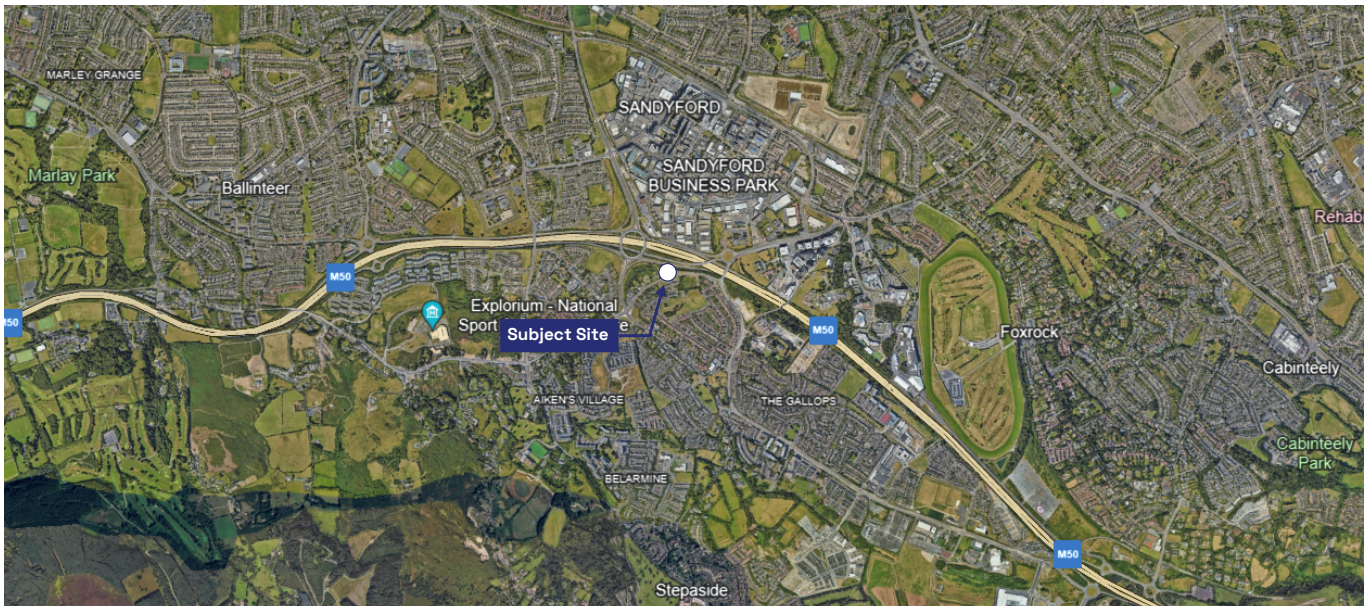
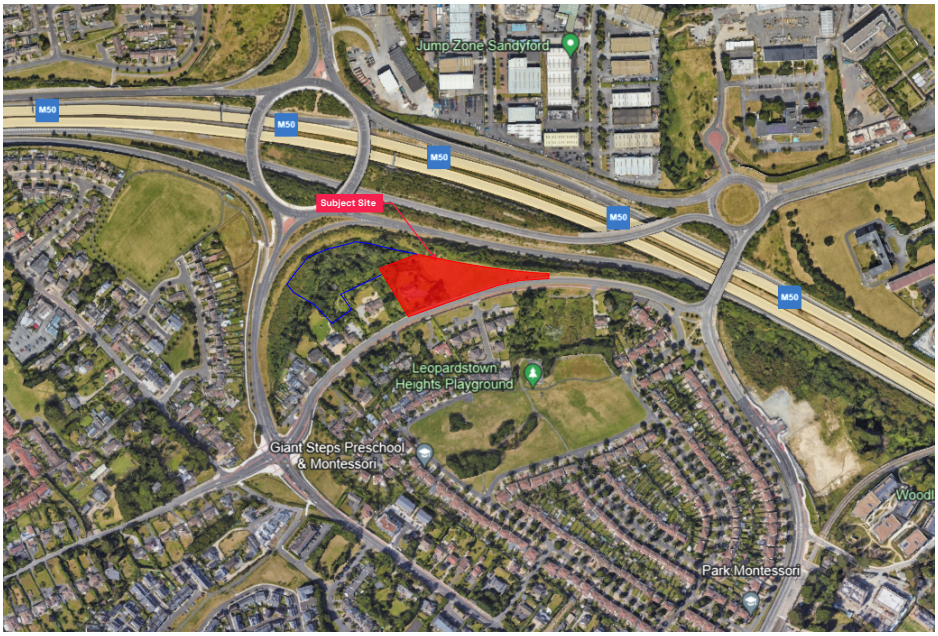


Fig 2.2 - Site Location in Relation to the Local Road Network



3 Site Management

3.1 Site Establishment

The contractor will provide all necessary accommodation, material handling and secure storage for its operations.

The facilities to be provided and maintained by the contractor will include:

- construction plant;
- hoisting equipment and cranes;
- scaffolding, platforms, access ladders, barriers, handrails;
- barricades and hoardings;
- temporary driveways, road crossovers and construction zone;
- 24/7 emergency vehicle access to site during working hours;
- on-site hardstand areas for vehicle loading and unloading;
- storage sheds and compounds;
- rubbish sorting areas;
- site amenities with all required equipment and facilities;
- construction worker facilites;
- first aid facilities;
- site administration offices.

Construction plant and site amenities will comply with the requirements of all relevant authorities and be wholly contained within the hoarded site. All construction plant and equipment will be progressively removed when no longer required.

First Aid facilities for the use of all construction staff in the form of a fully provisioned first aid area within the site office with life-saving and safety equipment as required by relevant statues, authorities and awards will be maintained at all times by the contractor.

The contractor will obtain all required permits, pay the applicable fees and comply with all conditions.

3.2 Hoarding and Fences

Prevention of unauthorised access to the site is a very high priority and will be vigorously managed throughout the construction period. When the contractor is appointed, the site will be secured with site barriers and hoardings in accordance with the final construction management plan. Any hoardings and signboards to the perimeter of the site will comply with the requirements of the relevant authorities and the relevant Health and Safety Acts.

The contractor will be required to erect a single project signboard to the hoarding at the main entrance points to identify the site.

3.3 Services Relocations and Temporary Protection of Public Domain

Prior to any works commencing on site, detailed dilapidation reports will be carried out for footpaths, kerbs, road pavements and utility infrastructure features of the main access routes in the immediate vicinity to the site.

The contractor will provide protection to existing surrounding building elements potentially impacted by the works. Protection may be in the form of screened hoardings, scaffolding and fencing, taped drop sheets and the like, all installed prior to commencement of the demolition works.

The type of required hoardings, scaffolding and fencing will vary over the duration of the works, depending on how the site activities potentially impact on the adjoining public domain and neighbourhood.

Dial-before-you-dig enquiries and detailed services location investigations shall be carried out to identify any need for temporary protection of elements of existing utility infrastructure that are not to be diverted as part of the works.

All temporary protection is to be installed and maintained during the duration of the works until they are no longer required.

3.4 Major Plant and Equipment

Plant and equipment used during the entire works are:

- articulated and rigid trucks;
- rigs, bulldozers, excavators, backhoes, with

ancillary equipment (saws);
- tower cranes;
- concrete delivery trucks;
- concrete pumps;
- man, and material hoists;
- scissor, boom and fork lifts.

All plant and equipment will be operated by experienced and qualified personnel with the appropriate registrations.

3.5 Vehicular Access to Site

Construction site access will be via the Leapordstown Road which runs in a east to west direction.

- Advanced warning provided to all users on the road and directional signage for site traffic

Revised measures will be developed further as part of the Construction Traffic Management Plan (CTMP) developed by the contractor in consultation with the Design Team and DLRCC.

The principal objective of the CTMP is to ensure that the impacts of all building activities generated during the construction of the proposed development upon both the public (off-site) and internal (on-site) workers environments, are fully considered and proactively managed / programmed respecting key stakeholders requirements thereby ensuring that both the public's and construction workers safety is maintained at all times, disruptions minimised and undertaken within a controlled hazard free / minimised environment. It is noted that the impact of the construction works will be temporary in nature.

The CTMP will be prepared in accordance with the principles outlined below and shall always comply with the requirements of:

- Chapter 8 of the Department of the Environment Traffic Signs Manual, current edition, published by The Stationery Office, and available from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2;
- Guidance for the Control and Management of Traffic at Road Works (June 2010) prepared by the Local Government Management Services Board; and
- Any additional requirements detailed in the Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS).

Note that all construction traffic will travel to and from the site via the proposed leapordstown Road. In order to ensure satisfactory operation of the construction stage the following is proposed

- Provision of sufficient employee and visitor parking and compounding to ensure no potential overflow onto the local network.

Site offices and compound will be located within the site boundary where feasible. Due to the location and nature of access to the site, there will be limited site parking or construction parking anywhere in the vicinity of the site. Nearby off-site car parking will be identified to avoid congestion in the surrounding areas. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.

Finally, truck wheel washes will be installed at construction entrances and any specific recommendations regarding construction traffic management made by the Local Authority will be adhered to.

The following mitigation measures will be incorporated into the CTMP:

- During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads.
- The surrounding road network will be signed to define the access and egress routes for the development.
- The traffic generated by the construction phase of the development will be strictly controlled in order to minimise the impact of this traffic on the surrounding road network.
- All road works will be adequately signposted and enclosed to ensure the safety of all road users and construction personnel.
- Nearby off-site car parking will be identified for use by employees and visitors to avoid congestion in the surrounding areas.
- Construction staff will be encouraged to use public transport and information on local transportation will be published on site.
- A programme of street cleaning if/when required.

- Any associated directional signage
- Any proposals to facilitate the delivery of abnormal loads to the site
- Measures to obviate queuing of construction traffic on the adjoining road network.

3.6 Site Security

Access to site will be controlled by means of an electronic access control system and camera remote monitoring system for out of hours use. During working hours, a gateman will control traffic movements and deliveries. All personnel working on site will be required to have a valid Safe Pass card.

3.7 Material Hoisting & Movement Throughout the Site

It is envisaged that a tower crane will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork element and general building materials. A detailed crane analysis will be prepared for verification of the safe load parameters. No loads will be lifted over the public domain or adjacent properties.

Hoists and teleporters may also be used within the site and around its perimeter as required during the project, to facilitate material and waste movements into and out of the site.

3.8 Deliveries & Storage Facilities

All deliveries to site will be scheduled to ensure their timely arrival and avoid the need for storing large quantities of materials on site. Deliveries will be scheduled outside of rush hour traffic to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

3.9 Site Accommodation

On-site facilities shall include:

a materials and equipment storage area;

- a site office;
- staff welfare facilities (e.g. toilets, drying room, canteen, etc.).
- Electricity will be provided to the site via national grid.

Water supply to the site during construction works will be provided by means of a temporary connection to a public watermain. Similarly, a temporary connection for foul water drainage will be made to the public network.

3.10 Site Parking

Due to the location and nature of access to the site, there will be limited site parking or construction parking anywhere in the vicinity of the site. Nearby off-site car parking will be identified to avoid congestion in the surrounding areas. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.

3.11 Site Working Hours

Subject to the agreement of the Planning Authority, the following site operation hours are proposed:

- Monday to Friday: 07:00 to 19:00
- Saturdays: 08:00 to 14:00
- Sundays & Bank Holidays: Works not permitted

It may be necessary for some construction operations to be undertaken outside these times, for example: service diversions and connections; concrete finishing and fit-out works; etc. There may also be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times.

4 Environmental Management

The contractor will establish guidelines and controls for all activities that may impact on the surrounding environment for the duration of the works, including; air, water, land, natural resources, flora, fauna, humans, and their interrelation.

The project is to be developed to enable to all personnel with the means to understand their responsibilities and to meet the contractor's statutory, contractual and procedural obligations relating to environmental management.

For each activity, the environmental aspects and associated actual and potential impacts are to be identified as they relate to the following environmental elements:

- emissions to air;
- releases to water;
- releases to land;
- use of raw materials & natural resources;
- use of energy;
- waste and by-products;
- community & neighbours;
- flora & fauna;
- heritage & cultural.

4.1 Materials and Decontamination

Excavation works will each address the requirements of this investigation report and verify the treatment and removal of all materials and contamination encountered during the works.

4.2 Noise

The Contractor shall implement measures to eliminate and reduce noise levels where possible.

All construction activities will be carried out in compliance with the recommendations of BS 5228, Noise Control on Construction and open sites part 1 and comply with BS 6187 Code of Practice for Demolition.

The following is an outline of the possible noise mitigation measure which the Contractor may consider implementing on site to address potential noise levels;

General Considerations:

1. All site staff shall be briefed on noise mitigation measure and of best practicable means to be employed to control noise.
2. Site hoarding should be erected to maximise the reduction in noise levels.
3. The Contractor should but in place a liaison officer to engage with neighbours on a weekly basis and keep them a braised of the pending works on site and address any concerns raised.
4. Internal haul routes shall be maintained, and steep gradients shall be avoided where possible.
5. Material and plant loading and unloading shall only take place during normal working hours unless the requirement for extended hours for traffic management (i.e. road closure) or health and safety reasons has been granted (application must be made to the Council a minimum of 4 days prior to proposed works)
6. Minimise opening and shutting of gates through good coordination of deliveries and vehicle movements.

Plant

- Contractor should ensure that each item of plant and equipment complies with the noise limits quoted in the relevant EC Directive 2000/14/EC.
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
- Use all plant and equipment only for the tasks for which it has been designed.
- Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
- Power plant by mains electricity where possible rather than generators.
- Employ partial or full enclosures for fixed plant where possible.
- Locate movable plant away from noise sensitive receptors where possible.

- All plant operators to be qualified in their specific piece of plant.
- Compressors and generators will be sited in areas least likely to give rise to nuisance where practicable.

Vehicle activity:

- Ensure all vehicle movement on site occur within permitted working hours unless permission to the contrary has been granted
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public road, if unavoidable engines should be turned off.
- Contractor should plan the site layout to ensure that reversing is kept to a minimum.
- Wheel washing of vehicles prior to exiting the site shall take place to ensure that adjoining roads are kept clean of dirt and debris. Regular road sweeping of adjoining roads should take place as necessary.

4.3 Air Quality & Dust Monitoring

Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall monitor dust levels in the vicinity of the site in accordance with planning conditions. Records shall be kept of such monitoring for review by the Planning Authority. The minimum criteria to be maintained shall be the limit for Environmental Protection Agency (EPA) specification for licensed facilities in Ireland, which is 350mg/m^2/day.

The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project.

4.4 Migrating Dust & Dirt Pollution

- A regime of "wet" road sweeping can be set up to ensure the roads around the immediate site are as clean and free from dirt/dust arising from the site, as is reasonably practicable.
- Footpaths immediately around the site can be cleaned by hand regularly, with damping as necessary.
- Scaffolding to be cleaned regularly. Netting can be provided to enclose scaffolding at sensitive areas of the site.
- Vehicle waiting areas or hard standings can be regularly inspected and kept clean.
- Vehicle and wheel washing facilities can be provided at the site exit where practicable. If necessary, vehicles can be washed down before exiting the site.
- Internal combustion plant should not be left running unnecessarily.
- Where possible fixed plant such as generators should be located away from residential areas.
- The number of handling operations for material should be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates should be carried out using covered/sheeted lorries.
- Vehicles loading should be dampened down and drop heights for material to be kept to a minimum.
- Dust dispersal over the site boundary should be minimised using static sprinklers or other watering methods necessary.
- Stockpiles of material should be kept to a minimum and may be sheeted or watered down. These should be located away from sensitive boundaries.
- Equipment and techniques for cutting/ grinding sawing/sanding etc., which minimise dust emissions and which have the best available dust suppression measures, should be employed.
- Where possible pre-mixed plasters and masonry compounds should be used to minimise dust arising from on-site mixing.

Prior to commencement, the main contractor should identify the construction operations which are likely to generate dust and to draw up action plans to minimise emissions. Furthermore, the main contractor should prepare environmental risk assessments for all dust generating processes, which are envisaged. The main contractor should allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.

4.5 Harmful Materials

Harmful material will be stored on site for use in connection with the construction works only. These materials will be stored in a controlled manner. Where on-site facilities are used there will be a bunded filling area using double bunded steel tank at a minimum.

4.6 Vibration

The Contractor will be required to carry out the works such that the effect of vibration on the adjoining buildings and surroundings is minimised and does not cause any damage.

The Contractor shall be required to comply with the requirements of the planning permission for any vibration limits for the works. In the absence of any Local Authority requirements, Table 4.1 shall set the limitations:

Background vibrations shall be established prior to commencement. A vibration monitoring system is to be put in place prior to any works taking place. This system is to raise an alarm if an agreed limit is exceeded at which time the working methods are to be adjusted so as to reduce vibrations generated.

Table 4.1 - Trigger Values for Vibraiton

	Peak Particle Velocity (PPV)	
Trigger Level	50Hz and Below	Above 50Hz
1	10mm/s	10mm/s
2	10mm/s	12mm/s
3	10mm/s	15mm/s

5 Waste Management

All waste should be minimised and where it does occur it should be categorised and disposed of appropriately. Skips are likely to be a feature for the waste disposal on this site. The contractor is to carefully plan and sequence skip arrival time and where possible skips should be dropped and picked on the same day.

6 Traffic Management

6.1 Site Traffic, Traffic and Pedestrian Management

The anticipated truck movements from and to the site in relation to the preliminary programme for the works will be nominated in the construction methodology by the main contractor.

The construction site will be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. The Contractor will pay particular attention to pedestrian traffic and safety at the entrances. Where possible, all vehicles will enter and exit the site in a forward direction.

Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed.

6.2 Minimization of Construction Vehicle Movements

Construction-related vehicle movements will be minimized through:

- consolidation of delivery loads to/from the site and scheduling of large deliveries to occur outside of peak periods;
- use of precast/prefabricated materials where possible;
- reuse of 'cut' material generated by the construction works on site where possible, through various accommodation works;
- provision of adequate storage space on site;
- development of a strategy to minimise construction material quantities as much as possible;
- promotion of public transport use by construction personnel, in order to minimise staff vehicle movements.

The following headings identify some of the measures to be encouraged.

Cycling

Cycle parking spaces will be provided on the site for construction personnel. In addition, lockers will be provided to allow cyclists to store their cycling clothes.

Car Sharing

Car sharing among construction personnel will be encouraged, especially from areas where construction personnel may be clustered. The contractor shall aim to organize shifts in accordance with personnel origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and will minimise the potential traffic impact on the surrounding road network.

Public Transport

Construction personnel will be encouraged to use public transport as means to travel to and from the site. An information leaflet shall be provided to all personnel as part of their induction on site, highlighting the location of the various public transport services in the vicinity of the construction site.

Public Roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. The contractor will liaise with the Transportation and Infrastructure department of DLRCC to agree any changes to load restrictions and construction access routes for the site. Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment.

All entrances and temporary roads will be continuously maintained for emergency vehicle access.

The following measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

- a regular program of site tidying will be established to ensure a safe and orderly site;
- scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind;
- food waste will be strictly controlled on all parts of the site;

- mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate;
- wheel wash facilities will be provided for vehicles exiting the site;
- in the event of any fugitive solid waste escaping the site, it will be collected immediately and removed.

Compound Facilities / Parking

The construction compound for the infrastructure works shall be entirely within the site boundary, although in some instances located outside the phase being constructed. The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. Site accommodation to be provided will include suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc. Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.

A permeable hardstand area will be provided for staff parking and these areas will be separate from designated machinery / plant parking.

A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities.

A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.

On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and the site compound area reinstated in full on completion of the works.

7 Provision for Construction

7.1 Hoarding, Set-up of Site & Access/Egress Points

The site area will be enclosed with hoarding, details of which are to be agreed with Dun Laoghaire Rathdown County Council (DLRCC). Hoarding panels will be maintained and kept clean for the duration of the project.

This will involve erecting the hoarding around the proposed site perimeter in line with the finished development description.

The restricted confines of the site will require the contractor to set up an off-site "Construction Staging Area". This off-site facility should be suitably located to allow efficient delivery of materials and personnel to site. A "Just in Time" approach will be required for the delivery of particular building materials such as concrete formwork and reinforcement cages for the piles. The location of this facility should be highlighted within the Construction Management Plan.

7.2 Removal of Services

Prior to any works a utility survey will be carried out to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers.

7.3 Site Clearance

The proposed site is a mix of residential and greenfield and does not generate any significant vehicular traffic. The following is a high-level method statement for the clearance of the site:

- Establish a site set-up and welfare facilities;
- Carry out an invasive species survey using a qualified and approved surveyor.
- Carry out a detailed services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties.
- Carry out any necessary services diversions and decommissioning works.

7.4 Excavation

This development will involve a bulk excavation and removal of material during the construction of the building foundations. The Contractor will prepare a Construction Waste Management Plan in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" (Department of Environment, Heritage and Local Government, 2006) and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

7.5 Site Service Installations

Drainage, power, water and the like will be installed to serve the proposed development.

7.6 Construction Stage

The super structure is a series of 2 blocks ranging varying in height, reaching up to 6 storeys. The buildings are constructed as an RC frame of loading bearing perimeter and internal walls, supporting floor slabs. The building façade will be constructed in accordance with the Architect's specification.

Works to the façade will commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works will take place.

Works to the façade will commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works will take place.

7.7 Superstructure

The construction of the superstructure will involve complex sequencing of activities. The building will be constructed as a reinforced concrete frame subject to change in detailed design stages. As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor.

The following outlines a general construction sequence for the superstructure:

Buildings Structure

- Site clearance including install/removal of below ground services, demolition and removal of existing building.
- Excavation of site and construction of the foundation and ground slab
- Construction of rising elements to ground floor and construction of ground floor slab
- Construct the RC floor slab
- Repeat for upper floors.

Envelope / Cladding:

- Commencement of envelope works to ground floor when structure has progressed to approximately Level 2/3, with suitable temporary openings in the façade left for ease of transport of construction material.
- Advancing of external leaf two or three levels behind the structure

Mechanical & Electrical fit-out:

- First fix will commence at each level behind structure;
- This will be followed by the second fix and the final connections

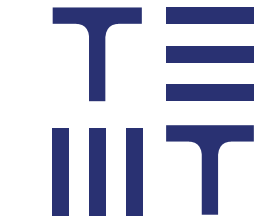
Fit-out:

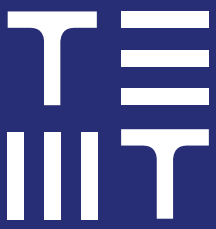
- Initial installation of stud work when cladding is complete, and floor is weather tight;
- Installation of equipment and associated connection to services;
- Completion of finishes.
- The final commissioning period will commence during fit-out

The above is an indicative construction sequence. The final sequence will be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

Erection and operation of cranes

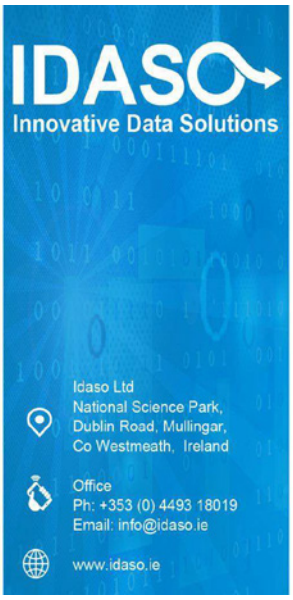
It is envisaged that a tower crane will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork element and general building materials. These visits will be coordinated with the other site activities and crane operations to ensure all risks are correctly assessed and mitigated against. The Contractor will need to obtain all necessary licences from the Local Authority. A “mast climber” maybe installed at some local areas to facilitate particular façade features. The mast climber is essentially a climbing platform that allows the user safely to access any level without the requirement for a full scaffold tower.


TENT ENGINEERING



TENT ENGINEERING

14 Appendix E - Automatic Traffic Count Survey



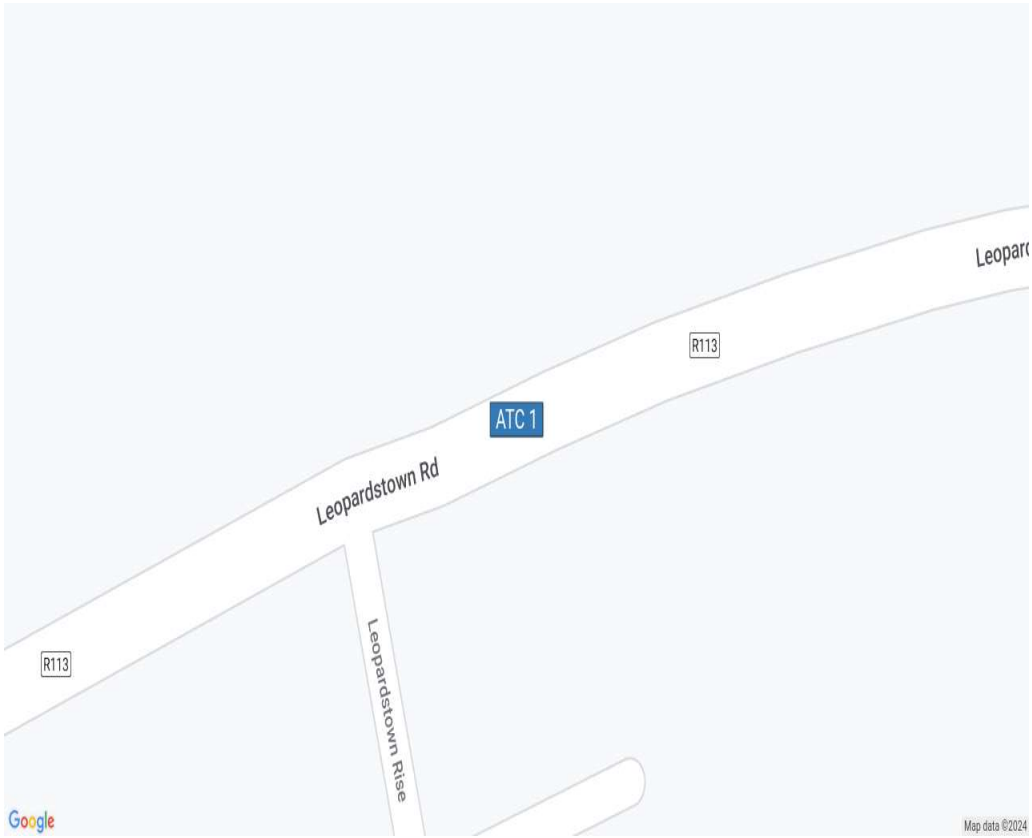
Data Analysis Services
Traffic-Transportation- Commercial-Innovation

24653 - Wildrock ATC

with compliments

IDASO

Survey Name: 24653 - Wildrock ATC
Date: Tue 27 Aug 2024 — Mon 02 Sep 2024



IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Tue 27-Aug-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
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00:15	0	4	0	0	0	0	4	4	0	2	1	0	0	0	3	3
00:30	0	3	2	0	0	0	5	5	1	3	1	0	0	0	5	4.4
00:45	0	6	0	0	0	0	6	6	0	3	0	0	0	0	3	3
H/TOT	0	24	3	0	0	0	27	27	1	12	5	0	0	0	18	17.4
01:00	0	5	0	0	0	0	5	5	0	3	0	0	0	0	3	3
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01:45	0	2	0	0	0	0	2	2	0	3	0	0	0	0	3	3
H/TOT	0	12	1	0	0	0	13	13	0	8	0	0	0	0	8	8
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02:45	0	2	1	0	0	0	3	3	0	1	1	0	0	0	2	2
H/TOT	0	7	2	1	0	0	10	10.5	0	7	2	1	0	0	10	10.5
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03:45	0	2	1	0	0	0	3	3	0	2	1	0	0	0	3	3
H/TOT	0	3	1	0	0	0	4	4	0	4	1	0	0	0	5	5
04:00	0	2	0	1	1	0	4	5.8	0	2	1	0	0	0	3	3
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04:45	0	1	1	0	0	0	2	2	0	1	0	0	0	0	1	1
H/TOT	0	4	1	1	1	0	7	8.8	0	5	2	0	0	0	7	7
05:00	0	2	1	0	0	0	3	3	0	3	0	0	0	0	3	3
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05:45	0	6	1	1	0	0	8	8.5	0	5	0	0	0	0	5	5
H/TOT	0	13	2	1	0	1	17	18.5	0	14	1	1	0	0	16	16.5
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11:45	1	80	15	1	0	0	97	96.9	0	60	4	4	0	0	68	70
H/TOT	1	264	38	6	0	0	309	311.4	0	183	24	9	0	0	216	220.5
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12:45	1	72	9	2	0	0	84	84.4	2	56	10	0	0	0	68	66.8
H/TOT	1	293	42	12	0	0	348	353.4	3	196	35	8	1	0	243	246.5
13:00	0	46	10	1	0	0	57	57.5	1	51	6	2	0	0	60	60.4
13:15	0	84	8	1	2	1	96	100.1	1	44	10	1	0	0	56	55.9
13:30	0	58	12	1	0	1	72	73.5	1	43	6	0	0	0	50	49.4
13:45	1	76	8	3	2	1	91	95.5	1	51	10	0	0	0	62	61.4
H/TOT	1	264	38	6	4	3	316	326.6	4	189	32	3	0	0	228	227.1
14:00	1	63	8	4	1	0	77	79.7	0	44	7	2	0	1	54	56
14:15	0	62	11	4	0	0	77	79	0	43	14	2	0	0	59	60
14:30	2	50	12	2	0	0	66	65.8	4	44	9	1	0	0	58	56.1
14:45	1	57	6	2	0	0	66	66.4	0	37	7	2	1	0	47	49.3
H/TOT	4	232	37	12	1	0	286	290.9	4	168	37	7	1	1	218	221.4
15:00	1	69	11	1	0	0	82	81.9	0	54	5	0	0	0	59	59
15:15	1	90	11	1	0	0	103	102.9	0	45	9	3	0	0	57	58.5
15:30	4	107	12	0	0	0	123	120.6	0	45	7	2	0	0	54	55
15:45	1	84	8	5	2	0	100	104.5	0	48	6	3	0	0	57	58.5
H/TOT	7	350	42	7	2	0	408	409.9	0	192	27	8	0	0	227	231
16:00	1	106	10	2	0	0	119	119.4	0	36	9	2	0	0	47	48
16:15	0	93	16	1	0	0	110	110.5	1	47	4	2	0	0	54	54.4
16:30	1	103	11	1	0	0	116	115.9	1	57	8	1	0	0	67	66.9
16:45	1	135	15	0	0	1	152	152.4	1	52	6	1	0	0	60	59.9
H/TOT	3	437	52	4	0	1	497	498.2	3	192	27	6	0	0	228	229.2
17:00	1	134	10	0	0	0	145	144.4	0	59	8	0	0	0	67	67
17:15	0	121	9	0	1	1	132	134.3	0	67	10	0	0	0	77	77
17:30	1	135	15	0	0	0	151	150.4	0	70	10	0	0	0	80	80
17:45	0	154	8	0	0	0	162	162	1	69	8	0	0	0	78	77.4
H/TOT	2	544	42	0	1	1	590	591.1	1	265	36	0	0	0	302	301.4
18:00	2	125	22	1	0	0	150	149.3	0	50	6	0	0	0	56	56
18:15	2	116	7	0	0	0	125	123.8	1	57	3	0	0	0	61	60.4
18:30	0	97	6	2	1	0	106	108.3	1	45	6	0	0	0	52	51.4
18:45	2	77	16	1	0	0	96	95.3	3	42	7	0	0	0	52	50.2
H/TOT	6	415	51	4	1	0	477	476.7	5	194	22	0	0	0	221	218

19:00	1	76	8	0	0	0	85	84.4	0	55	6	0	0	0	61	61
19:15	0	88	13	0	0	0	101	101	1	58	13	0	0	0	72	71.4
19:30	1	56	9	0	0	0	66	65.4	0	64	6	2	0	0	72	73
19:45	1	71	9	0	0	0	81	80.4	1	51	9	2	0	0	63	63.4
H/TOT	3	291	39	0	0	0	333	331.2	2	228	34	4	0	0	268	268.8
20:00	0	63	7	1	0	0	71	71.5	2	57	5	0	0	0	64	62.8
20:15	2	56	2	0	0	0	60	58.8	2	49	9	1	0	0	61	60.3
20:30	2	42	5	0	0	0	49	47.8	0	48	3	1	0	0	52	52.5
20:45	1	43	8	0	0	0	52	51.4	0	38	5	0	0	0	43	43
H/TOT	5	204	22	1	0	0	232	229.5	4	192	22	2	0	0	220	218.6
21:00	0	48	5	0	0	0	53	53	1	27	6	1	0	0	35	34.9
21:15	1	45	4	1	0	0	51	50.9	0	38	3	0	0	0	41	41
21:30	1	48	2	0	0	0	51	50.4	3	32	1	0	1	0	37	36.5
21:45	1	32	5	0	0	0	38	37.4	1	15	3	0	0	0	19	18.4
H/TOT	3	173	16	1	0	0	193	191.7	5	112	13	1	1	0	132	130.8
22:00	1	30	4	0	0	0	35	34.4	1	26	3	0	0	0	30	29.4
22:15	1	26	2	0	0	0	29	28.4	2	20	0	0	0	0	22	20.8
22:30	0	15	1	0	0	0	16	16	0	14	1	0	0	0	15	15
22:45	2	23	3	0	0	0	28	26.8	2	14	1	0	0	0	17	15.8
H/TOT	4	94	10	0	0	0	108	105.6	5	74	5	0	0	0	84	81
23:00	1	28	3	0	0	0	32	31.4	0	4	0	0	0	0	4	4
23:15	0	12	1	0	0	0	13	13	0	6	2	0	0	0	8	8
23:30	0	7	2	0	0	0	9	9	0	7	0	0	0	0	7	7
23:45	0	14	2	0	0	0	16	16	0	10	1	0	0	0	11	11
H/TOT	1	61	8	0	0	0	70	69.4	0	27	3	0	0	0	30	30
24 TOT	42	4552	613	93	14	7	5321	5367.5	46	3242	486	74	4	2	3854	3870.6

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Wed 28-Aug-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	7	1	0	0	0	8	8	0	2	0	0	0	0	2	2
00:15	0	3	0	0	0	0	3	3	0	6	0	0	0	0	6	6
00:30	0	3	1	0	0	0	4	4	1	2	0	0	0	0	3	2.4
00:45	0	3	0	0	0	0	3	3	0	2	0	0	0	0	2	2
H/TOT	0	16	2	0	0	0	18	18	1	12	0	0	0	0	13	12.4
01:00	0	4	0	0	0	1	5	6	1	0	1	0	0	0	2	1.4
01:15	0	1	1	0	0	0	2	2	0	2	0	0	0	0	2	2
01:30	0	5	1	0	0	0	6	6	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
H/TOT	0	10	2	0	0	1	13	14	1	6	1	0	0	0	8	7.4
02:00	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1
02:15	0	5	1	0	0	0	6	6	0	1	1	0	0	0	2	2
02:30	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1
02:45	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0
H/TOT	0	9	2	0	0	0	11	11	0	1	3	0	0	0	4	4
03:00	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1
03:45	0	1	0	0	0	0	1	1	0	3	0	0	0	0	3	3
H/TOT	0	3	0	0	0	0	3	3	0	4	0	0	0	0	4	4
04:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
04:15	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
04:30	0	1	0	0	0	1	2	3	0	1	2	0	0	0	3	3
04:45	0	3	0	0	0	0	3	3	0	2	0	0	0	0	2	2
H/TOT	0	6	0	0	0	1	7	8	0	6	2	0	0	0	8	8
05:00	0	2	1	0	0	0	3	3	0	1	1	0	0	0	2	2
05:15	0	2	2	0	0	0	4	4	0	2	1	0	0	0	3	3
05:30	0	3	0	0	0	0	3	3	0	3	2	0	0	0	5	5
05:45	0	10	2	1	0	0	13	13.5	0	10	1	0	0	0	11	11
H/TOT	0	17	5	1	0	0	23	23.5	0	16	5	0	0	0	21	21
06:00	0	4	3	1	0	0	8	8.5	1	12	2	0	0	0	15	14.4
06:15	0	9	2	1	0	0	12	12.5	0	15	2	0	0	0	17	17
06:30	0	10	5	0	0	0	15	15	0	30	4	0	0	0	34	34
06:45	0	20	4	3	1	0	28	30.8	3	41	3	2	0	0	49	48.2
H/TOT	0	43	14	5	1	0	63	66.8	4	98	11	2	0	0	115	113.6
07:00	0	29	2	2	0	0	33	34	1	51	6	5	0	0	63	64.9
07:15	0	33	3	2	0	0	38	39	1	50	7	1	1	0	60	61.2
07:30	0	38	3	2	0	0	43	44	0	66	5	1	0	0	72	72.5
07:45	0	32	3	0	0	0	35	35	0	72	12	1	0	1	86	87.5
H/TOT	0	132	11	6	0	0	149	152	2	239	30	8	1	1	281	286.1

08:00	0	57	6	1	0	0	64	64.5	2	83	15	3	0	0	103	103.3
08:15	0	69	9	1	1	0	80	81.8	1	69	17	4	0	0	91	92.4
08:30	0	83	14	2	0	0	99	100	1	75	8	3	0	0	87	87.9
08:45	0	50	7	1	0	0	58	58.5	0	79	10	1	0	0	90	90.5
H/TOT	0	259	36	5	1	0	301	304.8	4	306	50	11	0	0	371	374.1
09:00	0	53	11	2	1	0	67	69.3	1	64	5	1	1	1	73	75.2
09:15	1	63	14	0	0	0	78	77.4	1	57	11	1	0	0	70	69.9
09:30	0	46	14	1	0	0	61	61.5	1	51	11	0	0	0	63	62.4
09:45	0	57	13	4	1	1	76	80.3	1	36	8	0	1	0	46	46.7
H/TOT	1	219	52	7	2	1	282	288.5	4	208	35	2	2	1	252	254.2
10:00	0	44	6	3	0	0	53	54.5	1	45	9	1	0	0	56	55.9
10:15	1	49	12	2	0	0	64	64.4	1	36	13	1	1	1	53	55.2
10:30	0	56	14	1	0	0	71	71.5	1	40	8	3	0	0	52	52.9
10:45	3	65	11	4	1	0	84	85.5	0	49	8	1	0	0	58	58.5
H/TOT	4	214	43	10	1	0	272	275.9	3	170	38	6	1	1	219	222.5
11:00	0	47	8	1	0	0	56	56.5	0	41	8	5	0	0	54	56.5
11:15	2	66	10	1	0	0	79	78.3	0	38	4	2	0	0	44	45
11:30	4	59	8	0	1	0	72	70.9	0	37	9	1	0	0	47	47.5
11:45	1	57	13	6	0	0	77	79.4	2	59	7	1	0	0	69	68.3
H/TOT	7	229	39	8	1	0	284	285.1	2	175	28	9	0	0	214	217.3
12:00	0	71	10	1	1	0	83	84.8	0	55	7	3	1	0	66	68.8
12:15	1	78	11	1	0	2	93	94.9	0	50	9	3	0	0	62	63.5
12:30	1	68	12	4	0	0	85	86.4	1	47	10	0	0	0	58	57.4
12:45	1	70	9	4	0	0	84	85.4	2	48	6	1	0	0	57	56.3
H/TOT	3	287	42	10	1	2	345	351.5	3	200	32	7	1	0	243	246
13:00	1	66	18	4	0	0	89	90.4	0	51	6	1	0	0	58	58.5
13:15	0	69	8	2	0	0	79	80	1	62	11	2	1	0	77	78.7
13:30	3	71	5	0	0	0	79	77.2	2	52	8	2	0	0	64	63.8
13:45	1	65	11	3	0	0	80	80.9	0	70	12	1	0	0	83	83.5
H/TOT	5	271	42	9	0	0	327	328.5	3	235	37	6	1	0	282	284.5
14:00	1	65	15	5	2	0	88	92.5	1	45	9	2	0	0	57	57.4
14:15	1	56	14	0	0	0	71	70.4	0	45	10	3	0	0	58	59.5
14:30	0	68	10	1	0	0	79	79.5	1	43	12	3	2	0	61	64.5
14:45	2	62	11	2	0	0	77	76.8	0	50	11	2	0	0	63	64
H/TOT	4	251	50	8	2	0	315	319.2	2	183	42	10	2	0	239	245.4
15:00	2	74	13	1	1	0	91	91.6	0	63	10	0	0	0	73	73
15:15	0	75	7	0	1	0	83	84.3	0	40	11	0	0	0	51	51
15:30	2	99	12	1	0	0	114	113.3	1	49	7	1	0	0	58	57.9
15:45	0	100	14	1	0	1	116	117.5	0	50	7	2	1	0	60	62.3
H/TOT	4	348	46	3	2	1	404	406.7	1	202	35	3	1	0	242	244.2
16:00	1	112	18	3	0	0	134	134.9	2	52	11	2	0	0	67	66.8
16:15	0	113	14	4	0	0	131	133	0	45	6	1	0	0	52	52.5
16:30	1	102	13	0	0	0	116	115.4	0	53	5	0	1	0	59	60.3
16:45	1	114	10	0	1	0	126	126.7	3	60	15	2	0	0	80	79.2
H/TOT	3	441	55	7	1	0	507	510	5	210	37	5	1	0	258	258.8
17:00	1	140	11	3	0	0	155	155.9	0	62	5	0	0	0	67	67
17:15	2	133	12	2	1	0	150	151.1	3	63	10	0	0	0	76	74.2
17:30	0	138	12	1	3	0	154	158.4	1	65	10	0	0	0	76	75.4
17:45	1	134	11	3	0	0	149	149.9	2	66	12	2	0	0	82	81.8
H/TOT	4	545	46	9	4	0	608	615.3	6	256	37	2	0	0	301	298.4
18:00	2	108	18	3	0	0	131	131.3	1	55	6	0	0	0	62	61.4
18:15	3	100	15	3	1	0	122	123	1	48	7	0	0	0	56	55.4
18:30	1	86	9	0	0	0	96	95.4	0	46	13	0	0	0	59	59
18:45	0	86	14	1	0	0	101	101.5	0	59	10	1	0	0	70	70.5
H/TOT	6	380	56	7	1	0	450	451.2	2	208	36	1	0	0	247	246.3

19:00	1	82	7	0	0	0	90	89.4	1	40	6	1	0	0	48	47.9
19:15	0	65	7	0	0	0	72	72	0	54	13	0	0	0	67	67
19:30	0	65	5	0	0	0	70	70	0	43	9	0	0	0	52	52
19:45	1	53	13	1	0	0	68	67.9	2	48	8	0	0	0	58	56.8
H/TOT	2	265	32	1	0	0	300	299.3	3	185	36	1	0	0	225	223.7
20:00	2	43	10	0	0	0	55	53.8	0	32	3	0	0	0	35	35
20:15	0	60	5	0	0	0	65	65	1	36	8	0	0	0	45	44.4
20:30	1	56	5	1	0	1	64	64.9	1	49	10	0	0	0	60	59.4
20:45	2	46	4	0	0	0	52	50.8	0	37	8	0	0	0	45	45
H/TOT	5	205	24	1	0	1	236	234.5	2	154	29	0	0	0	185	183.8
21:00	0	55	5	0	0	0	60	60	1	28	6	0	0	0	35	34.4
21:15	1	48	1	0	0	0	50	49.4	0	27	3	2	0	0	32	33
21:30	0	29	1	0	0	0	30	30	2	32	5	0	0	0	39	37.8
21:45	1	38	5	0	1	0	45	45.7	2	23	5	0	0	0	30	28.8
H/TOT	2	170	12	0	1	0	185	185.1	5	110	19	2	0	0	136	134
22:00	0	30	2	0	0	0	32	32	0	17	2	0	1	0	20	21.3
22:15	0	25	1	0	0	0	26	26	0	11	0	0	0	0	11	11
22:30	0	23	2	0	0	0	25	25	0	14	1	0	0	0	15	15
22:45	0	13	2	0	0	0	15	15	1	10	0	0	0	0	11	10.4
H/TOT	0	91	7	0	0	0	98	98	1	52	3	0	1	0	57	57.7
23:00	1	20	2	0	0	0	23	22.4	0	10	0	0	0	0	10	10
23:15	0	19	0	0	0	0	19	19	0	4	0	0	0	0	4	4
23:30	0	9	0	0	0	0	9	9	0	7	1	0	0	0	8	8
23:45	0	9	3	0	0	0	12	12	0	7	2	0	0	0	9	9
H/TOT	1	57	5	0	0	0	63	62.4	0	28	3	0	0	0	31	31
24 TOT	51	4468	623	97	18	7	5264	5312.3	54	3264	549	75	11	3	3956	3978.4

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Thu 29-Aug-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	9	0	0	0	0	9	9	0	6	1	0	0	0	7	7
00:15	0	14	2	0	0	0	16	16	0	2	0	0	0	0	2	2
00:30	0	6	1	0	0	0	7	7	0	8	0	0	0	0	8	8
00:45	0	5	0	0	0	0	5	5	0	2	0	0	0	0	2	2
H/TOT	0	34	3	0	0	0	37	37	0	18	1	0	0	0	19	19
01:00	0	3	1	0	0	0	4	4	0	2	1	0	0	0	3	3
01:15	0	3	0	0	0	0	3	3	0	1	0	0	0	0	1	1
01:30	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0
01:45	0	2	1	0	0	0	3	3	0	2	0	0	0	0	2	2
H/TOT	0	12	3	0	0	0	15	15	0	5	1	0	0	0	6	6
02:00	0	6	2	0	0	0	8	8	0	0	0	0	0	0	0	0
02:15	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	3	0	0	0	0	3	3	0	1	0	0	0	0	1	1
H/TOT	0	10	2	0	0	0	12	12	0	1	0	0	0	0	1	1
03:00	0	0	1	0	0	0	1	1	0	1	0	0	0	0	1	1
03:15	0	2	0	0	0	0	2	2	0	3	0	0	0	0	3	3
03:30	0	2	0	0	0	0	2	2	0	1	3	0	0	0	4	4
03:45	0	2	0	0	0	0	2	2	0	2	0	0	0	0	2	2
H/TOT	0	6	1	0	0	0	7	7	0	7	3	0	0	0	10	10
04:00	0	2	0	0	0	0	2	2	0	2	0	0	0	0	2	2
04:15	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1
04:30	0	4	0	0	0	0	4	4	0	3	2	0	0	0	5	5
04:45	0	1	2	0	0	0	3	3	0	2	0	1	0	0	3	3.5
H/TOT	0	8	2	0	0	0	10	10	0	8	2	1	0	0	11	11.5
05:00	0	2	0	0	0	0	2	2	0	2	2	0	0	0	4	4
05:15	0	1	0	0	0	1	2	3	1	5	0	0	0	0	6	5.4
05:30	0	4	1	0	0	0	5	5	0	5	1	0	0	0	6	6
05:45	0	9	0	0	0	0	9	9	0	7	2	0	0	0	9	9
H/TOT	0	16	1	0	0	1	18	19	1	19	5	0	0	0	25	24.4
06:00	0	8	1	1	0	0	10	10.5	1	11	3	1	0	0	16	15.9
06:15	0	10	3	2	0	0	15	16	0	25	5	0	0	0	30	30
06:30	0	15	1	0	0	0	16	16	0	23	4	0	0	0	27	27
06:45	0	21	6	1	0	0	28	28.5	1	35	6	0	0	0	42	41.4
H/TOT	0	54	11	4	0	0	69	71	2	94	18	1	0	0	115	114.3
07:00	0	23	8	1	1	0	33	34.8	0	35	4	3	0	0	42	43.5
07:15	0	23	5	2	0	0	30	31	0	55	7	3	0	0	65	66.5
07:30	0	38	3	1	0	0	42	42.5	1	66	11	2	0	0	80	80.4
07:45	0	43	4	0	0	1	48	49	1	79	18	2	1	1	102	104.7
H/TOT	0	127	20	4	1	1	153	157.3	2	235	40	10	1	1	289	295.1

08:00	0	75	8	0	0	0	83	83	0	79	9	4	0	0	92	94
08:15	1	77	17	2	0	0	97	97.4	0	75	17	0	0	0	92	92
08:30	0	88	13	3	1	0	105	107.8	2	81	13	3	1	0	100	101.6
08:45	0	70	18	3	0	0	91	92.5	1	79	9	2	0	0	91	91.4
H/TOT	1	310	56	8	1	0	376	380.7	3	314	48	9	1	0	375	379
09:00	0	68	17	2	0	0	87	88	1	61	12	1	0	0	75	74.9
09:15	1	51	12	2	0	0	66	66.4	2	63	15	7	1	0	88	91.6
09:30	0	42	12	0	0	0	54	54	0	50	14	2	0	0	66	67
09:45	0	48	10	1	1	0	60	61.8	1	57	11	3	1	1	74	77.2
H/TOT	1	209	51	5	1	0	267	270.2	4	231	52	13	2	1	303	310.7
10:00	0	58	8	2	1	0	69	71.3	0	44	10	2	0	0	56	57
10:15	0	40	7	3	0	0	50	51.5	0	42	6	2	0	0	50	51
10:30	0	50	19	5	0	0	74	76.5	0	36	6	0	0	0	42	42
10:45	0	55	15	3	1	0	74	76.8	0	41	10	2	0	0	53	54
H/TOT	0	203	49	13	2	0	267	276.1	0	163	32	6	0	0	201	204
11:00	0	49	7	1	0	0	57	57.5	0	48	10	3	0	0	61	62.5
11:15	0	44	12	2	0	0	58	59	1	35	15	1	1	0	53	54.2
11:30	0	50	16	7	2	1	76	83.1	1	41	8	1	0	0	51	50.9
11:45	0	66	7	3	0	0	76	77.5	1	51	10	1	1	0	64	65.2
H/TOT	0	209	42	13	2	1	267	277.1	3	175	43	6	2	0	229	232.8
12:00	2	63	12	0	1	0	78	78.1	0	47	3	2	0	0	52	53
12:15	1	56	13	6	0	0	76	78.4	1	41	8	1	0	0	51	50.9
12:30	1	72	9	4	1	0	87	89.7	0	47	15	1	0	0	63	63.5
12:45	2	59	10	2	0	0	73	72.8	2	61	10	2	1	0	76	77.1
H/TOT	6	250	44	12	2	0	314	319	3	196	36	6	1	0	242	244.5
13:00	1	71	8	0	1	0	81	81.7	1	36	10	3	0	0	50	50.9
13:15	1	64	11	1	1	0	78	79.2	0	61	10	2	0	0	73	74
13:30	2	85	16	3	0	1	107	108.3	0	44	14	0	0	0	58	58
13:45	1	65	15	0	1	0	82	82.7	0	49	11	4	1	1	66	70.3
H/TOT	5	285	50	4	3	1	348	351.9	1	190	45	9	1	1	247	253.2
14:00	0	70	7	1	0	0	78	78.5	0	57	9	2	0	0	68	69
14:15	0	76	14	4	0	0	94	96	1	58	8	1	0	0	68	67.9
14:30	1	81	15	3	0	0	100	100.9	0	51	13	4	0	0	68	70
14:45	2	67	13	5	0	0	87	88.3	0	55	8	2	0	0	65	66
H/TOT	3	294	49	13	0	0	359	363.7	1	221	38	9	0	0	269	272.9
15:00	0	71	14	2	2	0	89	92.6	0	56	6	1	0	0	63	63.5
15:15	0	72	12	2	2	0	88	91.6	0	43	7	2	0	0	52	53
15:30	0	76	13	2	0	0	91	92	0	52	11	3	0	0	66	67.5
15:45	0	101	16	3	2	0	122	126.1	0	62	8	4	0	0	74	76
H/TOT	0	320	55	9	6	0	390	402.3	0	213	32	10	0	0	255	260
16:00	1	83	10	0	0	0	94	93.4	2	53	8	1	0	0	64	63.3
16:15	1	113	15	0	2	0	131	133	1	44	17	0	0	0	62	61.4
16:30	2	107	11	3	0	0	123	123.3	1	65	12	0	0	0	78	77.4
16:45	3	99	18	2	0	0	122	121.2	0	59	14	0	1	0	74	75.3
H/TOT	7	402	54	5	2	0	470	470.9	4	221	51	1	1	0	278	277.4
17:00	2	108	11	1	1	0	123	123.6	2	59	7	0	0	0	68	66.8
17:15	2	154	16	0	1	0	173	173.1	0	43	10	0	0	0	53	53
17:30	2	145	20	4	0	0	171	171.8	0	51	8	0	0	0	59	59
17:45	1	126	13	0	0	0	140	139.4	0	70	8	0	0	0	78	78
H/TOT	7	533	60	5	2	0	607	607.9	2	223	33	0	0	0	258	256.8
18:00	2	107	17	1	0	0	127	126.3	1	61	9	0	0	0	71	70.4
18:15	3	108	17	0	0	0	128	126.2	1	45	6	0	1	0	53	53.7
18:30	1	82	9	1	1	0	94	95.2	1	57	7	0	1	0	66	66.7
18:45	1	86	16	0	0	0	103	102.4	1	49	6	1	0	0	57	56.9
H/TOT	7	383	59	2	1	0	452	450.1	4	212	28	1	2	0	247	247.7

19:00	1	73	12	1	0	0	87	86.9	1	42	7	0	0	0	50	49.4
19:15	0	73	2	0	0	0	75	75	0	53	4	0	0	0	57	57
19:30	2	49	5	1	0	0	57	56.3	0	44	9	0	0	0	53	53
19:45	4	67	6	2	1	0	80	79.9	0	45	5	0	0	0	50	50
H/TOT	7	262	25	4	1	0	299	298.1	1	184	25	0	0	0	210	209.4
20:00	1	48	4	2	0	0	55	55.4	0	43	8	0	0	0	51	51
20:15	1	54	5	0	0	0	60	59.4	3	30	4	0	0	0	37	35.2
20:30	0	46	7	0	0	0	53	53	1	29	5	0	0	0	35	34.4
20:45	1	47	5	0	0	0	53	52.4	1	26	4	0	0	0	31	30.4
H/TOT	3	195	21	2	0	0	221	220.2	5	128	21	0	0	0	154	151
21:00	1	57	4	0	0	0	62	61.4	1	44	2	0	0	0	47	46.4
21:15	1	43	7	0	0	0	51	50.4	0	32	3	0	0	0	35	35
21:30	3	36	0	0	0	0	39	37.2	1	20	5	0	1	0	27	27.7
21:45	0	35	4	2	0	0	41	42	0	22	2	0	0	0	24	24
H/TOT	5	171	15	2	0	0	193	191	2	118	12	0	1	0	133	133.1
22:00	0	30	2	0	0	0	32	32	0	17	4	0	0	0	21	21
22:15	0	24	4	0	0	0	28	28	1	11	3	0	0	0	15	14.4
22:30	0	26	1	0	0	0	27	27	0	13	2	0	0	0	15	15
22:45	0	22	1	0	0	0	23	23	0	10	4	0	0	0	14	14
H/TOT	0	102	8	0	0	0	110	110	1	51	13	0	0	0	65	64.4
23:00	1	24	0	0	0	0	25	24.4	0	9	1	0	0	0	10	10
23:15	0	11	1	0	0	0	12	12	0	6	1	0	0	0	7	7
23:30	0	13	2	0	0	0	15	15	0	10	0	0	0	0	10	10
23:45	0	15	2	0	0	0	17	17	0	8	0	0	0	0	8	8
H/TOT	1	63	5	0	0	0	69	68.4	0	33	2	0	0	0	35	35
24 TOT	53	4458	686	105	24	4	5330	5385.9	39	3260	581	82	12	3	3977	4013.2

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Fri 30-Aug-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	19	0	0	0	0	19	19	0	13	0	0	0	0	13	13
00:15	0	11	1	0	0	0	12	12	0	6	1	0	0	0	7	7
00:30	0	13	0	0	0	0	13	13	0	6	0	0	0	0	6	6
00:45	0	6	1	0	0	0	7	7	0	3	0	0	0	0	3	3
H/TOT	0	49	2	0	0	0	51	51	0	28	1	0	0	0	29	29
01:00	0	5	1	0	0	0	6	6	0	2	1	0	0	0	3	3
01:15	0	5	1	0	0	0	6	6	0	2	1	0	0	0	3	3
01:30	0	8	1	0	0	0	9	9	0	0	0	0	0	0	0	0
01:45	0	3	2	0	0	0	5	5	0	2	0	0	0	0	2	2
H/TOT	0	21	5	0	0	0	26	26	0	6	2	0	0	0	8	8
02:00	0	5	0	0	0	0	5	5	0	1	0	0	0	0	1	1
02:15	0	2	1	0	0	0	3	3	0	1	2	0	0	0	3	3
02:30	0	7	1	0	0	0	8	8	0	0	0	0	0	0	0	0
02:45	0	1	1	0	0	0	2	2	0	1	0	0	0	0	1	1
H/TOT	0	15	3	0	0	0	18	18	0	3	2	0	0	0	5	5
03:00	0	3	0	0	0	0	3	3	0	2	0	0	0	0	2	2
03:15	0	2	1	0	0	0	3	3	0	2	1	0	0	0	3	3
03:30	0	2	0	0	0	0	2	2	0	1	1	0	0	0	2	2
03:45	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1
H/TOT	0	8	1	0	0	0	9	9	0	6	2	0	0	0	8	8
04:00	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
04:15	0	1	0	0	0	1	2	3	0	1	0	0	0	0	1	1
04:30	0	0	1	0	0	0	1	1	0	3	0	0	0	0	3	3
04:45	0	1	0	0	0	0	1	1	0	2	2	1	0	0	5	5.5
H/TOT	0	3	1	0	0	1	5	6	0	6	2	1	0	0	9	9.5
05:00	1	4	1	0	0	0	6	5.4	0	1	1	1	0	0	3	3.5
05:15	0	1	0	2	0	0	3	4	0	4	0	0	0	0	4	4
05:30	0	1	0	1	0	0	2	2.5	1	3	0	0	0	0	4	3.4
05:45	0	4	1	0	0	0	5	5	0	4	1	0	0	0	5	5
H/TOT	1	10	2	3	0	0	16	16.9	1	12	2	1	0	0	16	15.9
06:00	0	8	2	0	0	0	10	10	0	13	1	0	0	0	14	14
06:15	0	12	2	1	0	0	15	15.5	1	12	6	0	0	0	19	18.4
06:30	0	11	2	0	0	1	14	15	0	17	2	0	0	0	19	19
06:45	0	16	7	1	0	0	24	24.5	2	22	6	0	0	0	30	28.8
H/TOT	0	47	13	2	0	1	63	65	3	64	15	0	0	0	82	80.2
07:00	0	15	4	3	0	1	23	25.5	0	32	2	2	0	0	36	37
07:15	0	24	4	1	1	0	30	31.8	0	52	11	3	0	0	66	67.5
07:30	1	32	8	0	0	0	41	40.4	1	58	8	0	1	0	68	68.7
07:45	0	48	4	2	0	0	54	55	1	67	12	1	0	1	82	82.9
H/TOT	1	119	20	6	1	1	148	152.7	2	209	33	6	1	1	252	256.1

08:00	0	69	10	1	0	0	80	80.5	1	73	11	2	0	0	87	87.4
08:15	0	98	10	3	0	0	111	112.5	0	66	14	4	0	0	84	86
08:30	0	96	15	2	1	0	114	116.3	0	64	12	2	0	0	78	79
08:45	0	73	12	4	0	0	89	91	0	71	13	2	0	0	86	87
H/TOT	0	336	47	10	1	0	394	400.3	1	274	50	10	0	0	335	339.4
09:00	0	38	11	1	0	0	50	50.5	3	58	12	1	0	0	74	72.7
09:15	0	49	10	3	0	0	62	63.5	0	36	10	2	0	0	48	49
09:30	0	41	13	3	0	1	58	60.5	0	37	8	3	0	0	48	49.5
09:45	2	58	11	2	0	0	73	72.8	1	37	6	3	0	0	47	47.9
H/TOT	2	186	45	9	0	1	243	247.3	4	168	36	9	0	0	217	219.1
10:00	0	56	14	5	0	0	75	77.5	0	40	5	1	1	0	47	48.8
10:15	1	51	10	3	0	0	65	65.9	0	40	13	1	1	0	55	56.8
10:30	0	45	9	1	1	1	57	59.8	0	40	10	1	0	0	51	51.5
10:45	1	53	12	3	0	0	69	69.9	0	48	13	1	0	0	62	62.5
H/TOT	2	205	45	12	1	1	266	273.1	0	168	41	4	2	0	215	219.6
11:00	0	65	7	4	0	0	76	78	1	58	12	1	0	0	72	71.9
11:15	0	54	9	3	0	0	66	67.5	0	52	15	2	0	0	69	70
11:30	1	60	7	4	0	0	72	73.4	0	46	15	2	0	0	63	64
11:45	0	67	9	5	0	0	81	83.5	0	52	10	1	0	0	63	63.5
H/TOT	1	246	32	16	0	0	295	302.4	1	208	52	6	0	0	267	269.4
12:00	1	66	12	5	0	0	84	85.9	2	52	11	1	1	0	67	67.6
12:15	1	61	12	0	0	0	74	73.4	0	51	9	1	0	0	61	61.5
12:30	1	76	13	3	0	0	93	93.9	1	68	17	3	0	0	89	89.9
12:45	0	72	15	4	1	0	92	95.3	2	56	8	0	0	0	66	64.8
H/TOT	3	275	52	12	1	0	343	348.5	5	227	45	5	1	0	283	283.8
13:00	2	74	9	3	1	0	89	90.6	2	73	5	7	0	0	87	89.3
13:15	1	62	15	5	1	0	84	87.2	1	58	9	2	0	0	70	70.4
13:30	2	81	8	1	0	0	92	91.3	2	52	9	1	0	0	64	63.3
13:45	3	94	22	2	0	0	121	120.2	0	70	8	3	0	0	81	82.5
H/TOT	8	311	54	11	2	0	386	389.3	5	253	31	13	0	0	302	305.5
14:00	4	80	15	0	0	0	99	96.6	1	55	12	2	0	0	70	70.4
14:15	2	85	15	6	0	0	108	109.8	0	50	14	3	0	0	67	68.5
14:30	0	89	16	0	0	0	105	105	0	54	12	0	0	1	67	68
14:45	1	76	14	3	0	0	94	94.9	0	72	8	2	0	0	82	83
H/TOT	7	330	60	9	0	0	406	406.3	1	231	46	7	0	1	286	289.9
15:00	0	85	18	2	0	0	105	106	0	63	10	1	0	0	74	74.5
15:15	0	106	17	5	0	0	128	130.5	1	55	11	1	0	0	68	67.9
15:30	1	93	19	1	2	0	116	118.5	1	54	8	0	1	0	64	64.7
15:45	1	108	13	3	0	0	125	125.9	1	50	12	0	0	0	63	62.4
H/TOT	2	392	67	11	2	0	474	480.9	3	222	41	2	1	0	269	269.5
16:00	3	106	11	3	1	0	124	125	0	57	12	2	0	0	71	72
16:15	0	105	14	1	2	0	122	125.1	0	48	10	1	0	0	59	59.5
16:30	1	102	12	2	1	0	118	119.7	0	64	8	0	0	0	72	72
16:45	1	108	13	2	0	0	124	124.4	2	55	8	3	1	0	69	70.6
H/TOT	5	421	50	8	4	0	488	494.2	2	224	38	6	1	0	271	274.1
17:00	1	114	10	1	0	0	126	125.9	0	59	7	0	0	0	66	66
17:15	4	110	14	2	1	1	132	132.9	1	61	7	1	0	0	70	69.9
17:30	1	99	9	1	0	0	110	109.9	1	66	2	0	0	0	69	68.4
17:45	0	97	10	0	0	0	107	107	0	57	8	0	0	0	65	65
H/TOT	6	420	43	4	1	1	475	475.7	2	243	24	1	0	0	270	269.3
18:00	0	81	7	0	0	1	89	90	1	51	11	0	0	0	63	62.4
18:15	2	76	12	1	1	0	92	92.6	3	47	12	0	0	0	62	60.2
18:30	0	73	10	0	1	0	84	85.3	0	59	10	0	0	0	69	69
18:45	3	77	5	0	1	0	86	85.5	2	48	7	1	1	0	59	59.6
H/TOT	5	307	34	1	3	1	351	353.4	6	205	40	1	1	0	253	251.2

19:00	1	82	9	0	0	0	92	91.4	2	49	2	0	0	0	53	51.8
19:15	1	66	3	0	0	0	70	69.4	1	54	7	0	0	0	62	61.4
19:30	3	57	11	0	1	0	72	71.5	1	52	9	1	0	0	63	62.9
19:45	3	53	4	1	0	0	61	59.7	2	52	7	1	0	0	62	61.3
H/TOT	8	258	27	1	1	0	295	292	6	207	25	2	0	0	240	237.4
20:00	1	53	1	0	0	0	55	54.4	1	54	5	0	0	0	60	59.4
20:15	0	65	5	0	0	0	70	70	1	45	5	0	0	0	51	50.4
20:30	0	44	4	0	0	0	48	48	2	23	1	0	0	0	26	24.8
20:45	2	45	8	2	1	0	58	59.1	1	28	4	0	0	0	33	32.4
H/TOT	3	207	18	2	1	0	231	231.5	5	150	15	0	0	0	170	167
21:00	2	30	1	0	0	0	33	31.8	0	36	6	1	1	0	44	45.8
21:15	0	35	1	0	0	0	36	36	1	22	5	0	0	0	28	27.4
21:30	1	39	5	0	0	0	45	44.4	1	24	6	0	0	0	31	30.4
21:45	0	45	3	0	0	0	48	48	3	20	1	0	0	0	24	22.2
H/TOT	3	149	10	0	0	0	162	160.2	5	102	18	1	1	0	127	125.8
22:00	1	33	3	0	1	0	38	38.7	1	27	1	0	0	0	29	28.4
22:15	2	32	2	0	0	0	36	34.8	2	20	2	0	0	0	24	22.8
22:30	1	24	2	0	0	0	27	26.4	0	13	1	0	0	0	14	14
22:45	0	21	2	0	0	0	23	23	0	18	2	0	0	0	20	20
H/TOT	4	110	9	0	1	0	124	122.9	3	78	6	0	0	0	87	85.2
23:00	0	20	3	0	0	0	23	23	1	17	2	0	0	0	20	19.4
23:15	0	13	3	0	0	0	16	16	0	9	3	0	0	0	12	12
23:30	0	19	2	0	0	0	21	21	0	8	1	0	0	0	9	9
23:45	0	28	1	0	0	0	29	29	0	18	2	0	0	0	20	20
H/TOT	0	80	9	0	0	0	89	89	1	52	8	0	0	0	61	60.4
24 TOT	61	4505	649	117	19	7	5358	5411.6	56	3346	575	75	8	2	4062	4078.3

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Sat 31-Aug-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	24	1	0	0	0	25	25	0	13	0	0	0	0	13	13
00:15	0	17	1	0	0	0	18	18	0	10	1	0	0	0	11	11
00:30	0	13	2	0	0	0	15	15	1	14	1	0	0	0	16	15.4
00:45	0	12	1	0	0	0	13	13	0	6	0	0	0	0	6	6
H/TOT	0	66	5	0	0	0	71	71	1	43	2	0	0	0	46	45.4
01:00	0	6	2	0	0	0	8	8	0	10	1	0	0	0	11	11
01:15	0	16	2	0	0	0	18	18	0	5	1	0	0	0	6	6
01:30	0	10	0	0	0	0	10	10	0	10	0	0	0	0	10	10
01:45	0	10	0	0	0	0	10	10	0	4	0	0	0	0	4	4
H/TOT	0	42	4	0	0	0	46	46	0	29	2	0	0	0	31	31
02:00	0	8	1	0	0	0	9	9	0	3	0	0	0	0	3	3
02:15	0	16	0	0	0	0	16	16	0	4	2	0	0	0	6	6
02:30	0	7	2	0	0	0	9	9	0	4	1	0	0	0	5	5
02:45	0	4	0	0	0	0	4	4	0	1	2	0	0	0	3	3
H/TOT	0	35	3	0	0	0	38	38	0	12	5	0	0	0	17	17
03:00	0	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1
03:15	0	4	0	0	0	0	4	4	0	3	1	0	0	0	4	4
03:30	0	7	0	0	0	0	7	7	0	4	1	0	0	0	5	5
03:45	0	6	0	0	0	0	6	6	0	4	0	0	0	0	4	4
H/TOT	0	18	0	0	0	0	18	18	0	12	2	0	0	0	14	14
04:00	0	5	0	0	0	0	5	5	0	1	0	0	0	0	1	1
04:15	0	2	0	0	0	0	2	2	0	2	1	0	0	0	3	3
04:30	0	1	0	0	0	0	1	1	0	2	0	1	0	0	3	3.5
04:45	0	4	1	0	0	0	5	5	0	1	0	0	0	0	1	1
H/TOT	0	12	1	0	0	0	13	13	0	6	1	1	0	0	8	8.5
05:00	0	2	0	0	0	0	2	2	0	4	0	0	0	0	4	4
05:15	0	1	0	1	0	0	2	2.5	0	1	0	0	0	0	1	1
05:30	0	2	0	1	0	0	3	3.5	0	3	0	1	0	0	4	4.5
05:45	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0
H/TOT	0	8	1	2	0	0	11	12	0	8	0	1	0	0	9	9.5
06:00	0	5	0	0	0	0	5	5	1	5	0	1	0	0	7	6.9
06:15	0	6	0	1	0	0	7	7.5	0	5	1	0	0	0	6	6
06:30	0	9	1	2	0	0	12	13	0	7	0	1	0	0	8	8.5
06:45	0	7	1	1	0	0	9	9.5	0	3	0	0	0	0	3	3
H/TOT	0	27	2	4	0	0	33	35	1	20	1	2	0	0	24	24.4
07:00	0	11	0	0	0	0	11	11	0	5	3	0	0	0	8	8
07:15	0	9	2	1	0	0	12	12.5	0	9	2	0	0	0	11	11
07:30	0	16	3	0	0	0	19	19	1	20	0	0	0	0	21	20.4
07:45	0	17	7	0	0	0	24	24	0	13	3	2	0	0	18	19
H/TOT	0	53	12	1	0	0	66	66.5	1	47	8	2	0	0	58	58.4

08:00	0	15	0	1	0	0	16	16.5	0	13	2	3	0	0	18	19.5
08:15	0	27	6	2	0	0	35	36	0	22	2	4	0	0	28	30
08:30	1	26	6	2	0	0	35	35.4	0	19	8	2	0	0	29	30
08:45	0	34	4	1	0	0	39	39.5	0	34	2	1	0	0	37	37.5
H/TOT	1	102	16	6	0	0	125	127.4	0	88	14	10	0	0	112	117
09:00	0	45	6	4	0	0	55	57	0	24	0	1	0	0	25	25.5
09:15	0	50	3	1	0	0	54	54.5	0	45	9	0	0	0	54	54
09:30	0	76	10	2	0	0	88	89	1	37	6	1	0	0	45	44.9
09:45	0	61	10	0	0	0	71	71	0	48	5	0	0	0	53	53
H/TOT	0	232	29	7	0	0	268	271.5	1	154	20	2	0	0	177	177.4
10:00	1	69	8	3	0	1	82	83.9	1	43	7	0	0	0	51	50.4
10:15	0	64	6	1	0	0	71	71.5	0	47	9	0	0	0	56	56
10:30	0	84	11	1	1	0	97	98.8	0	79	5	1	0	0	85	85.5
10:45	1	70	6	0	0	0	77	76.4	1	62	6	0	0	0	69	68.4
H/TOT	2	287	31	5	1	1	327	330.6	2	231	27	1	0	0	261	260.3
11:00	0	74	6	0	0	0	80	80	1	74	9	0	0	0	84	83.4
11:15	2	89	17	2	0	0	110	109.8	0	60	10	0	0	0	70	70
11:30	1	97	12	0	0	0	110	109.4	4	65	7	2	1	0	79	78.9
11:45	0	122	12	0	0	0	134	134	1	60	6	0	0	0	67	66.4
H/TOT	3	382	47	2	0	0	434	433.2	6	259	32	2	1	0	300	298.7
12:00	0	93	8	1	1	0	103	104.8	0	72	8	0	0	0	80	80
12:15	2	101	13	2	0	0	118	117.8	0	74	12	1	0	0	87	87.5
12:30	1	117	15	1	0	0	134	133.9	1	58	7	1	0	0	67	66.9
12:45	0	100	8	0	0	0	108	108	1	71	8	1	0	1	82	82.9
H/TOT	3	411	44	4	1	0	463	464.5	2	275	35	3	0	1	316	317.3
13:00	0	92	12	3	0	1	108	110.5	0	54	8	1	1	0	64	65.8
13:15	1	83	12	1	0	0	97	96.9	1	65	8	1	0	0	75	74.9
13:30	0	103	16	1	1	0	121	122.8	1	49	9	1	0	0	60	59.9
13:45	2	126	5	3	0	0	136	136.3	2	77	10	0	0	0	89	87.8
H/TOT	3	404	45	8	1	1	462	466.5	4	245	35	3	1	0	288	288.4
14:00	2	115	11	1	1	1	131	132.6	1	41	6	0	0	0	48	47.4
14:15	0	118	16	1	1	0	136	137.8	0	59	7	1	0	0	67	67.5
14:30	1	99	11	2	0	0	113	113.4	3	68	6	1	1	0	79	79
14:45	1	120	10	2	0	0	133	133.4	0	73	11	0	0	0	84	84
H/TOT	4	452	48	6	2	1	513	517.2	4	241	30	2	1	0	278	277.9
15:00	2	116	15	2	0	0	135	134.8	2	78	9	0	0	0	89	87.8
15:15	0	80	10	1	0	0	91	91.5	0	61	9	0	0	0	70	70
15:30	1	94	11	1	1	0	108	109.2	0	62	11	0	0	0	73	73
15:45	0	79	7	0	0	0	86	86	1	74	14	0	0	0	89	88.4
H/TOT	3	369	43	4	1	0	420	421.5	3	275	43	0	0	0	321	319.2
16:00	0	70	12	0	0	0	82	82	0	73	10	0	0	0	83	83
16:15	0	74	9	0	0	0	83	83	2	46	9	1	0	0	58	57.3
16:30	2	78	8	0	0	0	88	86.8	0	57	11	0	0	0	68	68
16:45	0	80	8	0	1	0	89	90.3	1	49	9	0	0	0	59	58.4
H/TOT	2	302	37	0	1	0	342	342.1	3	225	39	1	0	0	268	266.7
17:00	0	55	4	0	1	1	61	63.3	1	44	6	0	0	0	51	50.4
17:15	3	103	8	0	0	0	114	112.2	0	47	5	0	0	0	52	52
17:30	3	85	6	2	2	1	99	101.8	2	50	6	0	0	0	58	56.8
17:45	0	73	5	0	0	0	78	78	0	51	8	0	1	0	60	61.3
H/TOT	6	316	23	2	3	2	352	355.3	3	192	25	0	1	0	221	220.5
18:00	1	76	6	0	0	0	83	82.4	1	51	11	0	0	0	63	62.4
18:15	1	91	11	1	0	0	104	103.9	2	44	8	0	0	0	54	52.8
18:30	3	59	4	1	0	0	67	65.7	4	42	7	0	0	0	53	50.6
18:45	1	60	8	0	0	0	69	68.4	1	46	9	0	0	0	56	55.4
H/TOT	6	286	29	2	0	0	323	320.4	8	183	35	0	0	0	226	221.2

19:00	2	67	7	0	0	0	76	74.8	1	36	12	0	0	0	49	48.4
19:15	2	72	5	0	0	0	79	77.8	0	48	4	0	0	0	52	52
19:30	2	48	7	1	0	0	58	57.3	1	46	4	0	0	0	51	50.4
19:45	2	50	4	0	0	0	56	54.8	0	42	4	0	0	0	46	46
H/TOT	8	237	23	1	0	0	269	264.7	2	172	24	0	0	0	198	196.8
20:00	1	31	4	0	0	0	36	35.4	1	44	4	0	0	0	49	48.4
20:15	0	43	4	0	0	0	47	47	0	24	2	1	0	0	27	27.5
20:30	0	38	3	0	0	0	41	41	1	31	3	0	0	0	35	34.4
20:45	0	46	2	0	0	0	48	48	0	31	4	0	0	0	35	35
H/TOT	1	158	13	0	0	0	172	171.4	2	130	13	1	0	0	146	145.3
21:00	3	45	3	0	0	0	51	49.2	1	21	6	1	0	0	29	28.9
21:15	1	34	3	0	0	0	38	37.4	0	20	3	0	0	0	23	23
21:30	1	40	1	0	0	0	42	41.4	2	20	0	0	0	0	22	20.8
21:45	0	28	1	0	0	0	29	29	0	12	4	0	0	0	16	16
H/TOT	5	147	8	0	0	0	160	157	3	73	13	1	0	0	90	88.7
22:00	1	20	2	0	0	0	23	22.4	1	13	1	0	0	0	15	14.4
22:15	0	36	2	0	0	0	38	38	0	15	1	0	0	0	16	16
22:30	0	30	1	0	0	0	31	31	0	22	1	0	0	0	23	23
22:45	1	27	0	0	0	0	28	27.4	1	12	2	0	0	0	15	14.4
H/TOT	2	113	5	0	0	0	120	118.8	2	62	5	0	0	0	69	67.8
23:00	0	32	2	0	0	0	34	34	0	18	2	0	0	0	20	20
23:15	0	26	3	0	0	0	29	29	0	8	3	0	0	0	11	11
23:30	0	16	2	0	0	0	18	18	1	9	3	0	0	0	13	12.4
23:45	0	20	1	0	0	0	21	21	0	9	0	0	0	0	9	9
H/TOT	0	94	8	0	0	0	102	102	1	44	8	0	0	0	53	52.4
24 TOT	49	4553	477	54	10	5	5148	5163.6	49	3026	419	32	4	1	3531	3523.8

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Sun 01-Sep-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	16	1	0	0	0	17	17	1	15	0	0	0	0	16	15.4
00:15	0	11	0	0	0	0	11	11	1	6	1	0	0	0	8	7.4
00:30	0	23	1	0	0	0	24	24	1	17	1	0	0	0	19	18.4
00:45	0	10	2	0	0	0	12	12	0	10	0	0	0	0	10	10
H/TOT	0	60	4	0	0	0	64	64	3	48	2	0	0	0	53	51.2
01:00	0	9	5	0	0	0	14	14	0	8	0	0	0	0	8	8
01:15	0	15	1	0	0	1	17	18	0	10	2	0	0	0	12	12
01:30	0	19	0	0	0	0	19	19	0	7	0	0	0	0	7	7
01:45	0	9	3	0	0	0	12	12	0	8	1	0	0	0	9	9
H/TOT	0	52	9	0	0	1	62	63	0	33	3	0	0	0	36	36
02:00	0	10	0	0	0	0	10	10	0	9	1	0	0	0	10	10
02:15	0	9	1	0	0	0	10	10	0	3	0	0	0	0	3	3
02:30	0	2	1	0	0	0	3	3	0	4	1	0	0	0	5	5
02:45	0	10	0	1	0	0	11	11.5	0	7	0	0	0	0	7	7
H/TOT	0	31	2	1	0	0	34	34.5	0	23	2	0	0	0	25	25
03:00	0	7	0	0	0	0	7	7	0	6	4	0	0	0	10	10
03:15	0	5	1	0	0	0	6	6	0	2	0	0	0	0	2	2
03:30	0	2	0	0	0	0	2	2	0	3	0	0	0	0	3	3
03:45	0	6	1	0	0	0	7	7	0	2	1	0	0	0	3	3
H/TOT	0	20	2	0	0	0	22	22	0	13	5	0	0	0	18	18
04:00	0	3	1	0	0	0	4	4	0	4	1	0	0	0	5	5
04:15	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0
04:30	0	2	0	0	0	0	2	2	0	1	0	0	0	0	1	1
04:45	0	3	0	0	0	0	3	3	0	2	2	0	0	0	4	4
H/TOT	0	12	1	0	0	0	13	13	0	7	3	0	0	0	10	10
05:00	0	2	1	0	0	0	3	3	0	2	0	0	0	0	2	2
05:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
05:30	0	3	0	0	0	0	3	3	0	2	0	0	0	0	2	2
05:45	0	3	0	0	0	0	3	3	0	3	1	0	0	0	4	4
H/TOT	0	8	2	0	0	0	10	10	0	7	1	0	0	0	8	8
06:00	0	2	0	0	0	0	2	2	0	2	0	0	0	0	2	2
06:15	0	1	1	0	0	0	2	2	0	2	1	1	0	0	4	4.5
06:30	0	2	2	0	0	0	4	4	1	5	2	0	0	0	8	7.4
06:45	0	8	1	0	0	0	9	9	0	6	1	0	0	0	7	7
H/TOT	0	13	4	0	0	0	17	17	1	15	4	1	0	0	21	20.9
07:00	0	5	0	0	0	0	5	5	0	7	1	1	0	0	9	9.5
07:15	0	9	1	0	0	0	10	10	0	7	1	0	0	0	8	8
07:30	0	4	2	0	0	0	6	6	0	8	2	0	0	0	10	10
07:45	0	16	5	0	0	0	21	21	0	18	2	0	0	0	20	20
H/TOT	0	34	8	0	0	0	42	42	0	40	6	1	0	0	47	47.5

08:00	0	10	5	1	0	0	16	16.5	0	7	5	1	0	0	13	13.5
08:15	0	17	0	0	0	0	17	17	0	12	2	0	0	0	14	14
08:30	0	18	4	0	0	0	22	22	1	15	3	0	0	0	19	18.4
08:45	1	33	5	1	0	0	40	39.9	0	22	4	0	0	0	26	26
H/TOT	1	78	14	2	0	0	95	95.4	1	56	14	1	0	0	72	71.9
09:00	0	15	5	1	0	0	21	21.5	0	20	2	1	0	0	23	23.5
09:15	0	37	8	0	0	2	47	49	0	16	2	0	0	0	18	18
09:30	0	39	5	0	0	0	44	44	1	26	5	1	0	0	33	32.9
09:45	0	45	4	0	1	0	50	51.3	0	57	2	0	0	0	59	59
H/TOT	0	136	22	1	1	2	162	165.8	1	119	11	2	0	0	133	133.4
10:00	0	54	8	1	0	0	63	63.5	0	25	6	0	0	0	31	31
10:15	0	58	6	0	0	0	64	64	0	30	3	0	0	0	33	33
10:30	0	56	4	2	0	0	62	63	0	42	5	0	0	0	47	47
10:45	0	76	6	3	0	0	85	86.5	0	29	8	1	0	0	38	38.5
H/TOT	0	244	24	6	0	0	274	277	0	126	22	1	0	0	149	149.5
11:00	0	61	10	0	0	0	71	71	0	48	6	1	0	0	55	55.5
11:15	0	60	5	2	0	0	67	68	0	34	10	0	0	0	44	44
11:30	0	66	2	0	0	0	68	68	0	55	8	1	0	0	64	64.5
11:45	1	67	3	1	0	0	72	71.9	0	64	5	0	1	0	70	71.3
H/TOT	1	254	20	3	0	0	278	278.9	0	201	29	2	1	0	233	235.3
12:00	0	78	8	0	1	0	87	88.3	1	53	9	1	0	0	64	63.9
12:15	0	104	7	1	0	0	112	112.5	1	59	6	1	0	0	67	66.9
12:30	1	87	10	2	0	0	100	100.4	0	59	6	0	0	0	65	65
12:45	1	97	7	0	0	0	105	104.4	1	51	5	1	1	0	59	60.2
H/TOT	2	366	32	3	1	0	404	405.6	3	222	26	3	1	0	255	256
13:00	1	69	13	1	0	0	84	83.9	2	74	7	0	0	0	83	81.8
13:15	1	84	6	0	0	0	91	90.4	1	48	6	0	0	0	55	54.4
13:30	0	62	11	1	0	0	74	74.5	1	47	8	1	0	0	57	56.9
13:45	0	86	9	1	0	0	96	96.5	1	67	9	0	0	0	77	76.4
H/TOT	2	301	39	3	0	0	345	345.3	5	236	30	1	0	0	272	269.5
14:00	0	108	9	0	0	0	117	117	0	66	9	0	0	0	75	75
14:15	0	71	1	1	1	0	74	75.8	1	65	13	0	0	0	79	78.4
14:30	2	116	16	1	0	0	135	134.3	0	61	8	0	0	0	69	69
14:45	0	90	6	0	0	0	96	96	0	56	7	0	0	0	63	63
H/TOT	2	385	32	2	1	0	422	423.1	1	248	37	0	0	0	286	285.4
15:00	1	105	11	1	0	0	118	117.9	1	38	7	0	0	0	46	45.4
15:15	1	104	13	0	0	0	118	117.4	1	58	5	1	0	0	65	64.9
15:30	0	92	14	0	0	0	106	106	2	47	6	0	0	0	55	53.8
15:45	3	100	12	0	0	0	115	113.2	0	55	9	0	0	0	64	64
H/TOT	5	401	50	1	0	0	457	454.5	4	198	27	1	0	0	230	228.1
16:00	0	81	8	0	1	0	90	91.3	1	48	6	0	0	1	56	56.4
16:15	2	75	5	0	0	0	82	80.8	0	57	4	0	0	0	61	61
16:30	1	58	8	0	0	0	67	66.4	0	58	5	0	0	0	63	63
16:45	0	78	4	1	0	0	83	83.5	0	58	5	0	0	0	63	63
H/TOT	3	292	25	1	1	0	322	322	1	221	20	0	0	1	243	243.4
17:00	1	59	6	1	0	0	67	66.9	1	59	12	0	0	0	72	71.4
17:15	3	70	12	2	0	0	87	86.2	0	41	8	1	0	0	50	50.5
17:30	4	59	4	0	1	0	68	66.9	2	42	6	0	0	0	50	48.8
17:45	0	72	12	1	0	0	85	85.5	4	53	6	0	0	0	63	60.6
H/TOT	8	260	34	4	1	0	307	305.5	7	195	32	1	0	0	235	231.3
18:00	5	90	3	2	0	0	100	98	1	56	8	0	0	0	65	64.4
18:15	2	75	6	0	0	0	83	81.8	2	47	9	0	0	0	58	56.8
18:30	1	57	6	0	0	0	64	63.4	0	49	7	0	0	0	56	56
18:45	1	50	9	2	0	0	62	62.4	0	44	6	1	0	0	51	51.5
H/TOT	9	272	24	4	0	0	309	305.6	3	196	30	1	0	0	230	228.7

19:00	2	57	6	0	1	0	66	66.1	0	47	3	0	0	0	50	50
19:15	1	53	3	2	0	1	60	61.4	2	32	5	0	0	0	39	37.8
19:30	1	56	4	0	1	0	62	62.7	3	40	5	0	0	0	48	46.2
19:45	1	38	8	1	1	0	49	50.2	0	24	5	1	0	0	30	30.5
H/TOT	5	204	21	3	3	1	237	240.4	5	143	18	1	0	0	167	164.5
20:00	0	32	6	1	0	0	39	39.5	0	26	4	0	0	0	30	30
20:15	1	38	2	0	0	0	41	40.4	3	17	5	0	0	0	25	23.2
20:30	0	41	1	1	0	0	43	43.5	0	26	1	0	0	0	27	27
20:45	1	28	4	1	0	0	34	33.9	0	30	5	1	0	0	36	36.5
H/TOT	2	139	13	3	0	0	157	157.3	3	99	15	1	0	0	118	116.7
21:00	1	28	4	0	0	0	33	32.4	1	13	1	0	0	0	15	14.4
21:15	1	26	4	0	1	0	32	32.7	0	15	2	0	0	0	17	17
21:30	0	23	3	0	0	0	26	26	0	12	1	0	0	0	13	13
21:45	0	17	1	1	0	0	19	19.5	3	12	1	0	0	0	16	14.2
H/TOT	2	94	12	1	1	0	110	110.6	4	52	5	0	0	0	61	58.6
22:00	0	18	2	0	0	0	20	20	0	14	2	0	0	0	16	16
22:15	0	18	3	0	0	0	21	21	0	8	0	0	0	0	8	8
22:30	0	16	0	0	0	0	16	16	1	9	1	0	0	0	11	10.4
22:45	1	9	2	0	0	0	12	11.4	1	8	2	0	0	0	11	10.4
H/TOT	1	61	7	0	0	0	69	68.4	2	39	5	0	0	0	46	44.8
23:00	0	4	2	0	0	0	6	6	1	5	1	0	0	0	7	6.4
23:15	0	10	2	0	0	0	12	12	0	10	1	0	0	1	12	13
23:30	0	11	1	0	0	0	12	12	0	9	2	0	0	0	11	11
23:45	0	19	1	0	0	0	20	20	0	7	0	0	0	0	7	7
H/TOT	0	44	6	0	0	0	50	50	1	31	4	0	0	1	37	37.4
24 TOT	43	3761	407	38	9	4	4262	4270.9	45	2568	351	17	2	2	2985	2971.1

IDASO

Survey Name: 24653 - Wildrock ATC
Site: ATC 1
Location: R113 Leopardstown Road
Date: Mon 02-Sep-2024

	Westbound (A => B)								Eastbound (B => A)							
TIME	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**	**M/C**	**CAR**	**LGV**	**OGV1**	**OGV2**	**PSV**	**TOT**	**PCU**
00:00	0	17	6	0	0	0	23	23	0	4	0	0	0	0	4	4
00:15	0	9	2	0	0	0	11	11	0	7	3	0	0	0	10	10
00:30	1	10	0	0	0	0	11	10.4	0	3	1	0	0	0	4	4
00:45	0	2	0	0	0	0	2	2	0	2	1	0	0	0	3	3
H/TOT	1	38	8	0	0	0	47	46.4	0	16	5	0	0	0	21	21
01:00	1	4	0	0	0	0	5	4.4	2	3	1	0	0	0	6	4.8
01:15	0	7	1	0	0	0	8	8	0	1	0	0	0	0	1	1
01:30	0	2	1	0	0	0	3	3	0	2	0	0	0	0	2	2
01:45	0	3	0	0	0	0	3	3	0	3	0	0	0	0	3	3
H/TOT	1	16	2	0	0	0	19	18.4	2	9	1	0	0	0	12	10.8
02:00	0	4	0	0	0	0	4	4	0	2	0	0	0	0	2	2
02:15	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
02:30	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0
02:45	0	3	2	0	0	0	5	5	0	0	1	0	0	0	1	1
H/TOT	0	16	2	0	0	0	18	18	0	2	1	0	0	0	3	3
03:00	0	3	2	0	0	0	5	5	0	2	2	0	0	0	4	4
03:15	0	1	2	0	0	0	3	3	0	1	1	0	0	0	2	2
03:30	0	2	0	0	0	0	2	2	0	4	0	1	0	0	5	5.5
03:45	0	2	0	0	0	0	2	2	0	1	1	0	0	0	2	2
H/TOT	0	8	4	0	0	0	12	12	0	8	4	1	0	0	13	13.5
04:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
04:15	0	1	0	0	0	0	1	1	0	2	0	0	0	0	2	2
04:30	1	0	0	0	0	0	1	0.4	0	2	1	0	0	0	3	3
04:45	0	4	1	0	0	0	5	5	0	1	0	0	0	0	1	1
H/TOT	1	5	1	0	0	0	7	6.4	0	6	1	0	0	0	7	7
05:00	0	2	0	1	0	0	3	3.5	0	6	0	0	0	0	6	6
05:15	0	4	1	0	0	0	5	5	0	2	0	1	0	0	3	3.5
05:30	0	3	1	0	0	0	4	4	0	9	2	0	0	0	11	11
05:45	0	12	0	1	0	0	13	13.5	0	13	0	0	0	0	13	13
H/TOT	0	21	2	2	0	0	25	26	0	30	2	1	0	0	33	33.5
06:00	0	4	1	1	0	0	6	6.5	0	4	3	1	0	0	8	8.5
06:15	0	14	1	1	0	0	16	16.5	0	16	3	0	0	0	19	19
06:30	0	11	2	1	0	0	14	14.5	0	27	2	0	1	0	30	31.3
06:45	0	15	4	2	0	0	21	22	1	22	6	0	0	0	29	28.4
H/TOT	0	44	8	5	0	0	57	59.5	1	69	14	1	1	0	86	87.2
07:00	0	15	1	1	0	0	17	17.5	1	33	8	1	1	0	44	45.2
07:15	0	38	4	1	0	0	43	43.5	0	40	7	1	0	0	48	48.5
07:30	1	37	6	3	0	0	47	47.9	1	68	7	0	0	0	76	75.4
07:45	0	46	7	1	0	0	54	54.5	1	56	15	1	0	0	73	72.9
H/TOT	1	136	18	6	0	0	161	163.4	3	197	37	3	1	0	241	242

08:00	0	63	6	1	0	1	71	72.5	0	62	16	6	0	0	84	87
08:15	0	103	11	3	2	0	119	123.1	0	65	17	2	1	0	85	87.3
08:30	0	84	11	1	0	1	97	98.5	0	74	12	0	0	0	86	86
08:45	0	75	12	1	0	0	88	88.5	1	93	9	1	0	0	104	103.9
H/TOT	0	325	40	6	2	2	375	382.6	1	294	54	9	1	0	359	364.2
09:00	0	70	7	4	0	0	81	83	1	81	15	1	0	0	98	97.9
09:15	0	48	9	4	0	0	61	63	2	52	9	2	0	0	65	64.8
09:30	1	45	10	2	0	0	58	58.4	1	32	11	2	0	0	46	46.4
09:45	0	48	12	3	1	0	64	66.8	0	38	15	0	0	0	53	53
H/TOT	1	211	38	13	1	0	264	271.2	4	203	50	5	0	0	262	262.1
10:00	0	50	12	3	0	0	65	66.5	0	28	7	0	0	0	35	35
10:15	0	34	6	0	0	0	40	40	0	33	13	1	0	0	47	47.5
10:30	0	44	7	3	1	0	55	57.8	0	30	7	1	0	0	38	38.5
10:45	0	45	18	2	1	0	66	68.3	0	33	6	3	0	0	42	43.5
H/TOT	0	173	43	8	2	0	226	232.6	0	124	33	5	0	0	162	164.5
11:00	2	34	4	3	0	0	43	43.3	0	36	4	3	0	0	43	44.5
11:15	0	44	13	4	1	0	62	65.3	1	34	9	2	0	0	46	46.4
11:30	0	52	4	7	0	0	63	66.5	0	38	6	0	0	0	44	44
11:45	0	48	9	4	0	0	61	63	0	32	2	3	0	0	37	38.5
H/TOT	2	178	30	18	1	0	229	238.1	1	140	21	8	0	0	170	173.4
12:00	1	55	3	2	0	0	61	61.4	1	41	5	3	0	0	50	50.9
12:15	0	58	6	1	0	0	65	65.5	0	25	7	0	0	0	32	32
12:30	0	68	3	3	1	0	75	77.8	2	43	15	1	0	0	61	60.3
12:45	1	52	8	1	0	0	62	61.9	1	41	8	2	0	0	52	52.4
H/TOT	2	233	20	7	1	0	263	266.6	4	150	35	6	0	0	195	195.6
13:00	0	68	9	0	2	0	79	81.6	0	24	12	4	0	0	40	42
13:15	1	70	7	3	0	0	81	81.9	1	36	7	3	1	0	48	50.2
13:30	2	70	11	1	0	0	84	83.3	1	47	3	1	0	0	52	51.9
13:45	0	61	18	2	1	0	82	84.3	1	58	13	4	0	0	76	77.4
H/TOT	3	269	45	6	3	0	326	331.1	3	165	35	12	1	0	216	221.5
14:00	0	82	7	2	0	1	92	94	0	55	14	2	0	0	71	72
14:15	1	71	9	1	0	0	82	81.9	2	57	10	0	0	0	69	67.8
14:30	0	63	9	1	0	0	73	73.5	2	50	11	3	0	0	66	66.3
14:45	2	71	10	3	0	0	86	86.3	0	52	6	1	0	0	59	59.5
H/TOT	3	287	35	7	0	1	333	335.7	4	214	41	6	0	0	265	265.6
15:00	0	69	14	0	0	0	83	83	1	52	5	1	1	0	60	61.2
15:15	0	79	11	1	0	0	91	91.5	0	51	9	0	0	0	60	60
15:30	2	77	15	2	0	0	96	95.8	1	56	9	0	0	0	66	65.4
15:45	2	80	11	3	0	2	98	100.3	1	56	8	2	0	0	67	67.4
H/TOT	4	305	51	6	0	2	368	370.6	3	215	31	3	1	0	253	254
16:00	0	102	14	3	0	0	119	120.5	0	56	8	0	0	0	64	64
16:15	2	88	8	1	0	0	99	98.3	1	58	10	2	0	0	71	71.4
16:30	2	107	14	2	1	0	126	127.1	2	56	10	0	0	0	68	66.8
16:45	0	120	9	1	1	0	131	132.8	1	60	11	0	0	0	72	71.4
H/TOT	4	417	45	7	2	0	475	478.7	4	230	39	2	0	0	275	273.6
17:00	0	107	14	0	1	0	122	123.3	0	57	8	0	0	0	65	65
17:15	1	126	19	2	1	0	149	150.7	0	58	8	1	0	0	67	67.5
17:30	1	145	19	1	0	0	166	165.9	3	43	9	0	0	0	55	53.2
17:45	0	108	15	1	0	0	124	124.5	0	55	5	0	0	0	60	60
H/TOT	2	486	67	4	2	0	561	564.4	3	213	30	1	0	0	247	245.7
18:00	0	105	13	2	0	0	120	121	0	47	9	1	0	0	57	57.5
18:15	0	80	9	0	0	0	89	89	0	45	10	1	1	0	57	58.8
18:30	0	76	7	1	0	0	84	84.5	0	54	5	1	0	0	60	60.5
18:45	0	81	4	0	0	0	85	85	0	39	7	0	0	0	46	46
H/TOT	0	342	33	3	0	0	378	379.5	0	185	31	3	1	0	220	222.8

19:00	1	75	7	0	0	0	83	82.4	0	59	11	0	0	0	70	70
19:15	1	69	12	0	0	0	82	81.4	0	44	4	1	0	0	49	49.5
19:30	2	50	6	0	0	0	58	56.8	1	40	6	0	0	0	47	46.4
19:45	1	60	13	0	0	0	74	73.4	2	36	6	0	0	0	44	42.8
H/TOT	5	254	38	0	0	0	297	294	3	179	27	1	0	0	210	208.7
20:00	2	49	4	0	0	0	55	53.8	1	39	9	0	0	0	49	48.4
20:15	3	54	7	0	0	0	64	62.2	1	28	4	1	0	0	34	33.9
20:30	0	47	7	0	0	0	54	54	1	38	5	0	0	0	44	43.4
20:45	0	37	3	0	0	0	40	40	4	29	4	1	0	0	38	36.1
H/TOT	5	187	21	0	0	0	213	210	7	134	22	2	0	0	165	161.8
21:00	4	36	2	0	1	0	43	41.9	0	30	5	0	0	0	35	35
21:15	0	50	8	0	0	0	58	58	0	28	3	0	0	0	31	31
21:30	1	27	1	0	0	0	29	28.4	0	22	7	0	0	0	29	29
21:45	1	20	2	0	0	0	23	22.4	1	11	1	1	0	0	14	13.9
H/TOT	6	133	13	0	1	0	153	150.7	1	91	16	1	0	0	109	108.9
22:00	0	28	3	0	0	0	31	31	0	13	2	0	0	0	15	15
22:15	0	31	0	0	0	0	31	31	0	12	1	0	0	0	13	13
22:30	0	11	2	0	0	0	13	13	0	11	0	0	0	0	11	11
22:45	0	16	1	0	0	0	17	17	0	3	0	0	0	0	3	3
H/TOT	0	86	6	0	0	0	92	92	0	39	3	0	0	0	42	42
23:00	0	10	2	0	0	0	12	12	0	10	0	0	0	0	10	10
23:15	0	7	1	1	0	0	9	9.5	0	4	0	1	0	0	5	5.5
23:30	1	14	2	0	0	0	17	16.4	0	4	0	0	0	0	4	4
23:45	0	10	0	0	0	0	10	10	0	3	1	0	0	0	4	4
H/TOT	1	41	5	1	0	0	48	47.9	0	21	1	1	0	0	23	23.5
24 TOT	42	4211	575	99	15	5	4947	4995.8	44	2934	534	71	6	0	3589	3605.9

15 Appendix F - Transport Capacity Study

Wildrock Residential Development – Public Transport Capacity Study

Contract Number	C1194
Topic	Wildrock Residential Development – Public Transport Capacity Study
Version Number	v1.2
Status	Final
Author(s)	Dilip Kumar, Tom Fitzgerald
Reviewer	Ciaran McKeon
Date	24 October 2024

1. Introduction

1.1. Overview

Transport Insights has been appointed to undertake a public transport capacity study in relation to a residential development planning application delivering 79 no. residential units at Wildrock, Leopardstown Road, Sandyford, Dublin 18 (hereafter referred to as the application site).

Information outlined within this Note has been informed by the following items furnished to Transport Insights:

- Wildrock Outline Mobility Management Plan (MMP) and Transport Statement (TS) Reports for the proposed development; and
- Information provided by Tent Engineering relating to future resident mode split targets.

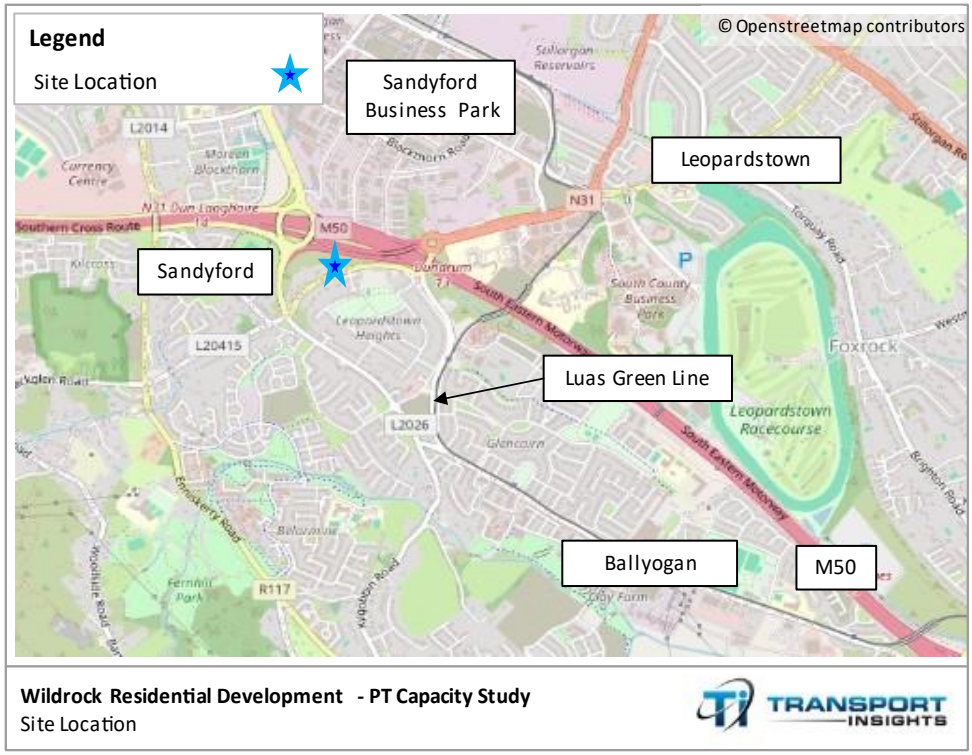
1.2. Proposed Development Location and Overview

Site Location

The proposed development site, as illustrated in Figure 1.1 (overleaf), is located at the Wildrock, Leopardstown Road, Sandyford, Dublin 18. The application site's location with respect to its local context is illustrated in Figure 1.2 (also overleaf).

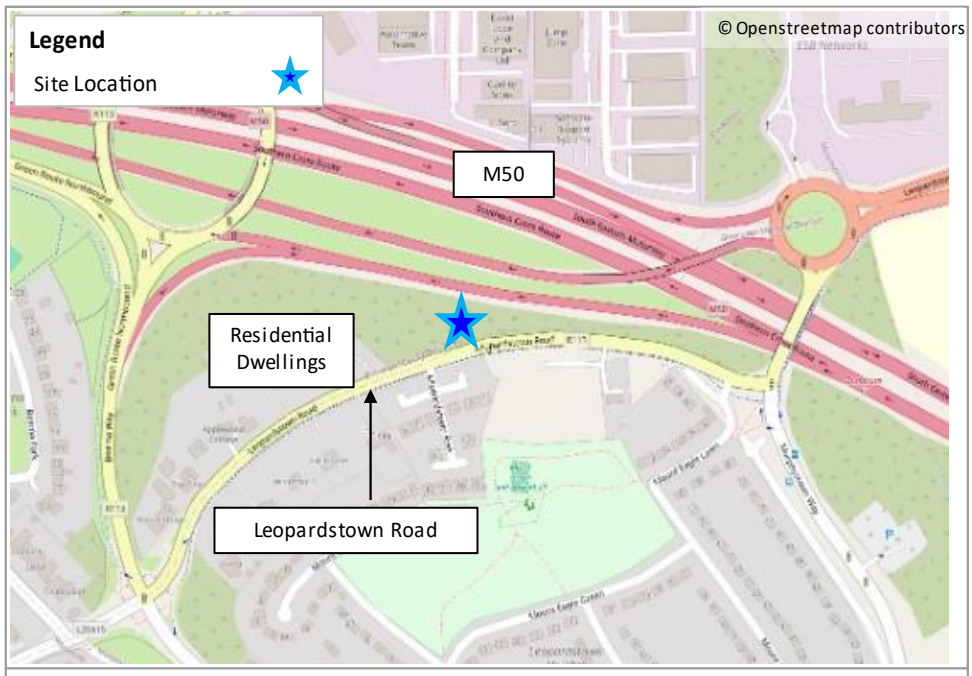
The application site, as illustrated in Figure 1.2, is bounded by residential dwellings to the west, Leopardstown Road to the south and east and M50 motorway to the north.

Figure 1.1 Site Location



Wildrock Residential Development - PT Capacity Study
Site Location

Figure 1.2 Application Site – Local Context



Wildrock Residential Development - PT Capacity Study
Application Site – Local Context

Proposed Development Overview

The overall proposed development consists of 2 no. of apartment blocks with 79 no. residential units, with the following parking facilities to also be provided:

- 64 no. car parking spaces; and
- 96 no. bicycle parking spaces.

Access to the development is proposed to be provided from Leopardstown Road which adjoins the site's southern boundary. The proposed development's year of opening is assumed to be 2027.

2. Public Transport Provision

2.1. Existing Public Transport Provision

In addition to Luas Green Line services operating via the Glencairn Stop, the proposed development site is also served by a number of bus routes operating on Murphystown Way, namely the 47 and 118.

Other bus service within the general vicinity of the site include the 44 route which operates from Sandyford Road ca. 650 metres to the west of the site. While further enhancing the application site's public transport accessibility, their capacity has not been reviewed, with the scope of analysis within this Note focusing more proximate bus services.

Details in relation to the peak and off-peak frequencies of currently available public transport (bus and Luas) services set out in the following Table 2.1.

Table 2.1 Current Public Transport Services in Application Site's Vicinity

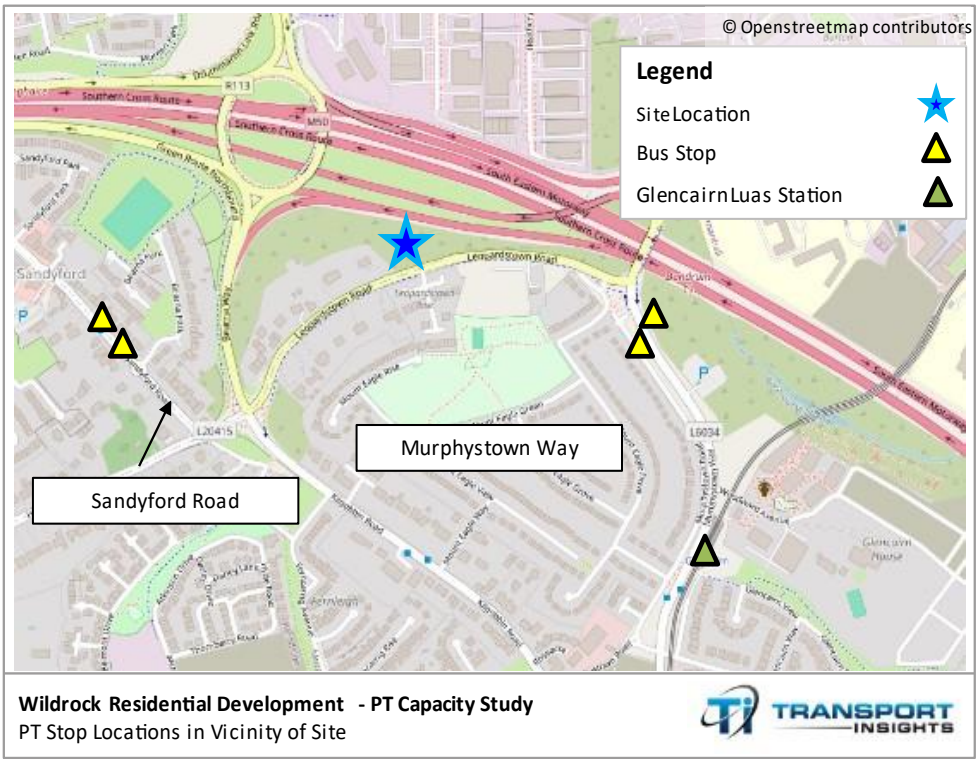
Route No.	Route	Average Weekday Off-Peak Frequency	Average Weekday Peak Frequency
47	Poolbeg – Belarmine	75 minutes	30 minutes
118*	Kilternan Towards Eden Quay	-	1 service in day
44	DCU – Enniskerry	60 minutes	30 minutes
Luas Green Line	Broombridge – Bride Glen	13 minutes	9 minutes

*Peak hour service only

Public transport stops in the vicinity of the application site are illustrated in Figure 2.1 (overleaf), with 2 no. bus stops on Murphystown Way (ca. 350 metres away from site), 2 no. bus stops on

Sandyford Road (ca. 600 metres away from site) and the Glencairn Luas Stop on the Luas Green Line ca. 700 metres (9 minutes' walk) to the southeast.

Figure 2.1 Public Transport Stop Locations in Vicinity of Site



Considering local bus and Luas service provision, they offer the application site a cumulative peak frequency of one vehicle every 5.14 minutes.

In accordance with the definition provided within the Sustainable Urban Housing: Design Standards for New Apartments (Department of Housing, Local Government and Heritage, December 2022), the site is considered to be within a central and/ or accessible urban location due to it being *"within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m) to/from high capacity urban public transport stops (such as DART or Luas)"*.

2.2. Proposed Public Transport Provision

The final proposals from the New Dublin Area Bus Network Project, developed as part of the broader BusConnects programme, were published by the National Transport Authority in September 2020 following extensive prior public consultation. The revised network includes amendments to the bus network within the application site's vicinity, as illustrated in the following Figure 2.2.

Figure 2.2 Proposed Public Transport Network in Vicinity of Site

Wildrock Residential Development - PT Capacity Study
Proposed Public Transport Network in Vicinity of Site

As can be seen within the preceding Figure 2.2, within the application site's vicinity, local route L13 (Kilternan - Stillorgan Village - UCD - Ringsend) and peak only route P13 (Kilternan - Stepaside - UCD) along Murphystown Way and radial routes 86 (Ticknock - Goatstown - Mountjoy Square) are also proposed to operate via Sandyford Road.

Details of the above identified proposed routes are presented within the following Table 2.2.

Table 2.2 BusConnects: Proposed Bus Services in Application Site's Vicinity

Route No.	Route	Weekday Peak Frequency
L13	Kilternan - Stillorgan Village - UCD – Ringsend	60 minutes
P13*	Kilternan - Stepaside – UCD	30 minutes
86	Ticknock - Goatstown - Mountjoy Square	30 minutes

*Peak Hour Service only

Together, the planned bus routes set out above offer a cumulative peak frequency of one bus every 12 minutes, thereby offering comparable cumulative frequency and capacity relative to the existing local service offer. The BusConnects network redesign is being delivered on a phased

basis, and it is assumed that the enhanced bus network will be fully operational before the subject development's expected completion.

2.3. Existing Commuting Patterns in the Vicinity of the Subject Site

An assessment of Central Statistics Office (CSO) Census 2022 data was undertaken to inform potential commuting patterns associated with the proposed development site. This assessment was undertaken using the CSO Electoral Division Statistics tool and was based on characteristics of Small Area 'A267078003' (which includes the proposed development site) and other local Small Areas ('A267078001', 'A267078002', and 'A267092019') as presented in the following Figure 2.3. As this area includes existing residential settlements, it is deemed to represent an appropriate baseline for establishing peak travel departure times from the current proposed development.

Figure 2.3 CSO Census 2022 Small Areas Map

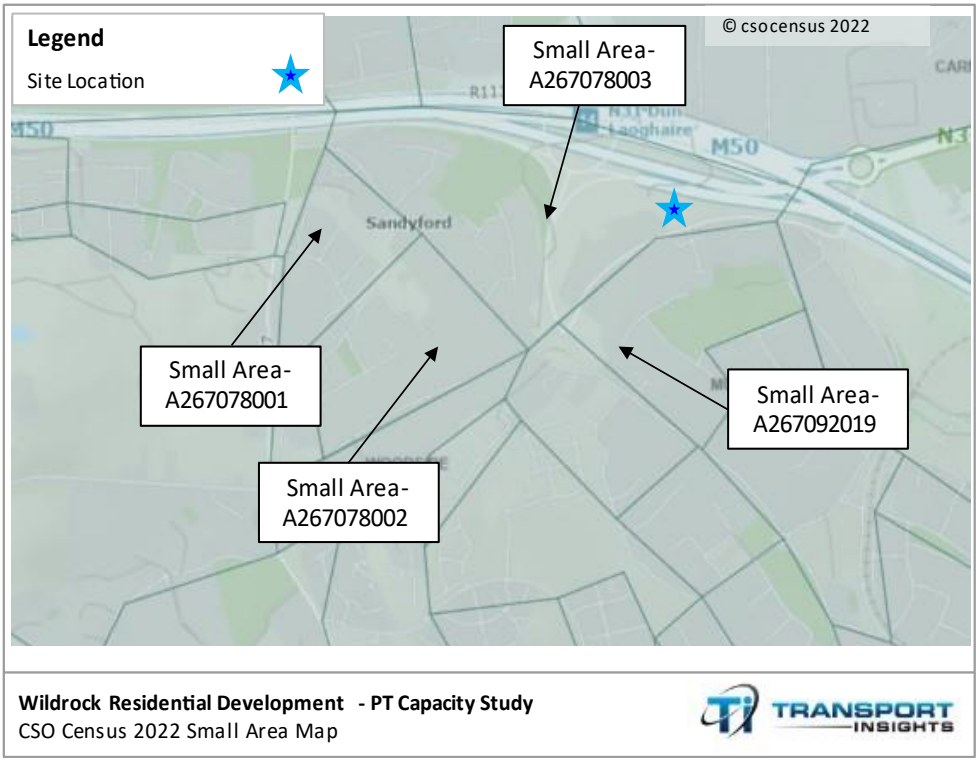


Table 2.3 (overleaf) presents the identified travel times of the population within the analysed Small Areas aged 5 years and over by time leaving home to travel to work, school or college. As shown in this table, 30% and 26% of the population within the analysed Small Areas aged 5 years and over commence their trip during the periods 07:31-08:00hrs and 08:01–08:30hrs respectively. Together this one-hour time period represents 56% of all commuting trips undertaken by those residents within the Small Areas assessed.

Table 2.3 Population Aged 5 Years and Over by Time Leaving Home To Travel To Work, School Or College

Time Period	Small Areas				Total	% Share
	A267078003	A267078001	A267078002	A267092019		
Before 6:30	9	4	11	4	28	3%
06:30-07:00	17	9	22	25	73	8%
07:01-07:30	21	16	22	23	82	10%
07:31-08:00	49	57	73	78	257	**30%**
08:01-08:30	54	56	58	56	224	**26%**
08:31-09:00	18	20	22	22	82	10%
09:01-09:30	6	3	5	3	17	2%
After 09:30	9	9	13	9	40	5%
Not Stated	26	4	14	15	59	7%
Total	**209**	**178**	**240**	**235**	**862**	**100%**

3. Public Transport Survey Data Collection and Analysis

3.1. Survey Overview

Survey Locations

In order to determine baseline public transport capacity, public transport occupancy surveys were undertaken at 2 no. bus stops located on Murphystown Way ca. 350 metres from the application site and the Glencairn Luas Stop. Both bus stops, located on Murphystown Way are serviced by routes 47 and 118. The survey was undertaken at the following locations:

- Bus stop no. 7416, Murphystown way, Dublin 18 – buses heading northbound;
- Bus stop no. 7418, Murphystown way, Dublin 18 – buses heading southbound;
- Platform 1, Glencairn Luas Stop, Dublin 18 – Luas heading northbound; and
- Platform 2, Glencairn Luas Stop, Dublin 18 – Luas heading southbound.

Figure 3.1 (overleaf) illustrates the location of the surveyed public transport stops outlined above.

Figure 3.1 Surveyed Public Transport Stop Locations

Survey Dates and Times

The bus and Luas occupancy survey was undertaken on Tuesday 15 October 2024. The survey date is deemed representative as it is during the peak midweek period (Tuesday to Thursday) and falls within the academic year of both primary and secondary schools. Both surveys were undertaken during the AM peak period (07:00-09:00hrs) – including the peak hour as identified from Census data at Table 2.3, and PM peak period (16:30-18:30hrs).

The survey sought to collect the following information:

- time of each bus/ Luas passing;
- bus service number/ Luas service;
- estimated capacity (seating and standing); and
- bus/ Luas occupancy count estimate (total passengers seating and standing)[1].

[1] In the case of Luas, estimated observed tram occupancy at departure was rounded to the nearest ten passengers, as counting exact number of passengers was deemed infeasible.

3.2. Survey Results: Murphystown Way Bus Services

Northbound AM Peak (Bus Stop No. 7416)

Within the following Table 3.1, the survey results for the AM peak period (07:00-09:00hrs) at bus stop no. 7416 (Murphystown Way northbound, i.e. in direction of peak travel towards Dublin City Centre) are shown. It should be noted that all buses identified by the survey were found to be double-decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.1 Survey Results – AM Period (07:00-09:00hrs), Bus Stop No. 7416, Murphystown Way

Route No.	Time	Est. No. Occupants on Arrival	No. Alighters	No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
47	07:10	30	0	1	31	63	67%
47	07:42	27	0	2	29	65	69%
47	07:46	31	0	0	31	63	67%
118	08:03	35	0	5	40	54	57%
47	08:27	76	0	3	79	15	16%
Total		**199**	**0**	**11**	**210**	**260**	**55%**

As can be seen from the preceding Table 3.1, during the AM peak survey period all buses in the northbound direction were found to have excess capacity. During the survey period (07:00-09:00hrs), the average occupancy of the buses surveyed was found to be 42 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 52 no. passengers (55%).

As set out in Section 2.3, an analysis of Census data demonstrated that the peak hour for those commuting to their place of work or education was found to be 07:31-08:30hrs. During this time period, the average occupancy of northbound buses surveyed was found to be 45 no. passengers and average excess capacity was found to be 49 no. passengers (52%).

Southbound AM Peak (Bus Stop No. 7418)

Within the following Table 3.2, the survey results for the AM peak period (07:00-09:00hrs) at bus stop no. 7418 (Murphystown Way southbound, i.e. in direction of non-peak travel from Dublin City Centre) are shown. As per the northbound direction, all buses were found to be double-

decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.2 Survey Results – AM Period (07:00-09:00hrs), Bus Stop No. 7418, Murphystown Way

Route No.	Time	Est. No. Occupants on Arrival	No. Alighters	No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
47	08:46	10	0	0	10	84	89%

As can be seen from the preceding Table 3.2, during the AM peak survey period only one bus in the southbound direction was recorded, which was found to have excess capacity of 84 no. passengers (89%).

Northbound PM Peak (Bus Stop No. 7416)

Within the following Table 3.3, the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 7416 (Murphystown Way northbound, i.e. in direction of non-peak travel towards Dublin City Centre) are shown.

Table 3.3 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 7416, Murphystown Way

Route No.	Time	Est. No. Occupants on Arrival	No. Alighters	No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
47	16:47	2	0	0	2	92	98%
47	17:11	55	0	0	55	39	41%
47	17:25	10	0	0	10	84	89%
47	18:15	5	0	0	5	89	95%
Total		**72**	**0**	**0**	**72**	**304**	**81%**

As can be seen from the preceding Table 3.3, during the PM peak survey period all buses in the northbound direction were found to have excess capacity. During the survey period (16:30-18:30hrs), the average occupancy of the buses surveyed was found to be 18 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 76 no. passengers (81%).

During the PM peak hour, i.e. 17:00-18:00hrs, the average occupancy of northbound buses was found to be 33 no. passengers and average excess capacity was found to be 62 no. passengers (65%).

Southbound PM Peak (Bus Stop No. 7418)

Within the following Table 3.4, the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 7418 (Murphystown Way southbound, i.e. in direction of peak travel from Dublin City Centre) are shown.

Table 3.4 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 7418, Murphystown Way

Route No.	Time	Est. No. Occupants on Arrival	No. Alighters	No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
47	17:11	55	0	0	55	39	41%
47	17:47	27	2	0	25	69	73%
47	18:09	30	3	1	28	66	70%
Total		**112**	**5**	**1**	**108**	**174**	**62%**

As can be seen from the preceding Table 3.4, during the PM peak survey period all buses in the southbound direction were found to have excess capacity. During the survey period (16:30-18:30hrs), the average occupancy of the buses surveyed was found to be 36 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 58 no. passengers (62%).

During the busiest PM peak hour, i.e. 17:00-18:00hrs, the average occupancy of southbound buses was found to be 40 no. passengers and average excess capacity was found to be 54 no. passengers (57%).

3.3. Survey Results: Glencairn Luas Stop Services

Northbound AM Peak (Platform 1, Glencairn Luas Stop)

Within the following Table 3.5, the survey results for the AM peak period (07:00-09:00hrs) at Platform 1, Glencairn Luas Stop (northbound, i.e. in direction of peak travel towards Dublin City Centre) are shown. At present, a mix of Citadis 402 trams and Citadis 502 trams are operating

having capacity of 319 and 408 passengers[2] respectively. Hence, for assessment purposes, an average capacity of 364 no. passengers per tram has been considered for all Luas Green Line services.

Table 3.5 Survey Results – AM Period (07:00-09:00hrs), Platform 1, Glencairn Luas Stop

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Parnell	07:06	90	274	75%
Parnell	07:15	90	274	75%
Parnell	07:27	210	154	42%
Parnell	07:37	270	94	26%
Parnell	07:44	330	34	9%
Parnell	07:52	330	34	9%
Parnell	07:58	350	14	4%
Parnell	08:05	350	14	4%
Parnell	08:09	300	64	18%
Broombridge	08:13	330	34	9%
Parnell	08:20	350	14	4%
Broombridge	08:29	350	14	4%
Broombridge	08:31	150	214	59%
Parnell	08:37	120	244	67%
Broombridge	08:40	60	304	84%
Parnell	08:47	150	214	59%
Broombridge	08:52	210	154	42%
Parnell	08:56	40	324	89%
Total		**4,080**	**2,472**	**38%**

As can be seen from the preceding Table 3.5, during the AM peak survey period all Luas services in the northbound direction were found to have excess capacity. During the survey period (07:00-09:00hrs), the average occupancy of the Luas surveyed was found to be 227 no. passengers.

[2] Tram fleet is assumed to currently largely/ fully comprise the higher capacity tram types (Citadas 502 trams), however for capacity assessment purposes, the average of lower and higher capacity trams has conservatively been assumed. Details of tram types are as per published information on Luas website.

Average excess capacity across the 2-hour survey period on the Luas surveyed was found to be 137 no. passengers (38%).

As set out in Section 2.3, an analysis of Census data demonstrated that the peak hour for those commuting to their place of work or education was found to be 07:31-08:30hrs. During this time period, the average occupancy of northbound Luas services surveyed was found to be 329 no. passengers and average excess capacity was found to be 35 no. passengers (10%).

Southbound AM Peak (Platform 2, Glencairn Luas Stop)

Within the following Table 3.6, the survey results for the AM peak period (07:00-09:00hrs) at Platform 2, Glencairn Luas Stop (southbound, i.e. in direction of non-peak travel from Dublin City Centre) are shown. As per the northbound direction, for assessment purposes, Luas services are considered to have an average capacity of 364 no. passengers per tram.

Table 3.6 Survey Results – AM Period (07:00-09:00hrs), Platform 2, Glencairn Luas Stop

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Brides Glen	07:05	30	334	92%
Brides Glen	07:09	40	324	89%
Brides Glen	07:18	40	324	89%
Brides Glen	07:28	60	304	84%
Brides Glen	07:31	30	334	92%
Brides Glen	07:33	10	354	97%
Brides Glen	07:38	40	324	89%
Brides Glen	07:44	50	314	86%
Brides Glen	07:57	60	304	84%
Brides Glen	08:00	60	304	84%
Brides Glen	08:03	50	314	86%
Brides Glen	08:06	40	324	89%
Brides Glen	08:13	90	274	75%
Brides Glen	08:22	150	214	59%
Brides Glen	08:23	10	354	97%
Brides Glen	08:35	270	94	26%
Brides Glen	08:43	60	304	84%
Brides Glen	08:51	60	304	84%

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Brides Glen	09:00	40	324	89%
Total		**1,190**	**5,726**	**83%**

As can be seen from the preceding Table 3.6, during the AM peak survey period all Luas services in the southbound direction were found to have excess capacity. Average occupancy of Luas services surveyed was found to be 63 no. passengers, and average excess capacity was found to be 301 no. passengers (83%).

During the AM peak hour, i.e. 07:31-08:30hrs, the average occupancy of southbound Luas services surveyed was found to be 54 no. passengers and average excess capacity was found to be 310 no. passengers (85%).

Northbound PM Peak (Platform 1, Glencairn Luas Stop)

Within the following Table 3.7, the survey results for the PM peak period (16:30-18:30hrs) at Glencairn Luas Stop (northbound, i.e. in direction of non-peak travel towards Dublin City Centre) are shown.

Table 3.7 Survey Results – PM Period (16:30-18:30hrs), Platform 1, Glencairn Luas Stop

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Parnell	16:30	60	304	84%
Parnell	16:39	50	314	86%
Parnell	16:47	60	304	84%
Parnell	17:00	90	274	75%
Parnell	17:10	90	274	75%
Parnell	17:19	120	244	67%
Parnell	17:26	150	214	59%
Broombridge	17:37	150	214	59%
Broombridge	17:46	120	244	67%
Broombridge	17:56	180	184	51%
Broombridge	18:05	90	274	75%
Parnell	18:16	90	274	75%

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Parnell	18:26	90	274	75%
Total		**1,340**	**3,392**	**72%**

As can be seen from the preceding Table 3.7, during the PM peak survey period all Luas services in the northbound direction were found to have excess capacity. During the survey period (16:30-18:30hrs), the average occupancy of Luas services surveyed was found to be 103 no. passengers. Average excess capacity across the 2-hour survey period on Luas services surveyed was found to be 261 no. passengers (72%).

During the PM peak hour, i.e. 17:00-18:00hrs, the average occupancy of northbound Luas surveyed was found to be 129 no. passengers and average excess capacity was found to be 235 no. passengers (65%).

Southbound PM Peak (Platform 2, Glencairn Luas Stop)

Within the following Table 3.8, the survey results for the PM peak period (16:30-18:30hrs) at Platform 2, Glencairn Luas Stop (southbound, i.e. in direction of peak travel from Dublin City Centre) are shown.

Table 3.8 Survey Results – PM Period (16:30-18:30hrs), Platform 2, Glencairn Luas Stop

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Brides Glen	16:36	90	274	75%
Brides Glen	16:44	150	214	59%
Brides Glen	16:51	90	274	75%
Brides Glen	16:59	240	124	34%
Brides Glen	17:12	270	94	26%
Brides Glen	17:27	330	34	9%
Brides Glen	17:34	240	124	34%
Brides Glen	17:40	180	184	51%
Brides Glen	17:52	240	124	34%
Brides Glen	18:01	300	64	18%
Brides Glen	18:08	180	184	51%

Route Service.	Time	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
Brides Glen	18:16	270	94	26%
Brides Glen	18:22	300	64	18%
Brides Glen	18:30	210	154	42%
Total		**3,090**	**2,006**	**39%**

As can be seen from the preceding Table 3.8, during the PM peak survey period all Luas services in the southbound direction were found to have excess capacity. Average occupancy of Luas services surveyed was found to be 221 no. passengers, and average excess capacity was found to be 143 no. passengers (39%).

During the PM peak hour, i.e. 17:00-18:00hrs, the average occupancy of southbound Luas services surveyed was found to be 252 no. passengers and average excess capacity was found to be 112 no. passengers (31%).

3.4. AM and PM Peak Hour Direction of Peak Demand Overview

Based on the bus occupancy survey results presented in Section 3.2, it has been established that during the weekday AM and PM peak hours surveyed, buses have 52% or greater excess capacity in the direction of peak demand, i.e. towards City Centre in the AM peak hour and from City Centre in the PM peak hour. Additionally, based on the Luas survey results presented in Section 3.3, Luas services have been identified to have ca. 10% and 31% excess capacity in the direction of peak demand, i.e. towards the City Centre in the AM peak hour and from the City Centre in the PM peak hour respectively.

Considering overall bus and Luas services capacity and utilisation, excess capacity in the direction of peak travel, i.e. northbound bus services/ northbound Luas services in the AM peak hour and southbound bus services/southbound Luas services in the PM peak hour has been identified to be ca. 14% and 33% respectively. While bus and Luas passenger demand may vary from day to day, such variations are relatively small and therefore the survey results can be deemed to provide a robust basis for assessing the impact of additional demand generated by the Wildrock residential development.

3.5. Existing Peak Hour Public Transport Service Capacity

The AM and PM peak hours have been identified through CSO and bus/ Luas occupancy survey data to be 07:31-08:30hrs and 17:00-18:00hrs respectively.

Bus Services

Table 3.9 which follows details the number of local bus services, i.e. 47 and 118 observed to operate from the surveyed bus stops on Murphystown Way for both the AM and PM peak hours, along with the capacity (passengers per hour per direction [pphpd]) of these bus services.

Table 3.9 Existing AM and PM Peak Hour Bus Service Capacity

	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:00-18:00hrs)
Northbound		
No. Services	4	2
Capacity (pphpd)	376	188
Southbound		
No. Services	1	2
Capacity (pphpd)	94	188

As shown in the preceding table, based on the capacity of buses operating on these routes, i.e. 94 no. passengers per vehicle, bus service capacity in the northbound direction has been estimated as 376 and 188 pphpd in the AM peak hour and PM peak hour respectively. Similarly, in the southbound direction, bus service capacity has been estimated as 94 and 188 pphpd in AM and PM peak hours respectively.

Luas Services

The following Table 3.10 details the observed number of Green Line Luas services operating via the Glencairn Stop along with the capacity (passengers per hour per direction [pphpd]). As noted within Section 3.3, average passenger capacity of 364 per tram has been assumed for Luas Green Line services. As shown in this table, Luas Green Line services operating via the Glencairn Luas Stop offers a capacity of up to 4,004 pphpd during peak hours.

Table 3.10 Existing AM and PM Peak Hour Luas Service Capacity

	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:00-18:00hrs)
Northbound		
No. Services	9	7
Capacity (pphpd)	3,276	2,548
Southbound		
No. Services	11	5
Capacity (pphpd)	4,004	1,820

Combined Bus and Luas Peak Hour Service Capacity

As can be seen from Tables 3.9 and 3.10 for bus and Luas respectively, total public transport capacity of direct relevance to the proposed development of the application site is as follows:

- Public transport capacity in the peak direction is 3,652 pphpd in the AM peak hour; and
- Public transport capacity in the peak direction is 2,008 pphpd in the PM peak hour.

4. Public Transport Demand

4.1. Proposed Development Modal Splits

In support of the proposed development of the application site, its residents' modal split targets are as outlined in the following Table 4.1.

Table 4.1 Proposed Modal Splits

Walk	Cycle	Public Transport	Car
5%	15%	30%	50%

4.2. Proposed Development Public Transport Demand

In support of the residential development application, TRICS People Trip rates have been extracted from TRICS and are presented in Appendix A. In order to determine whether the modal splits outlined in the preceding Section 4.1 above are achievable in relation to existing public transport (i.e. bus and Luas services) provision in the vicinity of the application site, an analysis of the daily residential public transport demand has been undertaken. This analysis is based on the modal splits set out above and TRICS People Trip rates, and the public transport capacities determined in the preceding Section 3.

Table 4.2 (overleaf) provides an overview of estimated residential travel demand based on the proposed no. of units within the development. As demonstrated within this table, the AM peak hour (07:31-08:30hrs) departure trips (12 trips) from the proposed development and PM peak hour (17:00-18:00hrs) arrival trips (8 trips) to the proposed development represent the peak demand as regards the public transport capacity assessment.

Table 4.2 Peak Hour Residential Public Transport Demand[3]

Time Period		TRICS 'People' Trip Rate per Dwell	% Public Transport	No. Units Proposed	Additional Number of PT Trips
AM Peak	AM Arrival	0.103	30%	79	2
	AM Departure	0.526			12
PM Peak	PM Arrival	0.354			8
	PM Departure	0.171			4

Within the following Table 4.3, estimated peak hour trips are detailed. It should also be noted that it has been assumed that 80% of public transport resident trips will take place in the direction of peak demand. The assumed 'worst case' 80% directional demand is deemed conservative on the basis of assessing the impact of the majority of residents of the residential development boarding buses/ Luas trams in the direction of peak demand, where more limited excess capacity exists across the overall public transport network (i.e. bus and Luas) compared to the opposing direction.

Table 4.3 Peak Hour Residential Public Transport Directional Demand

Time Period	Total No. Peak Hour Trips To/ From Development	No. of Peak Hour Trips in Direction of Peak Demand To/ From Development (80%)
AM Peak	12	10
PM Peak	8	7

4.3. Impact of Proposed Development on Existing Services

Within Table 4.4 (overleaf), the number of trips to and from the development in the AM and PM peak hours in the direction of peak demand are calculated. The percentage of new users with respect to existing public transport capacity in the AM and PM peak hours has also been

[3] The TRICS trip rate for the 08:00-09:00hrs time period has been used for the proposed development's AM peak hour, which as per local Census data has been determined to be 07:31-08:30hrs. Similarly, TRICS trip rates for the 17:00-18:00hrs time period have used same as the proposed site development's assumed PM peak hour.

estimated. It should be noted that it has been assumed that there will be no change in the capacity of existing public transport services in order to provide a robust assessment.

Table 4.4 Existing Public Transport Service Capacity – Peak Demand Direction

AM Peak Hour PT Trips Depart in Direction of Peak Demand	AM Peak Hour PT Service Capacity (pphpd)	% New PT Users/ AM Peak Hour Capacity	No. of PM Peak Hour PT Trips Arrive in Direction of Peak Demand	AM Peak Hour PT Service Capacity (pphpd	% New PT Users/ PM Peak Hour Capacity
10	3,652	**0.27%**	7	2,008	**0.33%**

As set out in Table 4.4 above, 10 no. and 7 no. trips are expected to be undertaken by public transport in the direction of peak demand between 07:30-08:30hrs and 17:00-18:00hrs respectively. This represents ca. 0.27% and 0.33% of total bus and Luas service capacity in AM and PM peak hours respectively. In Section 3.4, it was determined that overall bus and Luas excess capacity in the direction of peak travel, i.e. northbound in the AM peak hour and southbound in the PM peak hour has been identified to be ca. 14% and 33% respectively. As such, it is apparent that current public transport capacity within the vicinity of the residential development site is sufficient to accommodate the small additional demand generated by the proposed development.

It should also be noted while planned further improvements to the local bus network being delivered as part of the overall BusConnects programme will offer comparable cumulative frequencies and capacity relative to the existing local service offer, such improvements will deliver a better integrated, more attractive service offer to residents of the residential development, and throughout Dublin.

5. Conclusion

Transport Insights has been appointed to undertake a public transport capacity study in relation to a residential development planning application for a site at Wildrock, Leopardstown Road, Sandyford, Dublin 18. The study has been informed by comprehensive bus and Luas occupancy surveys, and review of a range of planning stage documents furnished to Transport Insights by Tent Engineering.

Based on the findings of the public transport occupancy survey and analysis contained within this Note, it was found that residents of the proposed development would utilise ca. 0.27% and 0.33% of the total capacity of existing AM and PM peak hour public transport services respectively. Furthermore, it has been determined that local public transport services (bus and Luas) have ample capacity to accommodate such demand. As such, it is apparent that current public transport capacity is sufficient to accommodate additional demand generated by the proposed development.

Appendix A TRICS Trip Rate Data

See overleaf.

Calculation Reference: AUDIT-710101-241014-1040

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	**GREATER LONDON**		
	BE	BEXLEY	1 days
	BM	BROMLEY	3 days
	BN	BARNET	2 days
	BT	BRENT	1 days
	EN	ENFIELD	1 days
	HG	HARINGEY	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	HO	HOUNSLOW	2 days
	HV	HAVERING	1 days
	IS	ISLINGTON	2 days
	KI	KINGSTON	1 days
	RD	RICHMOND	1 days
	TH	TOWER HAMLETS	1 days
	WF	WALTHAM FOREST	6 days
02	**SOUTH EAST**		
	CT	CENTRAL BEDFORDSHIRE	3 days
	HF	HERTFORDSHIRE	4 days
	PO	PORTSMOUTH	1 days
	WS	WEST SUSSEX	1 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
05	**EAST MIDLANDS**		
	DY	DERBY	1 days
	NG	NOTTINGHAM	3 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
08	**NORTH WEST**		
	MS	MERSEYSIDE	1 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days
10	**WALES**		
	CO	CONWY	1 days
11	**SCOTLAND**		
	HI	HIGHLAND	1 days
12	**CONNAUGHT**		
	MA	MAYO	1 days
14	**LEINSTER**		
	LU	LOUTH	1 days
	WX	WEXFORD	1 days
15	**GREATER DUBLIN**		
	DL	DUBLIN	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 6 to 493 (units:)
Range Selected by User: 6 to 493 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 16/11/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	9 days
Tuesday	17 days
Wednesday	13 days
Thursday	5 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	49 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	3
Edge of Town Centre	18
Suburban Area (PPS6 Out of Centre)	15
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	9

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	34
Built-Up Zone	8
No Sub Category	7

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	44 days - Selected
Servicing vehicles Excluded	12 days - Selected

Secondary Filtering selection:

Use Class:
C3 49 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	2 days
20,001 to 25,000	11 days
25,001 to 50,000	23 days
50,001 to 100,000	6 days
100,001 or More	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	4 days
75,001 to 100,000	2 days
125,001 to 250,000	11 days
250,001 to 500,000	7 days
500,001 or More	22 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	3 days
0.6 to 1.0	32 days
1.1 to 1.5	14 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	11 days
No	38 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	26 days
1a (Low) Very poor	1 days
1b Very poor	4 days
2 Poor	4 days
3 Moderate	4 days
4 Good	4 days
5 Very Good	2 days
6a Excellent	3 days
6b (High) Excellent	1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 **BE-03-C-01** **BLOCKS OF FLATS** **BEXLEY**
CROOK LOG
BEXLEYHEATH

Edge of Town Centre
Residential Zone
Total No of Dwellings: 79
Survey date: WEDNESDAY *19/09/18* *Survey Type: MANUAL*

2 **BM-03-C-01** **BLOCKS OF FLATS** **BROMLEY**
RINGER'S ROAD
BROMLEY

Town Centre
Built-Up Zone
Total No of Dwellings: 160
Survey date: MONDAY *12/11/18* *Survey Type: MANUAL*

3 **BM-03-C-02** **BLOCK OF FLATS** **BROMLEY**
ORCHARD ROAD
BROMLEY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 20
Survey date: TUESDAY *17/10/23* *Survey Type: MANUAL*

4 **BM-03-C-03** **BLOCKS OF FLATS** **BROMLEY**
ORCHARD ROAD
BROMLEY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 26
Survey date: WEDNESDAY *18/10/23* *Survey Type: MANUAL*

5 **BN-03-C-01** **FLATS IN HOUSES** **BARNET**
VICTORIA ROAD
NEW BARNET

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 33
Survey date: THURSDAY *09/06/22* *Survey Type: MANUAL*

6 **BN-03-C-02** **BLOCKS OF FLATS** **BARNET**
OAKLEIGH ROAD
WHETSTONE

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 115
Survey date: WEDNESDAY *13/09/23* *Survey Type: MANUAL*

7 **BT-03-C-03** **BLOCKS OF FLATS** **BRENT**
MOUNT PLEASANT
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 130
Survey date: THURSDAY *16/11/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 **CA-03-C-03** **BLOCKS OF FLATS** **CAMBRIDGESHIRE**
CROMWELL ROAD
CAMBRIDGE

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 82
Survey date: MONDAY *18/09/17* *Survey Type: MANUAL*

9 **CO-03-C-01** **BLOCKS OF FLATS** **CONWY**
MOSTYN BROADWAY
LLANDUDNO

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 37
Survey date: MONDAY *26/03/18* *Survey Type: MANUAL*

10 **CT-03-C-01** **BLOCKS OF FLATS** **CENTRAL BEDFORDSHIRE**
WING ROAD
LEIGHTON BUZZARD
LINSLADE
Edge of Town Centre
Residential Zone
Total No of Dwellings: 175
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

11 **CT-03-C-02** **BLOCKS OF FLATS** **CENTRAL BEDFORDSHIRE**
STANBRIDGE ROAD
LEIGHTON BUZZARD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

12 **CT-03-C-03** **BLOCKS OF FLATS** **CENTRAL BEDFORDSHIRE**
COURT DRIVE
DUNSTABLE

Edge of Town Centre
No Sub Category
Total No of Dwellings: 146
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

13 **DL-03-C-18** **BLOCKS OF FLATS** **DUBLIN**
HAROLD'S CROSS ROAD
DUBLIN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 102
Survey date: WEDNESDAY *19/05/21* *Survey Type: MANUAL*

14 **DY-03-C-03** **BLOCKS OF FLATS** **DERBY**
CAESAR STREET
DERBY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 30
Survey date: WEDNESDAY *25/09/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

15 **EN-03-C-03** **BLOCKS OF FLATS** **ENFIELD**
NORTH CIRCULAR ROAD
PALMERS GREEN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 27
Survey date: WEDNESDAY *08/11/17* *Survey Type: MANUAL*

16 **HF-03-C-03** **BLOCK OF FLATS** **HERTFORDSHIRE**
SHENLEY ROAD
BOREHAMWOOD

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 91
Survey date: THURSDAY *14/11/19* *Survey Type: MANUAL*

17 **HF-03-C-06** **BLOCKS OF FLATS** **HERTFORDSHIRE**
FERNDOWN ROAD
WATFORD
SOUTH OXHEY
Edge of Town
Residential Zone
Total No of Dwellings: 26
Survey date: THURSDAY *08/06/23* *Survey Type: MANUAL*

18 **HF-03-C-07** **BLOCKS OF FLATS** **HERTFORDSHIRE**
OXHEY DRIVE
WATFORD
SOUTH OXHEY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 84
Survey date: WEDNESDAY *07/06/23* *Survey Type: MANUAL*

19 **HF-03-C-08** **BLOCKS OF FLATS** **HERTFORDSHIRE**
HAYLING ROAD
WATFORD
SOUTH OXHEY
Edge of Town
Residential Zone
Total No of Dwellings: 22
Survey date: TUESDAY *06/06/23* *Survey Type: MANUAL*

20 **HG-03-C-01** **BLOCKS OF FLATS** **HARINGEY**
BREAM CLOSE
TOTTENHAM HALE

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 255
Survey date: TUESDAY *18/06/19* *Survey Type: MANUAL*

21 **HI-03-C-02** **BLOCK OF FLATS** **HIGHLAND**
KING STREET
NAIRN

Edge of Town Centre
Residential Zone
Total No of Dwellings: 16
Survey date: WEDNESDAY *19/04/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

22 **HM-03-C-02** **BLOCKS OF FLATS** **HAMMERSMITH AND FULHAM**
GLENTHORNE ROAD
HAMMERSMITH

Town Centre
Built-Up Zone
Total No of Dwellings: 194
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

23 **HO-03-C-04** **BLOCKS OF FLATS** **HOUNSLOW**
LONDON ROAD
ISLEWORTH

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 203
Survey date: TUESDAY *03/07/18* *Survey Type: MANUAL*

24 **HO-03-C-05** **BLOCK OF FLATS** **HOUNSLOW**
PARK LANE
HOUNSLOW
CRANFORD
Edge of Town
Residential Zone
Total No of Dwellings: 14
Survey date: FRIDAY *06/03/20* *Survey Type: MANUAL*

25 **HV-03-C-02** **BLOCKS OF FLATS** **HAVERING**
WATERLOO ROAD
ROMFORD

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total No of Dwellings: 493
Survey date: TUESDAY *22/11/16* *Survey Type: MANUAL*

26 **IS-03-C-05** **BLOCK OF FLATS** **ISLINGTON**
LEVER STREET
FINSBURY

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 15
Survey date: WEDNESDAY *29/06/16* *Survey Type: MANUAL*

27 **IS-03-C-06** **BLOCK OF FLATS** **ISLINGTON**
CALEDONIAN ROAD
HOLLOWAY

Edge of Town Centre
Residential Zone
Total No of Dwellings: 14
Survey date: MONDAY *27/06/16* *Survey Type: MANUAL*

28 **KI-03-C-03** **BLOCK OF FLATS** **KINGSTON**
PORTSMOUTH ROAD
SURBITON

Edge of Town Centre
Residential Zone
Total No of Dwellings: 20
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

29 **LU-03-C-04** **BLOCKS OF FLATS** **LOUTH**
RIVER COURT
DROGHEDA

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 42
Survey date: WEDNESDAY *22/09/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

30 **MA-03-C-01** **BLOCKS OF FLATS** **MAYO**
KNOCK ROAD
CLAREMORRIS

Edge of Town Centre
No Sub Category
Total No of Dwellings: 22
Survey date: TUESDAY *14/09/21* *Survey Type: MANUAL*

31 **MS-03-C-04** **BLOCK OF FLATS** **MERSEYSIDE**
HOY DRIVE
NEWTON-LE-WILLOWS
EARLESTOWN
Edge of Town Centre
Residential Zone
Total No of Dwellings: 24
Survey date: MONDAY *12/04/21* *Survey Type: MANUAL*

32 **NF-03-C-02** **MIXED FLATS & HOUSES** **NORFOLK**
HALL ROAD
NORWICH
LAKENHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 82
Survey date: MONDAY *18/11/19* *Survey Type: MANUAL*

33 **NG-03-C-01** **HOUSES (SPLIT INTO FLATS)** **NOTTINGHAM**
LAWRENCE WAY
NOTTINGHAM

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 56
Survey date: TUESDAY *08/11/16* *Survey Type: MANUAL*

34 **NG-03-C-02** **HOUSES (SPLIT INTO FLATS)** **NOTTINGHAM**
CASTLE MARINA ROAD
NOTTINGHAM

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 135
Survey date: WEDNESDAY *09/11/16* *Survey Type: MANUAL*

35 **NG-03-C-03** **BLOCK OF FLATS** **NOTTINGHAM**
CANAL STREET
NOTTINGHAM

Town Centre
Built-Up Zone
Total No of Dwellings: 46
Survey date: MONDAY *02/10/23* *Survey Type: MANUAL*

36 **PO-03-C-01** **BLOCKS OF FLATS** **PORTSMOUTH**
CROSS STREET
PORTSMOUTH

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 90
Survey date: TUESDAY *05/06/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

37 **RD-03-C-07** **BLOCKS OF FLATS** **RICHMOND**
BESSANT DRIVE
KEW

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 170
Survey date: WEDNESDAY *14/06/23* *Survey Type: MANUAL*

38 **SH-03-C-01** **BLOCK OF FLATS** **SHROPSHIRE**
ABBEY FOREGATE
SHREWSBURY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 47
Survey date: MONDAY *19/06/23* *Survey Type: MANUAL*

39 **SH-03-C-02** **BLOCK OF FLATS** **SHROPSHIRE**
ABBEY FOREGATE
SHREWSBURY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 12
Survey date: FRIDAY *16/06/23* *Survey Type: MANUAL*

40 **TH-03-C-04** **BLOCK OF FLATS** **TOWER HAMLETS**
LEVEN ROAD
POPLAR
ABERFELDY VILLAGE
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total No of Dwellings: 83
Survey date: FRIDAY *21/06/19* *Survey Type: MANUAL*

41 **TW-03-C-01** **BLOCKS OF FLATS** **TYNE & WEAR**
CAULDWELL AVENUE
WHITLEY BAY
MONKSEATON
Edge of Town
Residential Zone
Total No of Dwellings: 45
Survey date: FRIDAY *15/10/21* *Survey Type: MANUAL*

42 **WF-03-C-01** **BLOCKS OF FLATS** **WALTHAM FOREST**
ERSKINE ROAD
WALTHAMSTOW

Edge of Town Centre
Residential Zone
Total No of Dwellings: 97
Survey date: TUESDAY *05/11/19* *Survey Type: MANUAL*

43 **WF-03-C-02** **BLOCKS OF FLATS** **WALTHAM FOREST**
GROSVENOR ROAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 28
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

44 **WF-03-C-03** **FLATS & TERRACED HOUSES** **WALTHAM FOREST**
FOREST ROAD
WALTHAMSTOW

Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total No of Dwellings: 22
Survey date: FRIDAY *21/05/21* *Survey Type: MANUAL*

45 **WF-03-C-04** **BLOCKS OF FLATS** **WALTHAM FOREST**
GROSVENOR ROAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 42
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

46 **WF-03-C-05** **BLOCK OF FLATS** **WALTHAM FOREST**
NEW WANSTEAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 6
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

47 **WF-03-C-06** **BLOCKS OF FLATS** **WALTHAM FOREST**
BELGRAVE ROAD
WANSTEAD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 44
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

48 **WS-03-C-01** **BLOCKS OF FLATS** **WEST SUSSEX**
GORING ROAD
WORTHING
GORING-BY-SEA
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 18
Survey date: WEDNESDAY *11/05/22* *Survey Type: MANUAL*

49 **WX-03-C-01** **BLOCKS OF FLATS** **WEXFORD**
UPPER GEORGE'S STREET
WEXFORD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 28
Survey date: THURSDAY *20/04/23* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.80

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	32	0.000	2	32	0.000	2	32	0.000
07:00 - 08:00	49	78	0.033	49	78	0.119	49	78	0.152
08:00 - 09:00	49	78	0.047	**49**	**78**	**0.138**	49	78	0.185
09:00 - 10:00	49	78	0.065	49	78	0.071	49	78	0.136
10:00 - 11:00	49	78	0.056	49	78	0.067	49	78	0.123
11:00 - 12:00	49	78	0.061	49	78	0.071	49	78	0.132
12:00 - 13:00	49	78	0.066	49	78	0.070	49	78	0.136
13:00 - 14:00	49	78	0.062	49	78	0.066	49	78	0.128
14:00 - 15:00	49	78	0.057	49	78	0.061	49	78	0.118
15:00 - 16:00	49	78	0.090	49	78	0.066	49	78	0.156
16:00 - 17:00	49	78	0.093	49	78	0.063	49	78	0.156
17:00 - 18:00	**49**	**78**	**0.121**	49	78	0.065	49	78	0.186
18:00 - 19:00	49	78	0.118	49	78	0.071	**49**	**78**	**0.189**
19:00 - 20:00	21	72	0.088	21	72	0.048	21	72	0.136
20:00 - 21:00	21	72	0.046	21	72	0.029	21	72	0.075
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.003			1.005			2.008

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	6 - 493 (units:)
Survey date date range:	01/01/16 - 16/11/23
Number of weekdays (Monday-Friday):	49
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	7
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

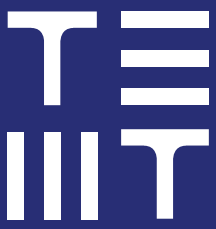
BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.80

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	32	0.031	2	32	0.000	2	32	0.031
07:00 - 08:00	49	78	0.054	49	78	0.351	49	78	0.405
08:00 - 09:00	49	78	0.103	**49**	**78**	**0.526**	**49**	**78**	**0.629**
09:00 - 10:00	49	78	0.137	49	78	0.227	49	78	0.364
10:00 - 11:00	49	78	0.132	49	78	0.183	49	78	0.315
11:00 - 12:00	49	78	0.139	49	78	0.170	49	78	0.309
12:00 - 13:00	49	78	0.167	49	78	0.169	49	78	0.336
13:00 - 14:00	49	78	0.156	49	78	0.160	49	78	0.316
14:00 - 15:00	49	78	0.157	49	78	0.158	49	78	0.315
15:00 - 16:00	49	78	0.295	49	78	0.177	49	78	0.472
16:00 - 17:00	49	78	0.287	49	78	0.161	49	78	0.448
17:00 - 18:00	49	78	0.354	49	78	0.171	49	78	0.525
18:00 - 19:00	**49**	**78**	**0.386**	49	78	0.175	49	78	0.561
19:00 - 20:00	21	72	0.328	21	72	0.123	21	72	0.451
20:00 - 21:00	21	72	0.180	21	72	0.084	21	72	0.264
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.906			2.835			5.741

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*



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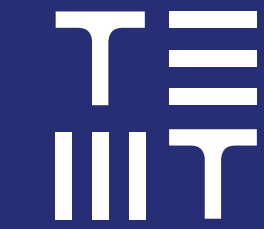
Endnotes
1



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