Travel Plan

Proposed Residential Development Site at Knockrabo Phase 2, Mount Anville Road, Goatstown, Dublin

October 2024

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015 and BS EN ISO 14001: 2015)

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Comments

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1. Introduction

1.1 Context

This Travel Plan has been prepared by Waterman Moylan as part of the planning application documentation for a proposed development on lands at Knockrabo, Mount Anville Road, Goatstown, Co. Dublin.

Knockrabo Investments DAC intend to apply for permission for a Large-scale Residential Development ranging from 2- part 8 storeys (for a period of 7 years) with a total application site area of c. 2.54 hectares, at Knockrabo, Mount Anville Road, Goatstown, Dublin 14.

The development will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility and Community / Leisure Uses.

The accommodation schedule is shown in **Table 1** below:

Description	1-bed	2-bed	3-bed	4-bed	Total	GFA (Sqm)
Houses	-	1	3	8	12	-
Duplex	-	-	27	-	27	-
Apartments	35	81	3	-	119	-
Childcare Facility	-	-	-	-	-	400
Community / Leisure Uses	-	-	-	-	-	223
Total	**35**	**82**	**33**	**8**	**158**	**623**

Table 1 | *Schedule of Accommodation*

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

1.2 Programme

It is expected that construction of the Subject Development will commence in 2025 and be completed in 2027.

1.3 Scope

This Travel Plan will be a key operational feature of the proposed development at Knockrabo, Mount Anville Road, Goatstown, Co. Dublin. The objective of this plan is to assess, examine, and manage the typical traffic that will be generated by the residential units during the operational phase of the development.

The implementation of the Travel Plan will encourage residents to refrain from using private vehicles and instead adopt sustainable transport systems. Consequently, the ongoing implementation of this Travel Plan

will facilitate the sustainability of transport to and from the site, enhance the utilisation of public transport, and reduce the reliance on private vehicle use by promoting more sustainable and cost-effective travel habits such as walking, cycling, and the use of public transport to reach the destination.

1.4 Threshold for Transport Assessment

Appendix 3, Section 3.3, of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* indicates that a Travel Plan will be required where the proposed development meets one or more of the following thresholds:

1- 100 residential units or more.

2- All educational developments.

3- Any development proposing 100 or more car parking spaces or generating 100 or more trips in the peak hours.

4- Developments resulting in more than 100 employees.

5- Retail development in excess of 1,000 sq.m.

6- Leisure facilities including cinemas in excess of 1,000 sq.m.

7- Office/ Financial development in excess of 2,500 sq.m.

8- Hospital/ Medical development in excess of 1,000 sq.m.

9- Industrial development in excess of 5,000 sq.m.

10- Distribution and warehousing development in excess of 10,000 sq.m.

With regard to the subject development, it can be stated that threshold 3 has been met.

1.5 Report Structure

The report is structured into eight sections. The initial section is the introduction, which provides fundamental data on the Subject Development and the objective of the report.

Section 2 provides an overview of the location of the Subject Development and the general environment in which it is situated.

Section 3 offers a comprehensive account of the accessibility features of the development, including pedestrian, bicycle, road network, and public transport infrastructure in the surrounding area. This provides an understanding of the connectivity of the surrounding area in relation to the site development.

Section 4 presents an analysis of potential future public transport improvements that are expected to be implemented in the near future.

Section 5 provides a detailed description of the development's main features from a mobility perspective, which includes the vehicular access, the car parking proposed, and the cycle parking proposed.

Section 6 indicates the modal choices targets that have been considered for the Subject Development and presents the current modal choice which is based on the information available from the 2022 Census. It also presents the strategy that will be used to reach the target modal choice, which will form the basis of the Travel Plan.

Section 7 presents the proposed Travel Plan for the development; however it is important to note that the detail provided in this report serves as a guideline for the Subject Development, which forms the basis for the Travel Plan to be developed by the Travel Plan Coordinator.

Finally, section 8 presents the conclusions of the report.

2. Site Description

2.1 Location of Development

The site is located in Knockrabo, Mount Anville Road, Goatstown, Co. Dublin. It is situated approximately 8 km southern of Dublin City in a residential area.

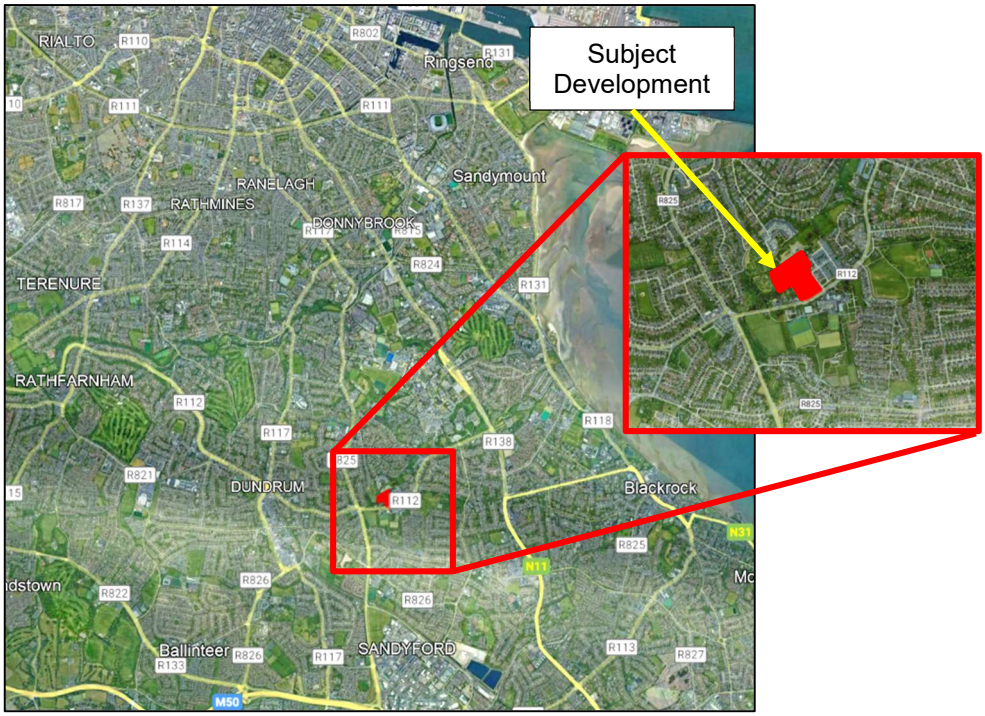

Figure 1 | Site Location (Source: Google Earth)

2.2 Site Characteristics

The subject site is bounded to the south-east by Mount Anville Road; to the south by 'Mount Anville Lodge' and by the rear boundaries of 'Thendara' (a Protected Structure – RPS Ref. 812), 'The Garth' (a Protected Structure – RPS Ref. 819), 'Chimes', 'Hollywood House' (a Protected Structure – RPS Ref. 829); to the south-west by existing allotments; to the north by the reservation corridor for the Dublin Eastern By-Pass (DEBP); and to the east by the site of residential development 'Knockrabo' (Phase 1, permitted under DLRCC Reg. Ref. D13A/0689 / An Bord Pleanála (ABP) Ref. PL.06D.243799 and DLRCC Reg. Ref. D16A/0821 (Phase 1); and DLRCC Reg. Ref. D16A/0960 (Phase 1A)).

The site includes 'Cedar Mount' (a Protected Structure- RPS Ref. 783) and 'Knockrabo Gate Lodge (West)' (a Protected Structure RPS Ref. 796), including Entrance Gates and Piers.

It is noted that an agreed access reservation for the DEBP project is supplied along Knockrabo Way, the entrance road to the development, as indicated in the accompanying Road Hierarchy drawing Waterman Moylan drawing No. *20-086-P105A Proposed Road Hierarchy & General Site Layout*.

The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

Vehicular, cycle and pedestrian access to serve the development will be provided from Mount Anville Road (R112) via Knockrabo Way, which borders the Subject Development to the right.

On Mount Anville Road (R112) towards the east, 50m from the junction of Knockrabo Way and Mount Anville Road (R112) is the access to Mount Anville Junior School & Secondary School.

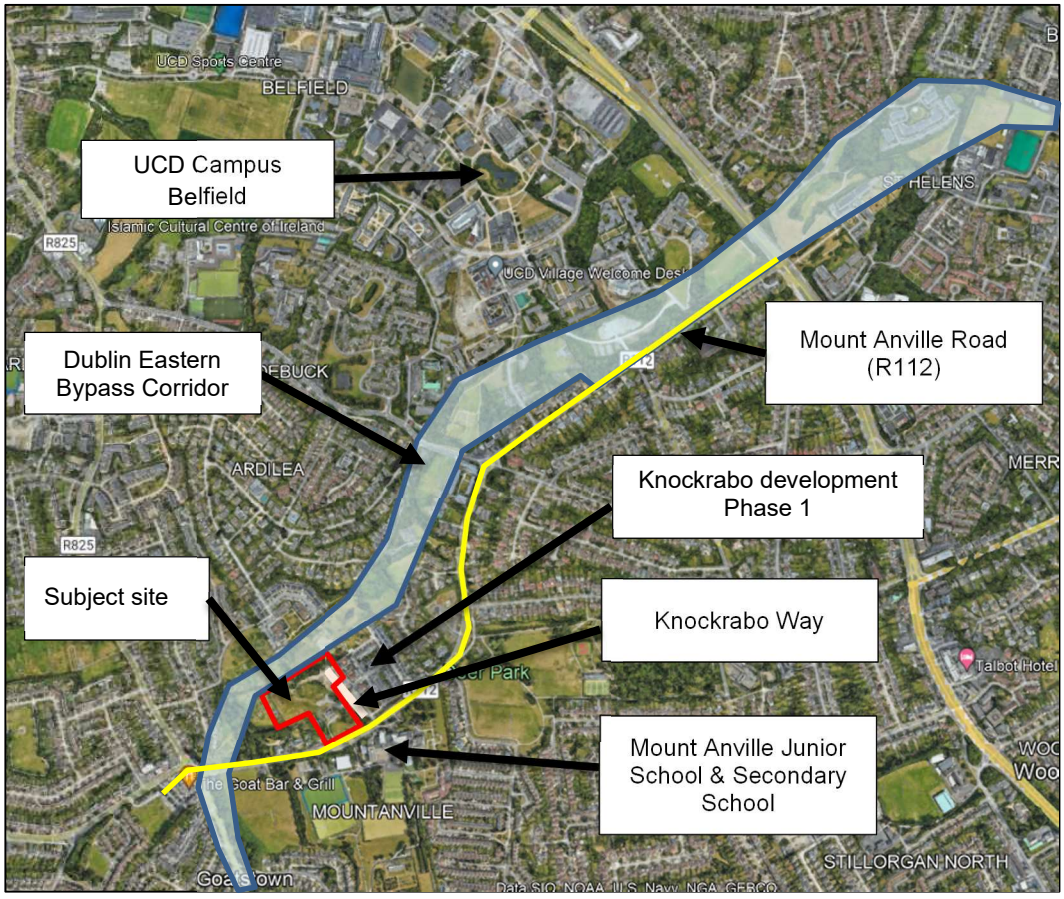

Figure 2 | *Site Location*

Dún Laoghaire-Rathdown County Development Plan 2022-2028 indicates that the subject development site is within an area designated with Zoning Objective "*A – To provide residential development and improve residential amenity while protecting the existing residential amenities*."

Figure 3 below is taken from Land Zoning Map No. 1 of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028*.

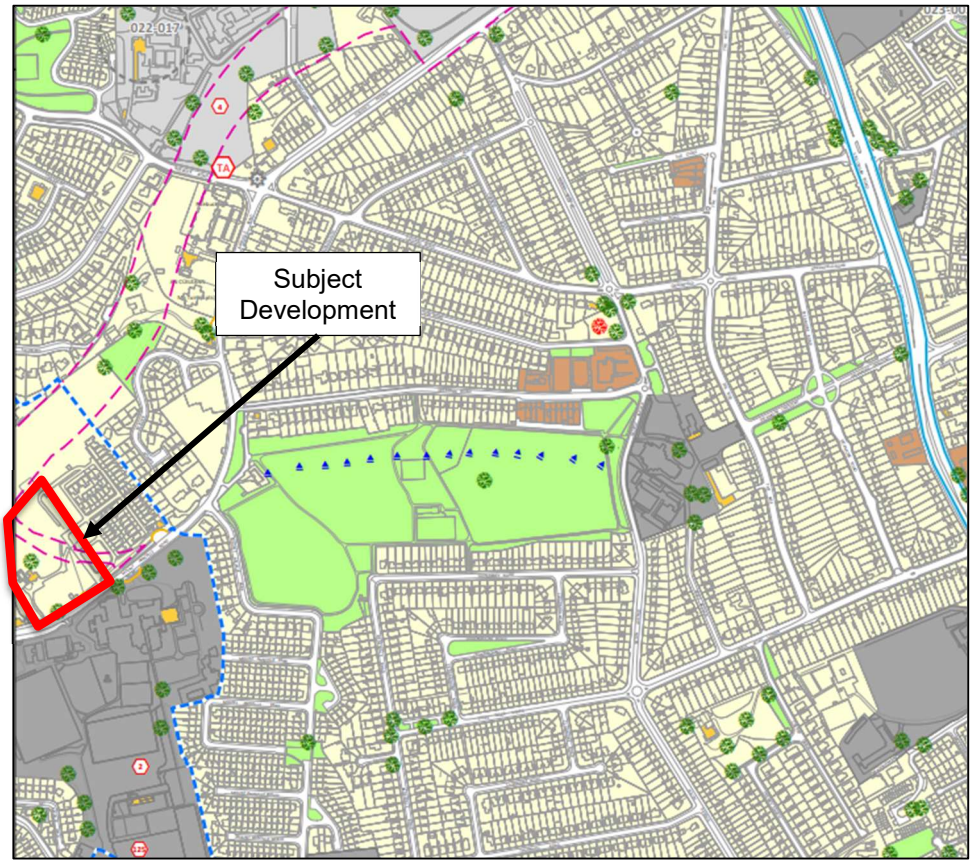

Figure 3 | *Site Location and Zoning (Source: Land Zoning Map No. 1 of the Dún Laoghaire-Rathdown County Development Plan 2022-2028).*

3. Site Accessibility

3.1 Pedestrian Infrastructure and Walking Accessibility

The key to pedestrian accessibility is the provision of short, convenient, and safe routes. Walking is the most common mode of transport. Almost all journeys involve some walking, so improvements to pedestrian facilities can have a wide impact.

The existing pedestrian facilities in the surrounding urban area consist of a well-interconnected network of footpaths linking the different neighbourhoods to each other, to the existing schools and to the surrounding public network.

Figure below shows the walking catchments accessible from the Subject Development for 10-minute, 20-minute, and 30-minute walking times.

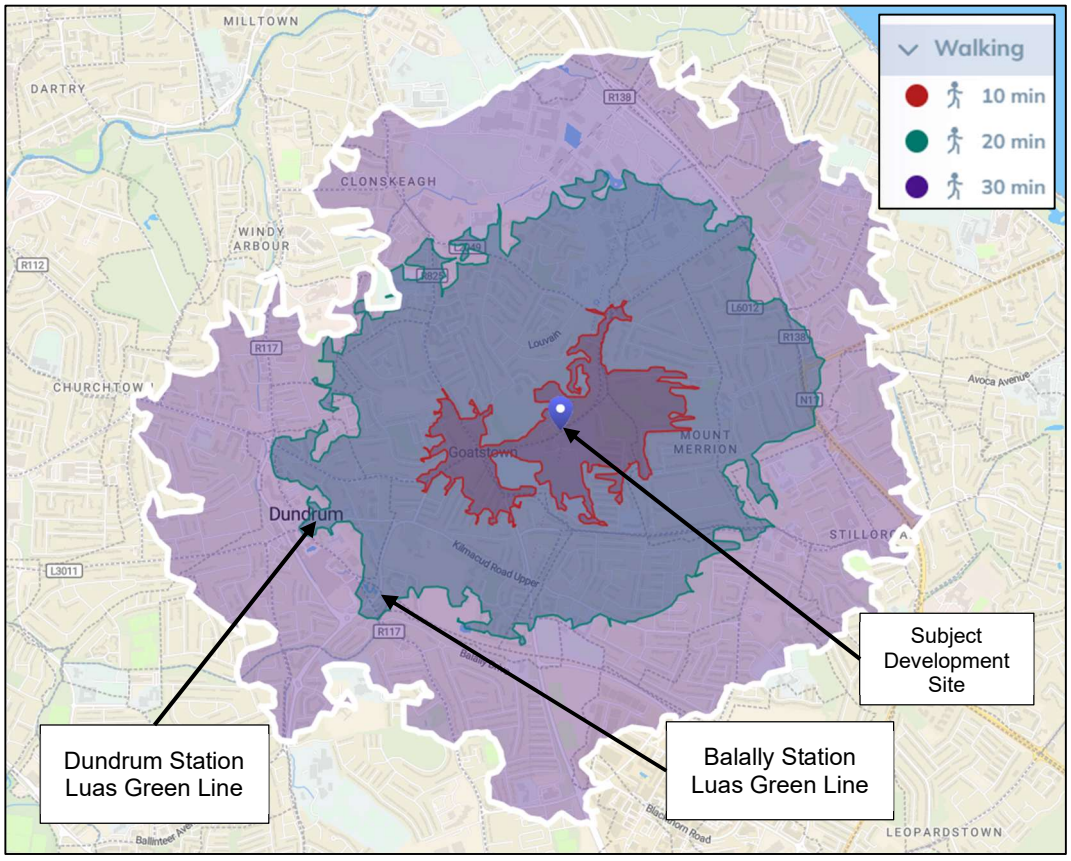

Figure 4 | *Isochrone map indicating Walking Accessibility (Source: Smappen)*

Figure 4 above shows the significant extent of the pedestrian catchment areas accessible from the Subject Development for different walking times ranging from 10 minutes, 20 minutes, and 30 minutes. As can be seen, a 20-minute walk provide access to the main bus stops in the surrounding area as well as the two LUAS Green Stations at Dundrum and Balally.

The surrounding area of the Subject Development is characterised by the presence of footpaths on both sides of the roads. In particular, on Mount Anville Road, the pedestrian is separated from the carriageway by a minimum 1.00m-wide grass verge.

3.2 Cycle Infrastructure and Cycling Accessibility

There are several cycle infrastructures in the surrounding area of the Subject Development as can be seen in **Figure 5** below.

There is no cycle facility on Mount Anville Road. However, to the west, there is a dedicated cycle route along R825. To the east of the Subject Development site, R138 has a dedicate cycle track along the road. Both cycle infrastructure provide access to Dublin City.

Figure 5 below shows the existing GDA Existing Cycle Network.

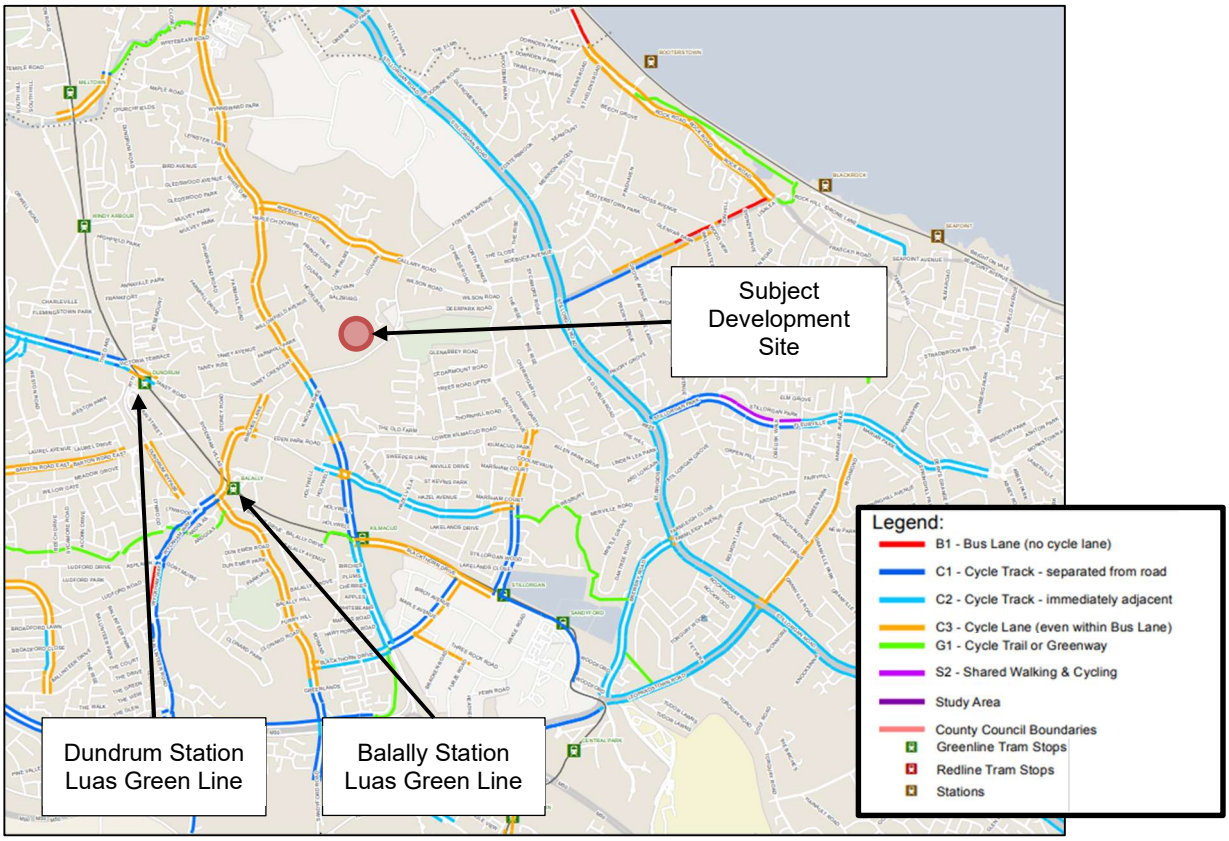

Figure 5 | *Existing Cycle Network (Source: CDA Cycle Network)*

Figure 6 below presents the cycling catchments accessible from the Subject Development for 10-minute, 20-minute, and 30-minute cycling times.

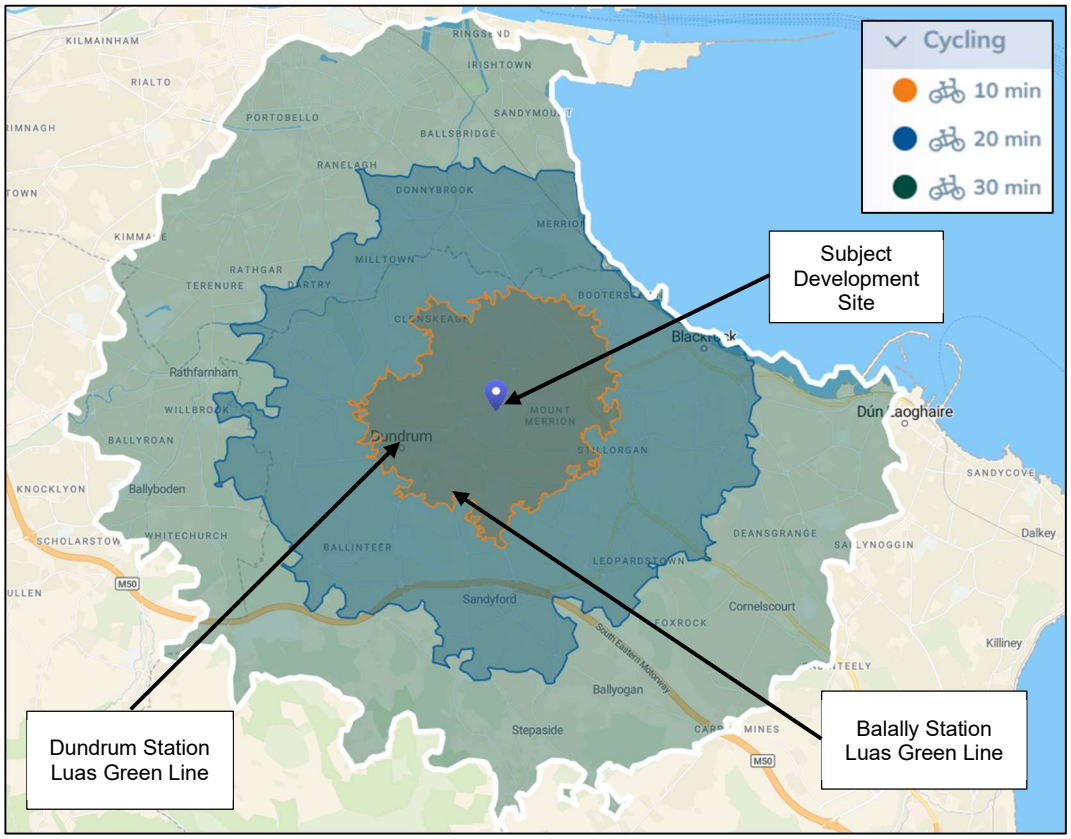

Figure 6 | *Isochrone map indicating Cycling Accessibility (Source: Smappen)*

Figure 6 above shows the cycling catchment areas accessible from the subject development for 10-, 20- and 30-minute cycle times. The figure illustrates that the 10-minute cycle catchment area includes the centre of Dundrum and both Green Line Stations. The 30-minute catchment area covers most of the surrounding area, including employment centres (see **Figure 12** below).

3.3 Existing Roads

The surrounding area of the Subject Development is well served by a network of roads that providing convenient access to all directions as can be seen in **Figure 7**.

The proposed development site has access to Mount Anville Road (R112), which is subject to a 50 km/h speed limit.

Proceeding in a northeast direction from the site, Mount Anville Road terminates at a four-arm signal-controlled junction with Roebuck Road, Fosters Avenue and Callary Road. Continuing in a northerly direction from this signalised junction, Fosters Avenue joins the strategic N11 Stillorgan Road corridor at a 3-arm signalised junction.

The N11 Stillorgan Road runs predominantly north-south providing access to Dublin City, Donnybrook, Mount Merrion, Blackrock to the north and Stillorgan, Foxrock, Conrnelscourt, Cabinteely, and the M50 motorway to the south.

Mount Anville Road (R112) terminates at a four-arm signal-controlled junction with Taney Road, Kilmacud Road and Goatstown Road to the west of the subject site. Westbound on Taney Road from this junction, direct access can be gained to Dundrum Town Centre and the Luas Green Line. Goatstown Road and Kilmacud Road provide alternative routes to Dublin City Centre and the M50 motorway, respectively.

To the west of the subject development is the R825, which runs in a southerly direction providing access to the M50 motorway, and to Dublin City in a northerly direction.

The M50 is a C-shaped orbital motorway that spans approximately 45.5 km (28.3 miles). It begins at Dublin Port, running northward through the Dublin Port Tunnel and along a portion of the Airport Motorway. The motorway then turns west at its junction with the M1, circling the northern, western, and southern suburbs of Dublin before merging with the M11 at Shankill in Southeast Dublin.

Figure below shows the roads in the area of the subject development.

Figure 7 | *Road Network*

3.4 Existing Public Transport Network

3.4.1 Bus Network

The proposed development is well served in terms of public transport provision. **Figure 8** below shows the bus stops in the surrounding area of the Subject Development.

The closest bus stop is located on Mount Anville Road which serves routes S6 & 511. There are extra bus stops in the vicinity of the site on the R825 which serves route 11, within 500 metres of the site.

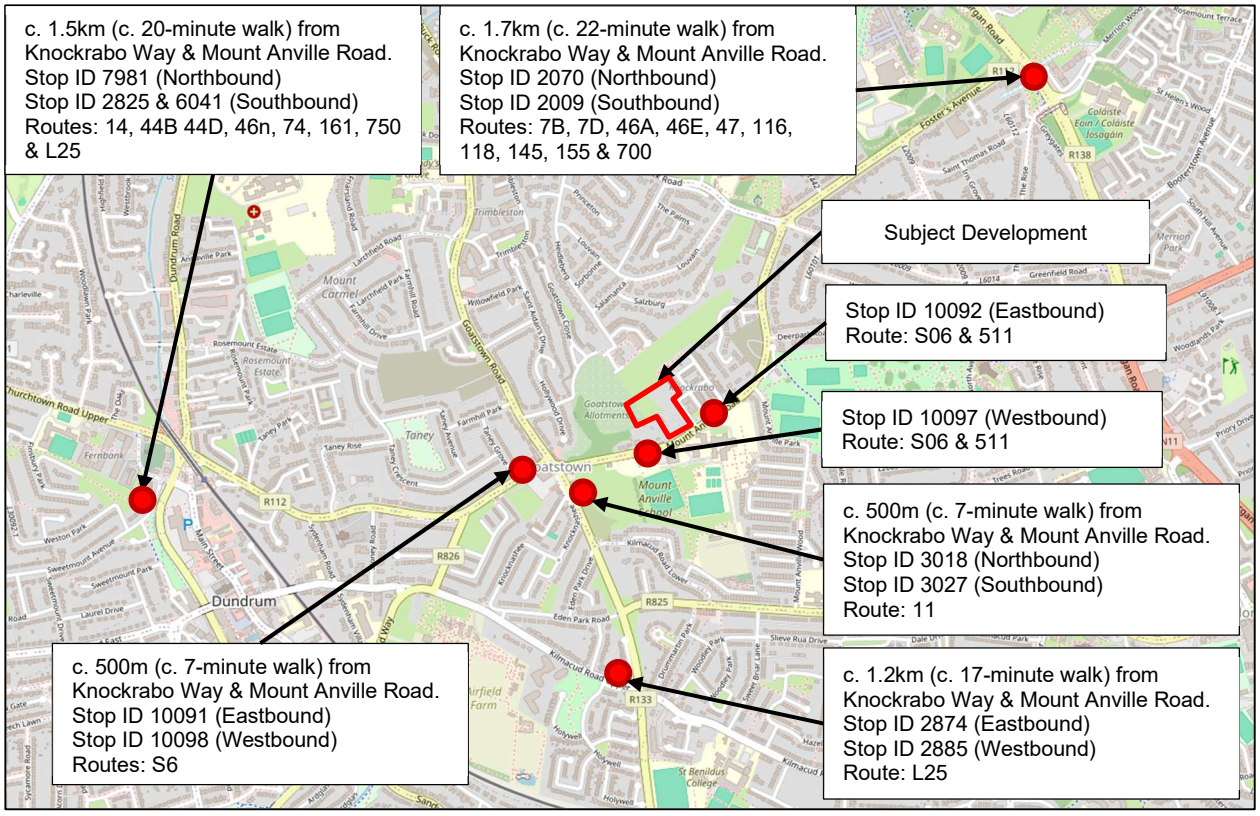

Figure 8 | *Bus Network – Walking distance from development to closest Bus Stop*

The routes that serve the bus stops shows in figure above, are listed below and a summary of the frequency of each route is indicated in **Table 2** below. The full bus timetables are provided in the Waterman Moylan Report No. *20-086r.004 Traffic and Transport Assessment*, *Appendix B,* which is included in the documentation package.

- **Bus Stop 10092 & 10097:** Located at Mount Anville Road. This stop is served by Joe Moroney Coach Hire Ltd, Route 511 and by Go Ahead Ireland, route S6. The former, due to the nature of the service and the hours of operation, is presumed intended for the students of the Mount Anville Junior School & Secondary School students and may not be of interest to local residents.
- **Bus Stop 3018 & 3027:** Located at Drummartin Road. This Bus stop is served by Dublin Bus, route 11.
- **Bus Stop 2874 & 2885:** Located at Kilmacud Road Upper. This Bus stop is served by Dublin Bus, route L25.

- **Bus Stop 10091 & 10098:** Located at Taney Road. This Bus stop is served by Go Ahead Ireland, route S6.
- **Bus Stop 2009 & 2070:** Located at Stillorgan Road. This bus stop served by Air Coach, route 700; Dublin Bus, routes 7b, 7d, 46a, 46e, 46n 47, 116, 118 & 155.
- **Bus Stop 2825:** Located at Dundrum Luas Station. This bus stop served by Dublin Bus, routes 14, 44D, & 46n; and Go Ahead, routes 161.
- **Bus Stop 6041:** Located at Dundrum Luas Station. This bus stop served by Dublin Bus, route 74; and Dublin Coach, route 750.
- **Bus Stop 7981 & 2866:** Located at Dundrum Luas Station. This Bus Stop Served by Dublin Bus, routes 44, 44B & L25.

Route	Stop ID Route Name	Weekday Frequency	Saturday Frequency	Sunday Frequency
Bus Stop 10092 & 10097				
511	Ardilea, Mount Anville School – Rathgar, Dartry Road	1 service 6:10	No Service	No Service
	Rathgar, Dartry Road - Ardilea, Mount Anville School	1 service 8:25	No Service	No Service
S6	Stop ID 7719 (Westbound) The Square – Blackrock Station	Every 15 Minutes between 06:04 and 23:58	Every 15-20 Minutes between 06:04 and 23:59	Every 30 Minutes between 08:03 and 23:58
	Stop ID 10160 (Eastbound) BlackRock Station – The Square	Every 15 Minutes between 05:44 and 23:42	Every 15-20 Minutes between 06:14 and 23:43	Every 30 Minutes between 07:42 and 23:43
Bus Stop 3018 & 3027				
11	Stop ID 3018 (Northbound) Wadelai PK – Sandyford Ind Estate	Every 20-30 Minutes between 07:38 and 23:44	Every 30 Minutes between 07:43 and 23:48	Every 30 Minutes between 11:20 and 23:41
	Stop ID 3027 (Southbound) Sandyford Ind Estate – Wadelai PK	Every 20-30 Minutes between 06:41 and 23:37	Every 30 Minutes between 06:38 and 23:38	Every 30 Minutes between 09:26 and 23:37
Bus Stop 2874 & 2885				
L25	Stop ID 2874 (Eastbound) Dundrum Town Centre – Dun Laoghaire	Every 15 Minutes between 05:33 and 23:34	Every 15-20 Minutes between 06:03 and 23:34	Every 20 Minutes between 07:43 and 23:43
	Stop ID 2885 (Westbound) Dun Laoghaire – Dundrum Town Centre	Every 15 Minutes between 05:48 and 23:50	Every 15-20 Minutes between 06:17 and 23:50	Every 20 Minutes between 07:48 and 23:50
Bus Stop 10091 & 10098				

S6	Stop ID 7719 (Westbound) The Square – Blackrock Station	Every 15 Minutes between 06:03 and 23:57	Every 15-20 Minutes between 06:03 and 23:58	Every 30 Minutes between 08:02 and 23:57
	Stop ID 10160 (Eastbound) BlackRock Station – The Square	Every 15 Minutes between 05:45 and 23:43	Every 15-20 Minutes between 06:15 and 23:44	Every 30 Minutes between 07:43 and 23:44
Bus Stop 2009 & 2070				
46a	Stop ID 2009 (Southbound) Phoenix Park – Dun Laoghaire	Every 8 Minutes between 06:49 and 23:49	Every 10 Minutes between 07:36 and 23:53	Every 15-20 Minutes between 09:09 and 23:45
	Stop ID 2070 (Northbound) Dun Laoghaire – Phoenix Park	Every 8 Minutes between 06:25 and 23:49	Every 10 Minutes between 07:20 and 23:52	Every 15-20 Minutes between 08:54 and 23:49
46e	Stop ID 2070 (Northbound) Blackrock Station – Mountjoy Square	2 services 8:06 & 8:31	No services	No services
46n	Stop ID 2009 (Southbound) Dublin City South, D'Olier Street – Dundrum, Outside Luas Station	Friday 5 services 0:16, 1:16, 2:16, 3:16 & 4:16	5 services 0:16, 1:16, 2:16, 3:16 & 4:16	No services
47	Stop ID 2009 (Southbound) Poolbeg Street – Belarmine	Every 30 Minutes between 16:05 and 23:53, and 8:15, 9:07 & 9:47	Every Hour between 07:54 and 23:54	Every Hour between 09:57 and 23:51
	Stop ID 2070 (Northbound) Belarmine – Poolbeg Street	Every 30 Minutes between 6:58 and 9:32, and from 16:56 to 23:47	Every Hour between 07:51 and 23:49	Every Hour between 09:56 and 23:48
7b	Stop ID 2009 (Southbound) Mountjoy Square – Shankhill	4 services 17:46, 17:56, 18:06 & 18:16	No Service	No Service
	Stop ID 2070 (Northbound) Shankhill – Mountjoy Square	5 services 7:36, 8:01, 8:16, 8:38 & 9:03	No Service	No Service
7d	Stop ID 2009 (Southbound) Mountjoy Square – Dalkey	1 service 18:13	No Service	No Service
	Stop ID 2070 (Northbound) Dalkey – Mountjoy Square	1 service 7:51	No Service	No Service
116	Stop ID 2009 (Southbound) Whitechurch – Parnell Square	1 service 15:39	No Service	No Service
	Stop ID 2070 (Northbound) Parnell Square - Whitechurch	1 service 08:36	No Service	No Service

118	Stop ID 2070 (Northbound) Kilternan – Eden Quay	1 service 08:27	No Service	No Service
145	Stop ID 2009 (Southbound) Heuston Rail Station – Ballywaltrim	Every 10 Minutes between 06:53 and 23:56	Every 15 Minutes between 07:26 and 23:58	Every 20 Minutes between 09:00 and 23:48
	Stop ID 2070 (Northbound) Ballywaltrim – Heuston Rail Station	Every 10 Minutes between 06:54 and 23:49	Every 15 Minutes between 07:16 and 23:52	Every 20 Minutes between 08:10 and 23:45
155	Stop ID 2009 (Southbound) IKEA Ballymun – Bray	Every 20 Minutes between 06:58 and 23:50	Every 20 Minutes between 07:50 and 23:50	Every 20 Minutes between 08:51 and 23:44
	Stop ID 2070 (Northbound) Bray – IKEA Ballymun	Every 20 Minutes between 06:34 and 23:44	Every 20 Minutes between 06:29 and 23:46	Every 20 Minutes between 08:33 and 23:43
700	Stop ID 2009 (Southbound) Dublin Airport – Leopardstown	Every 30 Minutes, 24 hours	Every 30 Minutes, 24 hours	Every 30 Minutes, 24 hours
	Stop ID 2070 (Northbound) Leopardstown – Dublin Airport	Every 30 Minutes, 24 hours	Every 30 Minutes, 24 hours	Every 30 Minutes, 24 hours
Bus Stop 2825				
14	Dundrum Luas Station – Ardlea Road (Beaumont)	Every 10-20 minutes between 6:15 and 23:30	Every 15 minutes between 6:30 and 23:20	Every 20 minutes between 8:30 and 23:30
	Ardlea Road (Beaumont) – Dundrum Luas Station	Every 10-20 minutes between 6:11 and 00:34	Every 15 minutes between 7:30 and 0:00	Every 20 minutes between 8:30 and 0:30
44D	Dundrum – OCS	2 services 6:35 and 7:25	No Service	No Service
	OCS – Dundrum	1 service 17:28	No Service	No Service
46n	Dundrum, Outside Luas Station – Dublin City South, D'Olier Street	No Service	No Service	Every Hour between 01:05 and 05:05
161	Dundrum – Rockbrook	Every 30 minutes between 8:10 and 18:55	No Service	No Service
	Rockbrook – Dundrum	Every 30 minutes between 6:45 and 18:15	No Service	No Service
Bus Stop 6041				

74	Dundrum Luas – Eden Quay	Every 30 minute between 5:30 and 23:30	Every 30-60 minute between 6:00 and 23:30	Every 30-60 minute between 7:30 and 23:30
	Eden Quay – Dundrum Luas	Every 30 minute between 6:15 and 0:20	Every 30-60 minute between 6:45 and 0:20	Every 30-60 minute between 8:20 and 0:15
750	Dundrum, Outside Luas Station – Dublin Airport	Every hour between 4:15 and 21:15	Every hour between 4:15 and 21:15	Every hour between 4:15 and 21:15
	Dublin Airport – Dundrum, Outside Luas Station	Every hour between 6:30 and 23:00	Every hour between 6:30 and 23:00	Every hour between 6:30 and 23:00
Bus Stop 7981 & 2866				
44B	Dundrum Luas – Glencullen	5 services: 6:50, 7:45, 8:50, 15:45 & 17:30	No service	No service
	Glencullen – Dundrum Luas	5 services: 7:47, 8:49, 9:47, 17:04 & 18:41	No service	No service

Table 2 | *Bus Routes – Frequency Table (source: Transport for Ireland)*

The route S6, as shown in the table above, corresponds to the recently launched Bus Connects network, which commenced operation in November 2023. The route is a key service route which provide access from the Subject Development to Stillorgan Road (S138) to the East where there are the bus stops ID 2070 and ID 2009. It also provides access to the Dundrum Station Luas Green Line to the west and the bus stops in the surrounding area.

3.4.2 Luas Green Line

The Subject Development is situated in close proximity to two Luas Green Line stations: Dundrum and Balally. Both are situated at a distance of 1.5 km from the Subject Development. The LUAS Green Line provides convenient access to Sandyford and the city centre as seen in **Figure 10**, in addition to numerous other destinations along its route.

Figure 9 below illustrates the walking and cycling times from the subject development to the nearest LUAS stations. This is part of the Luas Green Line, providing convenient access to the city centre.

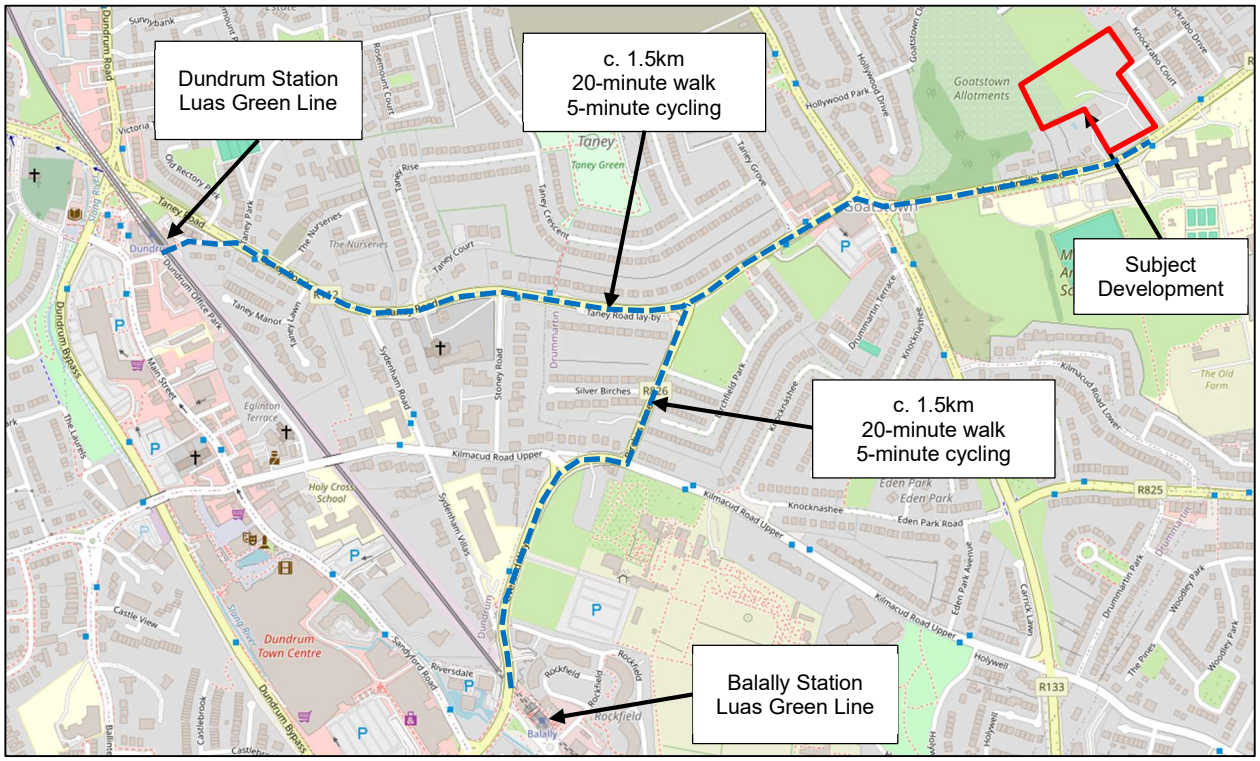

Figure 9 | *Luas Green Line Stations – Walking and cycle distance from development*

Figure 10 | *Luas Green Line Stations*

The operating hours of Luas Green Line at Dundrum Station in the northbound direction are as follows:

- Monday to Friday, the first tram passes at 5:37 and the last at 00:25.
- Saturdays, the first tram passes at 6:37 and the last at 0:25.
- Sundays and Bank Holidays, the first tram passes at 7:07 and the last at 23:25.

The southbound direction operates with the following timings:

- Monday to Friday, the first tram passes at 5:45 and the last at 00:56.
- Saturday, the first tram passes at 6:45 and the last at 0:56.
- Sunday and Bank Holidays, the first tram passes at 7:15 and the last at 23:56.

The frequency of the Luas is 3-5 minutes on weekdays, 5-7 minutes on Saturdays and 10-15 minutes on Sundays.

3.4.3 Car Sharing (Go Car)

The closest GoCar Base is located in the Stillorgan Gate Development at approximately 1.4km (or 19-minute walk) from the Subject Development.

There are other Go Car bases which are also close to the development – 4 in the vicinity of Dundrum Shopping Centre, approximately 1.7km (or 23-minute walk) west from the subject development, 1 at Circle K Stillorgan, approximately 1.7km (or a 23-minute walk) to the east and at Balally Luas Station to the south-east.

The location of the each GoCar Base in relation to the Subject Development is shown in **Figure 11** below.

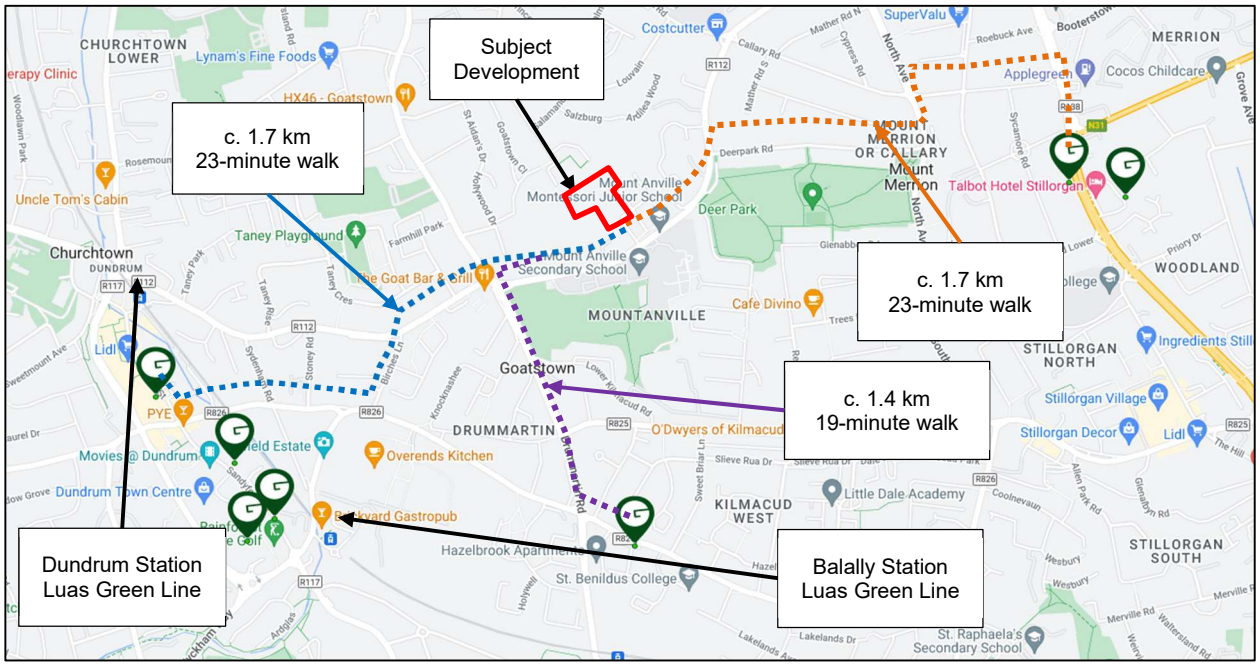

Figure 11 | *GoCar base locations (Source: GoCar website)*

3.5 Proximity to Amenities and Employment Areas

The Subject Development is situated in close proximity to a variety of amenities and employment areas, as shown in **Figure 12** below.

The site development is located less than 1.7 km from Dundrum Town Centre, which provides quick access to a wide range of amenities, including grocery stores, restaurants, coffee shops, and a retail park, educational institutions, medical care and employment opportunities. These amenities are within a convenient distance to reach by walking or cycling mode as can be seen in **Figure 4** and **Figure 6** above.

The site is situated in close proximity to a number of business parks that are easily accessible by bicycle, with the journey taking less than 20 minutes.

The subject development is situated approximately 8 kilometres (18-40-minute driving) from the centre of Dublin City and approximately 20 kilometres (26-50-minute driving) from Dublin Airport.

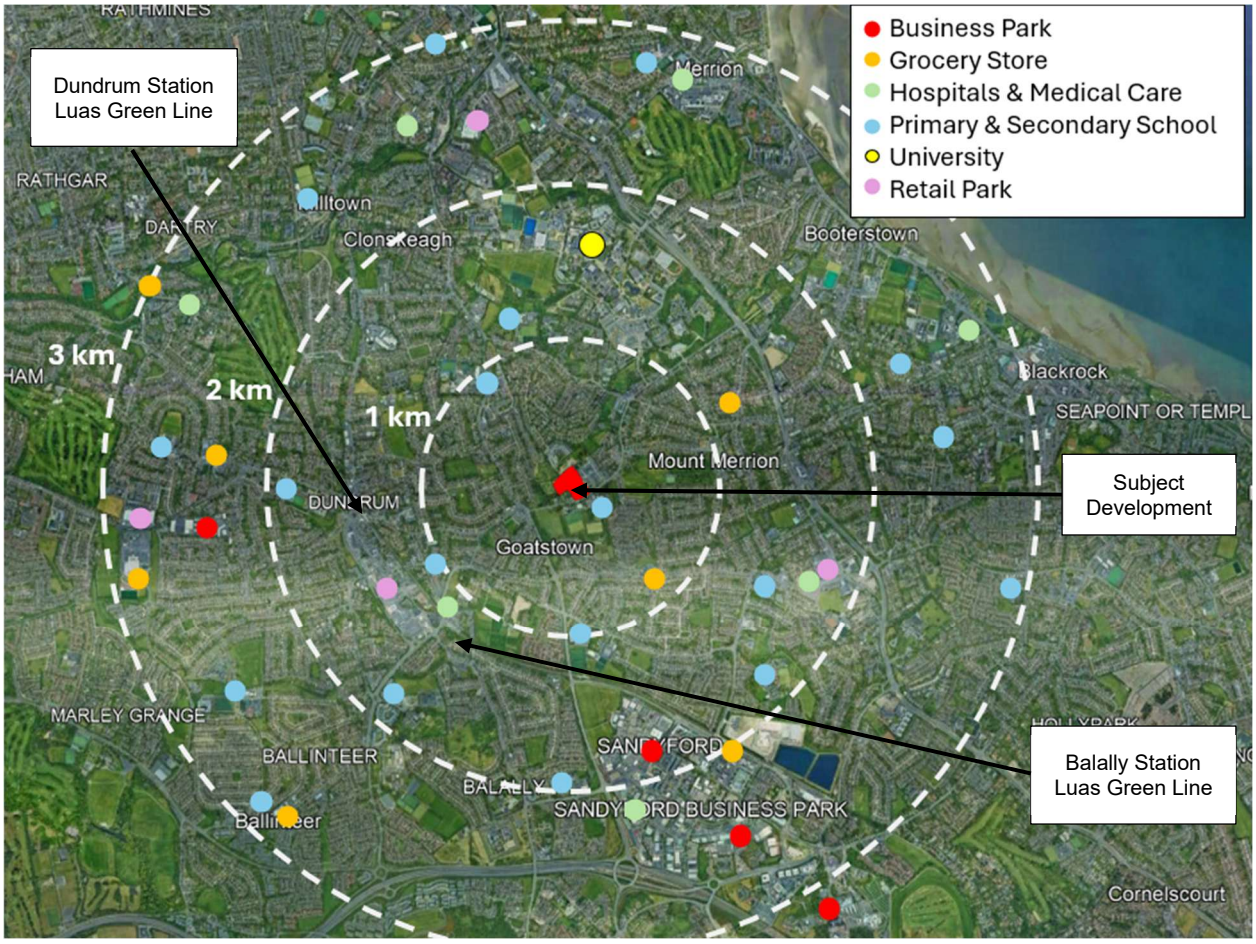

Figure 12 | *Main amenities and employment areas in the vicinity*

4. Transportation Improvements

4.1 Dublin Eastern Bypass

The Dublin Eastern Bypass scheme involves the construction of a new motorway route linking the Dublin Port Tunnel to the M50 at Sandyford, which was proposed. Part of the area reserved for this proposed route runs to the north of the subject site as shown in **Figure 13** below.

The motorway was first approved 20 years ago with the intention of linking the M50 from Whitehall through Marino, Poolbeg, Sandymount, Booterstown and west of Dundrum. The aim was to relieve congestion in the city centre. It is now seen as an overly car-centric project that should be discouraged and is being considered as a site for future sustainable development on the eastern edge of the Dublin conurbation.

The Greater Dublin Area Transport Strategy 2022-2042 indicates that:

> *Subject to the retention of a corridor reservation for the South Port Access Route, the lands reserved for this scheme in the Dublin City Development Plan, Poolbeg Strategic Development Zone Planning Scheme and Dún Laoghaire Rathdown County Development Plan can be released for development. In relation to the southern section, the NTA is of the view that the lands reserved in the Dún Laoghaire Rathdown County Development Plan for this scheme should be reserved, pending the outcome of an assessment for its potential use as a transport corridor accommodating sustainable transport modes.*

Dún Laoghaire-Rathdown County Development Plan 2022-2028 indicates that

> *To implement the requirements of the Dublin Eastern Bypass Corridor Protection Study Booterstown to Sandyford, 2011 and any subsequent updates to same and to promote potential additional future temporary uses of the Dublin Eastern Bypass reservation corridor, including a greenway /cycleway, a pedestrian walkway, biodiversity projects, recreational opportunities - inclusive of playing pitches - public transport provision and other suitable temporary uses, pending a decision from Transport Infrastructure Ireland/Central Government in relation to the future status of the Bypass. Any potential additional future short-term uses of the reservation corridor will be subject to a joint feasibility study to be undertaken by TII and the NTA.*
>
> *In the event that the corridor is no longer needed for the DEBP, a Dún Laoghaire-Rathdown County Council lead study should be carried out to determine the best use of the corridor prior to any development being permitted. This study may be informed by a future NTA study. This should include the consideration of sustainable transport, biodiversity and recreation projects including playing pitches, and engagement with the public.*

The figure below shows the location of the area reserved for the Dublin Eastern Bypass as extracted from the *Dun Laoghaire Rathdown County Development Plan (2016-2022) - Map No. T3* - which is the development plan before the current one. However, as the current development plan has the area split across several maps, the previous development plan has been considered to show the area reserved for the Dublin Eastern Bypass on only one figure.

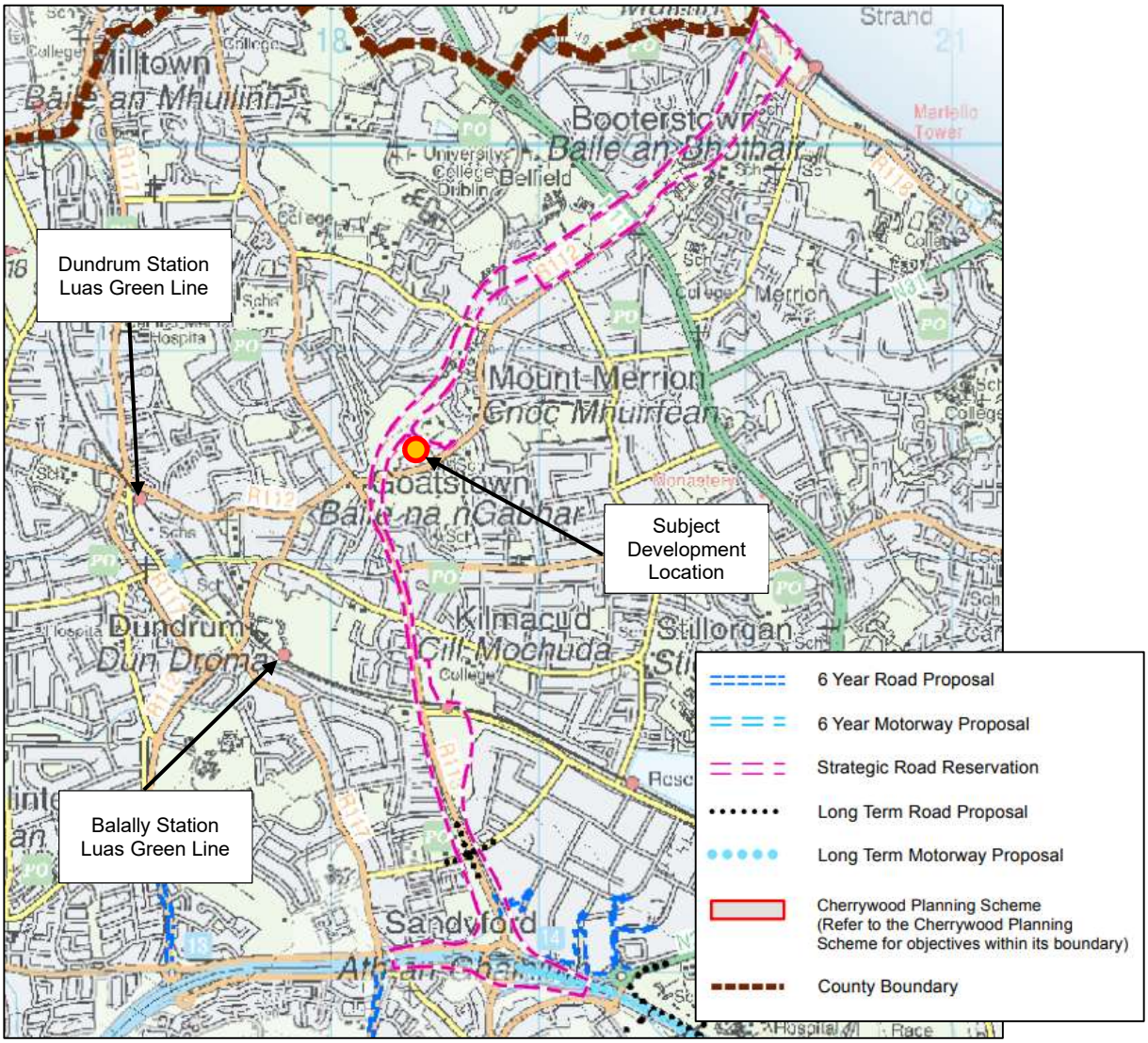

Figure 13 | *Dublin Eastern Bypass (Source:* Dun Laoghaire Rathdown County Development Plan (2016-2022) - *Map No. T3)*

4.2 BusConnects

Dun Laoghaire-Rathdown County Development Plan 2022-2028 outlines the Council's policy in relation to the provision of a quality bus network for the administrative area. In particular the *Policy Objective T6: Quality Bus Network/Bus Connections* indicates that:

> *"It is a Policy Objective to co-operate with the NTA and other relevant agencies to facilitate the implementation of the bus network measures as set out in the NTA's 'Greater Dublin Area Transport 2016-2035' and 'Integrated Implementation Plan 2019-2024' and the BusConnects Programme, and to extend the bus network to other areas where appropriate subject to design, environmental assessment, public consultation, approval, finance and resources."*

The BusConnects project, currently being promoted by the National Transport Authority (NTA), aims to deliver a significantly improved bus service in the Greater Dublin Area (GDA). Some of the route improvements identified in the BusConnects plan are already in place or underway. According to BusConnects the above route types can be defined as follows:

Spines routes: are very frequent routes made up of individual bus services that are timetabled to work together over their common sections.

Radials routes: are other services that operate into Dublin city centre. These services are not part of any Spine and operate to their own timetable.

Orbitals routes: provide connections between suburbs, without having to travel into the city centre.

Local routes: provide connections to Local centres and link to onward transport connections.

Peak routes operate during peak travel periods, providing additional capacity along key bus corridors. Express routes are direct services from outer suburbs to the city centre during peak hours, serving limited stops to get passengers to their destination faster.

The routes proposed to serve the area surrounding the Subject Development are shown in **Table 3** below, which also gives the route name and weekday and weekend frequency, and the map showing the location of each bus route is shown in **Figure 14** below.

Route	Route Name	Frequency
A-Spine A2	Airport – City Centre – Ballinteer – Dundrum	**Weekday**: Every 12 minutes between 7:00 and 19:00 Every 15 minutes between 6:00 and 7:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Saturday**: Every 15 minutes between 9:00 and 19:00 Every 20 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Sunday**: Every 20 minutes between 10:00 and 19:00 Every 30 minutes between 19:00 and 10:00
A-Spine A4	Swords – City Centre – Dundrum	**Weekday**: Every 12 minutes between 7:00 and 19:00 Every 15 minutes between 6:00 and 7:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Saturday**: Every 15 minutes between 9:00 and 18:00 Every 20 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Sunday**: Every 20 minutes between 10:00 and 19:00 Every 30 minutes between 19:00 and 10:00
E-Spine E1	Northwood – City Centre – Bray Main St. – Ballywaltrim	**Weekday**: Every 8 minutes between 7:00 and 9:00 and between 15:00 and 18:00 Every 10 minutes between 6:00 and 7:00, between 10:00 and 15:00, and between 18:00 and 23:00 Every 20 minutes between 23:00 and 6:00 **Saturday**: Every 10 minutes between 9:00 and 19:00 Every 15 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 20 minutes between 23:00 and 6:00

		Sunday: Every 15 minutes between 10:00 and 19:00 Every 20 minutes between 19:00 and 10:00
E-Spine E2	Charlestown – City Centre – Dun Laoghaire	**Weekday**: Every 8 minutes between 7:00 and 9:00 and between 15:00 and 18:00 Every 10 minutes between 6:00 and 7:00, between 10:00 and 15:00, and between 18:00 and 23:00 Every 20 minutes between 23:00 and 6:00 **Saturday**: Every 10 minutes between 9:00 and 19:00 Every 15 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 20 minutes between 23:00 and 6:00 **Sunday**: Every 15 minutes between 10:00 and 19:00 Every 20 minutes between 19:00 and 10:00
Orbital Route S4	Liffey Valley – Ballyfermot – Crumlin – Milltown – UCD	**Weekday**: Every 10 minutes between 6:00 and 23:00 Every 20 minutes between 23:00 and 6:00 **Saturday**: Every 10 minutes between 9:00 and 19:00 Every 15 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 20 minutes between 23:00 and 6:00 **Sunday**: Every 15 minutes between 10:00 and 19:00 Every 20 minutes between 19:00 and 10:00
Orbital Route S6	Tallaght – Dundrum – UCD – Blackrock	**Weekday**: Every 15 minutes between 6:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Saturday**: Every 15 minutes between 9:00 and 19:00 Every 15 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Sunday**: Every 20 minutes between 10:00 and 19:00 Every 30 minutes between 19:00 and 10:00
Radial Route 86	Tallaght – Dundrum – UCD – Blackrock	**Weekday**: Every 30 minutes between 5:00 and 23:00 Every 60 minutes between 23:00 and 5:00 **Saturday**: Every 30 minutes between 9:00 and 18:00 Every 60 minutes between 19:00 and 9:00 **Sunday**: Every hour over 24 hours
Radial Route 87	Belarmine – Dundrum – Mountjoy Square	**Weekday**: Every hour between 6:00 and 23:00 **Saturday**: Every hour between 9:00 and 19:00 **Sunday**: No Service
Radial Route 88	Enniskerry – Belarmine – Dundrum – Mountjoy Square	**Weekday**: Every hour between 6:00 and 23:00 **Saturday**: Every hour over 24 hours **Sunday**: Every hour over 24 hours
Local Route L25	Dundrum – Dun Laoghaire	**Weekday**: Every 15 minutes between 6:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Saturday**: Every 15 minutes between 9:00 and 19:00

		Every 20 minutes between 6:00 and 9:00 and between 19:00 and 23:00 Every 30 minutes between 23:00 and 6:00 **Sunday**: Every 20 minutes between 10:00 and 19:00 Every 30 minutes between 19:00 and 10:00
Local Route L33	Glencullen – Dundrum	**Weekday**: 9 service at 7:00, 8:00, 9:00, 11:00, 13:0, 15:00, 17:00, 18:00 and 20:00 **Saturday**: No Service **Sunday**: No Service

Table 3 | *BusConnects – Frequency service*

Figure below shows the bus routes that serves the area surrounding the subject development.

Figure 14 | *BusConnects Routes (Source: Revised Network Big Picture Map 2024 – BusConnects website)*

Route S6 is currently implemented in accordance with the assessment described in **Section 3.4.1**.

4.3 Luas Green Line

The *Greater Dublin Area Transport Strategy 2022-2042* proposed the extension of the Luas Green Line to Finglas to the north and to Bray to the south. The proposed extension of the Luas Green Line will provide a high-frequency and high-capacity link between Bray and Finglas, traversing the city centre. It will also serve as a rail link to several destinations within 1.5km walking distance of the Subject Development.

According to the Greater Dublin Area Transport Strategy 2022-2042, the next steps are:

- Between 2022 and 2030, upgrade the Luas Green Line
- Between 2031 and 2036 Extension of rail infrastructure to Finglas, Lucan and Bray
- Between 2037 and 2042, planning and design of additional Luas lines and extensions to existing lines.

4.4 Greater Dublin Area Cycle Network Plan

The proposed development site lies within the *"Dublin South Central"* sector as outlined in the *2022 Greater Dublin Area Cycle Network Plan*. An extract of the updated cycle network is reproduced in **Figure 15** below.

The *Greater Dublin Area Cycle Network Plan 2022* sets out the future local cycle network which includes a west-east primary orbital route along Mount Anville Road and two primary radial routes along Goatstown Road (R825) and Stillorgan Road (R138) to the west and east of the Subject Development respectively. These latter roads provide a direct link to the centre of Dublin City.

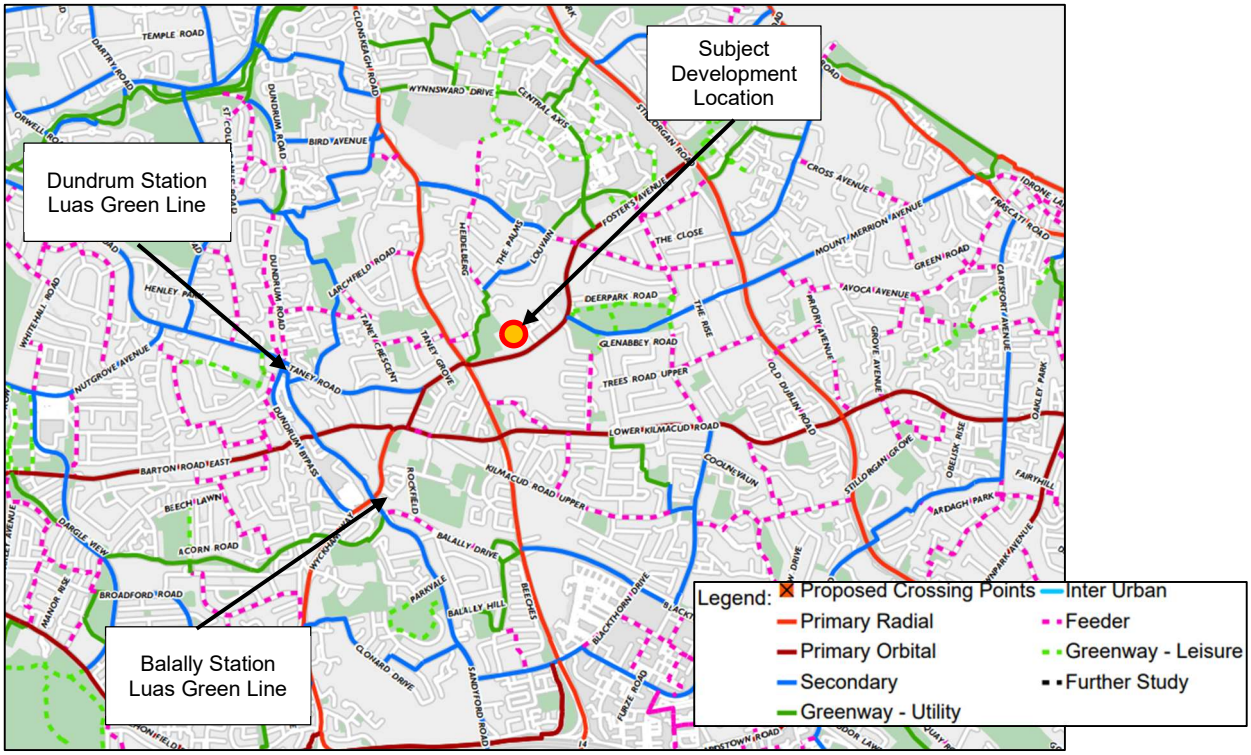

Figure 15 | *Proposed Cycle Network (Source: GDA Cycle Network Plan, 2022)*

4.5 Additional GoCar Station

It is expected that GoCar will provide 2 shared car club vehicles in the proposed development when fully developed and occupied. A letter to confirm GoCar intentions to provide these new car club vehicles within the site is included in the Waterman Moylan Report No. 20-*086r.004 Traffic and Transport Assessment*, *Appendix C,* which is included in the documentation package.

5. Proposed Development

5.1 Site Description

The total site area is approximately 2.54 hectares and is predominantly greenfield. The subject site is accessed from a circa 100m section of constructed entrance road, Knockrabo Way, that also facilitates access to the adjacent Phases 1 and 1A development to the east.

The development will consist of the construction of 158 No. residential units (12 No. houses and 146 No. apartments (35 No. 1 beds, 81 No. 2 beds, 3 No. 3 beds and 27 No. 3 bed duplex units), a childcare facility and Community / Leisure Uses.

The development will also provide 130 No. car parking spaces consisting of 117 No. residential spaces (comprising 54 No. at podium level, 63 No. on-street and on curtilage spaces, 6 No. visitor spaces and 2 No. on-street car sharing spaces); and 5 No. non-residential spaces; provision of 366 No. bicycle parking spaces (consisting of: 288 No. residential spaces, 70 No. (residential) visitor spaces, 6 No. (non-residential) spaces and 2 No. visitor (non-residential) spaces); and 9 No. motorcycle parking spaces.

The application does not impact on the future access to the Reservation for the Dublin Eastern Bypass.

5.2 Site Access Points

The Subject Development will have a single access point off Mount Anville Road via Knockrabo Way. Knockrabo Way is partially constructed and currently provides access to Phases 1 and 1A. This road will be extended further north to provide access to the subject development of Phase 2. This extension of Knockrabo Way was previously permitted under Planning Register Ref. No. D17A/1124 and there is no proposal to amend it.

Figure 16 below shows the site access point off Mount Anville Road, the road layout for the overall Knockrabo site and the upgraded access point to the Cedar Mount House.

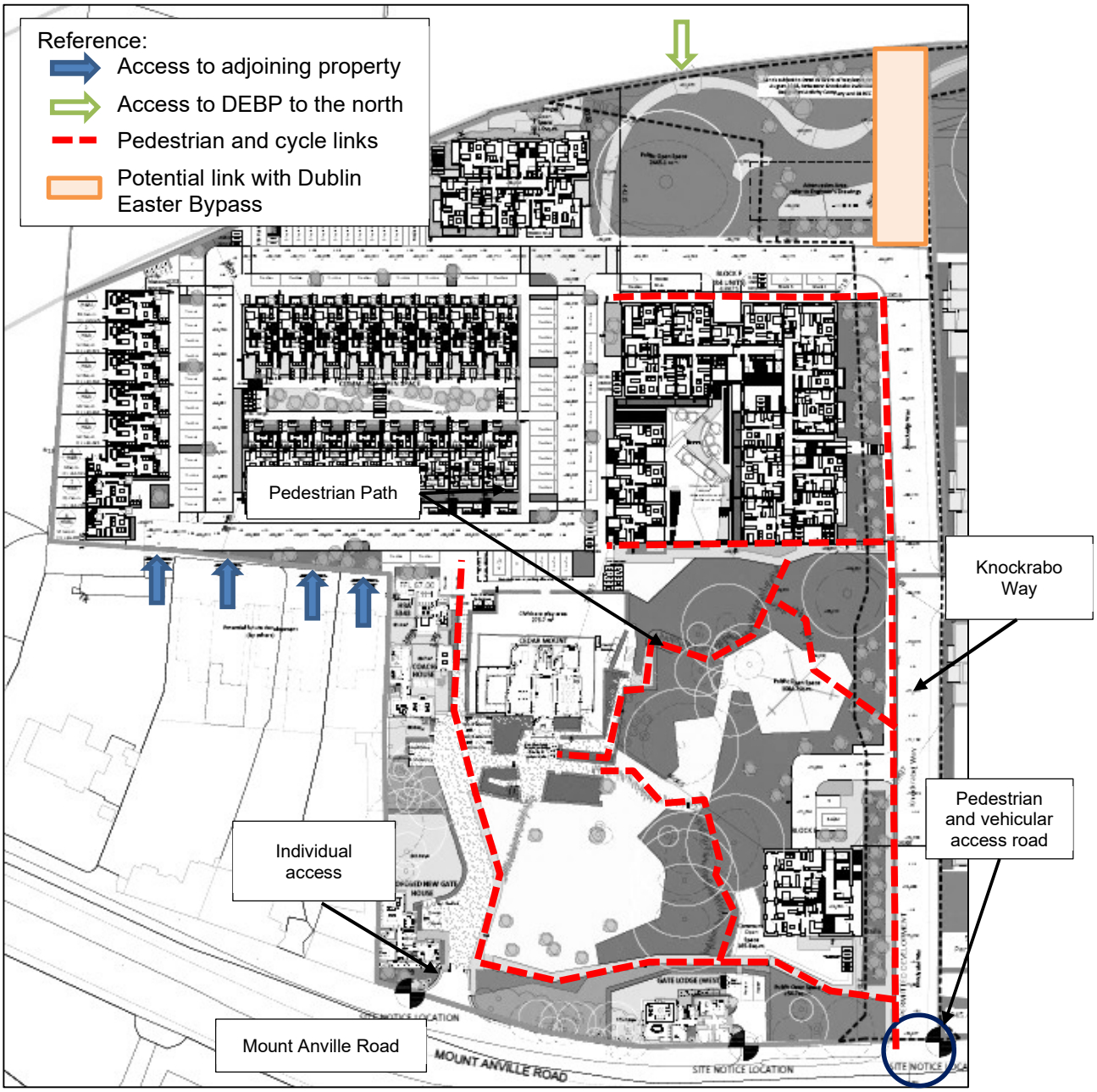

Figure 16 | *Proposed Development – Internal Road Network and Site Access Point*

As can be seen in the figure above, the subject site includes several links to the surrounding area. The blue arrows indicate the proposed road network to facilitate vehicular access and services to the gardens of the adjoining properties to facilitate their future development potential. The green arrow indicates a gateway to the northern lands which will serve to the Dublin Eastern Bypass (refer to **Section 4.1** above).

It is also important to note that the continuation of the Knockrabo Way will link to the Dublin Easter Bypass as indicated in the Dun Laoghaire Rathdown County Development Plan (2016-2022) - Map No. T3 (see **Figure 13** above).

The junction between Mount Anville Road and Knockrabo Way is shown below.

Figure 17 | *Proposed Development – Current Access Road*

Mount Anville Road is a two-way road with a width of 4.00 metres in each direction. Knockrabo Way is a two-way road with a width of 3.50 metres in each direction.

5.3 Pedestrian and Cyclist Infrastructure

The Subject Development provides good pedestrian accessibility from Mount Anville Road, as can be seen in **Figure 16** above.

The internal road layout gives priority to pedestrians at each crossing with a courtesy crossing, which is defined by a change of material and a vertical deviation, providing a safe environment for pedestrians.

All footpaths within the proposed development have been designed as 2.0m wide. This is in accordance with Section 4.3.1 of DMURS which suggests that a minimum 1.8m footpath should be provided.

5.4 Internal Road Layout

The internal roads have been designed in accordance with the requirements of the County Development Plan, with a width of 5.5 metres. All footpaths are 2.0m wide and connect the internal spaces.

All internal roads within the proposed development have been designed with a speed limit of 30km/h. The shared road will have a speed limit of 20km/h. All junctions within the development itself will be priority junctions with raised tables where appropriate.

The low design speeds and traffic calming measures will ensure the safe operation of these junctions and a safe/secure environment for pedestrians and cyclists.

The design and layout of the proposal has been prepared to fully comply with the current relevant design standards and specifications applicable to this form of development.

The development includes sufficient parallel and perpendicular parking spaces, as outlined in local guidelines (refer to **Section 5.6** below).

5.5 Traffic Assessment

The Traffic and Transport Assessment conducted for the Subject Development estimates that the Subject Development will result in a total of 79 car trips in the AM peak hour (24 arrivals and 55 departures) and 70 in the PM peak hour (44 arrivals and 26 departures).

Of the junctions assessed, the junction of Mount Anville Road (R112) and Knockrabo Way (existing T-junction) would experience a traffic increase above the threshold of 5% of the existing flow during the AM peak hour. This intersection has been assessed for the subject development.

The junction modelling results demonstrate that the existing junction of Mount Anville Road (R112) and Knockrabo Way would operate well for all scenarios assessed: The junctions would remain within their capacity for the 2042 DO SOMETHING (DS-2042) scenario during both peak periods.

The specific details of the assessment are set out in the Waterman Moylan Report No. *20-086r.004 Traffic and Transport Assessment*, which is included in the documentation package.

5.6 Car Parking

To determine the appropriate amount of car and cycle parking for the proposed development, reference will be made to the following guidelines/policies:

- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)
- Sustainable Urban Housing: Design Standards for New Apartments (July 2023)
- Greater Dublin Area Transport Strategy (2022 – 2042) Standards
- Dún Laoghaire-Rathdown County Development Plan 2022-2028

Details of the specific car parking assessment are set out in the Waterman Moylan Report No. 20-*086r.004 Traffic and Transport Assessment*, *section 10.1,* which is included in the documentation package.

Dún Laoghaire-Rathdown County Development Plan 2022-2028 indicates the maximum number of car parking spaces and permits deviations from the indicated value in certain instances. Section 12.4.5.2 of the standard outlines the assessment criteria for deviations from the car parking standard. The following points set out the assessment criteria that have been considered in order to determine the number of car parking spaces.

- *Proximity to public transport services and level of service and interchange available:* the Luas Green Line station at Dundrum is situated approximately 1,500 metres to the West of the site (see **Figure 9**). There are also two bus stops within 500 metres of the site (see **Figure 8**), which is a 5-minute walk. These bus stops serve route 11, which operates at a frequency of 20 to 30 minutes and the BusConnects Route S6, which operates at a frequency of 15 minutes. The latter provides a convenient connection between the Subject Development and the Dundrum Station Luas Green Line, with a five-minute journey on the bus.
- *Walking and cycling accessibility/permeability and any improvement to same*: the site has a wide range of pedestrian paths that traverse the public open spaces and provide access to Mount Anville Road, improving the permeability of development.
- *The need to safeguard investment in sustainable transport and encourage a modal shift:* in terms of mobility, the primary objective of the developments is to discourage the use of private vehicles and encourage residents to choose more sustainable means of transport. The extensive public transport service in the area and the provision of car-sharing within the development (see next point) help to ensure that residents do not feel the need to own a car in order to reach their destination.
- *Availability of car sharing and bike / e-bike sharing facilities:* the site provides two parking spaces designated for Go Car Station (refer to **Section 4.5**).

- *Existing availability of parking and its potential for dual use:* the site comprises three on-street car parking spaces allocated to the childcare facility. It is possible that these parking spaces could be made available for visitors when the childcare facility is not in operation.
- *Particular nature, scale, and characteristics of the proposed development:* the site is developed on 2.54 hectares of land, and it is bounded to the south by Mount Anville Road, to the east by Phase 1 of the overall Knockrabo development, to the southwest by existing allotments including Cedar Mount (a protected structure), and to the north by the reservation corridor for the Dublin Eastern Bypass Corridor Protection Study Booterstown to Sandyford. The proposed development comprises a total of 158 residential units, representing a net density of 102.9 units per hectare within the subject application and a net density of 65 units per hectare across the overall Knockrabo lands.
- The range of services available within the area: the Subject Development is situated within an area characterised by a wider range of land uses (see **Figure 12**). Typical land uses in the surrounding area include a fast-food store, a food discount store, a primary school, and a secondary school.
- *Impact on traffic safety and the amenities of the area:* the subject development will have a single car-access point off Mount Anville Road via Knockrabo Way. Knockrabo Way currently provides access to Phases 1 and 1A. The educational establishments of Mount Anville Montessori Junior School and Mount Anville Secondary School are situated on Mount Anville Road. Both educational institutions have access from Mount Anville Road, situated 60 metres to the east of the aforementioned access road. A reduction in the probability of car flow will serve to enhance the safety of traffic in the surrounding area.
- *Capacity of the surrounding road network:* The Traffic and Transport report assesses the junction located in Knockrabo Way & Mount Anville Road in order to evaluate the impact of the Subject Development on the surrounding road network. As a result of this assessment, it can be concluded that the junctions in question operate within capacity for all years assessed. Further details of this assessment can be found in the Waterman Moylan Report No. *20-086r.004 Traffic and Transport Assessment, section 8*, which forms part of the documentation package.
- *Robustness of Mobility Management Plan to support the development:* The application includes a Travel Plan, which includes the Mobility Management Plan. **Section 7** below describes the Travel Plan and its characteristics.
- *The availability of on street parking controls in the immediate vicinity*: the surrounding area does not allow parking on the carriageway, as the Mount Anville Road is a two-way road with a width of 4.00 metres in each direction. The Knockrabo Way is a two-way road with a width of 3.50 metres in each direction. The footpath is separated from the road by a wide grass verge on both sides of the road.

In accordance with the above, the following number of parking spaces is proposed for the Development:

Car Parking	No. Residential Units	Visitor/Drop off Parking (On Street)	Go-Car Parking (On Street)	Residential Parking (On-Street)	Residential Parking (On-Curtilage)	Residential parking (Podium)	Non-Residential Parking	Total Car Residential Parking	Residential Parking Ratio
4-bedroom house	8			8				8	1.0
Duplex	32			32				32	1.0
Block E	8			1		7		8	1.0

Car Parking	No. Residential Units	Visitor/Drop off Parking (On Street)	Go-Car Parking (On Street)	Residential Parking (On-Street)	Residential Parking (On-Curtilage)	Residential parking (Podium)	Non-Residential Parking	Total Car Residential Parking	Residential Parking Ratio
Block F	84			1		47		48	0.6
Block G	20			12				12	0.6
Community / Leisure Uses							2		
Childcare Facility							3		
3-bed detached	1				2			2	2
Exiting Gatelodge	1				2			2	2
New Gate House	1				2			2	2
Coach House	1			1				1	1
Apt 01	1			1				1	1
Apt 02	1			1				1	1
Go-Car			2				2		
Visitor		6					6		
Totals	**158**	6	2	59	6	55	13	**117**	**0.74**

Table 4 | *Car Parking Spaces Proposed*

It is therefore proposed that a total of 130 No. car parking spaces be provided, with 117 No. spaces allocated for residents of the development, 11 No. spaces for non-residents, visitors and drop-off parking, and 2 No. spaces for Go-Car Station.

The proposal includes the following parking spaces:

Motorcycle Parking: 9 no. motorcycle parking are proposed: 1 no. within Block E, 6 within Block F and 2 within Block G.

Disabled Parking: 5 no. disable parking are proposed.

5.7 Cycle Parking

To determine the appropriate amount of cycle parking for the proposed development, reference will be made to the following guidelines/policies:

- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)
- Sustainable Urban Housing: Design Standards for New Apartments (July 2023)
- Dun Laoghaire Rathdown Standards for Cycle Parking and Associated Cycling Facilities for New Developments (January 2018)

Details of the specific cycle parking assessment are set out in the Waterman Moylan Report No. 20-*086r.004 Traffic and Transport Assessment*, *section 10.2,* which is included in the documentation package.

In accordance with the guidelines and policies set out in the TTA, Bicycle Calculations are based on *Sustainable Urban Housing: Design Standards for New Apartments (July 2023)* for apartments and on *Standards for Cycle Parking and Associated Cycling Facilities for New Developments* for Houses & Duplex.

Land Use	No. Units	Standard		Proposed	
		Long-Stay	Short-Stay	Long-Stay	Short-Stay
2-bed Houses	1	1	1 / 5 units	1	1
3-bed Houses	3	1	1 / 5 units	3	1
4-bed Houses	8	3	1 / 5 units	24	2
1-bed Apartments	35	1	1 / 2 units	35	18
2-bed Apartments	81	2	1 / 2 units	162	40
3-bed Apartments	3	3	1 / 2 units	9	2
3-bed Duplex	27	2	1 / 5 units	54	6
Crèche	42 no. children 8 no. staff	1 per 10 children	1 per 5 staff	4	2
Community / Leisure uses	223 sqm	1 per 100 sqm GFA		2	
Total resident cycle parking spaces **Total non-resident cycle parking spaces**				**288** **6**	**70** **2**

Table 5 | *Cycle Parking Proposed*

It is therefore proposed that a total of 366 no. cycle park spaces will be provided. A total of 358 bicycle parking spaces will be allocated for the residential units, with 288 spaces designated for long-term use and 70 spaces for short-term use. Furthermore, it is proposed that 8 no. cycle parking spaces will be provided for non-resident units, with 6 no. spaces allocated for long-stay and 2 no. spaces for short-stay.

It is considered that the number of cycle parking spaces proposed is sufficient for the subject development and that it meets the minimum requirements of each of the standards analysed in the TTA.

6. Public Transport Assessment

To determine whether the current public transportation system has the capacity to accommodate the commuting needs of residents of the proposed development, a Public Transport Capacity Analysis has been prepared by Waterman Moylan on behalf of Knockrabo Investments DAC to accompany a planning application to Dun Laoghaire Rathdown.

Detailed assessment is outlined in the Waterman Moylan Report No. *20-086r.005 Public Transport Capacity Analysis*, which is included in the documentation package.

The transport public surveys were carried out by Waterman Moylan on Tuesday 14th May 2024, Tuesday 8th October 2024 and Wednesday 9th October 2024, during both peak hours, morning and evening. The survey was carried out in the morning between 07.00 and 09.00 and in the evening between 16.30 and 18.30, in line with the expected demand profile for bus and Luas journeys outlined above.

The survey was carried out at:

- **Bus Stop 3018 & 3027:** Located at Drummartin Road. This Bus stop is served by Dublin Bus, route 11.
- **Bus Stop 10092 & 10097:** Located at Mount Anville Road. This stop is served by Joe Moroney Coach Hire Ltd, Route 511 and by Go Ahead Ireland, route S6.
- **Dundrum Luan Green Line Station** for both directions, northbound and southbound.

The capacity and demand for the various public transport services in the area of the subject site is set out in **Table 9** below. As shown in the table below, the existing public transport system is sufficient to meet the commuting needs of the residents of the proposed development.

Service Type	No of Services	Total Capacity	Development Demand	Demand as % of Capacity
AM Peak Hour (7:30 – 8:30)				
Bus – Northbound	3	239	8	3.4%
Bus – Southbound	3	257	8	3.1%
Bus – Eastbound	4	256	8	3.0%
Bus – Westbound	4	329	8	2.4%
Luas – Northbound	15	1,609	14	0.9%
Luas – Southbound	13	2,135	6	0.3%
PM Peak Hour (17:00 – 18:00)				
Bus – Northbound	3	97	8	8.6%
Bus – Southbound	3	150	8	5.3%
Bus – Eastbound	5	134	8	6.0%
Bus – Westbound	2	43	8	21.5%
Luas – Northbound	15	2,325	14	0.6%
Luas – Southbound	13	1,337	6	0.5%

Table 6 | Demand vs Capacity AM Peak Weekday (Source: Waterman Moylan Report No. *20-086r.005 Public Transport Capacity Analysis)*

7. Modal Choice Targets Development

7.1 Small Areas – Census 2022

To understand the vehicle ownership and mode of travel choice of the residents in the area, public information from the Census 2022 was used. The Census was conducted by the Central Statistics Office on 3rd April 2022, and distributed information in small areas that divide the territory.

It is important to choose a wide number of areas to obtain representative values that will allow us to approximate the future behaviour of the inhabitants within the subject

The small areas consulted are shown in **Figure 18** below, with the selected areas for the 2016 Census on the left and those selected for the 2022 Census on the right.

Figure 18 | *Consulted Small Area 2016 (left) & 2022 (right)*

The difference in the selected areas between the two censuses is due to the fact that the census areas were modified for each year. However, this difference is not significant for the statistical purposes of this assessment.

The modal split in each year is detailed below, based on information from the 2016 and 2022 censuses.

Mode	Census 2016	Census 2022
Car	55.0%	50.2%
Public Transport	14.2%	15.0%
Walk	19.4%	23.4%
Cycle	11.5%	11.5%
Total	100%	100%

Table 7 | *Surveyed Modal Split for the Journey to Work, School, or College – 2016 & 2022.*

The table illustrates a notable reduction in the use of private vehicles between 2016 and 2022, accompanied by a substantial increase in the proportion of people walking as a mode of transport and a marginal rise in the proportion of individuals utilising public transport as a mode of transportation.

Another noteworthy aspect of the data is the number of houses, people and car ownership in the area between the two census years. The 2016 Census revealed that there were 1,875 houses with 5,111 people

living and a total of 2,821 cars in the area. The 2022 Census indicated that there were 2,160 houses, 5,833 people and 3003 cars in the area. This represents a 15.2% increase in the number of houses, a 14.2% rise in the population and a 6.4% increase in car ownership.

It can be observed that there has been an evolution in the behaviour of the residents with regard to transport sustainability. In light of the observed increase in population and the proportion of vehicles in the region, it is notable that there has been a shift in modal preference in the region from motorised to pedestrian systems. This is an encouraging indicator that the region is making a positive impact on sustainability, as residents have ceased using private vehicles and have instead walked more.

7.2 Target Modal Split

The targets presented in this section are set out with the objective of developing the strategies on which this Travel Plan is based. In order to ascertain the possible objective targets for the region, the Dún Laoghaire-Rathdown County Development Plan 2022-2028 indicates the following targets:

> *The travel mode share target shall at minimum meet the Smarter Travel targets (or any subsequent updated national/regional targets) - peak hour transport mode split of a maximum of 45 % trips by Car Driver and 55% minimum by sustainable modes (walking, cycling and public transport*

The target modal split has been established for the tenth year since the opening of Subject Development (2027), with the previous values serving as a reference point. The following table presents the modal split objective for this Travel Plan:

Mode	Census 2016	Census 2022	Target 2036
Motors	59%	50%	35%
Public Transport - Bus	7.7%	8.7%	15%
Public Transport - Luas	6.4%	6.3%	10%
Walk	15%	23%	25%
Cycle	2%	12%	15%
Total	100%	100%	100%

Table 8 | *Target Modal Split for Residents Journey to Work, School, or College 2016-2027 (Source: Dún Laoghaire-Rathdown County Development Plan 2022-2028).*

The aforementioned objectives can be achieved by considering the potential for public transport in the surrounding area, as presented in Sections 3 and 4 of this report.

Two bus stops are situated within 500 metres of the site (see **Figure 8**), which is a 5-minute walk. The bus stops serve route 11 at Goatstown Road (R825) operates at a frequency of 20 to 30 minutes and connects the subject development with Dublin Centre. Route S6 at Taney Road (R112) operates at a frequency of 15 minutes and runs east-west across Mount Anville Road (R112).

The route S6 corresponds to the recently launched Bus Connects network, which commenced operation in November 2023. The route constitutes a principal service route, offering access from the Subject Development to Stillorgan Road (S138) to the east, where the bus stops ID 2070 and ID 2009 are located. Additionally, the route provides access to Dundrum Station Luas Green Line, situated to the west, as well as the surrounding bus stops.

The Luas Green Line station at Dundrum is situated approximately 1,500 metres to the west of the site (see **Figure 9**). It can be reached with the bus route S6 in a five-minute journey on the bus.

In light of the characteristics previously outlined, the development strategy for this Travel Plan is to promote sustainability, encourage the use of public transport, and reduce reliance on private cars as summarised in Section bellow.

7.3 Strategy

The objective of this Travel Plan is to enhance pedestrian mobility to/from the Subject development by prioritising it over vehicular movement. To achieve this goal, the following objectives have been set out:

(a) Reduce single-occupancy car use.

(b) Reduce the use of cars for short journeys from the subject development, particularly at peak times.

(c) Promote the use of sustainable transport systems to and from the subject development.

(d) Promote the use of public transportation to reach their destinations.

The aim of these objectives is to encourage a greater number of people to walk, cycle or use public transport to and from the development rather than to travel by car.

In addition, this Travel Plan aims to provide guidance to all stakeholders involved, including the County Council, public transport providers, tenants, and owners of nearby developments, with the aim of promoting a sustainable transport network in and around the proposed development area to meet existing and future needs.

8. Travel Plan

8.1 Introduction

A Travel Plan (It is also referred as the Mobility Management Plan) will be implemented and developed on an ongoing basis with the triple objectives of promoting sustainability, enhancing public transport, and reducing dependency on the use of the private car. Section 12.4.3 of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* indicates that:

> *A Travel Plan is an effective instrument used utilising the provision of sustainable travel infrastructure within a development. (…) Travel Plan measures could include proposals to encourage cycling and walking, cycle parking facilities, car sharing, carpooling, dedicated priority car parking for car-sharers, sustainable delivery solutions, flexible working hours, off-peak shift working, e-working from home, free/subsidised bicycles and public transport promotions.*

It is important to strike an appropriate balance between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use.

The Travel Plan is designed to address the typical day-to-day operational requirements at the site. It will be implemented and managed by the Transport Coordinator, who will be responsible for overseeing the implementation and management of the Travel Plan.

8.2 Travel Plan Coordinator

The developer will appoint a Travel Plan Coordinator or management company to oversee the development of the plan. The latter will appoint a senior member of staff as Travel Plan Coordinator.

The Travel Plan Coordinator will represent the philosophy of the plan and act as a coordinator for the proper functioning of the plan. The Coordinator shall be appointed within two months of the site being occupied, and its responsibilities shall include:

- Implementing and maintaining the plan.
- Monitoring the progress of the plan.
- Liaise with internal departments and stakeholders, public transport operators and planning and highways officials.
- Producing information reports for the developer, residents, and planning and highway authorities.
- Ongoing evaluation of the Plan's objectives.

The Travel Plan Coordinator will be responsible for the creation and maintenance of up-to-date travel information boards for residents. The aforementioned information boards will be installed in strategic location, where residents will have access to a variety of resources, including travel information, timetables, internet access, and notice boards.

In addition to the above responsibilities, the Travel Plan Coordinator must also undertake the following activities.

8.2.1 Local Policies Review

A review of current policies and practices should be undertaken to understand their impact on residents' commuting patterns. An initial local policies review that affected the resident travel choose will indicate areas that may be addressed as part of the Travel Plan.

8.2.2 Site Audit

A preliminary assessment of the accessibility of the site is presented in **Section 3** above, while **Section 4** outlines potential future transport improvements. However, it is the responsibility of the Travel Plan Coordinator to update this information, considering the following guidance:

- Public Transport service: considering the location of the bus stops and the train stations, the route which is served and the frequency of services passing through the bus stop or train station.
- Pedestrian and cycle accessibility: this should include an assessment of the local cycling and walking environment from the subject development to the various public transport stops. This assessment must consider the current conditions and the need, where necessary, identify areas for improvement.
- Road condition: considering the traffic condition and if there is congestion near the site.
- Parking spaces near to the site: a survey of car and cycle parking near the site will provide an indication of whether residents require the use of a vehicle to arrive at the site and do not have sufficient space within the site's car park. The survey must consider the volume and usage of the parking spaces, their location, the quality and quantity of the available cycle parking, and the relationship between these factors and the demand for parking spaces. It must also consider any management issues that may arise.
- Facilities' location: it is of paramount importance for residents to be aware of the location of the primary shops, as well as the relative distance to the site. The distance should be provided in metres and in travel time, either walking or cycling.

Finally, it is important that the Travel Plan Coordinator is aware of possible future improvements to the public transport network, which could have an impact on residents.

8.2.3 Residents Travel Survey

Within the first four months of appointment, the Travel Plan Coordinator shall arrange for an residents' travel survey to be carried out. This can be achieved by means of self-completion questionnaires, which will help to identify travel requirements and set targets and needs. The information requested in the questionnaire should include:

- Personal details.
- Primary mode of transport.
- Current travel patterns including the time taken to travel to work and the place of work.

It is also necessary to ascertain the residents' views on alternative modes of transport to the car, in order to identify the factors that would encourage them to switch to other modes. Furthermore, it is important to ascertain the extent of usage of car sharing schemes.

It should be noted that, traditionally, response rates to such questionnaires are relatively low, and it may be necessary to encourage recipients to complete and return them.

The information obtained from the survey should be entered onto a database and used to formulate and monitor the implementation of the plan and to set and review targets. It is recommended that the aforementioned targets be agreed with the relevant planning and highway authorities or their agents within six months of the survey being carried out.

8.2.4 Promoting the Travel Plan

It is the responsibility of the Travel Plan Coordinator to provide all new residents at the site with a travel pack. The aforementioned pack should contain the following items:

(a) The Travel Plans.

(b) Public transport information, including bus and rail routes and frequencies.

(c) The advantages of the Travel Plan for residents and visitors.

(d) Details of tax incentives available, such as the Bike to Work Scheme, the Tax Saver Scheme for public transport tickets, etc.

(e) A travel survey form.

(f) Details of pedestrian and cycle facilities.

8.3 Action Plan

8.3.1 Walking

It is well documented that there are numerous benefits to walking to and from their destination on a daily basis. The Subject Development is situated within an area characterised by a wider range of land uses that are accessible by walking as are shown in **Figure 4** and **Figure 12**. The surrounding area is characterised by a variety of land uses, including a fast-food store, a food discount store, a primary school, and a secondary school.

It is proposed that residents be encouraged to reduce the use of the car for short journeys and indeed choose to walk to the nearest Luas Green Line Station, bus stops, grocery store, and to commute to their place of work, school, or college. For that, the connection of footpaths within the Subject Development with the existing will allow people to establish connections beyond the development itself.

The Travel Plan Coordinator will provide maps of the local area, which will show walking routes, local facilities, and distances with health information. This information will be displayed in strategic locations to help people understand the importance of choosing this mode of transport before the car.

This communication tool will be developed to encourage residents to meet and walk together, fostering a sense of community between them. Furthermore, children enrolled in local schools will be encouraged to walk to school on a daily basis, thus reducing the number of private vehicles on the road.

8.3.2 Cycling and cycle parking

Cycling is an effective mode of transport, promoting independence and sustainable travel and allowing for shorter distances to various facilities.

The subject development is located in close proximity to several business parks, as well as educational facilities at various levels and primary and specialist medical services, which can be reached within a 10-minute or maximum 30-minute cycle, as shown in **Figure 5**, **Figure 6** and **Figure 12**.

This mode of transport is particularly suited to those whose places of employment are within a 5km radius of the development and who require access to Dublin City.

In order to facilitate the storage and maintenance of bicycles in the area, the Subject Development will provide a total of 358 no. cycle parking spaces for the residential units, with 288 no. spaces allocated for long-stay and 70 no. spaces for short-stay. Furthermore, it is proposed that eight cycle parking spaces be provided for non-resident units, with 6 spaces allocated for long-stay and 2 spaces for short-stay.

The Travel Plan Coordinator will provide maps of the local area, indicating cycle routes, local facilities, and distances with health information. This information will be displayed in strategic locations to facilitate understanding of the importance of choosing this mode of transport over the car. Furthermore, the Travel Plan Coordinator will inform residents of future plans for the development of cycle routes in the area and of various government campaigns to encourage cycling.

If there is a genuine interest in bicycle maintenance, public courses on the use, maintenance, repair, and improvement of bicycles may be proposed.

Additionally, residents are encouraged to avail themselves of the government's Cycle to Work scheme, which may be available through the local authority. Additionally, a fleet of hire bikes may be provided, which can be used to attend meetings or to test cycling to and from work before making a purchase.

8.3.3 Car for individual use, shared use, and parking

Every day, thousands of commuters drive to work on the same routes to the same destinations at the same time as their colleagues. If every driver carried another driver, there would be 50% fewer cars on the road at peak times. There are numerous advantages to utilising sharing services for commuting purposes, including a reduction in carbon emissions, fuel costs and parking fees, as well as a reduction in congestion and journey times due to a reduction in the number of vehicles on the road. Additionally, the experience of the journey is enhanced due to a reduction in congestion and the presence of company.

Carsharing is a particularly appealing travel option for those residing in areas with long distances or lacking in communication with public transport. From the community, the Travel Plan Coordinator can be established that utilise local communication channels (such as billboards, email groups, meeting areas, etc.) to facilitate communication between different drivers, thus enabling the establishment of these vehicle sharing schemes.

From the company, the most effective means of encouraging people to carshare is to allocate dedicated parking spaces, in prime locations, for carsharers only.

In order to prevent the proliferation of automobile ownership, the Subject Development proposes a limited number of parking spaces for vehicles, as indicated in **Section 5.6** above. This indicates that 130 no. car parking spaces be provided, with 117 no. spaces allocated for residents of the development, 11 no. spaces for non-residents, visitors, and drop-off parking, and 2 no. spaces for Go-Car Station, with a ratio of 0.74 parking spaces for each house.

The Travel Plan Coordinator will be responsible for the management of inappropriate parking within the development.

8.3.4 Strategy for public transport use

(1) Introduction

The utilisation of public transport confers a multitude of advantages, both individual and social. Among these benefits may be enumerated the following:

- Pollution reduction: it can be observed that vehicles used for public transport are considerably less polluting than private vehicles in terms of the emission of grams of CO2 per passenger and kilometre travelled. In particular, the train is positioned as the most ecological means of (motorised) transport, with an average of 14 grams of CO2 emissions per kilometre per passenger. This is followed by the bus, with 68 grams of CO2 emissions per passenger compared to the 157.5 grams emitted by each private car. Therefore, by travelling by public transport, we will choose the most ecological alternative, reducing thousands of tons of CO2 into the atmosphere.
- Reduction of noise pollution: As with air pollution, noise pollution can be mitigated by augmenting the utilisation of public transport.
- Reduction of congestion in cities: The overuse of vehicles results in the daily collapse of cities, particularly during peak hours. This phenomenon transforms cities into dirty, noisy, and grey environments. In such a manner, public transport represents an optimal alternative to enhance traffic flow by reducing delays and traffic jams, thereby achieving superior urban mobility.
- Most liveable cities: Increasing the use of public transport would benefit everyone. Improve cities in many ways. Greener and greener cities, with less congestion, less pollution, and less greenhouse gas emissions.
- Economical: The costs associated with a private vehicle can be four times those of public transportation. The initial cost of a car is significantly higher than the sum paid for it. Furthermore, there are additional expenses such as fuel, maintenance, MOT, insurance, tolls, and other periodic costs. This renders public transport a more economical mode of transportation in both the short and long term.
- Time saving: The act of driving can be fraught with unexpected traffic jams or the necessity to search for parking, both of which can result in the loss of valuable time. Conversely, the use of public transport ensures that the scheduled time of arrival at the destination is maintained, thereby obviating the need for any further complications or stress.
- The opportunity to engage in other activities: The journey may be utilised to read, listen to music, catch up with friends, engage in conversation or simply to reflect. Bus or metro journeys are conducive to a variety of activities on a daily basis.
- Guarantee the mobility of groups with less access: This method of transportation ensures the possibility of travelling to young people, older people or people with reduced mobility who are unable to use or do not have their own vehicle.
- Accessible to the entire population: In addition to the aforementioned advantages, it is imperative to highlight the accessibility and subsidised prices that public transport offers, thereby ensuring its accessibility to the entire population. This is particularly important when considering the sectors of society at risk of social exclusion.

Considering the benefits described above, it is important to try to migrate for the use of private vehicles to public transport, especially when the destination is well connected with public service. This section proposes a series of measures that could increase the modal split in favour of public transport.

(2) Promote Tax Saver Commuter tickets

The TaxSaver Commuter Ticket Scheme is a cost-reduction initiative for public transport. It offers employers the opportunity to make PRSI savings of up to 10.75%. Employees can also benefit from savings on their travel costs, with savings of between 28.5% and 52% possible due to tax, PRSI and USC savings. The ticket covers bus, rail, and the Luas tram system.

The scheme is open to employees who wish to participate. They can discuss the matter with their employer, who will then apply and purchase the ticket on their behalf.

The TaxSaver scheme is managed in conjunction with the Revenue Commissioners by the following transport providers:

- Dublin Bus
- Bus Éireann
- Luas
- Irish Rail
- Approved transport providers

Residents may obtain tickets as part of their salary package (salary sacrifice) in lieu of an annual cash bonus or as a benefit-in-kind. TaxSaver tickets are not subject to tax, PRSI or USC. It is important to note that employees are only liable to pay tax, PRSI, and USC on the portion of their salary that represents the actual remuneration. In addition, the employer is also responsible for calculating PRSI on the same basis.

The Travel Plan Coordinator will be responsible for disseminating this information to the residents of the subject development, thereby affording them the opportunity to request this benefit at their place of employment.

(3) Update travel information

The Travel Plan Coordinator will provide maps of the local area, indicating the nearest bus stop and train stations and the distance between the Subject Development and these points. Additionally, the Travel Plan Coordinator will provide updated local train and bus maps and timetables.

This information will be displayed in strategic locations to facilitate understanding of the importance of choosing this mode of transport over the car. Furthermore, the Travel Plan Coordinator will inform residents of future plans for the development of public transport routes in the area.

Residents of the area will be informed about online public transportation information systems, their use and the advantages that this entails.

(4) Monitoring of the Public Transport service

It is the responsibility of the Travel Plan Coordinator to conduct regular assessments of the public transport service in order to ascertain the quality of the service provided. In order to ensure the provision of high-quality public transport services, the Coordinator must consider a number of factors, including fare, travel time, vehicle conditions, and frequency.

The Travel Plan Coordinator may also engage in lobbying activities with the public transport operators in order to ensure the continued provision of a high level of service on the public transport routes serving the development.

8.4 Monitoring of the Travel Plan

The responsibility for monitoring and reviewing the Plan will be borne by the Travel Plan Coordinator. The principal indicators that will be subject to monitoring are as follows:

- Changes in modal split – both 'usual' and 'occasional' modes used.
- Cycle Parking on site: Include the state of the bike racks and that there are no abandoned bikes without owners.
- Bikes purchase through the Cycle to Work scheme.
- Number of car parking permits issued.
- Number of registered carsharers.
- Others that may be important.

The travel survey (refer to **Section 7** above) establishes the initial modal split of travel by residents. Once the travel survey has been completed and analysed, the Travel Plan Coordinator will agree annual targets with the main stakeholders (the developer, the occupier(s), the Local Authority, or its agents, etc.) for increasing the percentage of non-car modes of transport.

It is recommended that the Travel Plan Coordinator meet with the stakeholders, officers of the Local Authorities or its agents within six months of the occupation of the building(s) and thereafter every twelve months to assess and review progress of the Plan and agree objectives for the next twelve months.

As a consequence of the evaluation, the following potential outcomes may emerge:

- The objectives have been achieved and no further intervention is deemed necessary to ensure alignment with existing local development plans.
- The objectives have not been fully achieved, necessitating the implementation of corrective measures that, due to their scale, can be managed by the Transport Coordinator.
- Large measures: the results are found to be significantly divergent from the stated objectives, which may necessitate the engagement of external consultants to develop the requisite mobility studies and implement the measures deemed necessary to realign the development with the originally stated objectives.

It is recommended that the Travel Plan Coordinator prepare and submit to senior management of the Developer, the residents and the Local Authorities or its agents an annual Monitoring Report.

8.5 Marketing

Marketing represents a valuable instrument for demonstrating to stakeholders the status of the implementation, elucidating the essence of the Travel Plan and the principal outcomes, demonstrating the level of responsibility for the surrounding environment, expose how the Subject Development is aligned

with the government's requirements or explain to the residets the different benefits that they will have with the implementation of the Travel Plan.

By employing marketing, the site can enhance its level of acceptance within the community and present itself as a model for other similar developments.

The Marketing campaign will be create considering the following:

- Identify the Target Audience of the Marketing Campaign: marketing may be directed towards a number of different stakeholders, including residents, government representatives, students, and the general public. Consequently, it is essential to tailor the message and create content that aligns with the specific events and circumstances of each target group. It is crucial to recognise that the target audience will comprise a heterogeneous group of individuals at varying stages of readiness for change.
- Identify the aim of the Marketing Campaign: the identification of the objective of the marketing campaign serves to clarify the message. It is not the same to run a campaign to inform residents about a new benefit available, to inform stakeholders about the progress of the plan, or to provide a message to the surrounding community. In order to achieve this, it is essential to ascertain the target audience and the communication tool to be employed. This will inform the manner in which the messenger is to be utilized to achieve the desired impact.
- Identify Communication Tools: the objective is to identify the communication tools that will be employed. The manner in which a message is conveyed affects the subsequent evolution of that message. Consequently, the selection of media for an information campaign is contingent upon the target audience. These may encompass print media, digital media, live events, or document reports.
- Identify your Message: Once the target audience has been identified, the objective of the campaign has been established and the communication tools have been selected, it is crucial to create a clear message that effectively conveys the information to the audience in the desired manner.
- Brand the Marketing Campaign: the creation of a logo or emblem that is directly related to the campaign that is being developed can assist in the visualisation of the main and the messenger.

In light of the aforementioned considerations, it is possible to deliver a targeted message that is more likely to be well received by the recipient and thus ensure the success of the marketing campaign.

9. Conclusion

This Travel Plan has been prepared by Waterman Moylan as part of the design documentation for a proposed development of lands at Knockrabo, Mount Anville Road, Goatstown, Co. Dublin.

The objective of this document is to encourage residents to alter their travel behaviour in favour of more sustainable modes of transportation.

The Travel Plan is a set of measures designed to facilitate sustainable travel for work-related journeys. The plan comprises a series of measures designed to encourage the use of walking, cycling, public transport, car sharing, the use of technology instead of travel, and flexible working practices.

It is important to note that the detail provided in this report serves as a guideline for the Subject Development, which forms the basis for the Travel Plan to be developed by the Travel Plan Coordinator.

There are a number of benefits to an organisation implementing a Travel Plan, including:

- Reduced costs associated with providing car parking for residents or visitors.
- Reduced pressure on parking spaces so they are available to those with most need.
- Reduced carbon emissions associated with travel.
- Land formerly under parking released for more productive purposes.
- Increased accessibility to the site for residents and visitors.
- Compliance with planning permission conditions.

UK and Ireland Office Locations