

Traffic and Transport Assessment for Proposed Residential Development at Mooretown, Swords, Co. Dublin

For Fingal County Council



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1. Introduction

1.1. Overview

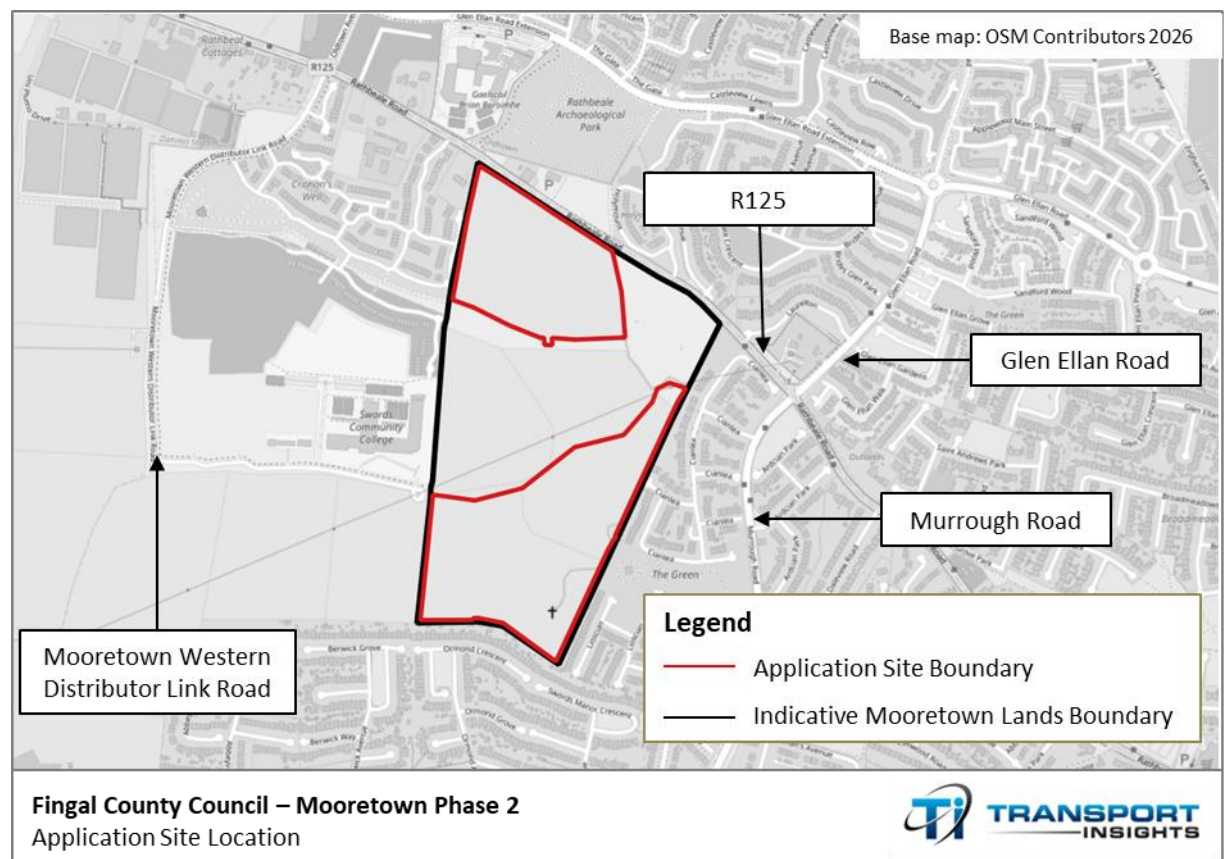
Transport Insights has been appointed by Fingal County Council (FCC) to prepare a Traffic and Transport Assessment (TTA) Report including a framework Residential Travel Plan (fRTP). In addition, a Traffic and Transport chapter of an Environmental Impact Assessment Report (EIAR) is also being prepared by Transport Insights. The TTA Report (and EIAR chapter) are being prepared in relation to a proposed Part 10 planning application at Mooretown, Swords, Co. Dublin. The proposed development comprises 360 no. residential units with associated access, creche, retail unit, outdoor amenities, car parking, and cycle parking facilities.

1.2. Site Location and Overview of Proposed Development

Site Location

The application site is located in west Swords, as presented in the following Figure 1.1. The site is zoned 'RA – Residential' in the *Fingal Development Plan 2023-2029*.

Figure 1.1 Application Site Location



The site is located west of Swords Town Centre, on lands generally bounded by the R125 in the north, residential land to the east and south, and Swords Community College to the west. The site forms part of the 'Lands at Mooretown' Framework Plan (October 2023). The proposed development, referred to

as Phase 2, shall take up the northwestern and southern portions of the site, integrating to the respective fringes of the permitted Phase 1 development. The location of the Phase 2 application site with respect to Phase 1 and wider environs is presented in the preceding Figure 1.1.

Overview of Proposed Development

The proposed development for Phase 2 is to comprise of 360 no. residential units consisting of:

- 305 no. houses including 2, 3 and 4-bed houses;
- 35 no. apartments including 1, 2 and 3-bed apartments; and
- 20 no. Duplex-Apartments.

The residential component will be accompanied by amenity facilities including a crèche (with 12 no. classrooms). The proposed development also includes associated pedestrian, cycle, and car circulation and parking facilities.

A more detailed description of the proposed development, including the proposed site layout and access arrangements, is provided within Section 4 of this Report.

1.3. Recent Relevant Planning History

Adjacent development lands have been the focus of an earlier development proposal, referred to as Phase 1 (FCC Reg. Ref: LADP/002/24). This phase proposed the construction of 274 no. residential units, including houses, apartments, and duplexes, together with associated site development works at Moortown, Swords, Co. Dublin. This development was approved at FCC's council meeting in May 2024 and is currently under construction.

1.4. Report Structure

The remainder of this Report is structured as follows:

- **Section 2** provides an overview of the relevant local, regional and national policy;
- **Section 3** describes the proposed development's receiving environment, including the adjacent road network;
- **Section 4** describes key transport related characteristics of the development proposal;
- **Section 5** includes a DMURS compliance statement;
- **Section 6** details the proposed development's traffic impact assessment and its outputs;
- **Section 7** sets out the framework Residential Travel Plan; and
- **Section 8** provides an overall summary and conclusion to the TTA.

2. Key Policy Review

2.1. Introduction

This section of the Report provides an overview of national, regional, and local planning policy and guidance deemed relevant to the proposed development and its assessment.

2.2. Traffic and Transport Assessment Guidelines (2014)

Transport Infrastructure Ireland's (TII's) *Traffic and Transport Assessment (TTA) Guidelines* May 2014 provides guidelines for best practice in relation to the preparation of a Transport Assessment.

In relation to scoping, the guidance states:

"The scoping study is a very important part of the TTA process. It is a precursor to the preparation of a TTA and should be undertaken at the earliest stages of planning for development. For a planning application, this phase may be the initial contact between the developer and the planning authority and, as such, the opportunity should be taken to emphasise the role of transport as both a possible asset and liability to the development. The planning authority should avail of such contact to address traffic and transport implications as an integral element of the development proposal."

In relation to the Assessment:

"The Traffic and Transport Assessment should be written as an impartial assessment of the traffic impacts of a scheme and it should not be seen to be a "best case" promotion of the development. All impacts, whether positive or negative, should be recorded. The level of detail to be included within the report should be sufficient to enable an experienced practitioner to be able to follow all stages of the assessment process and to reach a similar set of results and conclusions."

The TTA set out in this Report has been undertaken in accordance with national best practice TII's *Traffic and Transport Assessment Guidelines* (May 2014).

2.3. Design Manual for Urban Roads and Streets (DMURS)

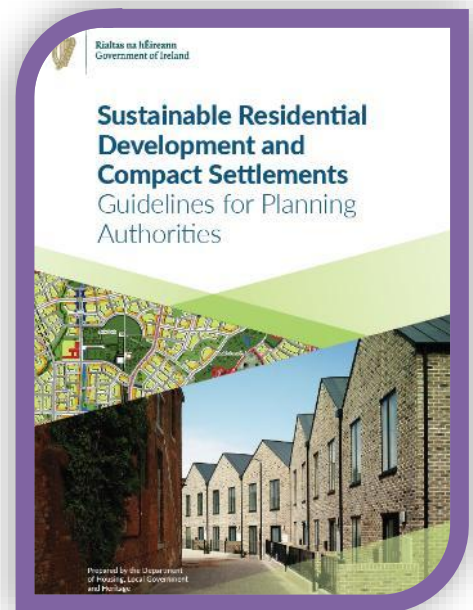
DMURS was jointly published by the Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Government in 2013 and updated in 2019. It provides comprehensive guidance on the design of urban roads and streets. Following issue of Circular RW 6/2013 by the Department of Transport, Tourism and Sport: *"The DMURS is now mandatory for all Local Authorities with effect from the date of this Circular, 28th March 2013, for all urban roads and streets within the 60 km/h urban speed limit zone..."*

DMURS provides clear guidance in relation to all aspects of road and street design, including carriageway and footpath widths, corner radii, stopping sight distances and sightlines, car parking dimensions and layouts, etc. *DMURS* guidance has underpinned key aspects of the current proposed development's design activities, namely access/ egress junctions and internal site layout, etc.

2.4. Sustainable Residential Developments and Compact Settlements

The *Sustainable Residential Developments and Compact Settlements, Guidelines for Planning Authorities* (hereafter referred to as Compact Settlements Guidelines) was published in January 2024 to “set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements”. The Compact Settlements Guidelines is a statutory document augmenting other relevant guidance documents under Section 28 of the Planning and Development Act 2000, including the Housing Guidelines, as well as the *DMURS*.

The Compact Settlements Guidelines concerns a variety of development aspects, including density, placemaking, and technical standards. A variety of settlements, area types and associated density ranges have been identified. Among settlement categories, Swords falls under the Key Towns and Large Towns (5,000+ population) class. The application site falls under Intermediate location class, as the current public transport provision in its vicinity does not meet the standards set out for an accessible location (i.e. lands located within 500 metres of an existing or planned 10-minute peak frequency individual bus service). Section 3 provides further detail on the location accessibility.



Cycle Parking

The Compact Settlement Guidelines cycle parking requirements are set out in SPPR 4 of the guidelines. The following requirements are noted:

- “Quantity – in the case of residential units that do not have ground level open space or have smaller terraces, a general minimum standard of 1 cycle storage space per bedroom should be applied. Visitor cycle parking should also be provided. Any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/ enlargement, etc. It will be important to make provision for a mix of bicycle parking types including larger/heavier cargo and electric bikes and for individual lockers.”

- *“Design – cycle storage facilities should be provided in a dedicated facility of permanent construction, within the building footprint or, where not feasible within an adjacent or adjoining purpose-built structure of permanent construction. Cycle parking areas shall be designed so that cyclists feel safe. It is best practice that either secure cycle cage/compound or preferably locker facilities are provided.”*

Details of cycle parking provision for residential units (e.g. 3 & 4 bed houses) that do not have access to private open space are set out in Section 4.

Car Parking

The Compact Settlement Guidelines car parking is set out in SPPR 3 of the guidelines. Locations have been designated based on the following:

“In intermediate and peripheral locations, defined in Chapter 3 (Table 3.8) the maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 2 no. spaces per dwelling”

The application site is noted to be located in an intermediate location, as the current public transport provision in its vicinity does not meet the standards set out for an accessible location, which are for lands located within 500 metres of an existing or planned 10-minute peak frequency individual bus service. Details of car parking provisions are set out in Section 4 of this TTA Report.

2.5. GDA Transport Strategy 2022-2042

The National Transport Authority (NTA) published the Greater Dublin Area *Transport Strategy 2022-2042* in early 2023. The *Strategy* sets out the framework for investment in transport infrastructure and services in the Greater Dublin Area (GDA) over the next two decades to 2042. It also provides the overarching transport planning policy framework for the region.

The *Strategy* seeks to support a shift in travel behaviour to more sustainable modes of travel. Over the lifetime of the *Strategy* an increased investment in active travel infrastructure and public transport infrastructure and services will be supported. Proposed infrastructure to be delivered for Swords includes proposed public transport Improvements, including MetroLink and BusConnects. The *Strategy* also seeks to support investment in improved walking and cycle facilities throughout the GDA. Section 3 of this TTA Report discusses proposed improvements in detail.



2.6. Fingal Development Plan 2023-2029

The *Fingal Development Plan 2023-2029*, effective from 05 April 2023, sets the planning context and a strategic vision for the sustainable development of the County. The strategic vision for the County is outlined in Section 1.2 of the Plan, and includes the following:

- *“Fingal will embrace healthy placemaking and economic prosperity through building cohesive and sustainable communities, where our cultural, natural and built environment is protected”;* and
- *“Continued growth of the County in a sustainable way and ensure the County continues to develop as a series of well-served, well-connected towns, villages and communities and a low carbon economy.”*



The *Development Plan* supports sustainable mobility through pledges to contribute to improved public transport provision, in addition to measures to encourage and promote walking and cycling and the development of Mobility Management Plans. Furthermore, the *Development Plan* recognises the role of car parking provision as a car travel demand management tool, setting out maximum car parking standards – conversely, minimum cycle parking standards are provided so that everyday cycling is encouraged by provision of appropriate infrastructure at all trip generators and destinations.

Cycle Parking Standards

The proposed apartments, creche and standard houses cycle parking provision shall be in accordance with FCC's *Development Plan*. Fingal's cycle parking standards are set out in Table 14.17 of the *Development Plan*. Section 4 details the proposed cycle parking provision further.

Car Parking Standards

The proposed apartments, creche and standard houses car parking provision is based on FCC's *Development Plan*. Fingal's car parking standards are set out in Table 14.19 of the *Development Plan*. With respect to car parking standards, two distinct zones have been designated within the *Development Plan*, with the proposed development identified as located within Zone 2 (due to not being located within 800 metres of an existing BusConnects spine route or 1,600 metres of an existing or planned Luas/Dart/Metro Rail station). Details of the proposed car parking provision are presented in Section 4 of this Report, with a plan of car parking facilities included in overall planning pack.

Lands at Mooretown Framework

The proposed development forms Phase 2 of the Mooretown Framework. Phase 2 continues to build on the layout and design principles established in Phase 1, which is currently under construction. Phase 1 is located at the centre of the framework lands and establishes the main road network for the lands, extending the Mooretown Distributor Road further east to connect to the R125. Phase 2 is intended to expand this development to the north and south, across two different areas. This phase continues the planned expansion of the area, maintaining a consistent design and providing open space and strong connectivity to Phase 1 (and other surrounding areas). It follows the same framework to ensure integration with Phase 1, supporting the overall vision for the residential community within the area.

3. Site Context

3.1. Introduction

To assess the proposed development's potential impact, an appreciation of the existing situation first needs to be established. This section of the Report describes the existing site layout, access arrangements, the local road network and background traffic conditions. The existing conditions presented herein represents an evidence-based review, and have been informed by:

- a desktop review of the study area and its surrounding transport network, including general traffic road infrastructure, facilities for pedestrians and cyclists and public transport infrastructure and service provision; and
- analysis of classified junction turning count survey data collected over a 12-hour period at 5 no. junction locations on Wednesday 20 November 2025 to determine existing background traffic conditions on the adjoining road network.

3.2. Site Location

The subject site is located west of Swords Town Centre, on lands generally bounded by the R125 in the north, residential land to the east and south, and Swords Community College to the west. The site forms part of lands within the Lands at Mooretown Framework Plan (October 2023). The development site is currently greenfield and has been zoned 'RA – Residential Area' in the *Fingal Development Plan 2023-2029*. The current proposed development, referred to as Phase 2, shall take up the northwestern and southern portions of the site, connecting to the respective fringes of the permitted Phase 1 development.

3.3. Local Road Network

The following paragraphs outline the key local roads and junctions in the vicinity of the application site.

R125 Regional Road

R125 is a two-way regional road, which runs in a southeast-northwest alignment and connects Ratoath and Swords.

R125 has a uniform horizontal and vertical alignment adjacent to the development site. Its carriageway in the vicinity of the site is approximately 6.0 metres wide and includes a single general traffic lane in each direction. Cycle tracks and footpaths are provided on both sides of the road.



A 50 km/h speed limit is in operation on this road in the application site's vicinity and public street lighting is present.

R125/ Murrough Road/ Glen Ellan Road Junction

The R125/ Murrough Road/ Glen Ellan Road Junction is a 4-arm junction located ca. 275 metres east of the site. Two-lane approaches and single egress lanes are provided at 3 of the 4 junction arms. The R125



northwest arm has a single approach and single egress lane as well as a left turn slip onto Glen Ellan Road (north).

Pedestrian and cyclist facilities are available along each road approaching the junction except the southeastern arm which only has pedestrian facilities. Controlled pedestrian crossings provided across all arms. Street lighting, signage and road markings are provided.

R125/ Site Access/ Holymount Junction

The R125/ Site Access/ Holymount junction is currently a 3-arm priority (STOP) controlled junction located to the north of the application site, where Holymount estate access road forms the other minor arm with the R125 forming the major arms of the junction.

Each arm has a single lane in both directions.

As part of Mooretown Phase 1 development, the existing 3-arm priority-controlled junction will be upgraded to a new 4-arm signal-controlled junction. The additional arm shall provide the site access to Phase 1 (and Phase 2) and form the southern arm of the 4-arm junction layout. Footpaths and cycle facilities are provided along

the R125 arms and new footpaths and cycle lanes are to be provided on the southern arm as part of the Phase 1 development. Street lighting and standard signage are provided at the junction.



Mooretown Western Distributor Link Road

Mooretown Western Distributor Link Road is a two-way single carriageway road, which runs in a north-south alignment from a 4-arm signal junction with the R125 for ca. 800 metres. This section forms part of the wider Swords Western Distributor Link Road, see Section 3.4.



Mooretown Western Distributor Link Road has a uniform vertical alignment adjacent to the development site, with a long S-curve bend in its northern part (close to the R125 junction). Cycle tracks and footpaths are provided on the eastern/northern side of the carriageway,

separated from the carriageway by grass verges. No formal on-street car parking facilities are provided on the Mooretown Western Distributor Link Road. A 50 km/h speed limit is in operation on this road and public street lighting is present.

School Access Road

The school Access Road runs in a west-east alignment to the west of the site. It will provide a connection to/ from Phase 1 Access Road to the Mooretown Western Distributor Link Road. It is currently ca. 400 metres in length and provides access to the secondary and primary schools to the west of the site. As part of Phase 1 of the development, the road will be extended to the northeast through Phase 1 lands to connect with the R125/ Site Access/ Holymount junction.



R125/ Mooretown Western Distributor Link Road/ Millers Ave Junction

The R125/ Mooretown Western Distributor Link Road/ Millers Ave Junction is a 4-way signal controlled junction located to the northwest of the application site, where Mooretown Western Distributor Link Road approaches the R125 from the south. Each arm has a single egress lane and two approach lanes.



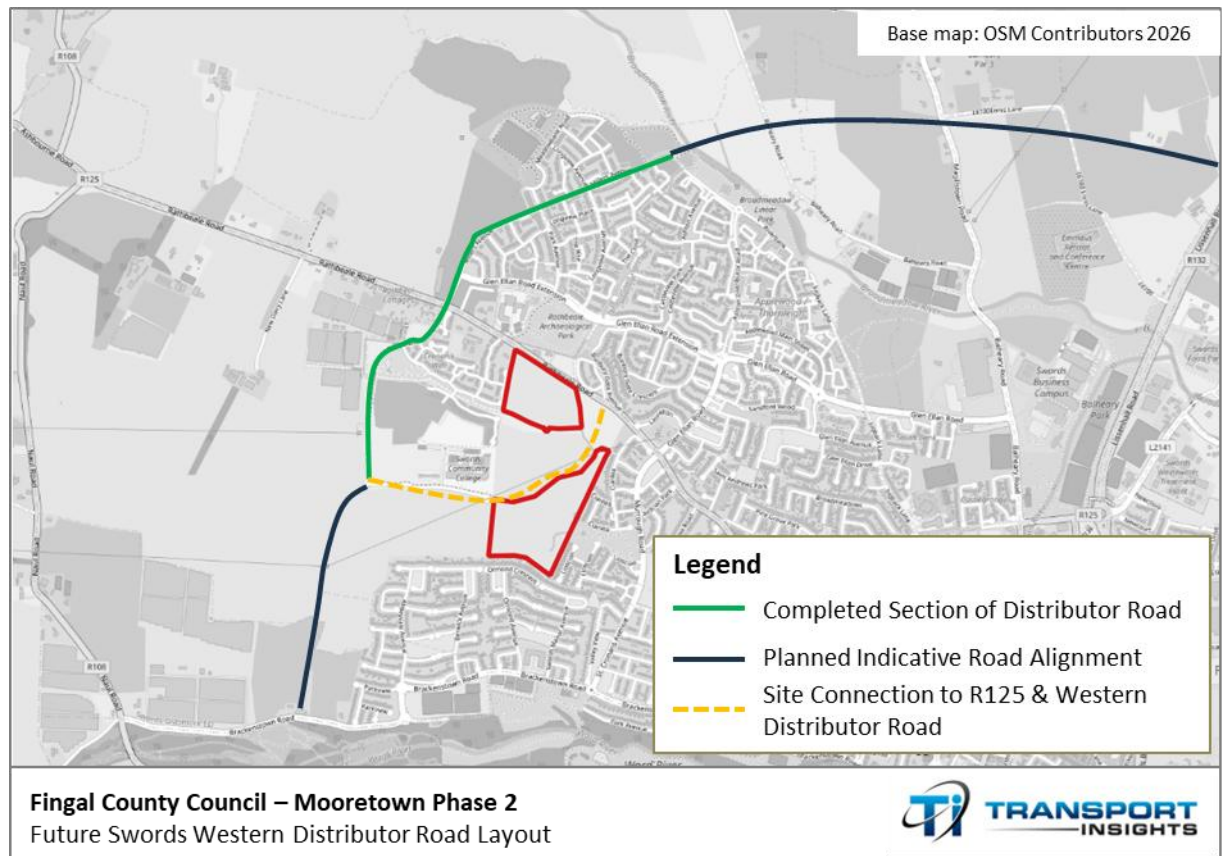
Footpaths and cycle facilities are provided along all arms of the junction with signalised crossing facilities present to facilitate crossing on all arms. Street lighting and signage are provided at the junction.

3.4. Future Road Infrastructure Upgrades

Swords Western Distributor Road (including Mooretown Distributor Road)

The Mooretown Distributor Road is a planned single-carriageway distributor route designed to serve the future and current Mooretown and Oldtown development lands in the west of Swords. As noted in Section 3.3, a ca. 800m section of the road has been built. The Mooretown Distributor Road will connect the existing R125 to Brackenstown Road, providing a north-south link and access to new residential areas. Figure 3.1 illustrates the envisaged distributor road network.

Figure 3.1 Future Swords Western Distributor Road Alignment



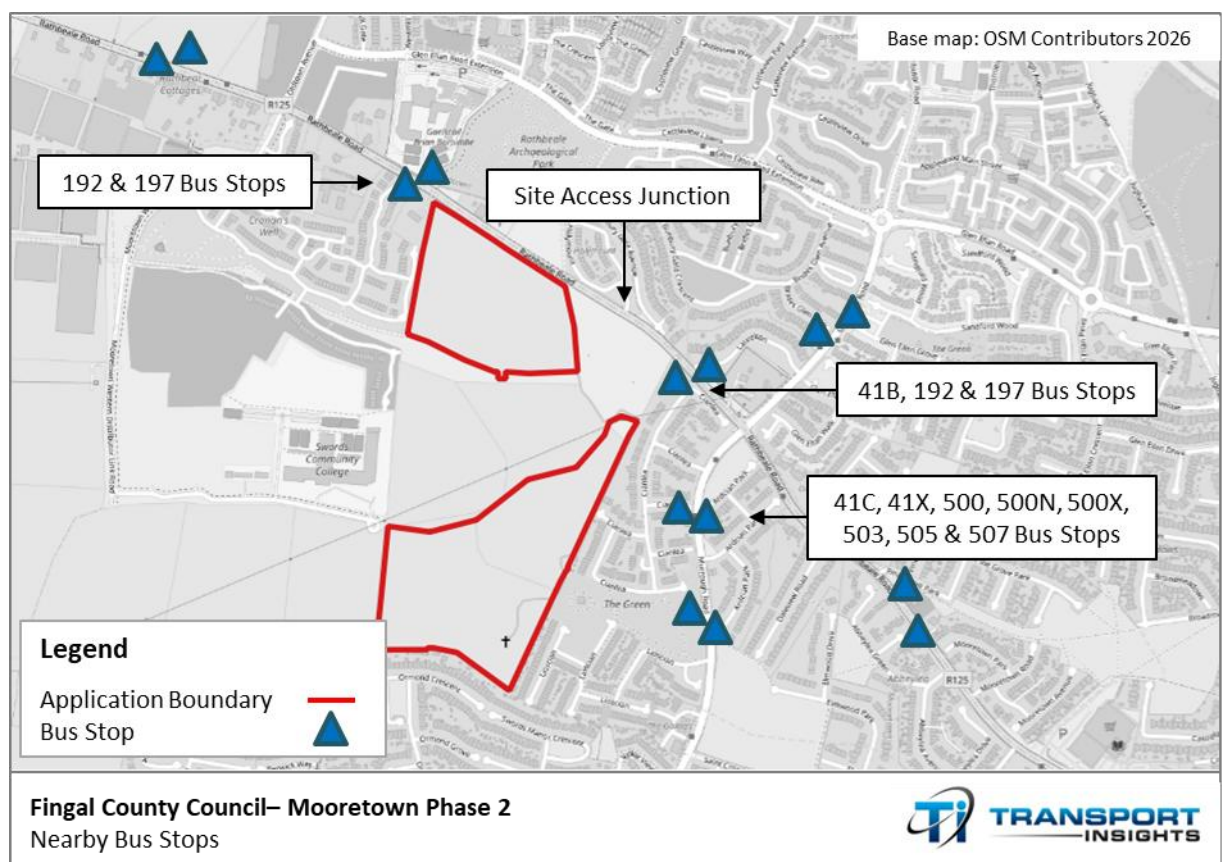
As Figure 3.1 illustrates, the Mooretown Distributor Road forms part of the Swords Western Distributor Road. The wider Swords Western Distributor Road route is described in the *GDA Transport Strategy 2022-2042*, *South Fingal Transport Study* and the *Fingal County Development Plan 2023-2029*. The wider route is planned to link the R132 to the northwest of Swords Town with Brackenstown Road (L2030) to the west of Swords. The proposed development and Phase 1 link to the Swords Distributor Road via the School Access Road (and the R125).

3.5. Public Transport

Bus Services

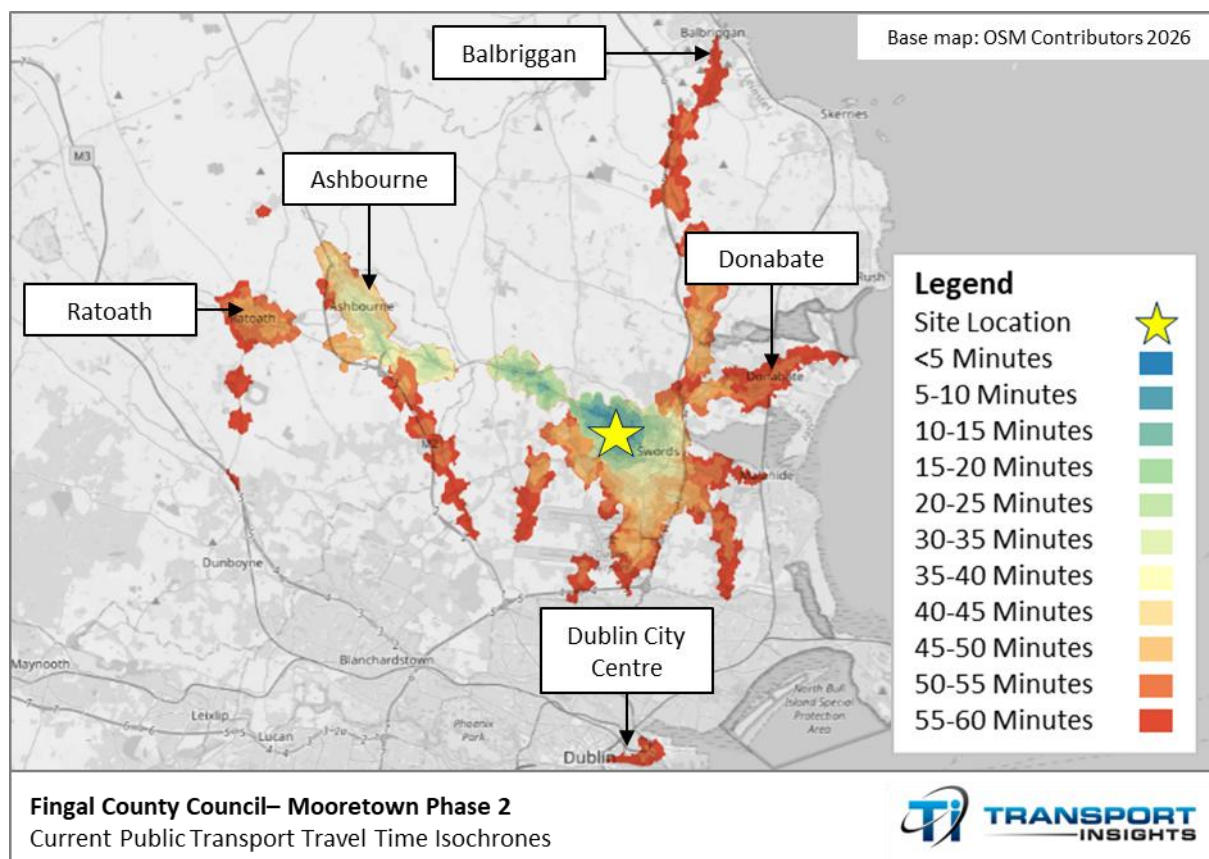
There are a number of bus services in the application sites' vicinity. The 41B, 192 and 197 route via the R125, ca. 140 metres southeast to the site access junction. As shown in Figure 3.2 below, the closest bus stop is located ca. 140 metres southeast of the R125 access point. On Murrough Road, ca. 450 metres to the southeast of the site access, there are a number of additional bus routes available, namely the 41C, 41X, 500, 500N, 500X, 503, 506 and the 507, all of which provide access into Dublin City and include express services.

Figure 3.2 Nearby Bus Stops



3.6. Site Accessibility by Public Transport

Figure 3.3 (overleaf) presents the application site's accessibility by existing public transport, showing travel time from various locations to the site.

Figure 3.3 Current Public Transport Travel Time Isochrones

As can be seen from the figure, the available public transport services enable access across Swords and to Dublin City Centre. Central Dublin can also be accessed using the 41C and 500 services. There is also a Local Link 192 bus linking Swords to Balbriggan with 10 services a day.

A Public Transport Capacity Assessment (PTCA) has been undertaken and is included as Appendix B of this report, with further details and analysis provided within that note. Based on the findings of the bus occupancy survey and analysis, it was found that the proposed development would utilise ca. 9.1% and 6.2% of the total capacity of the existing locally operating AM and PM peak hour public transport services respectively. It was determined that excess bus capacity in the direction of peak travel, i.e. from Swords in the AM peak hour and to Swords in the PM peak hour is 65% and 95% respectively. Therefore, it is apparent that current public transport capacity is sufficient to accommodate the additional passenger demand generated by the proposed development.

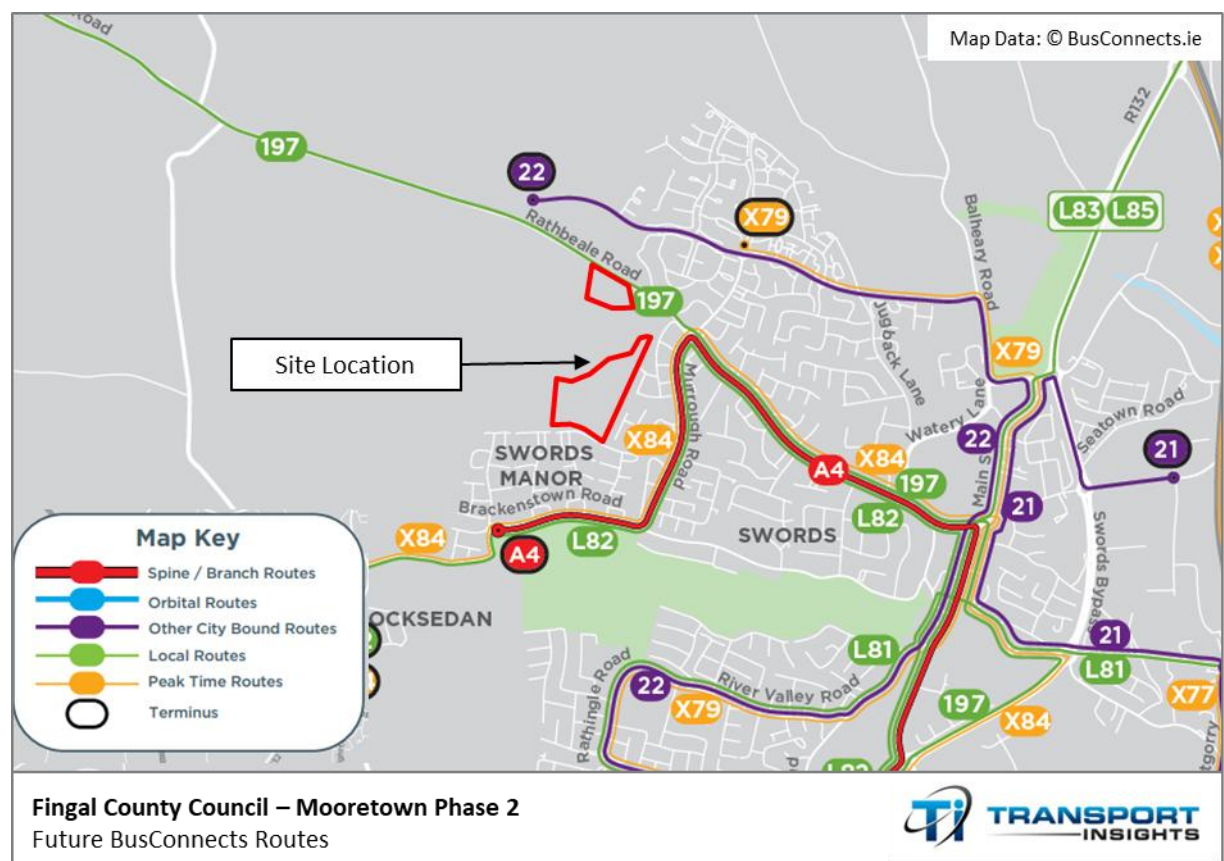
3.7. Proposed Public Transport Improvements

BusConnects

The final proposals from the New Dublin Area Bus Network Project, developed as part of the broader BusConnects programme, were published by the NTA in September 2020 after considerable public consultation. The revised network includes changes to the bus network within the application site's

vicinity. The revised network includes the L82 service which will travel from Knocksedan to Beaumont Hospital and X84 will travel from Knocksedan to UCD. The A4 will travel from Swords to Dundrum. These services will all route along Murrough Road with bus stops accessible from the site via the R125 (ca. 450 metres) or via a potential future link (subject to agreement) through Glasmore Abbey Park (ca. 400m). With a peak frequency of 12 minutes this places the site within the intermediate location of the *Compact Settlement Guidelines* as mentioned in Section 2.4. The NTA expects to launch the A-spine routes in Autumn 2026. Figure 3.4 illustrates the future BusConnects network in the vicinity of the site.

Figure 3.4 Future BusConnects Routes



Metrolink

The Metrolink will be developed as part of the *GDA Transport Strategy* light-rail plans. Its route will serve the broader Swords area. The nearest stops will be Swords Central and Seatown, both will be located a ca. 10-minute cycle or a ca. 6-minute drive away. The Estuary Park and Ride station will be located ca. 13-minute cycle and ca. 7-minute drive away from the site.

While no station is located adjacent to the development, the nearest stop will provide improved public transport accessibility for the site. The Metrolink route shall connect Swords, with Dublin city centre via Dublin Airport, offering a high-capacity and high-frequency service.

3.8. Active Travel

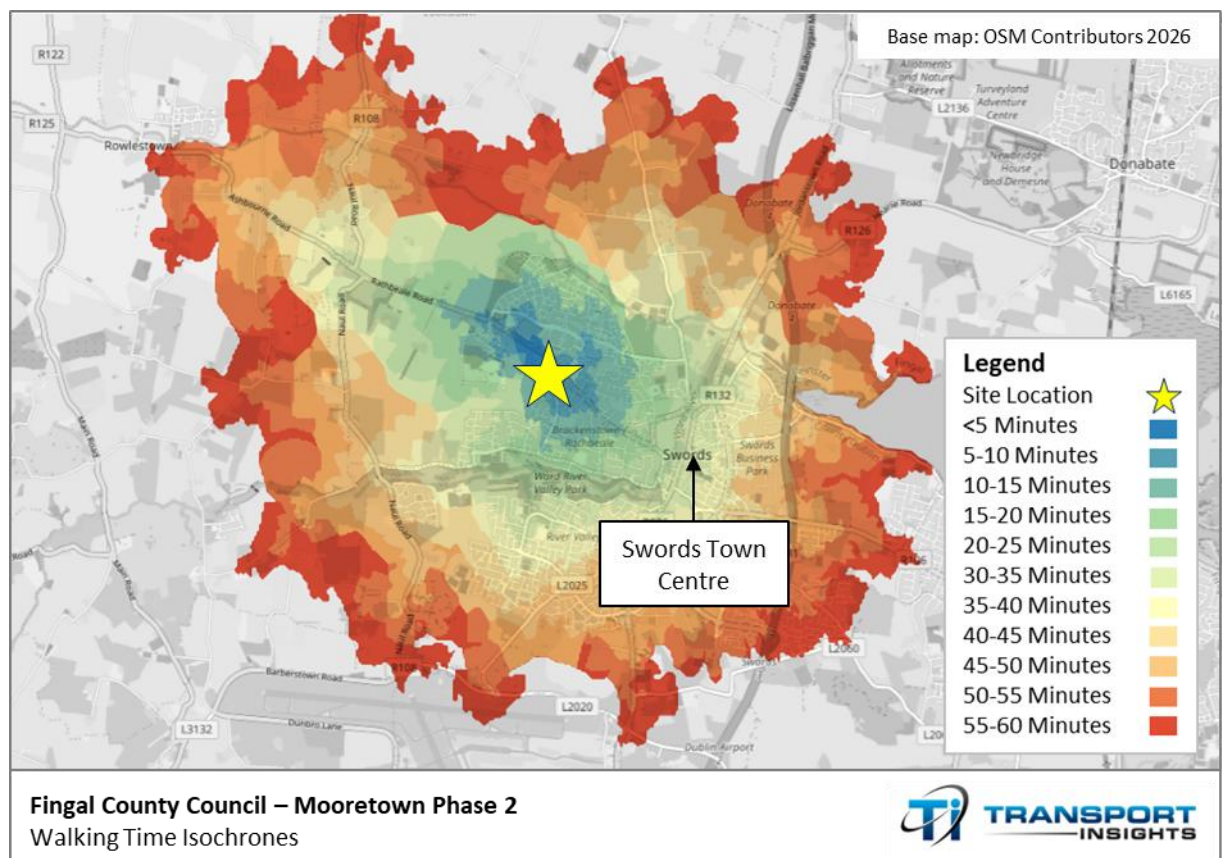
Existing Walking and Cycling Infrastructure

Footpaths are provided along most roads in urban Swords, including the R125 and Mooretown Western Distributor Link Road in the application site's vicinity. Cycling infrastructure in the site's general vicinity includes shared pedestrian/ cycle facilities provided as part of the Phase 1 access road, along the R125 and along the Mooretown Western Distributor Road.

Site's Accessibility by Walking and Cycling

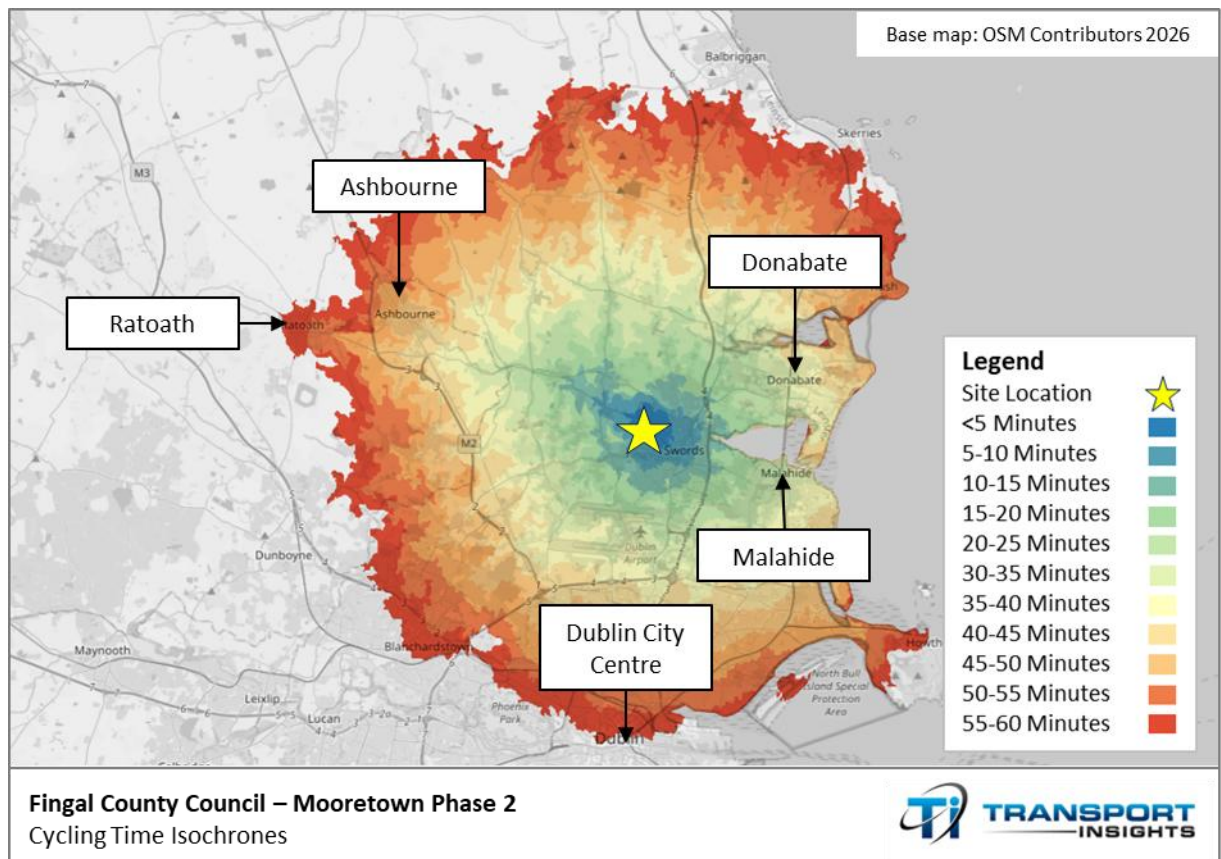
Figure 3.5 presents the application site's accessibility by walking, showing travel time from various locations to the site. As can be seen from this figure, the site can be reached by walking from a variety of locations within Swords, with the extent of the 60 minutes' isochrone reaching the northern boundary of Dublin airport in the South. It is deemed that walking represents a viable option for those residing in Swords.

Figure 3.5 Walking Time Isochrones



The following Figure 3.6 presents the application site's accessibility by cycling, showing travel time from various locations to the site.

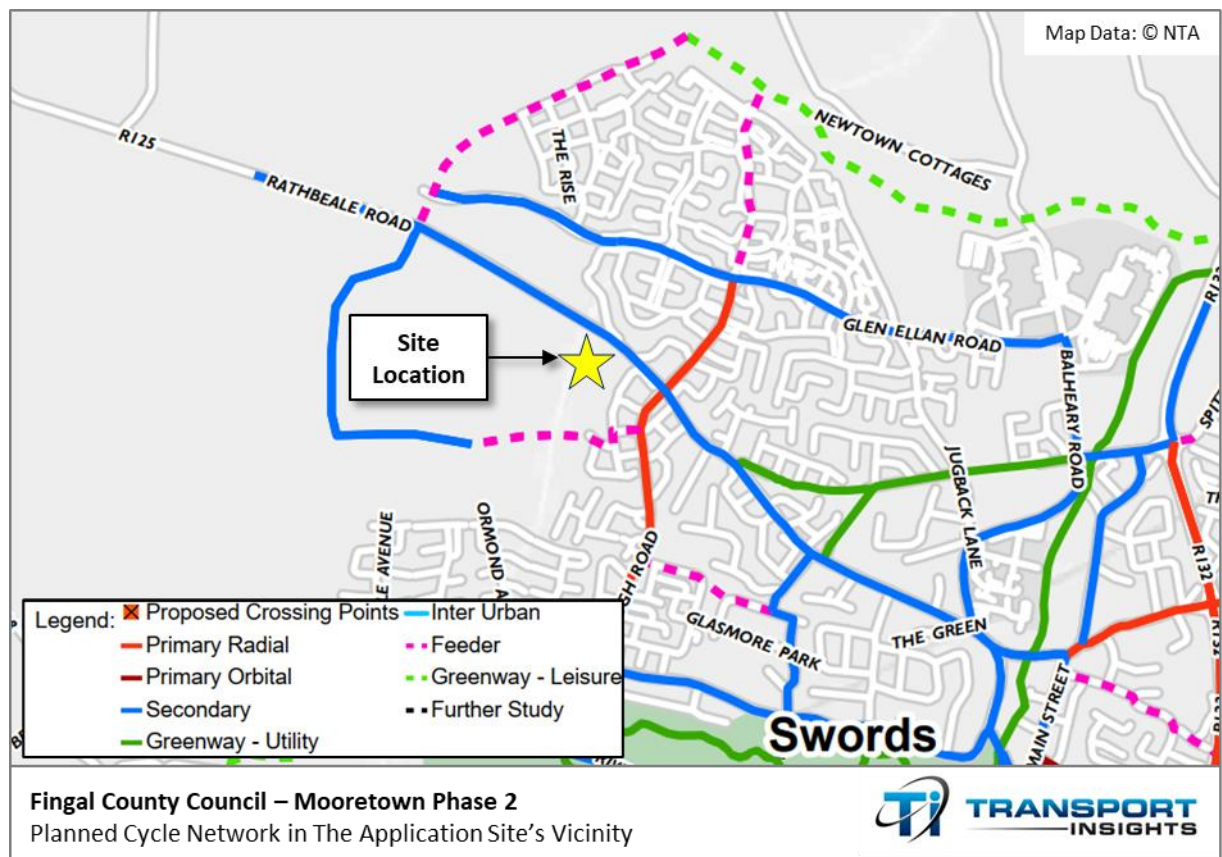
Figure 3.6 Cycling Time Isochrones



As can be seen in the preceding figure, the application site can be accessed within a 15-minute cycle from all parts of Swords. Distance-wise, cycling is also a viable alternative for trips to destinations including Donabate, Malahide and Dublin Airport. Dublin City Centre and Ashbourne are on the periphery of viable cycling distance with both being accessible within a 60-minute cycle.

3.9. Proposed Cycle Infrastructure Improvements

The planned layout of cycle infrastructure network within Dublin has been set out within the *Greater Dublin Area Cycle Network Plan* (part of the GDA Transport Strategy), published by the NTA. The proposed network in the application site's vicinity is illustrated in Figure 3.7 (overleaf) which follows.

Figure 3.7 Planned Cycle Network in The Application Site's Vicinity

As shown within the preceding figure, the R125 and Mooretown Western Distributor Link Road have been classified as a secondary cycle link. Murrough Road, to the east of the site, is classified as a primary radial cycle link. In addition, a feeder cycle route is indicated to run west from Murrough Road through existing residential areas and the proposed development to link with the Mooretown Western Distributor Link Road. The proposed development shall facilitate this cycling link, as detailed in Section 4. Expansion of dedicated cycling facilities in Swords shall enhance options for sustainable local mobility, with the planned interurban routes enabling longer distance travel.

It is also noted that the Phase 1 access road shall include active travel facilities with pedestrian and cycle infrastructure present on both sides of the carriageway. The proposed development shall deliver the facilities on the southern side of the access road. Although the proposed cycle infrastructure on the northern section of the Phase 1 access road isn't showing in the GDA Cycle Network Plan, it shall provide direct links for future residents of the development to other existing and planned active travel infrastructure in the vicinity of the development.

3.10. Shared Mobility

Shared mobility services currently available in Swords Town Centre include 3 no. GoCar stations with 4 no. vehicles available. The station closest to the application site is located on the R836 ca. 2 km away from the site. Car share facilities are also to be provided as part of Mooretown Phase 1, with 3 no.

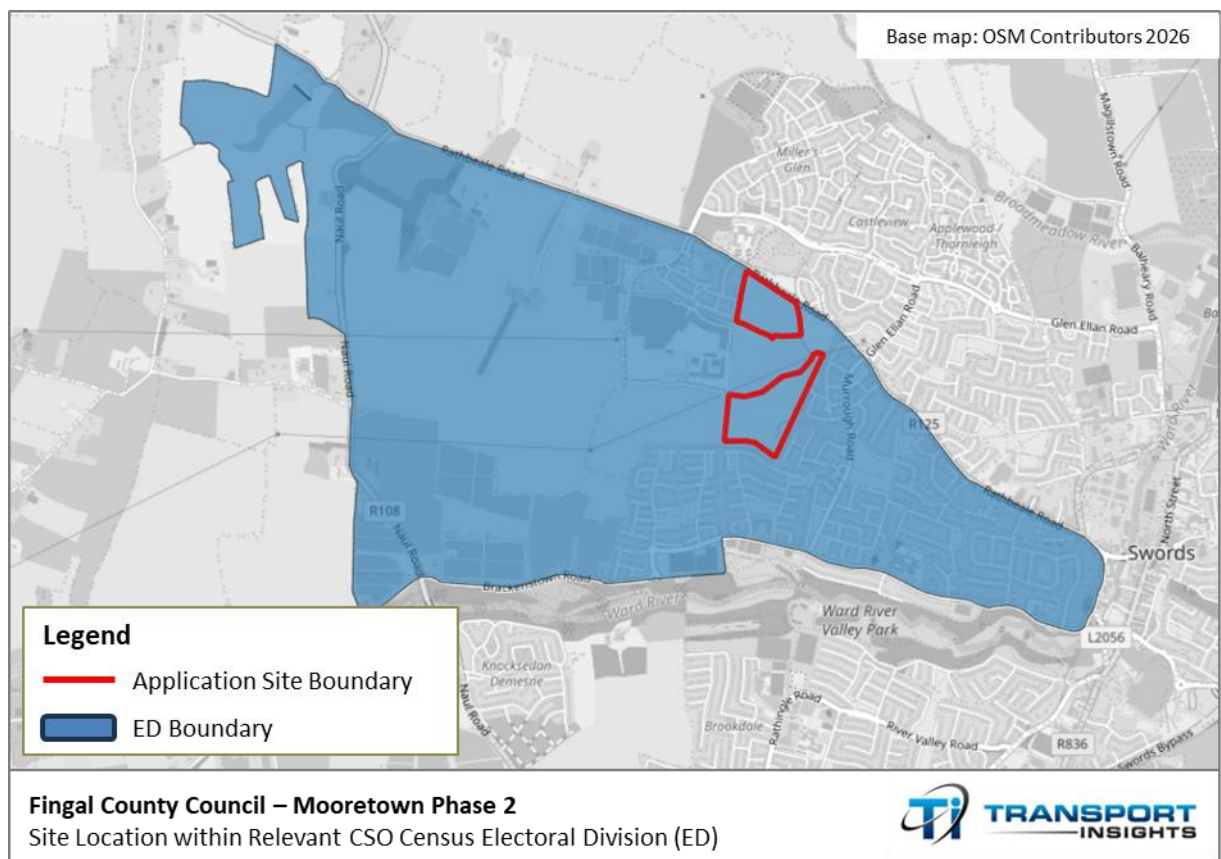
spaces to be provided. Two of the spaces are to be located on the Phase 1 Access Road. These spaces would be available for use by future residents and visitors of the proposed development. Furthermore, it should be noted that the western part of Swords, including the application site, is currently a mix of greenfield and/ or sites under development. The lands in question are currently undergoing rapid urbanisation, with the availability of car sharing services likely to follow completion of the residential schemes in the vicinity.

Blepper Bikeshare also includes operating zones in the site's vicinity. Currently operating zones are found in the west of Swords town, with small areas in the western areas of the town. The closest operating zone is found 650 metres to the north of the site access junction.

3.11. Current Resident Modal Split Patterns

With the application site being located in a currently undeveloped area, the baseline resident modal split and car ownership patterns have been established based on the CSO Census 2022 data for the electoral division "SWORDS-GLASMORE". As the dataset covers an area including both urban and rural households, the figures are deemed to be appropriate for the expected travel and car ownership patterns in a suburban development such as the proposed development. The relevant Electoral Division boundaries are presented in Figure 3.8 below.

Figure 3.8 Site Location within Relevant CSO Census Electoral Division (ED)



The local mode share patterns in commuting trips originating from the area in question and local household car ownership patterns are respectively presented in Tables 3.1 and 3.2, which follow.

Table 3.1 Electoral Division Population by Means of Travel to Work (%)

	On Foot	Bicycle	Public Transport	Car Driver	Car Passenger	Other	Remote work
% Residents	15%	2%	19%	37%	13%	8%	6%

Table 3.2 Electoral Division Car Ownership per Household

	No car	One car	Two cars	Three Cars	Four or More Cars
% Households	11%	39%	36%	10%	4%

As can be seen from Table 3.1 above, the driving mode share in commuting trips currently covers 50% or approximately one in two trips to work, with 19% (ca. one in five) of residents commuting to work by public transport. 15% of people commute to work on foot, with a negligible share of other modes, including cycling.

As per Table 3.2, ca. 1 in 10 households in the area is car-free, with ca. 40% of households owning one car, another 36% owning two cars, and the remaining 14% owning three or more cars. While the proportion of car-free households is modest, it nevertheless shows that the area offers opportunities for living without a car, which should further increase with gradual urbanisation and the associated provision of more varied services and amenities locally.

Overall, it is deemed that the proposed development has the potential to achieve a more sustainable modal split and lower car ownership compared to the area-wide average. A sustainable mode shift shall be enabled by mobility management interventions detailed in Section 7 as well as the increased availability of sustainable travel options in the future.

3.12. Relevant Permitted and Committed Developments

Mooretown Phase 1 - LADP/002/24

The Mooretown Phase 1 development includes 274 no. units comprising 187 no. houses and 87 no. duplexes and apartments. Phase 1 of the development includes a new link road from the R125 to Swords Community College. The permitted development is between the two sections of the Phase 2 development and stretches from the west to east of the overall lands. The permitted Mooretown Phase 1 development location is shown in Figure 3.9 in relation to the application site.

Residential Development, Mooretown - F23A/0504

The residential development includes 96 no. units comprising 46 no. houses and 50 no. duplexes and apartments. The development is located to the west of the proposed development adjacent to the Mooretown Distributor Link Road. The location is shown in Figure 3.9 (overleaf) in relation to the application site.

Mooretown Strategic Housing Development (SHD) - ABP-313362-22

The Mooretown SHD development includes 650 no. units comprising 265 no. houses and 385 no. duplexes and apartments in addition to 1 no. childcare facility, 5 no. retail units and 1 no. café/restaurant. The development is located to adjacent to the proposed development, forming the west boundary. The Mooretown Distributor Link Road lies to the west of the SHD site. The location is shown in Figure 3.9 in relation to the application site.

Oldtown Phase 5 - ABP-313302-22

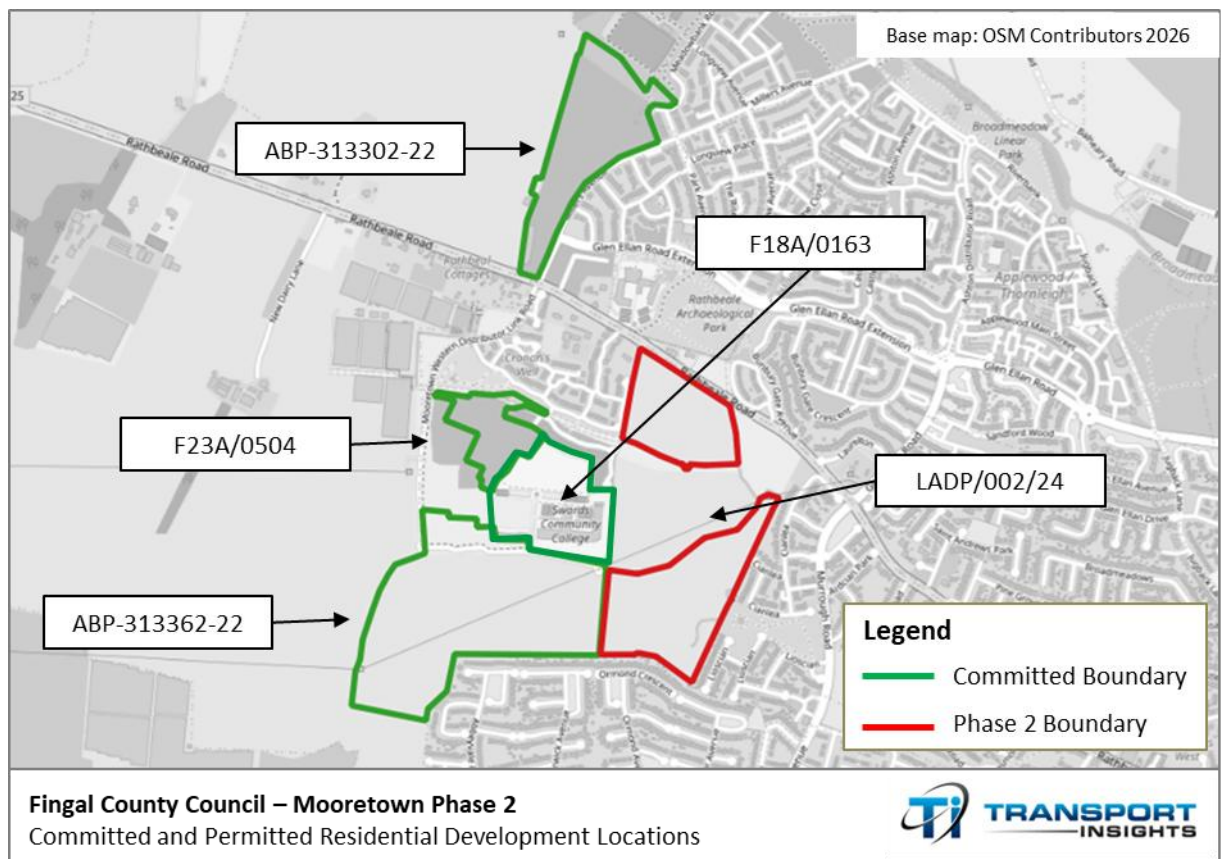
The Oldtown Phase 5 development includes 377 no. units comprising 173 no. houses and 204 no. duplexes and apartments in addition to 1 no. childcare facility. The development is located to the northwest of the proposed development and north of the R125. The location is shown in Figure 3.9 in relation to the application site.

Education Campus (F18A/0163)

The Education Campus is located to the west of the proposed development and includes a new primary school and a new secondary school. The secondary school, Swords Community College, opened in 2019. The primary school, Broadmeadow Community National School, is currently based in temporary accommodation on-site with the permanent school building not yet constructed. The primary school will eventually consist of 624 pupils.

It is noted that both schools are considered as committed development for the impact assessment (see Section 5 of this TTA Report). However, as the secondary school is operational it's trips have been picked up by the traffic surveys undertaken. As the primary school is not yet fully occupied its trip generation has been informed by planning documentation for Mooretown Phase 1.

Figure 3.9 Committed Residential Development Locations



4. Description of Proposed Development

4.1 Introduction

This section of the TTA Report describes key physical attributes of the proposed development including internal site layout characteristics, proposed car and cycle parking provision and provision for other modes.

4.2 Proposed Development

The overall proposed development comprises 360 no. residential units including:

- 305 no. houses including 2, 3 and 4-bed houses;
- 35 no. apartments including 1, 2 and 3-bed apartments; and
- 20 no. Duplex-Apartments.

The proposed residential units will be accompanied by associated pedestrian, cycle, and car circulation and parking facilities as well as various open space and recreational areas. Furthermore, the mobility needs of the development's future residents will also be supported by a comprehensive and tailored package of measures aimed at enabling and promoting use of sustainable transport modes, and facilitating them in living low-car owning and car-free lifestyles – such measures are set out in the fRTP (Section 7 of this report).

As part of the proposed development a 12 classroom creche is proposed and it is intended to primarily serve the local catchment.

4.3 Proposed Site Layout and Access Arrangement

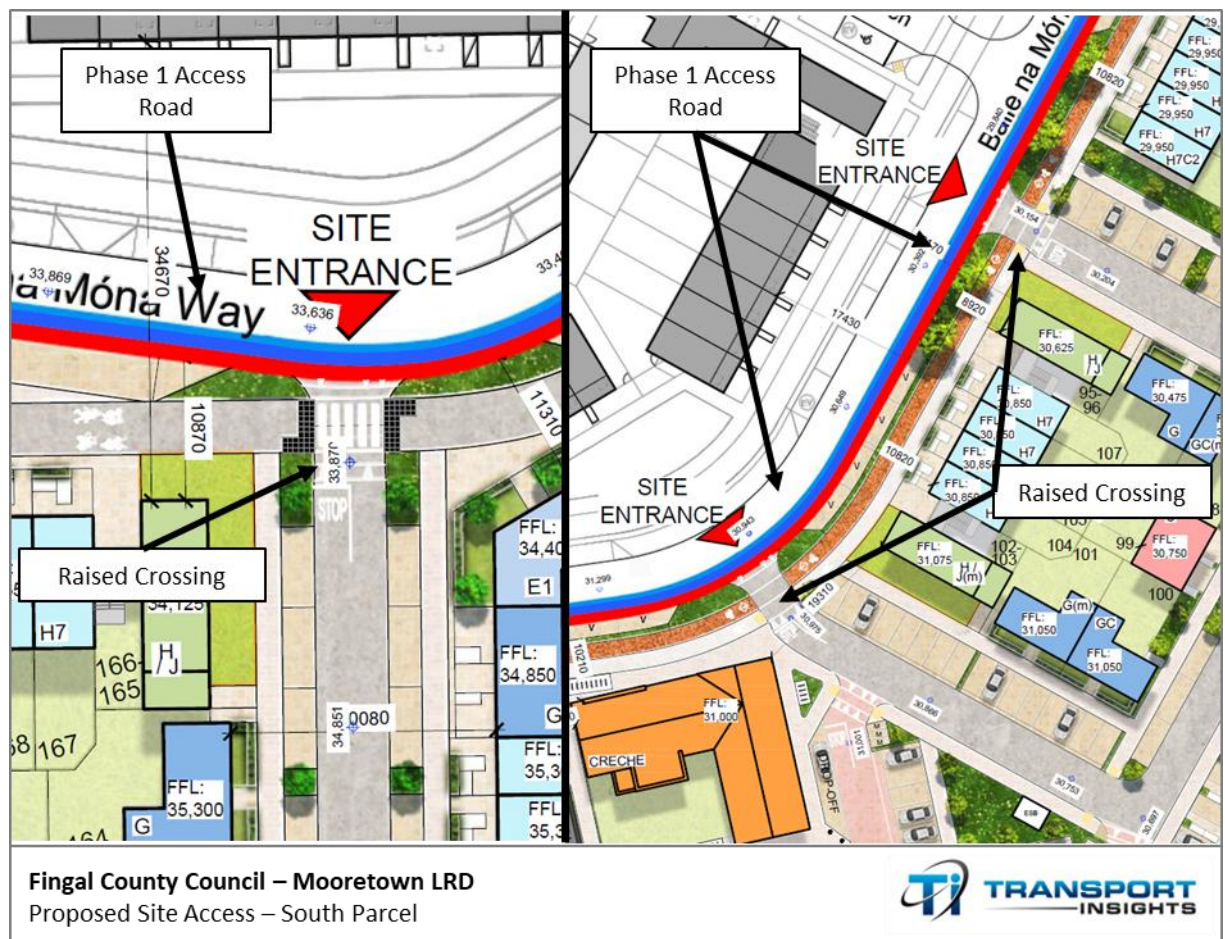
Proposed Site Layout

The proposed site layout provides an overview of the proposed new vehicular site accesses (see Figures 4.1 and 4.2), routes of the internal streets and footpaths and the general location of the various housing types and associated car parking facilities. The overall proposed site layout, produced by Deady Gahan Architects, is included in the submission package.

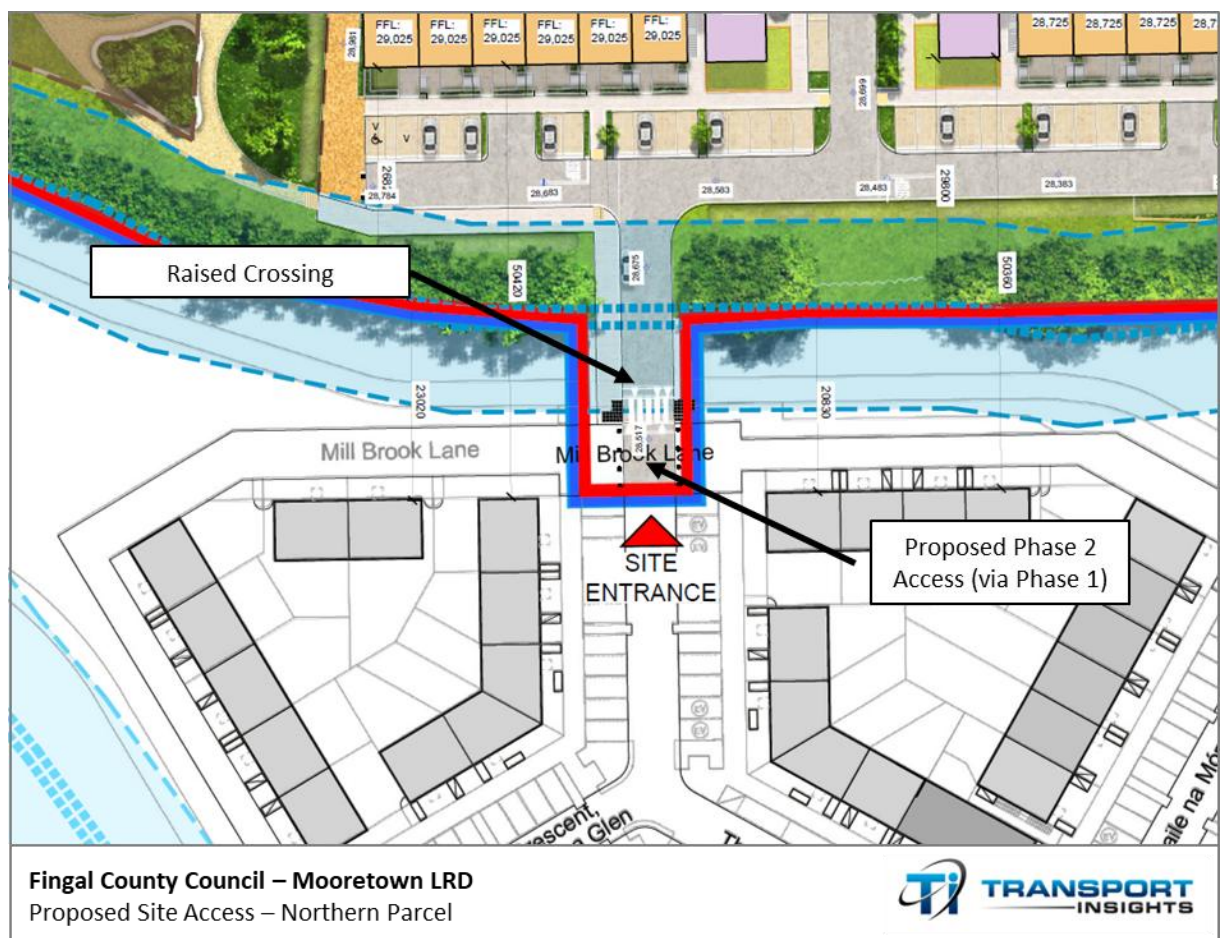
Vehicular Site Access Arrangements

Vehicular access to the proposed development shall be taken from the Phase 1 access road. The Phase 1 access road is a single carriageway local road and includes pedestrian and cyclist facilities on both sides of the carriageway. This access road provides access to the R125 to the north and the Mooretown Western Distributor Road to the east (via the School Access Road).

Three new vehicular access points are proposed on the southern side of the Phase 1 access road to enable access to the southern and north eastern parts of Phase 2. Figure 4.1 (overleaf) illustrates these three new access points. Additional annotation is provided by Transport Insights.

Figure 4.1 Proposed Development Layout – Southern Parcel

The design of each of these three access points has been informed by DMURS and CDM design guidance (e.g. non motorised user priority, raised crossing point, tightened corner radii, etc.). Visibility splay requirements for a 30 kph road, as per DMURS, are achievable from each access point. The northern part of Phase 2 is accessed via Phase 1 and its permitted road layout has also been informed by DMURS guidance. Figure 4.2 (overleaf) illustrates the proposed access point to the northern parcel of Phase 2. Additional annotation is provided by Transport Insights.

Figure 4.2 Proposed Development Layout – Northern Parcel

As with the access points off Phase 1 access road, the northern parcel access has been informed by DMURS and CDM design guidance (e.g. non motorised user priority, raised crossing point, tightened corner radii, etc.).

Internal Road Network

The internal road network has been designed with a focus on safety to ensure a self-enforcing low speed environment as evidenced by the features described below.

The features applied to do so include tight corner radii, horizontal and vertical deflections in road alignment, raised table junctions, raised uncontrolled crossing points, etc. The internal roads feature sections with a formal carriageway as well as shared space sections, which would be designated as homezones. The application of shared spaces provides a tangible indication of road hierarchy. Moreover, filtered permeability principle has been applied to facilitate convenient circulation of pedestrians and cyclists without encouraging travel by car. Furthermore, proposed active travel facilities enable integration of the proposed layout with Phase 1 (and surrounding areas).

4.4 DMURS Quality Audit and Stage 1 Road Safety Audit

A DMURS Quality Audit (QA) and Stage 1 Road Safety Audit (RSA) has been undertaken by Traffico and is provided in Appendix C of this TTA Report. The QA includes a number of recommendations for walking, cycling and accessibility. These recommendations shall be continually reviewed to ensure compliance with the QA at each design stage.

The Stage 1 RSA noted four potential issues with the proposed site layout. The design team have reviewed the four recommendations and have agreed with each. The proposed layout has been revised to reflect changes addressing the four issues (i.e. additional footpath, altered junction kerb line, revised cycle lane radii/ buffer and suitable uncontrolled pedestrian crossings). A completed RSA Feedback Form is provided in Appendix C.

4.5 Strategy for Pedestrians and Cyclists (Active Travel)

A Pedestrian and Cyclist Strategy has been drafted for the proposed development. The Strategy seeks to promote a highly permeable layout for Phase 2, providing active travel connections within the site and also enabling connections beyond the development site. The Strategy builds on the potential linkages set out in the Lands at Mooretown Framework (see image on right) as well as facilitating cycle connections set out in the GDA Cycle Network Plan. The proposed development layout shall include high quality east-west and north-south active travel connections, providing direct links to Phase 1, the R125, School Access Road (and beyond to Mooretown Western Distributor Link Road), Glasmore Abbey Park (via potential future link, subject to agreement), etc. The planning pack includes an Architectural Design Statement, produced by Deady Gahan Architects, which details the Pedestrian & Cycle Strategy.



Pedestrian footpaths within the development are proposed as having a width of 2.0 metres. The site features multiple active travel entrances from all sides to ensure high permeability. The Phase 1 Access Road includes a number of active travel crossing points which facilitate links between the two Phases. While Phase 1 included active travel facilities along the north eastern part of the carriageway, where the route bounds Phase 2, active travel facilities along this section are to be delivered as part of Phase 2. The proposed development shall include active travel facilities along the southern side of the Phase 1 Access Road, linking to active travel facilities at either end. The proposed Phase 2 facilities are to include a 4m wide shared pedestrian/ cycle facility towards the southern end and a 2m wide cycle track/ 2m wide footpath towards the northern end.

A Statement of Consistency with the Cycle Design Manual (CDM) has been undertaken of the proposed layout by Transport Insights. The proposed signage for the scheme is generally considered to be consistent with the CDM. The full statement is provided in Appendix D of this TTA Report.

4.6 Proposed Bus Turning Facilities

As part of the proposed development, a bus turning facility is proposed. The facility has been requested by the NTA to support the potential future provision of bus service(s) directly to the site. The facility is located towards the southwest of the proposed development site, situated on the southern side of the Phase 1 access road carriageway. In addition, bus parking facilities are also proposed on the southern side of the Phase 1 carriageway. The proposed bus facilities layout has been designed in collaboration with the NTA including in line with the NTA's Bus Stop Guidance document.

4.7 Servicing and Emergency Vehicle Access

Refuse collection vehicles and emergency vehicles are proposed to access/ egress the site using all vehicular accesses, as specified in the preceding Section 4.3. Refuse collection truck routes will be planned to minimise turning movements, with waste bins being taken to designated collection locations prior to the waste contractor arriving.

A swept path analysis has been carried out in order to ensure that both refuse vehicles and emergency vehicles will be capable of accessing, circulating within and egressing the site. A set of swept path analysis drawings, produced by AKM Design Group, has been included in the application package.

A Statement of Consistency with the Traffic Signs Manual (TSM) has been undertaken of the proposed layout by Transport Insights. The proposed signage for the scheme is generally considered to be consistent with the TSM. The full statement is provided in Appendix E of this TTA Report.

4.8 Cycle Parking Arrangements

The proposed cycle parking provision has been designed to encourage cycling as a key mode of transport to and from the proposed development and reduce the reliance of residents and visitors on private car use. The FCC *Development Plan* Standards and the *Sustainable Residential Development and Compact Settlements Guidelines* (January 2024) have been consulted in order to determine a suitable amount of cycle parking to be accommodated within the proposed development.

Table 4.1 and 4.2 (overleaf) provide an overview of the proposed cycling parking arrangements including applicable standard, residential unit type and cycle parking provision.

Table 4.1 Cycle Parking Standards

Land Use		FCC Development Plan		Compact Settlement Guidelines	
		Long Stay	Short Stay	Long Stay	Short Stay
Apartments	1-2 Bedrooms	1, plus 1 per bedroom	0.5 Spaces per unit	1 per bedroom	"Visitor Parking Should be Provided"
	3+ Bedrooms	2, plus 1 per bedroom	0.5 Spaces per unit		
Standard Housing	1-2 Bedrooms	1, plus 1 per bedroom	-		
	3+ Bedrooms	2, plus 1 per bedroom	-		
Creche		1 per classroom	5 per classroom	-	-

Table 4.2 Breakdown of Proposed Cycle Parking Provided

Land Use		No. Of Units	FCC Development Plan		Compact Settlement Guidelines		Proposed	
			Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay
Apartments	1-Bed	12	24	6	12	"Visitor Parking Should be Provided"	24	6
	2-Bed	15	45	7.5	30		46	8
	3-Bed	8	40	4	24		40	4
Duplexes	2-Bed	10	30	-	20		30	-
Standard Houses (Detached/Semi-Detached/Mid-Townhouse*)	2-Bed	161	483	-	322		483	-
	3-Bed	58	290	-	363		290	-
	4-Bed	1	6	-	4		6	-
Creche		12	12	60	-	-	12	60
Total			930	77.5	775	-	931	78

*Excludes unit types which have direct access to allocated GF private amenity space which can be utilised for required bike storage. **Compact Settlement Guidelines does not quantify short stay spaces, FCC standard utilised.

Table 4.2 outlines the cycle parking provision for the creche and the residential units which don't have direct access to private amenity space. The proposed End Townhouses, Semi-Detached and ground floor apartments (e.g. unit types C/CC1/CC2, E1, H, M, F1G) have direct access to private amenity space which would be utilised to store bicycles.

To encourage sustainable travel among residents the proposed cycle parking provision also includes non-standard (e.g. cargo bike) cycle parking spaces, with 12 no. spaces provided within the apartment communal bike store and 2 no. spaces provided within the creche bike store. Visitor cycle parking is proposed across the site and shall be provided in the form of Sheffield type stands.

4.9 Car Parking Arrangements

Proposed Provision

The proposed car parking provision has been designed to ensure balance between the residents' mobility needs with the focus on alternative modes of transport, while being cognisant of the site's locational and accessibility characteristics. The FCC *Development Plan* Standards for Zone 2 (i.e. location not located within 800 metres of an existing BusConnects spine route or 1,600 metres of an existing or planned Luas/Dart/Metro Rail station) and the *Sustainable Residential Development and Compact Settlements Guidelines* (January 2024) have been consulted in order to determine a suitable amount of car parking.

Table 4.3 and 4.4 (overleaf) provide an overview of the proposed car parking arrangements including applicable standard, land use type and car parking provision.

Table 4.3 Breakdown of Proposed Car Parking Standards

Land Use Type		FCC Development Plan Maximum Requirements		Compact Settlement Requirements
		Resident	Visitor	Resident & Visitor
Residential	1-2 Beds	1 per unit	1 per 5 units	2 Per Unit
	3 Beds	2 per unit	1 per 5 units	
Creche		0.5 per Classroom		-

Table 4.4 Breakdown of Proposed Car Parking Requirements and Proposed

Land Use		No. Of Units	FCC Development Plan		Compact Settlement Guidelines		Proposed	
			Resident	Visitor	Resident	Visitor	Resident	Visitor
Apartments	1-Bed	18	18	3.6	720	18	75	
	2-Bed	19	19	3.8		19		
	3-Bed	8	16	1.6		16		
Duplexes	2-Bed	10	10	2		10		
Houses	2-Bed	168	168	33.6		168		
	3-Bed	123	246	24.6		246		
	4-Bed	14	28	2.8		28		
Creche		12	-	6*		-		-
Total			505	72		720		505

*6 no. proposed visitor parking spaces along the Phase 1 Access Road are intended to be utilised by creche staff during operating hours (reverting to visitor parking outside these hours).

As detailed in Table 4.4, the FCC development standards would indicate 577 no. residential spaces (residential and visitor). While the Compact Settlement Guidelines would indicate a maximum of 720 no. spaces. The proposed development shall provide 580 no. parking spaces (inclusive of residential, visitor and 6 no. creche spaces that revert to visitor spaces [see subsequent paragraph]). Overall, the proposed car parking provision is below the maximum set out in Compact Settlement Guidelines and generally in line with FCC's development standards. A justification for the proposed quantum of car parking is provided in the subsequent paragraph.

A plan of car parking facilities, produced by Deady Gahan Architects, is included in the application package. The plan sets out in-curtilage parking, on-street parking (including resident, visitor, creche).

Car Parking Justification

The total car parking provision includes 580 no. spaces, which translates into 1.6 no. spaces per unit. This ratio of parking space to residential unit is less than the maximum of 2 no. car parking spaces per unit for an intermediate location (see Section 2) as per the Compact Settlements Guidance.

As set out in Section 3 of this report, the surrounding area is accessible by existing active travel infrastructure and well served by public transport services (with future improvements planned). The PTCA included as Appendix B, indicates spare capacity is available on the surrounding public transport services. The proposed development is to provide high-quality sustainable travel infrastructure (footpaths, cycle facilities, bus facilities, etc.) and enable numerous linkages to the surrounding areas, encouraging active and sustainable travel. Furthermore, a Residential Travel Plan (RTP) has been developed for the scheme (see Section 7) which includes an Action Plan to encourage sustainable travel for future residents. Considering the existing and planned sustainable travel accessibility of the proposed development and the RTP, the proposed car parking provision is considered suitable, and balances the mobility needs of future residents.

Electrical Vehicle Charging

17 no. of the on-street visitor car parking spaces (22% of 75 no. visitor spaces) are proposed to provide Electrical Vehicle (EV) charging facilities. It is also noted that, in curtilage car parking spaces are proposed to be pre-wired for future provision of EV charging facilities. The proposed EV charging provision is in line with Section 14.17.10 of the FCC Development Plan standard. An EV Charging Strategy and layout plan indicating the 17 no. EV charging spaces, produced by ENX, is provided as part of the application pack.

Motorcycle Parking

The proposed development is to provide 36 no. public accessible motorcycle parking spaces. This equates to 10% of the proposed car parking provision that is not within curtilage, in line with section 14.17.9 of the FCC Development Plan standards.

Accessible Car Parking

As part of the proposed car parking provision, 19 no. accessible space (i.e. 5% of the not within curtilage/ visitor spaces) are to be provided. This provision is in line with the section 14.17.8 of the FCC Development Plan standards.

Creche Parking

In relation to the proposed creche, FCC's Development Plan standards require 6 no. car parking spaces based on 0.5 spaces per classroom. It is noted that the proposed creche is expected to serve a local demand with sustainable travel modes expected to serve a considerable portion of this potential travel

demand. As such, the proposed approach to car parking provision for the creche is to provide a vehicle drop off area directly adjacent to the creche building. Two-way circulation is provided through the car parking area which enables a vehicle to access the creche drop off area in the appropriate direction so that a car door can be opened onto the footpath, providing safe access for parent/ child. In addition, 6 no. proposed visitor parking spaces along the Phase 1 Access Road are intended to be utilised by creche staff during operating hours (reverting to visitor parking outside these hours). The 6 no. spaces intended to serve the creche (during operating hours) shall be identified by signage.

5. DMURS Compliance Statement

5.1 Introduction

This section of the Report contains a statement of the design team's opinion the proposed development is consistent with DMURS. Compliance of key roads related aspects of the proposed development's layout with the principles of DMURS is set out hereunder. As noted in Section 4 an independent Quality Audit & Stage 1 RSA has also been undertaken of the proposed layout.

5.2 General Site Layout

The proposed site layout follows the DMURS approach with respect to 3-way offset network (DMURS Section 3.4.1), with a road layout which utilises slow, stop and/ or change in direction repeatedly within the layout to influence vehicle speeds. Such a network approach encourages a low speed environment while still enabling some through traffic on local street (i.e. Phase 1 Access Road). Furthermore, extensive active travel facilities and non motorised user priority at junctions (where possible) are proposed, providing a permeable layout to encourage non car travel.

5.3 Carriageway Widths

The vehicular carriageway width within the development ranges from 5 metres to 5.5 metres, in line with standard carriageway width for local streets recommended in DMURS Section 4.4.1. Given the other attributes of the internal roads within the site, including their limited width, the presence of curves and horizontal and vertical traffic calming measures, the proposed carriageway width is not deemed to give rise to any traffic safety hazard and is deemed consistent with base premises of the DMURS approach.

5.4 Corner Radii

Three metre corner radii within the development are proposed. While corner radii at the site access junctions from the Phase 1 Access Road are 4.5 metres to facilitate access and egress of refuse vehicles and occasional emergency vehicles. Those radii are compliant with DMURS Section 4.4.3.

5.5 Pedestrian Facilities

Proposed pedestrian footpaths within the site are 2 metres wide. A 4 metre wide active travel facility (either shared pedestrian/ cycle facility or cycle track/ footpath) is proposed along the southern side of the Phase 1 Access Road and shall tie in with active travel facilities being delivered as part of Phase 1. Pedestrian footpath widths meet the minimum space required for two people to pass comfortably in areas of low pedestrian demand, as per DMURS Section 4.3.1.

Raised tables across the site accesses off the Phase 1 Access Road are proposed as a traffic calming measure indicating to drivers a transition to a traffic calmed area within a residential development.

These crossings are proposed as having a width of 4 metres, in keeping with the design of pedestrian and cycle facilities along the Phase 1 Access Road. It is also noted, raised tables and/ or continuous footpath is proposed at junctions (where feasible) within the site.

5.6 On-Street Parking

Where on-street car parking is proposed within the development it is predominantly in the form of perpendicular parking bays with some parallel parking bays. The proposed visitor car parking spaces shall disincentivise unsafe visitor car parking (e.g. at/ near junctions, crossing points - which could affect the pedestrian environment and pedestrian safety) by providing separate parking spaces for visitors. Perpendicular parking spaces are proposed to be 2.5 metres wide x 5 metres long, which is similar to the standard size set out in DMURS (2.4 x 4.8 metres). In addition, where required for perpendicular spaces, additional space (ca. 0.5 metres) is provided outside of the main carriageway width to ensure a 6 metre width is provided to access/ egress a parking space, as per DMURS 4.4.9. The marginal increase in bay size (and additional space outside of the carriageway) is deemed to improve usability and user comfort and is not deemed to have any impact on traffic safety. Furthermore, this additional space between the main carriageway and the parking space provides additional visibility for pedestrian (beyond a parked car) at uncontrolled crossing points. Overall, the proposed layout of car parking facilities is deemed to create a self-enforcing low-speed environment.

5.7 Materials and Finishes

Visually contrasting materials and finishes are proposed to be used within the site in order to delineate pedestrian and cycle infrastructure and vehicular carriageways, and in doing so to improve legibility, calm vehicular traffic and reduce the need for excessive line markings and signage etc.

6. Traffic Impact Assessment

This section of the Report sets out baseline assumptions and outputs of the proposed development's traffic impact analysis. The analysis has been undertaken by reference to and consistent with the previously undertaken Phase 1 TTA, which had been accepted by FCC.

6.1 Traffic Impact Assessment Approach

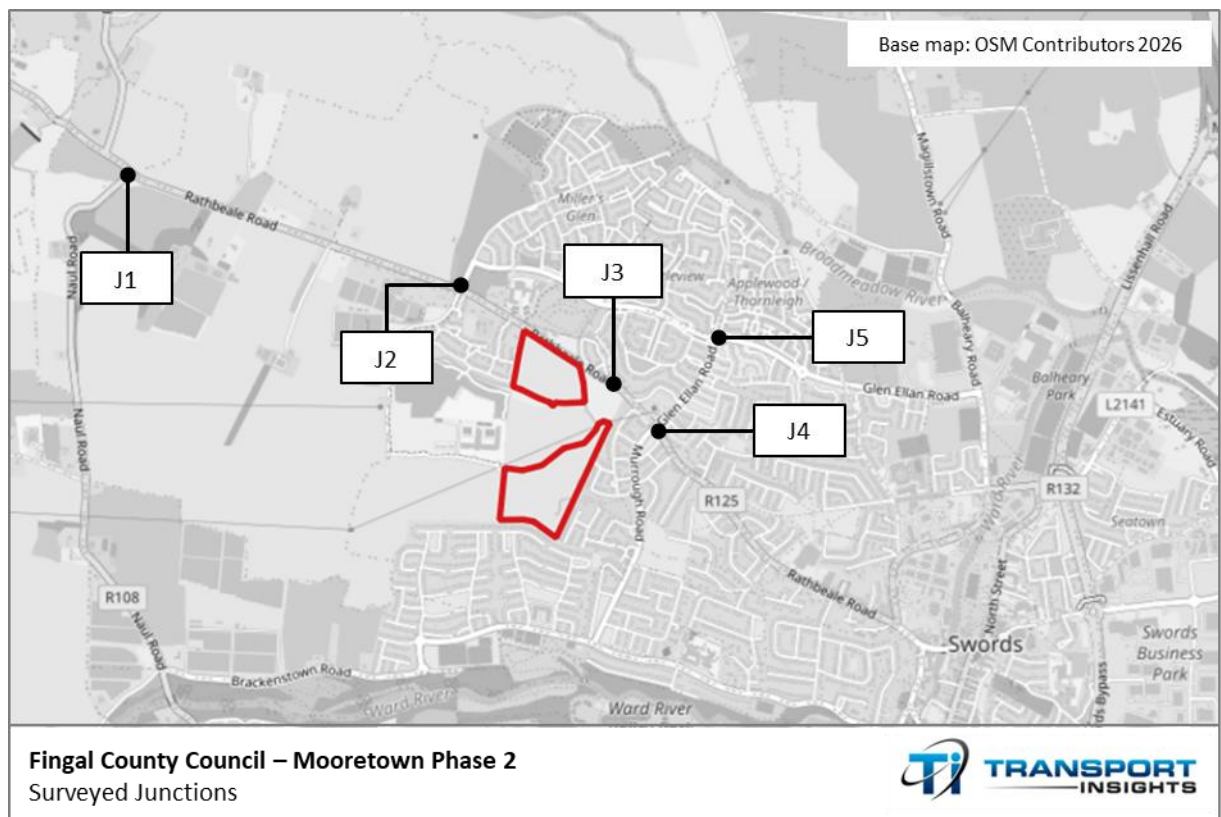
As noted in Section 1.3, a residential development, known as Phase 1, was permitted by FCC adjacent to the development. When completed Phase 1 will deliver 274 no. residential units and a new access road from the R125 through the site. A TTA was produced in support of the Phase 1 development. As part of this TTA an impact assessment was undertaken and considered the future years 2028, 2033 and 2043. The assessment analyses the potential impacts at 5 no. junctions in the locality.

The assessment approach and scope within the permitted Phase 1 TTA was approved by FCC and has informed the scope of the impact assessment undertaken for this TTA Report. In addition, relevant committed developments and TRICS trip rate values set out in the Phase 1 TTA have informed development of this TTA's impact assessment.

The approach applied should be noted to be consistent insofar as possible with that applied in the Mooretown Phase 1 TTA.

6.2 Baseline Traffic Data Collection and Analysis

To provide an understanding of the existing baseline traffic flows on the road network in the vicinity of the application site, traffic surveys were undertaken at 5 no. key junctions. The subject junctions are illustrated in Figure 6.1 (overleaf), with a list provided below the figure.

Figure 6.1 Surveyed Junction Locations

Surveyed Junctions are as follows:

- J1 – R125 Rathbeale Road/ R108 Naul Road (3-arm, priority-controlled);
- J2 – R125 Rathbeale Road/ Western Distributor Link Road (4-arm, priority-controlled);
- J3 – R125 Rathbeale Road/ Holymount/ Site Access (3-arm, priority-controlled);
- J4 – R125 Rathbeale Road/ Glen Ellan Road/ Murrough Road (4-arm, priority-controlled); and
- J5 – Glen Ellan Road/ Ashton Distributor Road (Applewood Roundabout) (4-arm, priority-controlled).

The above junctions have been selected to cover the key routes to and from the site. The scope of the survey work has provided an extensive coverage of the road network within west Swords. A Junction Turning Count (JTC) survey was undertaken at each of the 5 no. locations on Thursday 20 November 2025 and covered a 12-hour period from 07:00 to 19:00 hours. Appendix F contains the raw survey data for each survey junction.

The baseline survey data was analysed and the AM and PM network peak hours were defined. For the purposes of assessment, a common peak hour was chosen for the 5 no. junctions due to minor differences in the individual AM and PM peak hours at each junction. The AM peak hour is from 07:45-08:45hrs with the PM peak hour from 16:30-17:30hrs. Table 6.1 (overleaf) shows the total approach

flows for the peak hours. Appendix G contains a schematic of the local road network and illustrates the surveyed AM and PM peak hour flows at each of the 5 no. junctions.

Table 6.1 Traffic Survey Results (Approach Flows)

Jcn No.	Arms	Peak Hour Period	Total Junction Approach Flows	Of which HVs
1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,271	6.29%
		PM	1,489	3.56%
2	4-arm R125 Rathbeale Road/Western Distributor Link Road	AM	1,402	3.57%
		PM	1,227	2.20%
3	4-arm R125 Rathbeale Road/Holymount/Site Access	AM	784	4.21%
		PM	736	2.31%
4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,430	5.03%
		PM	1,618	2.66%
5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,539	3.44%
		PM	1,600	1.38%

6.3 Analysis Scenario Approach

In line with national best practice, the potential impact of the development traffic has been analysed for future years - the Year of Opening (YoO) 2028, YoO+5 2033 and YoO+15 2043. Three scenarios were created: a Do Nothing, a Do Minimum and a Do Something. The three scenarios enable the development of the analysis for the future years and ensure potential future background traffic growth and traffic flows from the permitted and committed developments are captured.

The three scenarios are outlined below.

- **Do Nothing (DN):** Background traffic volumes have been established as traffic volumes at the five junctions listed in Table 6.1 above in the YoO, YoO+5 and YoO+15. With no proposed development being assumed, this has constituted the **Do-Nothing** traffic scenario.
- **Do Minimum (DM):** In this scenario, the additional traffic associated with relevant permitted and committed developments has been accounted for. This has included the permitted Mooretown Phase 1 development (i.e. 274 no. units), the committed residential developments to the west and north of the site along the Western Distributor Road and the primary school to the west of

the site. The traffic forecast to be generated by these developments has been added to the Do-Nothing flows to obtain the Do-Minimum flows.

- **Do-Something (DS):** The traffic generation of the current proposed development has also been quantified. The DS scenario has been defined as including the DM traffic and the proposed development traffic.

Furthermore, to provide a robust assessment the future traffic flows in the YoO, YoO+5 and YoO+15 do not include any allowance for the potential reduction in traffic demand due to a potential modal shift (as a result of the improved active travel infrastructure and RTP). As such, the assessment indicates the worse case traffic figures are likely to reduce in future due to travel behaviour change.

6.4 Traffic Distribution and Assignment

The traffic distribution and assignment arrangements per scenario are outlined below: generation have been used to inform the scenarios below. Traffic distribution and assignment have been sourced from the Mooretown Phase 1 TTA.

- **DN Scenario** – background traffic is distributed and assigned on the local road network as per the observed survey flows.
- **DM Scenario** – the distribution and assignment patterns set out in the Mooretown Phase 1 TTA has been utilised for the relevant permitted and committed development traffic.
 - In relation to traffic from the permitted Phase 1, 80% has been distributed east from the site access (i.e. JTC survey site, Junction 3) with the remaining 20% distributed west at the site access junction, as per the Phase 1 TTA. Phase 1 traffic at the other 4 junctions assessed has been distributed in line with observed distribution patterns from the traffic surveys.

In relation to the various committed developments, traffic distribution and assignment has followed that set out in the Phase 1 TTA. In summary, traffic which access the R125 is distributed as follows:

- Residential Development, Mooretown will use the Western Link Distributor to access the R125 via junction 2.
- Mooretown Strategic Housing Development (SHD) will use both the Western Link Distributor and new link road that runs through the Mooretown lands. 25% will use the new link road with 75% using the existing Western Link Distributor.
- Oldtown Phase 5 will access the R125 via junction 2 from the northern arm.

- Primary School traffic will access the R125 from both Junctions 2 and 3. 60% via Junction 2 and 40% via Junction 3.
- **Do Something** – the DS scenario includes the proposed developments' traffic. The same distribution for the Mooretown Phase 1 development from the Phase 1 TTA traffic has been applied to the proposed developments predicated traffic. This means that all proposed traffic is distributed onto the local road network via the Phase 1 access road and Junction 3. At the junction, 80% will travel east towards Swords and 20% will travel west.

6.5 DN Scenario

DN traffic flows have been developed by applying forecast growth for the YoO, YoO+5 and YoO+15 to the baseline peak hour survey flows. Growth factors have been determined from the TII's Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections, October 2021 for Central County Dublin. DN scenario flows in the future years for the AM peak hour (07:45-08:45hrs) and PM peak hour (16:30-17:30hrs) at the 5 no. surveyed junctions are presented in Table 6.2. Appendix H contains a schematic of the local road network and illustrates the surveyed AM and PM peak hour flows at each of the 5 no. junctions.

Table 6.2 – DN Traffic Flows (Approach Flows)

Year	Junction		Peak Period	Do-Nothing Flows
	#	Name		
YoO (2028)	1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,344
			PM	1,573
	2	4-arm R125 Rathbeale Road/Western Distributor Link Road	AM	1,481
			PM	1,296
	3	4-arm R125 Rathbeale Road/Holymount/Site Access	AM	829
			PM	777
	4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,512
			PM	1,709
	5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,626
			PM	1,689
YoO +5 (2033)	1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,424
			PM	1,664
	2	4-arm R125 Rathbeale Road/Western Distributor Link Road	AM	1,567
			PM	1,369
	3	4-arm R125 Rathbeale Road/Holymount/Site Access	AM	877
			PM	822
	4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,600
			PM	1,807
	5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,720
			PM	1,784
	1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,519
			PM	1,770

YoO +15 (2043)	2	4-arm R125 Rathbeale Road/Western Distributor Link Road	AM	1,666
			PM	1,455
	3	4-arm R125 Rathbeale Road/Holymount/Site Access	AM	933
			PM	873
	4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,704
			PM	1,920
	5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,829
			PM	1,894

The above 2028, 2033 and 2043 background traffic flows have underpinned the assessment of the DM and DS scenarios.

6.6 DM Scenario

Permitted and Committed Traffic Flows

Section 7 (and Appendix F) of the Mooretown Phase 1 TTA, included as part of the planning submission, quantified the predicted traffic related to Phase 1 as well as other committed developments considered. The trip information from the Mooretown Phase 1 TTA has informed development of the DM scenario for this TTA Report. It is noted that the peak hours assessed in the Mooretown Phase 1 TTA differ slightly to those assessed in this TTA nevertheless the peak hour trip values from Mooretown Phase 1 TTA have been utilised to provide a robust assessment approach. Table 6.3 sets out the forecast traffic generation of the permitted (i.e. Phase 1) development and the committed developments (see Section 3.12 of this TTA Report).

Table 6.3 Permitted and Committed Vehicular Trip Generation

Development Source	Development Traffic (One-Way Trips)			
	AM peak hour		PM peak hour	
	Arr.	Dep.	Arr.	Dep.
Permitted Development				
Mooreland Phase 1 Lands ¹	29	78	65	37
Committed Developments				
Residential Development, Mooretown - F23A/0504	26	70	58	33
Mooretown Strategic Housing Development (SHD) - ABP-313362-22	70	185	154	88
Primary School	112	112	0	0
Permitted and Committed Total Trips	237	444	277	158

¹ Trip values shown relate to a development of 274 no. residential units as per the granted Phase 1 development. It is noted that the Mooretown Phase 1 TTA assessment considered the development of 600 no. residential units.

As set out in Table 6.3, combining the permitted and committed schemes would add an additional 681 trips in the AM peak hour and 435 trips in the PM peak hour. This additional traffic has been incorporated into the DM scenario with distribution and assignment as set out in Section 5.4.

DM Traffic Flows

The established AM and PM peak hour DM traffic flows at each of the 5 no. junction locations are presented in Table 6.4 below. For each assessment year, the figures provided include DN traffic volumes, committed development traffic and the permitted Mooretown Phase 1 traffic. Appendix I contains a schematic of the local road network and illustrates the DM AM and PM peak hour flows at each of the 5 no. junctions.

Table 6.4 – DM Traffic Flows

Year	Junction		Peak Period	DN Flows	Permitted and Committed Development Flows	DM Flows
	#	Name				
YoO (2028)	1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,344	175	1,519
			PM	1,573	119	1,692
	2	4-arm R125 Rathbeale Road/Western Distributor Link Road	AM	1,481	574	2,055
			PM	1,296	426	1,722
	3	4-arm R125 Rathbeale Road/Holymount/ Site Access	AM	829	550	1,378
			PM	777	359	1,136
	4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,512	574	2,086
			PM	1,709	455	2,164
	5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,626	181	1,806
			PM	1,689	147	1,836
YoO +5 (2033)	1	3-arm R125 Rathbeale Road/R108 Naul Road	AM	1,424	175	1,599
			PM	1,664	119	1,783
	2	4-arm R125 Rathbeale	AM	1,567	574	2,141
			PM	1,369	426	1,795

		Road/Western Distributor Link Road				
	3	4-arm R125 Rathbeale Road/Holymount/ Site Access	AM	877	550	1,426
			PM	822	359	1,181
	4	4-arm R125 Rathbeale Road/Glen Ellan Road/Murrough Road	AM	1,600	574	2,174
			PM	1,807	455	2,262
	5	4-arm Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)	AM	1,720	181	1,900
			PM	1,784	147	1,931
	YoO +15 (2043)	1	AM	1,519	175	1,693
			PM	1,770	119	1,889
		2	AM	1,666	574	2,241
			PM	1,455	426	1,881
		3	AM	933	550	1,483
			PM	873	359	1,232
		4	AM	1,704	574	2,279
			PM	1,920	455	2,375
		5	AM	1,829	181	2,009
			PM	1,894	147	2,041

6.7 DS Scenario

Proposed Development Traffic Generation

The proposed development will result in the construction of 360 no. residential units and associated community amenities. To quantify the proposed residential development trip generation the same TRICS trip rates used for the Phase 1 TTA (see Section 7, Table 5 of the Phase 1 TTA) have been utilised

for the proposed development. This ensures consistency with the permitted development traffic assessment approach.

To determine the proposed development trip generation, the proposed development trips for the 360 no. unit scheme (based on TRICS values) were calculated. It is noted that the TRICS trip rates peak hours differ slightly to the common network peak hours utilised for the impact assessment nevertheless the peak hour TRICS trip values have been utilised to provide a robust assessment approach. A summary of predicted development trips is presented in Table 6.5 below.

Table 6.5 TRICS Vehicular Trip Rates and Proposed Development Trips

Development Scheme	Trip Rate		Predicted Trips
Phase 2 360 no. Unit Development	AM Arrival	0.107	39
	AM Departure	0.284	102
	PM Arrival	0.237	85
	PM Departure	0.136	49

The proposed development of 360 no. units could result in the addition of 39 arrival and 102 departure trips in the AM peak hour and 85 arrivals and 49 departure trips in the PM peak hour. These trips would be in addition to the trips from the permitted scheme.

The proposed creche unit and commercial unit would serve the local area and as such related trips would most likely be linked trips already on the network and/ or part of the predicted residential trip generation. Therefore, no additional trips for these uses have been included in the DS scenario as it is assumed they are accounted for in the general residential trip generation.

DS Traffic Volumes – Surveyed Junctions

The following Table 6.6 (overleaf) presents the DS and DM scenario forecast traffic volumes at the 5 no. junctions in the future YoO, YoO+5 and YoO+15 for the AM peak hour (07:45-08:45hrs) and PM peak hour (16:30-17:30hrs). Appendix J contains the network schematic illustrating the traffic flows at each junction. Table 6.6 also provides the % increase at each junction between the DM and DS scenarios.

Table 6.6 Surveyed Junctions DM and DS Scenario Traffic Flows (Approach Flows)

Junction	Year	Peak Period	DM	DS	% Impact between DM and DS
J1	2028 (YoO)	AM	1,519	1,534	1.0%
		PM	1,692	1,709	1.0%
	2033 (YoO+5)	AM	1,599	1,613	0.9%
		PM	1,783	1,800	0.9%
	2043 (YoO+15)	AM	1,693	1,708	0.9%
		PM	1,889	1,906	0.9%
J2	2028 (YoO)	AM	2,055	2,084	1.4%
		PM	1,722	1,749	1.6%
	2033 (YoO+5)	AM	2,141	2,169	1.3%
		PM	1,795	1,822	1.5%
	2043 (YoO+15)	AM	2,241	2,269	1.3%
		PM	1,881	1,908	1.4%
J3	2028 (YoO)	AM	1,378	1,519	10.2%
		PM	1,136	1,271	11.8%
	2033 (YoO+5)	AM	1,426	1,567	9.9%
		PM	1,181	1,315	11.4%
	2043 (YoO+15)	AM	1,483	1,623	9.5%
		PM	1,232	1,366	10.9%
J4	2028 (YoO)	AM	2,086	2,249	7.8%
		PM	2,164	2,242	3.6%
	2033 (YoO+5)	AM	2,174	2,338	7.5%
		PM	2,262	2,340	3.5%
	2043 (YoO+15)	AM	2,279	2,442	7.2%
		PM	2,375	2,453	3.3%
J5	2028 (YoO)	AM	1,806	1,847	2.2%
		PM	1,836	1,853	0.9%
	2033 (YoO+5)	AM	1,900	1,941	2.1%
		PM	1,931	1,949	0.9%
	2043 (YoO+15)	AM	2,009	2,050	2.0%
		PM	2,041	2,058	0.9%

As can be seen Table 6.6, the junctions which indicate the highest % impact are Junction 3 and 4, which would reflect the distribution of the majority of development (up to 80%) traffic in this general direction. The following summary of the impact assessment is noted:

- Junction 1 impact ranges between 1% to 0.9%, as this junction is located west of Swords/ the site and would be expected to carry less of the development traffic.
- Junction 2 indicates a similarly low percentage impact at 1.4% in the AM Peak and 1.6% in the PM Peak due to 20% of the development traffic being distributed to the junction.

- Junction 3 has moderate % impact ranging from 9.5% to 11.8% depending on the peak hour period and future year due to all development traffic flowing through this junction.
- Junction 4 indicates a low to moderate % increase range of 3.3% to 7.8%, depending on the peak hour period and future year.
- Junction 5 indicates minor % impacts ranging from 0.9% to 2.2% depending on the peak hour period and future year.

As demonstrated in the preceding table, the current proposed development will result in a low to moderate increase in traffic volumes across the local road network (external to the development site).

6.8 Summary

A comprehensive impact assessment of the potential impact of the proposed development has been undertaken and detailed in this TTA Report. It has been informed by the assessment approach and scope of the Mooreland Phase 1 TTA. The assessment has covered the existing and proposed road network across the site and in the vicinity, with 5 no. junctions assessed. Three scenarios have been developed to reflect the level of permitted, committed and proposed development and potential future year background traffic. The assessment has indicated varying levels of percentage impact at the junctions, with the main impacts identified at Junctions 3 and 4. The assessment has demonstrated that the proposed development will have minimal material impact on the performance of the road network within the site's vicinity.

7. Framework Residential Travel Plan

7.1 Introduction

This section of the Report sets out the objectives, mode share targets, measures and actions (within an 'Action Plan') which together comprise the Residential Travel Plan (RTP). These are accompanied by a Monitoring and Management Strategy to ensure the Action Plan remains relevant in meeting the future needs of residents of the proposed development.

7.2 Travel Plan Status

As the site is not currently developed, the RTP has been developed in 'framework' format.

7.3 Reference Guide

To date, no relevant national (Irish) guidance has been published in relation to the development of RTP. Therefore, its development has been guided by best practice as set out within Transport for London's (UK) *Guidance for Residential Travel Planning*. This guidance document provides a holistic approach to behavioural change within residential settlements by incorporating both the 'hard' measures and the 'soft' marketing and management measures necessary to address the transport needs of new residential developments.

7.4 Objectives

The overarching objectives of the RTP are to:

- promote sustainable travel choices (walking, cycling and public transport); and
- reduce car dependency, car use and car ownership among residents of the development.

7.5 Car Sharing

GoCar services are currently available in Swords Town Centre include 3 no. GoCar stations with 4 no. vehicles available. The station closest to the application site is located on the R836 ca. 2 km away from the site access. In addition, 3 no. car share spaces are provided for as part of the adjacent Phase 1 development. Furthermore, it should be noted that the western part of Swords, including the application site, is currently a mix of greenfield and/ or sites under development. The lands in question are currently undergoing rapid urbanisation, with the availability of car sharing services likely to follow completion of the residential schemes in the vicinity.

7.6 Modal Split Targets

To establish performance indicators for the RTP, modal split targets for the proposed development have been set. Achieving a sustainable modal split for commuting is of key importance, therefore the modal split targets relate to commuting to work and education only. However, the actions (Section 7.8) aim to influence all residents' trip making needs, including recreational, social and retail trips.

The modal split targets have been set based on the site's accessibility characteristics. The modal split characteristics of Electoral District Swords-Glasmore (as described in Section 3) has been used. This area has been deemed to represent an appropriate baseline for establishing modal split targets for the proposed development. The following Table 7.1 presents the identified modal split of this area (i.e. the baseline), alongside the mode share targets for the proposed development.

Table 7.1 Baseline and Proposed Modal Split Targets

Mode	Walking	Cycling	Public Transport	Motorcycle / Scooter	Car (Driver)	Car (Passenger)	Other*
Baseline	15%	2%	19%	0%	37%	13%	14%
Target	16%	7%	25%	0%	30%	8%	14%

* Other includes: Van (3%), Other incl. lorry (0%), Work mainly at/from home (6%), not stated (5%).

As can be seen in the preceding Table 7.1, the majority of trips are by car driver (37%), with 13% of trips as a car passenger. Public transport (18% bus and 0.4% rail) forms 19% of all trips, with 15% of residents walking. Taking into account the above, it can be seen that sustainable modes of travel to work, school or college account for 36% (walking, cycling and public transport) of all commuting trips. There is currently a low uptake with regard to cycling (2%), which represents an opportunity to develop within the proposed development, which has been designed as a low speed and cyclist friendly environment which will assist with the potential for uptake.

In developing this RTP, it is intended to achieve the following modal split:

- higher walking modal share (15% increasing to 16%);
- higher cycling modal share (2% increasing to 7%); and
- higher public transport modal share (19% increasing to 25%);
- reduction in car driver modal share (37% reducing to 30%); and
- reduction in car passenger modal share (13% to 8%).

While no specific mode share targets have been set for visitors to the development due to the more limited scope to influence their travel behaviour, the site's accessibility by walking and cycling from other local residential areas and local amenities in the vicinity of Swords are expected to encourage sustainable mode choices.

7.7 Key RTP Measures

To achieve the modal split targets, the following measures are aimed at encouraging walking, cycling and using public transport. These measures complement the proposed bicycle and car parking provision aimed at reducing the car (driver) modal share, and residents' car ownership needs.

Appointment of a Travel Plan Coordinator

Encouraging a sustainable modal split is an ongoing behavioural change initiative. Therefore, effective management is critical to the implementation and ongoing success of the Travel Plan. A Travel Plan Coordinator (TPC) will be appointed to oversee the ongoing development and implementation of the RTP, including development of mobility related strategies and identification of newly available opportunities for residents as they emerge.

Sustainable Travel Information Pack

A Sustainable Travel Information Pack will be issued to each dwelling upon first occupation. The aim of the Pack is to raise awareness of local amenities around the site and the available sustainable travel options available to get there. The Pack will include the following promotional materials and leaflets:

- overview of benefits of sustainable travel to individuals, the community and the environment;
- information on available sustainable travel schemes and pricing, including TaxSaver, Bike to Work scheme, etc.;
- walking and cycling maps of the site's surroundings, detailing local education, shopping, health, sports, and leisure facilities in addition to public transport stops, and car sharing stations;
- public transport map covering bus services available in site's vicinity, presenting their routes' and typical frequency; and
- contact details of the TPC, to discuss transport or travel problems, or potential new ideas.

Residential Travel Survey

Six months after the development is operational, it is proposed that a travel survey of residents be undertaken to establish the development's baseline modal split and identify measures to promote travel by sustainable modes. This will allow future modal split targets to be set and actions to be identified to achieve these targets. The survey is also a forum for residents to identify any issues relating to mobility.

Following this, it is envisaged that a travel survey should be carried every two years, enabling changes in travel patterns to be monitored and any issues to be addressed on a regular basis.

7.8 RTP Actions

To assign responsibilities involved in the implementation of the RTP and set out the proposed measures in a systematic manner, the Action Plan is set out in a tabular form and is presented in the following Table 7.2 (overleaf).

Table 7.2 Framework Travel Plan Actions

Action	Why	Who	When	Target: Residents/ Visitors
Coordination				
Appoint a Travel Plan Co-Ordinator (TPC)	To assign responsibility for managing the Travel Plan implementation and ensuring that all actions are completed on time	The Applicant	Following planning approval	All
Public Transport				
Promote availability of public transport TaxSaver scheme	To alert residents to possibility and opportunity to engage with their respective employers	TPC	Upon site occupation	Residents
- Sustainable Transport Information Pack to be provided to new residents occupying dwellings to include details of public transport services and stop locations. - Link to the Transport for Ireland journey planner website - Travel information on resident's noticeboard (Travel Plan Information Board) to include public transport service details and stop locations	To inform residents of public transport options and opportunities	TPC	Prior to site occupation	Residents
Car Sharing				
Provide information to residents about local car-sharing locations (Go-Car etc.)	To promote a car sharing options for those who may require such	TPC	Upon site occupation	Residents
Cycling (Hard Measures Promoting Behavioural Change)				
Provision of secure cycle parking where no direct	Reduce car use and associated car parking demands	The Applicant	Prior to site occupation	Residents, visitors

Action	Why	Who	When	Target: Residents/ Visitors
external access to private open space is available.	Facilitate cycle use			
Provision of bike maintenance stand in apartment secure cycle parking store	To encourage cycle trips	The Applicant	Prior to site occupation	Residents
Provision of 14 no. cargo bike cycle parking within the proposed development	To support the use of non-standard bicycle types and encourage cycling trips	The Applicant	Prior to site occupation	Residents
Cycling (Soft Measures Promoting Behavioural Change)				
Promote availability of Cycle to Work scheme	To alert residents to possibility and opportunity to engage with their respective employers	TPC	Upon site occupation	Residents
- Include information about the on-site cycling facilities in a Sustainable Transport Information Pack - Inform residents of cycle routes which may accommodate their travel needs	To establish an active cycling culture and raise awareness of in-house cycle facilities to accommodate it	TPC	Upon site occupation	Residents
Have a publicly accessible bicycle repair kit and pump available for use by residents and visitors	To support cycling	TPC	Upon site occupation	All
Arrange tours of cycling facilities for new residents	Promote cycling	TPC	Upon site occupation	Residents
Walking				
Promote walking as active travel in the Sustainable Transport Information Pack	To promote fitness, well-being and reduce car dependency	TPC	Upon site occupation	Residents
Taxi				
Include information on local taxi rank facilities and phone numbers for local taxi companies on the	To accommodate residents and visitor access requirements	TPC	As relevant in the future	All

Action	Why	Who	When	Target: Residents/ Visitors
residents' noticeboards/ information packs				
General Active Travel Promotion				
Incentivise Active Commuters	To motivate residents to make active travel a way of life	TPC	Upon site occupation	Residents
Active Travel benefits information in residents' Sustainable Transport Information Pack and Travel Plan Information Board	Promote active alternatives – increasing the possibilities of reaching the premises	TPC	Upon site occupation	Residents
Encourage residents to compare their route options http:// transportforireland.ie/	Making travel to work faster and easier	TPC	Upon site occupation	Residents

7.9 Monitoring and Update Strategy

It is important to monitor and update the RTP to ensure the actions are being implemented and that actions are sustained over time. It also provides an opportunity for the effectiveness of actions to be assessed, and if required, new actions identified. The following steps are recommended to monitor progress:

- Informed by a resident and visitor travel survey, the RTP should be updated ca. six months from full site occupation; and the Action Plan tailored to meet the specific requirements of its residents and visitors.
- A resident and visitor travel survey should be carried out every two years thereafter, forming the baseline from which the RTP's future performance is measured and additional/ amended interventions identified. This information should be disseminated among residents.
- A quarterly review of the actions carried out or due should be undertaken by the TPC. This should take the form of a memo to the development's management company, documenting actions implemented, residents' feedback etc.

8. Summary and Conclusion

8.1 Summary

Transport Insights has been appointed by FCC to prepare a TTA including a framework Residential Travel Plan (RTP) relation to a Part 10 application at Mooretown, Swords, Co. Dublin.

Existing Site Context

The application site is located to the west of Swords Town Centre, on lands generally bounded by the R125 in the north, residential land to the east and south, and Swords Community College to the west. The application site forms part of lands within the 'Lands at Mooretown' Framework Plan (October 2023). The proposed development, referred to as Phase 2, shall take up the northwestern and southern portions of the site, integrating to the respective fringes of the permitted Phase 1 development. Existing active travel infrastructure in the vicinity of the site provides connections to Swords Town centre as well as retail, recreational and educational amenities. Existing public transport capacity for services in the surrounding area was assessed as part of a PTCA report. The local road network in the vicinity of the site mainly serves residential areas. To the north of the application site, the R125 provides connections towards Swords Town and the Swords Western Distributor Road passes to the west of the site. Existing peak hour traffic conditions on the surrounding road network have been determined via a comprehensive set of traffic surveys at relevant junctions on the local road network.

Proposed Development

The overall proposed development comprises 360 no. residential units and a creche. In summary, 55 no. apartment type units and 305 no. house type units are proposed and including 1, 2, 3 and 4 bed unit types. The proposed development will be accompanied by associated pedestrian, cycle, and car circulation and parking facilities as well as various open space and recreational areas. Vehicular access to the development shall be taken from the Phase 1 Access Road which in turn provides access to the R125 (to the north) and the Swords Western Distributor Road (to the west).

Furthermore, the mobility needs of the development's future residents will also be supported by a comprehensive and tailored package of measures aimed at enabling and promoting use of sustainable transport modes, and facilitating them in living low-car owning and car-free lifestyles – such measures are set out in the RTP.

Development Trip Generation and Distribution Considerations

The proposed development will result in 360 no. new residential units. The potential trip generation of these 360 no. units has been quantified in this report, based on the trip generation approach utilised for the permitted scheme. The proposed development could result in the addition of 39 arrival and 102 departure trips in the AM peak hour and 85 arrivals and 49 departure trips in the PM peak hour.

These trips would be in addition to the trips from the permitted scheme. Distribution and assignment of development trips has been informed by the permitted scheme assumptions.

Traffic Impact Assessment

A traffic impact assessment was undertaken as part of this TTA Report. The assessment considered the AM and PM peak hour period for the future years YoO (2028), YoO+5 (2033) and YoO+15 (2043) under three scenarios, namely, a Do-Nothing (DN), Do-Minimum (DM) and Do-Something (DS). The potential traffic flows from surrounding developments and background growth in traffic flows were considered, depending on the scenario assessed.

The DN scenario assessed potential background growth on the local road network. The DM scenario included the DN scenario flows along with permitted and committed development traffic. The DS scenario considered the DM flows along with the proposed development traffic.

To provide a robust assessment, the future traffic flows in the YoO, YoO+5 and YoO+15 future years do not include any allowance for the potential reduction in traffic demand due to a potential modal shift (as a result of the improved active travel infrastructure). As such, the impact assessment indicates the worse case traffic figures are likely to reduce in future due to travel behaviour change.

8.2 Overall Conclusions

The proposed Mooretown Phase 2 development has been subject to a comprehensive Traffic and Transport Assessment in accordance with guidance contained with TII's *Traffic and Transport Assessment Guidelines* (May 2014). Furthermore, a fRTP has been produced in relation to this development and are included herein.

The assessment of the proposed development's traffic impacts has been consistent with the approach pursued in assessing the traffic impact of the previously permitted Mooretown Phase 1 development. The cumulative impact of the current proposed development, the permitted Phase 1 residential scheme and the committed developments has also been considered. **The assessment has demonstrated that the proposed development will have minimal material impact on the performance of the road network within the site's vicinity, which will continue to operate in a satisfactory manner in all assessment years and time periods analysed.**

Appendix A Transport Scoping Note

Lands at Mooretown, Swords

Transport Briefing Note

Contract Number	C1361 2025
Topic	Traffic and Transport Briefing Note for Phase 2 of a proposed residential development at Mooretown, Swords, Co. Dublin
Version Number	v1.2
Status	Final
Author	Conor O'Brien/ Cillian O'Reilly
Reviewer	Eoin Munn
Date	23 October 2025

1. Introduction

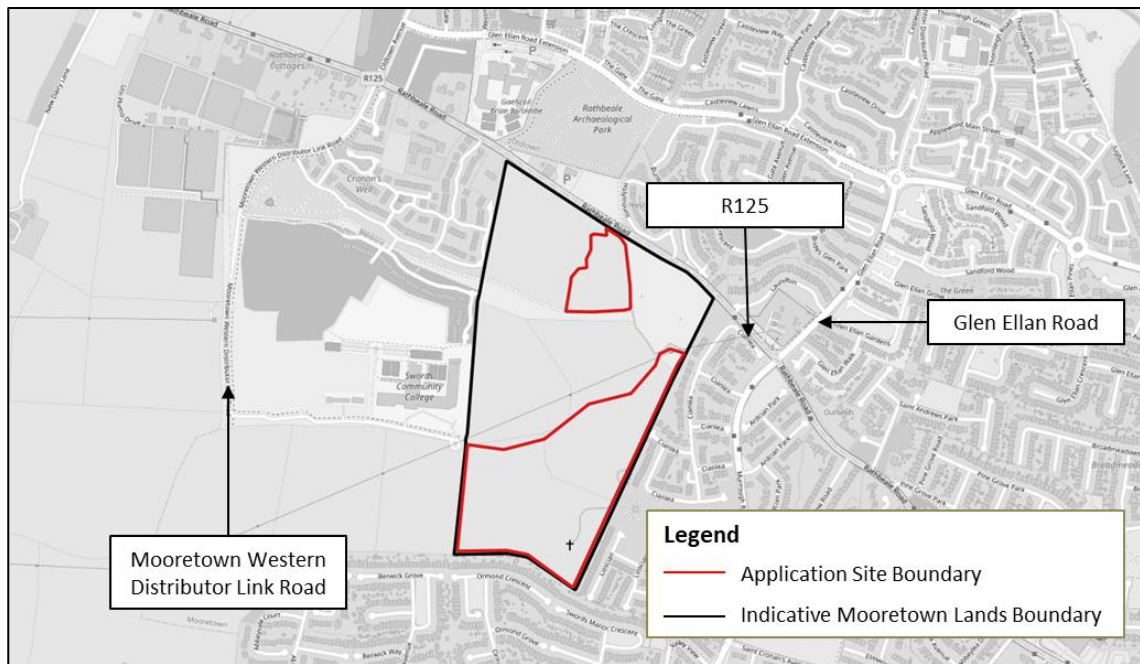
Transport Insights (TI) has been appointed on behalf of Fingal County Council to provide traffic and transport consultancy support in relation to a proposed residential development on lands at Mooretown, Swords, Co. Dublin.

This Briefing Note sets out the scope of transport planning inputs, and the analytical approach underpinning the Traffic and Transport Assessment (TTA) Report which shall support a planning application to An Coimisiún Pleanála (ACP). It forms the basis for discussion with FCC's Transportation Department as part of the Part 10 planning process.

1.1. Site Location

The site is located west of Swords Town Centre, on lands generally bounded by the R125 in the north, residential land to the east and south, and Swords Community College to the west. The site forms part of lands within the 'Lands at Mooretown' Framework Plan (October 2023). The development site is currently greenfield and has been zoned 'RA – Residential Area' in the *Fingal Development Plan 2023-2029*. The current proposed development, referred to as Phase 2, shall take up the northwestern and southern portions of the site, connecting to the respective fringes of the permitted Phase 1 development. The location of the Phase 2 application site with respect to Phase 1 and wider environs is presented in Figure 1.1 (overleaf).

Figure 1.1 Development Site Location



1.2. Planning Context

Adjacent development lands have been the focus of an earlier development proposal, referred to as Phase 1 (FCC Reg. Ref: LADP/002/24). This phase proposed the construction of 274 no. residential units, including houses, apartments, and duplexes, together with associated site development works at Moortown, Swords, Co. Dublin.

2. Development Proposal

2.1. Overview of Proposed Development

The draft proposed development for Phase 2 is to comprise of 360 no. residential units consisting:

- 305 no. houses including 2, 3 and 4-bed houses;
- 49 no. apartments including 1, 2 and 3-bed apartments; and
- 6 no. 2-bed Duplexes.

The residential component will be accompanied by amenity facilities including a crèche (with 160 no. places). The proposed development also includes associated pedestrian, cycle, and car circulation and parking facilities (provided in accordance with appropriate *Development Plan* standards). Figure 2.1 (overleaf) illustrates the current draft proposed site layout.

2.2. Site Access Arrangements

The proposed development shall take access from the R125 to the north and from the Western Distributor Link Road to the west, via Phase 1 road infrastructure. Due to the extent of the site and the current proposed development being distributed between its different locations, two internal accesses shall be provided to link to Phase 1 infrastructure. The Phase 2 proposal shall integrate with Phase 1 and the surrounding permitted residential developments. Figure 2.1 illustrates the draft proposed layout (produced by DG Architects).

Figure 2.1 Proposed Development – Site Layout



With regards to active travel permeability, the current proposed development shall be connected to footpaths and cycle tracks running along all adjacent roads (integrating with Phase 1), including Phase 1 infrastructure, the R125 and Mooretown Western Distributor Link Road.

2.3. Site Layout

The current draft site layout provides an overview of the proposed new vehicular site accesses, routes of the internal streets and footpaths and the general location of the various housing types and associated car parking facilities – details that shall be of primary relevance to transport and traffic related items of the upcoming Part 10 application. The proposed site layout is presented in Figure 2.1, with a to-scale drawing included in the submission package. The internal site layout shall be further developed in accordance with the *Design Manual for Urban Roads and Streets (DMURS)* [DTTAS/ DoECLG, 2019] guidance.

2.4. Likely Development Trip Generation and Traffic Impact

Development trip generation and traffic characteristics will be forecast, with the related analytical outputs forming part of the TTA. The proposed assessment methodology shall accord with guidance included within Traffic and Transport Assessment Guidelines (TTA Guidelines, Transport Infrastructure Ireland (TII), May 2014) and is set out in Section 3 of this Note.

3. Scope of Development Transport Inputs

3.1. Task 1 - Transport Scoping Note and LRD Meeting Request

Scoping with the Transportation Department of FCC shall be undertaken (with this Transport Note issued to FCC) as part of the pre-planning meeting, to confirm the proposed transport assessment scope and approach. Based upon resulting feedback, a brief to the project planning and design team shall be made with regards to the outcome.

3.2. Task 2 - Site Assessment

A comprehensive site assessment shall be undertaken, during which a range of information will be gathered, including the following attributes:

- walking and cycling infrastructure in the vicinity of the site;
- observations on the ongoing developments in the site's vicinity;
- availability and attractiveness of public transport (with existing and proposed bus stop locations informed by desktop research in advance of the site assessment); and
- observations of general traffic behaviour at key junctions (see Task 3) on the road network, including the extent of any queuing at junctions.

3.3. Task 3 - Traffic Survey Data Collection and Processing

It is currently envisaged that traffic surveys shall be required at the following (5 no.) junctions:

- R125 Rathbeale Road/ R108 Naul Road priority-controlled junction;
- R125 Rathbeale Road/ Western Distributor Link Road signal-controlled junction;
- R125 Rathbeale Road/ Holymount/ Site Access junction;
- R125 Rathbeale Road/ Glen Ellan Road/ Murrough Road signal-controlled junction; and
- Glen Ellan Road/ Ashton Distributor Road (Applewood Roundabout) junction.

Surveys would be undertaken on a neutral weekday (over a 12-hour period). Following receipt of data, surveys would be checked and formatted for use in subsequent tasks. Background traffic survey data shall subsequently be expanded, in line with TII's Unit 16.1 – Expansion Factors for Short Period Traffic Counts (2016), thus providing a robust baseline from which the proposed development's traffic impacts can be assessed.

3.4. Task 4 - Preliminary Transport Engineering Design Advice

Preliminary transport engineering advice in relation to proposed traffic and transport aspects of this application shall be provided to the design team. Draft layouts drawings shall be reviewed in accordance with best practice, and advice provided in relation to carriageway widths, junction corner radii, car park aisle widths, parking bay dimensions (including accessible and electric charging), pedestrian circulation routes, and cycle parking locations and specifications. A swept path analysis for the largest vehicles to access the site (i.e. standard refuse truck and fire tender) shall also be undertaken to demonstrate access can be accommodated in accordance with best practice.

3.5. Task 5 - Forecast Growth, Trip Generation and Assignment

Traffic generated by the proposed development during the critical peak periods will be estimated using the unit trip rates used for the Phase 1 development, derived from the TRICS trip generation database. Details of the rates applied will be presented in the TTA Report. With the proposed development being similar in nature to the permitted development, it is deemed that their traffic distribution patterns will generally be similar.

Trip generation related to permitted developments in the vicinity of the proposed development shall be reviewed as part of the TTA assessment. However, it is noted that a number of developments are built and now occupied, and as such, associated trips would be expected to be picked up as part of the traffic surveys (Task 3).

3.6. Task 6 - Impact Assessment

The proposed development's traffic impacts shall be assessed with respect to its traffic generation outputs and revised baseline traffic data emerging from the preceding Task 3 (factored as needed to reflect the development's current assumed year of opening, year of opening + 5 years, and year of opening + 15 years). The development's impact on the junctions set out within Task 3 shall be considered.

It is intended that a two-staged approach to the traffic impact assessment will be pursued, with percentage increase in junction traffic volumes due to proposed development being assessed initially, taking into consideration FCC's 2.5% traffic impact threshold. Impacts exceeding this threshold shall be subject to junction traffic modelling in accordance with best practice guidance.

3.7. Task 7 – Traffic and Transport Assessment Report

The outputs of the above tasks shall be summarised within a TTA Report and shall set out the proposed development's transport characteristics including existing transport infrastructure in its vicinity in addition to the potential impact of development related traffic on the surrounding local road network.

3.8. Task 8 – Framework Residential Travel Plan

To ensure the mobility requirements of the residents of the proposed development are addressed in a sustainable manner, without adversely impacting on the adjacent road network and local amenities, a framework Residential Travel Plan (RTP) shall be produced. To this end, both the developments' forecast mobility characteristics and the local land use and transport context shall be assessed to inform the setting of mode share targets for the development. An associated Action Plan provides a tailored set of measures developed to support the achievement of these targets.

4. Summary

This Transport Briefing Note summarises the scope of transport related inputs and related reporting proposed to accompany a planning application for a proposed residential development on lands at Mooretown, Swords, Co. Dublin and is issued for comment.

Appendix B Public Transport Capacity Study

Mooretown Phase 2 Development – PT Capacity Study

Contract Number	C1361.1
Topic	Mooretown Phase 2 – Public Transport Capacity Study
Version Number	v1.3
Status	Final
Author(s)	Conor O'Brien
Reviewer	Eoin Munn
Date	27 April 2026

1. Introduction

1.1. Overview

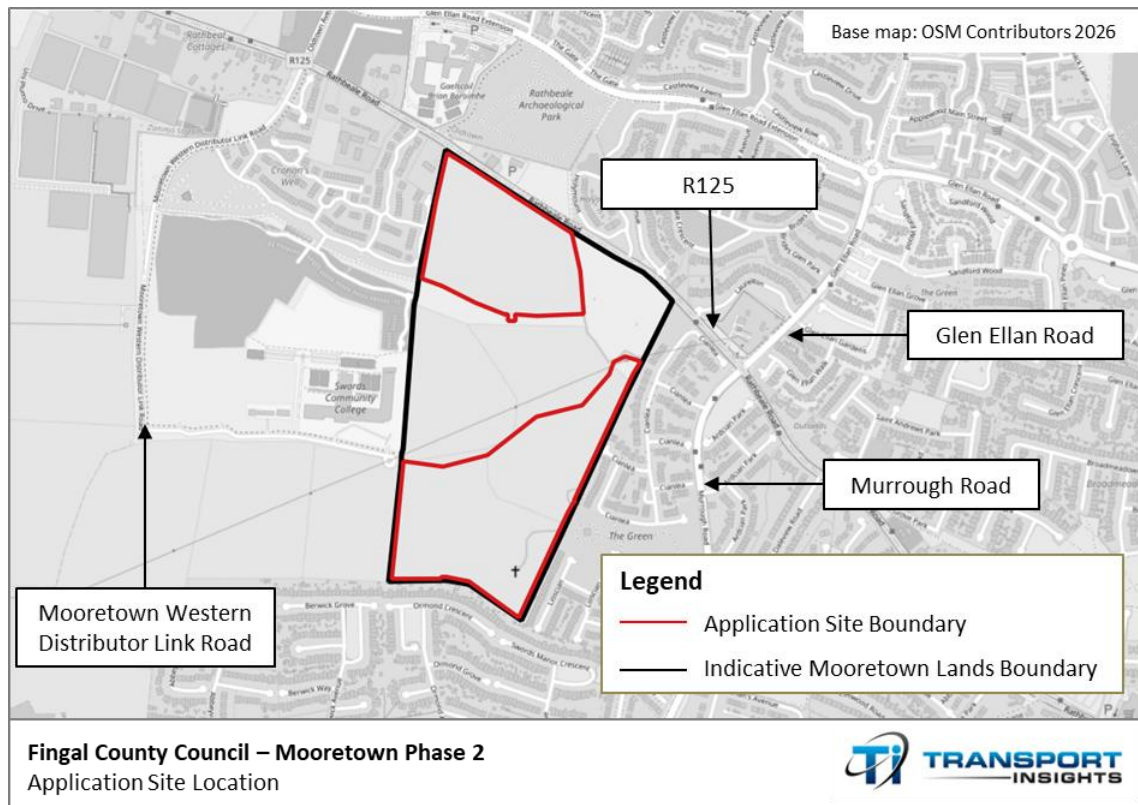
Transport Insights has been appointed by Fingal County Council to undertake a public transport (PT) capacity study in relation to a proposed residential development on lands at Mooretown, Swords, Co. Dublin (hereafter referred to as the application site).

Information outlined within this Note has been informed by the following documents by Transport Insights, including specifically the Traffic and Transport Assessment (TTA).

1.2. Proposed Development Location and Overview

Site Location

The application site is located to the west of Swords, as presented in the following Figure 1.1 (overleaf). The site is bounded by the R125 in the north, residential land to the east and south, and Swords Community College to the west. The site forms part of the 'Lands at Mooretown' Framework Plan (October 2023). The proposed development, referred to as Phase 2, shall take up the northwestern and southern portions of the site, integrating to the respective fringes of the permitted Phase 1 development.

Figure 1.1 Site Location

Proposed Development Overview

The proposed development for Phase 2 is to comprise of 360 no. residential units consisting of:

- 305 no. houses including 2, 3 and 4-bed houses;
- 35 no. apartments including 1, 2 and 3-bed apartments; and
- 20 no. 2-bed Duplexes.

The residential component will be accompanied by amenity facilities including a crèche. The proposed development includes associated pedestrian, cycle, and car circulation and parking facilities. The proposed development's year of opening is assumed to be 2028.

Report Structure

The remainder of this Report is structured as follows:

- Section 2 provides an overview of public transport available in the area;
- **Section 3** describes the survey methodology and presents the survey results;
- **Section 4** provides details of the trip generation and demand assessment and findings; and
- **Section 5** provides a summary of the PTCA report.

2. Public Transport Provision

2.1. Existing Public Transport Provision

The application site is directly served by a number of bus routes operating within its vicinity, namely the 41, 41B, 41C, 41X, 192, 196, 197, 500, 501, 503, 506 and 507 services. The following Table 2.1. sets out the peak and off-peak frequencies of currently available public bus services.

Table 2.1 Current Public Transport Services in Application Site's Vicinity¹

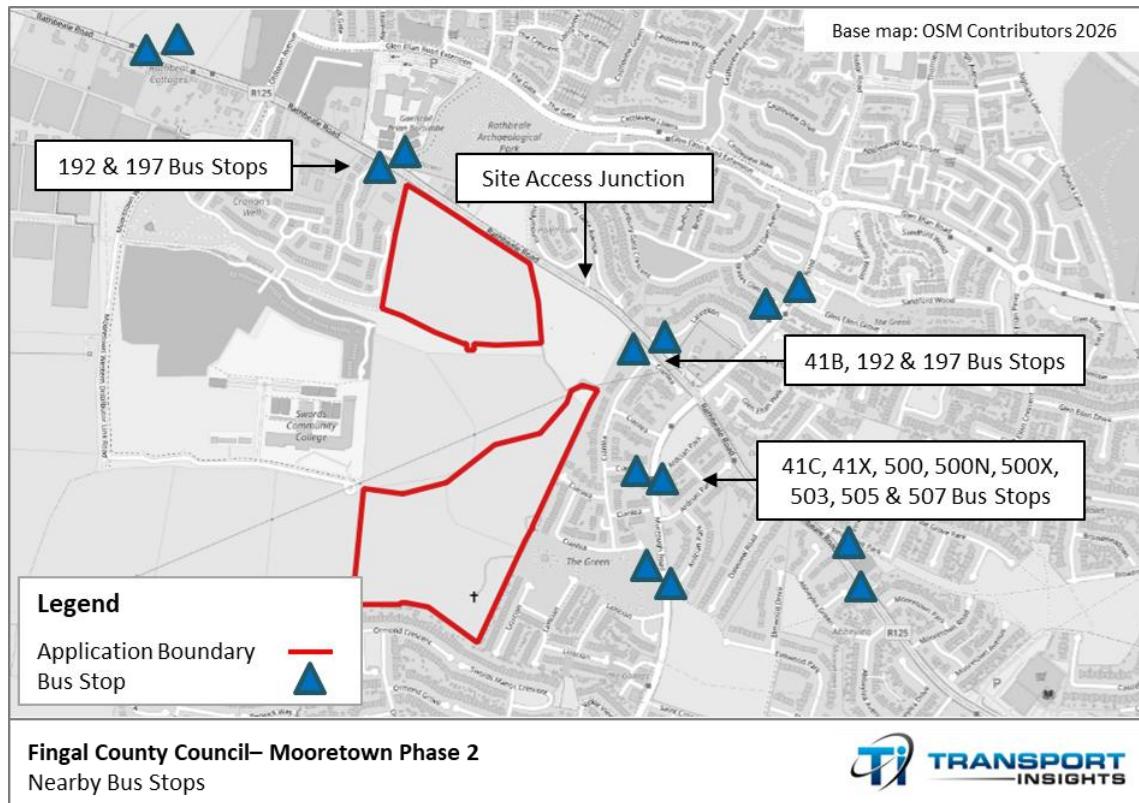
Route No.	Route	Average Weekday Off-Peak Frequency	Average Weekday Peak Frequency
41	Swords Manor - Lower Abbey Street	20 Minutes	15 Minutes
41B	Rolestown - Lower Abbey Street	4 Hours	4 Hours
41C	Swords Manor Via River Valley - Lower Abbey St	20 Minutes	20 Minutes
41X*	Swords - UCD Belfield	Peak Service Only	10 Minutes
192	Swords - Balbriggan	2 Hours	2 Hours
196	Knocksedan - Swords	1 Hour	1 Hour
197	Airside Ind. Estate - Ashbourne Retail Pk	1 Hour	1 Hour
500	Swords - Dublin City	30 Minutes	20 Minutes
500X	Swords - Dublin City	Peak Service Only	20 Minutes
501*	Swords - Dublin City	Peak Service Only	1 Service Only
503*	Swords - Dublin City	Peak Service Only	20 Minutes
506*	Dublin City - Swords	Peak Service Only	2 Hours
507*	Swords - Dublin City	Peak Service Only	1.5 Hours

*Peak period services only

¹ Source: <https://www.swordsexpress.com/timetable/> & <https://www.dublinbus.ie/timetables> & <https://bustimes.org/>

There are a number of bus services in the application sites vicinity. The 41B, 192 and 197 route via the R125, ca. 140 metres southeast to the site access junction. As shown in the Figure 2.1 below, the closest bus stop is located ca. 140 metres southeast of the R125 access point. On Murrough Road there are a number of additional bus routes available, namely the 41C, 41X, 500, 500N, 500X, 503, 506 and the 507, all of which provide access into Dublin City and include express services.

Figure 2.1 Public Transport Stop Locations in Vicinity of Application Site



Considering local bus service provision, they offer the application site a cumulative peak frequency² of one vehicle every ca. 2.2 minutes.

2.2. Proposed Public Transport

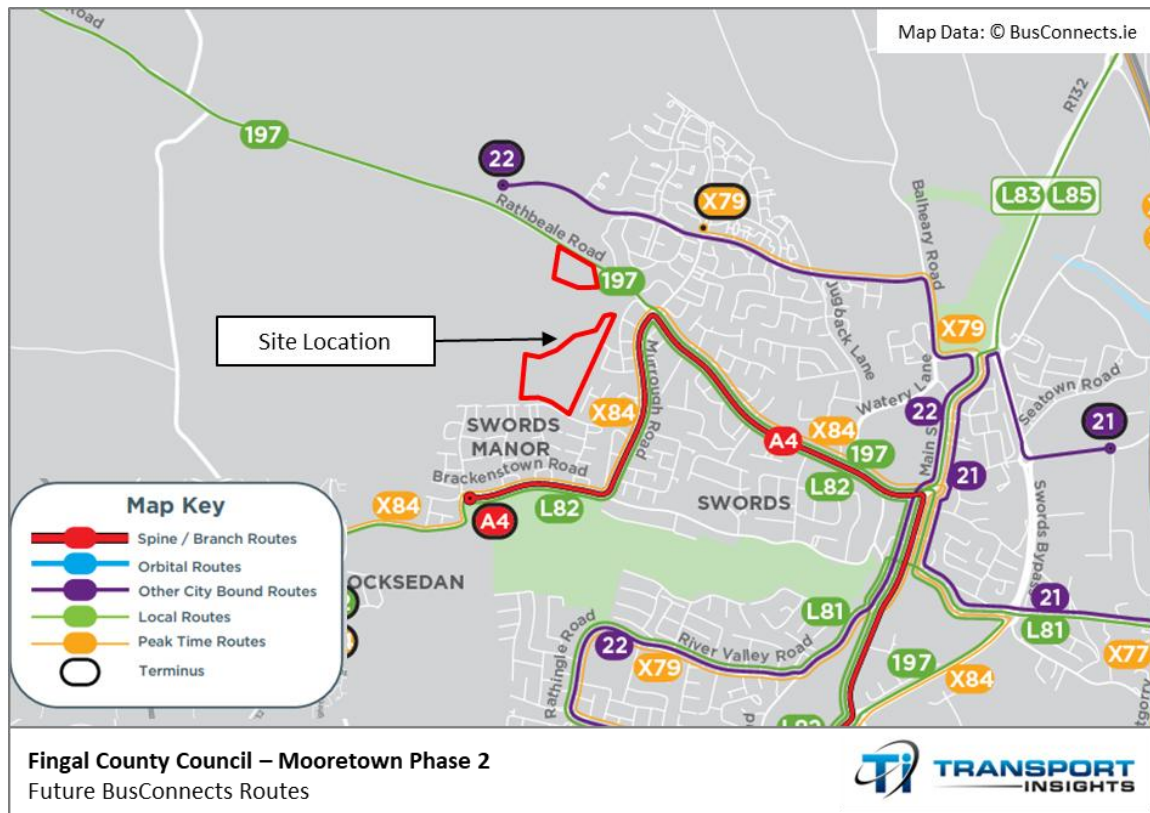
New Dublin Area Bus Network

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 after considerable public consultation. The revised network includes substantial

² Cumulative peak frequency is calculated based on total no. of scheduled vehicles in the weekday peak hour based on information set out in Table 2.1.

changes 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



The revised network includes the L82 service which will travel from Knocksedan to Beaumont Hospital and X84 will travel from Knocksedan to UCD. The A4 will travel from Swords to Dundrum. These services will all route along Murrough Road which is in close proximity to the site. The NTA expects to launch the A-spine routes in Autumn 2026.

Details of the proposed routes are presented within Table 2.2.

Table 2.2 Proposed Public Transport Services in Application Site's Vicinity³

Route No.	Route	Average Weekday Off-Peak Frequency	Average Weekday Peak Frequency
A4	Swords - City Centre -Nutgrove - Dundrum	15 Minutes	12 Minutes
22	Glen Ellan Rd - River Valley - City Centre	15 Minutes	15 Minutes

³ Source: <https://busconnects.ie/wp-content/uploads/2025/11/A3-Frequency-Table-21.11.25.pdf>

Route No.	Route	Average Weekday Off-Peak Frequency	Average Weekday Peak Frequency
L82	Knocksedan - Swords - Clonshaugh - Beaumont Hospital	1 Hour	1 Hour
X79	Glen Ellan Rd - River Valley - City Centre - UCD	Peak Service Only	12 Minutes
X84	Knocksedan - Swords Manor - City Centre - UCD	Peak Service Only	20 Minutes
192	Swords - Balbriggan	2 Hours	2 Hours
196	Knocksedan - Swords	1 Hour	1 Hour
197	Airside Ind. Estate - Ashbourne Retail Pk	1 Hour	1 Hour
500	Swords - Dublin City	30 Minutes	20 Minutes
500X	Swords - Dublin City	Peak Service Only	20 Minutes
501	Swords - Dublin City	Peak Service Only	1 Service Only
503	Swords - Dublin City	Peak Service Only	20 Minutes
506	Dublin City - Swords	Peak Service Only	2 Hours
507	Swords - Dublin City	Peak Service Only	1.5 Hours

Together, the planned public transport routes set out in the preceding table offer a cumulative peak frequency⁴ of one vehicle every 1.9 minutes, thereby representing a comparable level of frequency and capacity relative to the existing local public transport service offer. It should be noted that the BusConnects network redesign is being delivered on a phased basis with routes 197 service, as per Section 2.1 of this Note, having been operational since November 2019. Timelines for the delivery of all future phases of the network redesign is somewhat unclear, however the A spine is set to launch in Autumn 2026. It should be noted that the proposed site

⁴ Cumulative peak frequency is calculated based on total no. of scheduled vehicles in the weekday peak hour based on information set out in Table 2.2.

layout includes a bus terminus along the Mooretown Phase 1 road that can provide access to future bus services within the site.

3. Public Transport Survey Data Collection and Analysis

3.1. Survey Overview

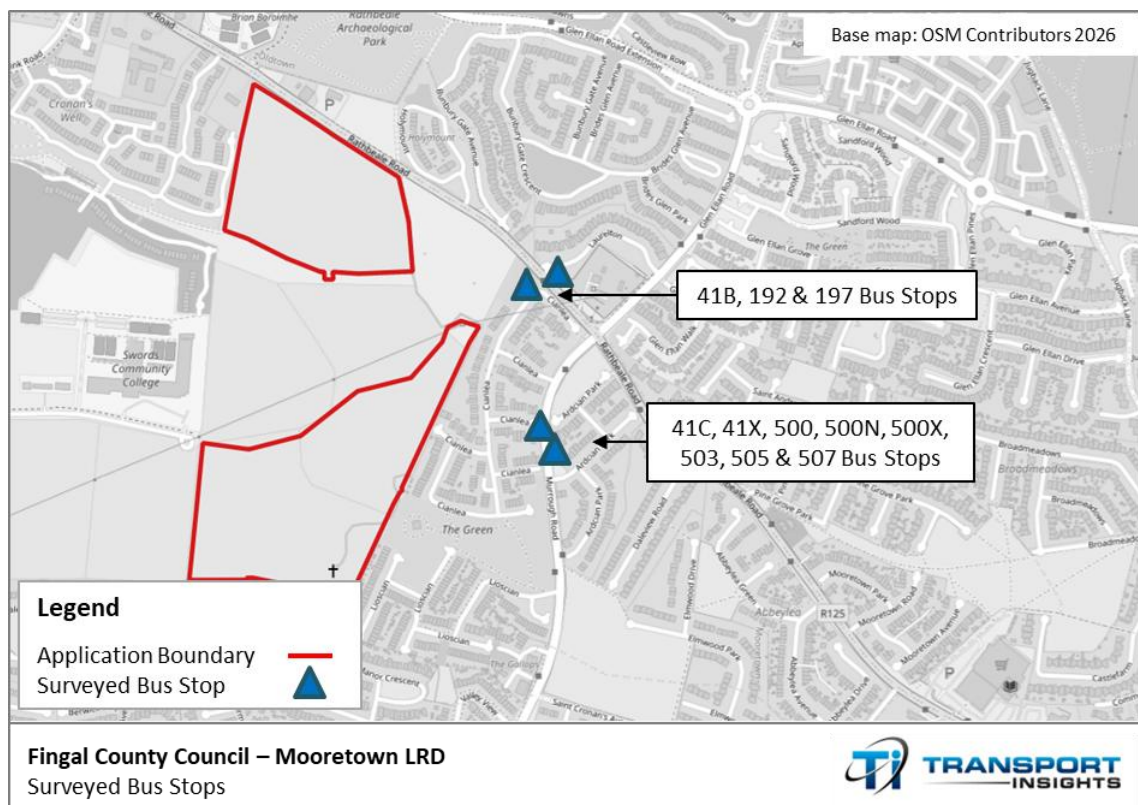
Survey Locations

In order to determine baseline public transport capacity, public transport occupancy surveys were undertaken at 4 no. bus stops within the application site's immediate vicinity. The bus stops are located on the R125 and Murrough Road, both to the east of the application site.

- Bus stop no. 7133, R125, Co. Dublin – buses heading northbound;
- Bus stop no. 10381, R125, Co. Dublin – buses heading southbound;
- Bus stop no. 4909, Murrough Road, Co. Dublin – buses heading northbound; and
- Bus stop no. 4911, Murrough Road, Co. Dublin – buses heading southbound.

Figure 3.1 illustrates the location of the surveyed bus stops outlined above.

Figure 3.1 Surveyed Bus Stop Locations



Survey Dates and Times

The bus occupancy survey was undertaken on Tuesday 20 January 2026. 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. The survey was undertaken during the AM peak period (07:30-09:30hrs) and PM peak period (16:30-18:30hrs).

The survey sought to collect the following information:

- time of each bus;
- bus service number;
- estimated capacity (seating and standing); and
- bus occupancy count estimate (total passengers seating and standing).

Survey Methodology

The survey was guided by the National Transport Authority survey specification, with the Bus Occupancy Surveys (BO) / Boarding & Alighting Surveys (B&A) presented in Appendix A. Data relevant to the specific characteristics of the study was captured, namely estimated no. of occupants on arrival, no. of alighting bus passengers, no. of boarding bus passengers, and estimated no. of occupants on departure.

Excess capacity available within each bus has been calculated by subtracting the estimated no. of occupants on departure from the total bus capacity⁵.

3.2. Survey Results: Bus Services

Bus Occupancy Survey Results: AM Peak

Summary outputs of the survey are presented in Table 3.1 (overleaf) and Table 3.2 which follow, for the AM and PM peak period respectively. The full set of records has been attached hereto as Appendix B. For increased legibility, records from all stops surveyed have been collated, with bus routes grouped by direction (towards Dublin, terminating in Swords, and other directions). School buses and other bus/ coach services not open to the public have been omitted.

⁵ Double-decker buses with a capacity of 86 no. passengers. Single-decker buses with a capacity of 45 no. passengers.

Table 3.1 Survey Results – AM Period (07:30-09:30hrs)

Dir.	Line No.	Destination	No. Buses	Total Capacity (No. Spaces)	On Arrival			On Departure		
					Average Occupancy (No. Pax)	Average Excess Capacity (No. Spaces)	Total Excess Capacity (No. Spaces)	Average Occupancy (No. Pax)	Average Excess Capacity (No. Spaces)	Total Excess Capacity (No. Spaces)
To Dublin	41	Abbey Street	6	516	32	54	327	35	51	305
	41B	Abbey Street	1	86	20	66	66	22	64	64
	41C	Abbey Street	4	344	6	80	321	7	79	316
	41X	Abbey Street	2	172	39	47	95	42	44	88
	500	Dublin	6	270	2	43	255	4	41	246
	500X	Dublin	2	90	23	23	45	26	19	38
	503	Dublin	1	45	0	45	45	1	44	44
	507	Dublin	1	45	2	43	43	3	42	42
	All	-	23	1568			1196			1511
To Swords	41	Swords Manor	4	344	2	84	335	2	84	336
	41C	Swords Manor	4	344	3	83	331	3	83	331
	500	Ormond Avenue	8	360	2	43	344	0	45	90
	All	-	10		5		757			778
Other	192	Swords	1	45	7	38	38	6	39	39
	196	Knocksedan	2	90	1	44	88	1	44	88
	197	Airside	2	90	14	32	63	14	32	63
	192	Balbriggan	2	90	14	32	63	14	32	63
	196	Swords	1	45	0	45	45	0	45	45
	197	Ashbourne	2	90	14	32	63	15	31	61
	All	-	10	450			359			358

As can be seen in the preceding table, the site is well served by buses during the AM peak, with 23 buses to Dublin, 10 buses from Dublin to Swords, and 5 buses to/from other destinations recorded. Dublin-bound services travel to the City Centre. The survey results are generally consistent with the timetable-based desktop study findings presented earlier within this section of the report.

Spare capacity exists on all services and in all directions, with the 500X being the only service that is somewhat constrained capacity with on average excess capacity of 19 no. spaces. On all other

services, average spare capacity on board exceeds 40 no. unoccupied spaces, with Dublin-bound services (deemed to serve the peak demand direction in the weekday morning period) offering an average of at 48 no. spaces on each vehicle. In light of the expected scale of bus travel demand generated by the proposed development, the available spare capacity is substantially more than sufficient to accommodate that demand.

Bus Occupancy Survey Results: PM Peak

Within the following Table 3.2, the survey results for the PM peak period (16:30-18:30hrs) at bus.

Table 3.2 Survey Results – PM Period (16:30-18:30hrs)

Dir.	Line No.	Destination	No. Buses	Total Capacity (No. Spaces)	On Arrival			On Departure		
					Average Occupancy (No. Pax)	Average Excess Capacity (No. Spaces)	Total Excess Capacity (No. Spaces)	Average Occupancy (No. Pax)	Average Excess Capacity (No. Spaces)	Total Excess Capacity (No. Spaces)
To Dublin	41	Abbey Street	6	516	2	84	504	5	81	488
	41B	Abbey Street	1	86	3	83	83	3	83	83
	41C	Abbey Street	4	344	3	83	333	6	80	321
	500	Dublin	6	270	0	45	269	1	44	267
	All	-	17	1216			1188			1158
To Swords	41	Swords Manor	3	258	6	80	241	5	81	242
	41C	Swords Manor	5	430	5	81	404	5	81	404
	500	Ormond Avenue	8	360	2	43	344	2	43	348
	500X	Ormond Avenue	2	90	2	43	86	1	44	88
	All	-	18	1138			1074			1081
Other	192	Swords	1	45	7	38	38	7	38	38
	196	Knocksedan	2	90	6	39	79	6	39	79
	197	Airside	2	90	9	37	73	9	37	73
	192	Balbriggan	1	45	13	32	32	13	32	32
	196	Swords	1	45	2	43	43	2	43	43
	197	Ashbourne	2	90	14	32	63	14	32	63
	All	-	9	405			328			328

As can be seen in the preceding table, the number of buses serving the site in the PM peak is similar to the AM peak, with 1 no. less bus surveyed. This includes 17 no. buses to Dublin, 18 no.

buses from Dublin to Swords, and 9 no. buses from buses to/from other destinations recorded. Dublin-bound services travel to the City Centre. The survey results are generally consistent with the timetable-based desktop study findings presented earlier within this section of the report.

Spare capacity exists on all services and in all directions, with average spare capacity on board exceeding 54 no. unoccupied spaces, with Swords-bound services (deemed to serve the peak demand direction in the weekday evening period) offering an average of at least 28 no. spaces on each vehicle. In light of the expected scale of bus travel demand generated by the proposed development, the available spare capacity is more than sufficient to accommodate that demand.

3.3. Existing Peak Hour Public Transport Service Capacity

The AM and PM standard network peak hours of 08:00-08:59hrs and 17:00-17:59hrs were selected for a more detailed analysis.

Bus Services

Table 3.3 which follows details the observed AM and PM surveyed peak hour frequencies of the bus routes operating from the surveyed bus stops, along with the capacity (passengers per hour per direction [pphpd]) of these bus services.

Table 3.3 Existing AM and PM Peak Hour Bus Service Capacity

	AM Peak Hour (08:00-08:59hrs)	PM Peak Hour (17:00-18:00hrs)
To Swords		
No. Services	7	15
Capacity (pphpd)	479	921
Excess Capacity	459	876
Excess Capacity %	96%	95%
From Swords		
No. Services	13	12
Capacity (pphpd)	749	786
Excess Capacity	486	714
Excess Capacity %	65%	96%

As shown in the preceding table, based on the capacity of buses operating in the site's vicinity, bus service capacity in the buses traveling from Swords has been estimated as 749 pphpd in the AM peak hour and 786 pphpd in the PM peak hour. Similarly, for buses traveling to Swords, bus

service capacity has been estimated as 479 pphpd and 921 pphpd in AM and PM peak hours respectively. As such, the bus services are considered to have spare capacity.

4. Public Transport Demand

4.1. Proposed Development Modal Splits

To establish performance indicators for the RTP, modal split targets for the proposed development have been set. The modal split targets have been set based on the site's accessibility characteristics. The modal split characteristics of Electoral District Swords-Glasmore has been used. This area has been deemed to represent an appropriate baseline for establishing modal split targets for the proposed development. The following Table 4.1 presents the identified modal split of this area (i.e. the baseline), alongside the mode share targets for the proposed development.

Table 4.1 Baseline and Proposed Modal Split Targets

Mode	Walking	Cycling	Public Transport	Motorcycle / Scooter	Car (Driver)	Car (Passenger)	Other*
Baseline	15%	2%	19%	0%	37%	13%	14%
Target	16%	7%	25%	0%	30%	8%	14%

4.2. Proposed Development Public Transport Demand

In support of the Mooretown Phase 1 residential development application, "Total Vehicle" Trip rate data had been extracted from the industry standard TRICS database for the land use. To ensure integrity, public transport trip generation rates have been calculated on a pro-rata basis, accounting for the targeted difference between the mode shares of driving and public transport. The application of TRICS trip rates in combination with development-specific modal splits results in a robust assessment of forecast public transport demand. This analysis is based on the modal splits set out in Table 4.1, and the PT capacities determined in the preceding Section 3. Table 4.2 (overleaf) is based on network peak hours of 08:00-09:00hrs and 16:00-17:00hrs.

Table 4.2 Peak Hour PT Demand

Time Period		TRICS Vehicle Trip Rate per Dwelling	% Car Driver	% Public Transport	Calculated PT Passenger Trip Rate per Dwelling	No. Units	Additional Number of PT Trips
AM Peak	AM Arrival	0.107	30%	25%	0.357	360	32
	AM Departure	0.284			0.947		85
PM Peak	PM Arrival	0.237			0.790		71
	PM Departure	0.136			0.453		41

As demonstrated within the preceding Table 4.2, the AM peak hour departure trips (85 trips) to the proposed development and PM peak hour arrival trips (71 trips) from the proposed development represent the peak demand as regards the PT capacity assessment.

Within the following Table 4.3, estimated peak hour PT trips are detailed. It should also be noted that it has been assumed that 80% of PT 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 users boarding buses in the direction of peak demand, where more limited excess capacity exists across the overall PT network compared to the opposing direction.

Table 4.3 Peak Hour PT Directional Demand

Time Period	Total No. Peak Hour PT Trips To/ From Development in Direction of Peak Demand	No. of Peak Hour PT Trips in Direction of Peak Demand To/ From Development (80%)
AM Peak	85	68
PM Peak	71	57

4.3. Impact of Proposed Development on Existing Services

Table 4.4 (overleaf), the number of PT 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 PT capacity in the AM and PM peak hours has also been estimated.

Table 4.4 Existing PT Service Capacity – Peak Demand Direction

AM Peak Hour PT Trips Depart in Direction of Peak Demand	Northbound Bus Services 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	Southbound Bus Peak Hour PT Service Capacity (pphpd)	% New PT Users/ PM Peak Hour Capacity
68	749	9.10%	57	921	6.18%

As set out in Table 4.4 above, 68 no. and 57 no. trips are expected to be undertaken by PT in the direction of peak demand between 08:00-09:00hrs and 17:00-18:00hrs respectively. Assuming all this demand was accommodated on services operating from the nearby stops, this would represent ca. 9.1% and 6.2% of total bus service capacity in AM and PM peak hours respectively.

In Section 3.2 of this Note, it was determined that excess bus capacity in the direction of peak travel, i.e. from Swords in the AM peak hour and to Swords in the PM peak hour is ca. 65% and 95% respectively. As such, it is apparent that current PT capacity within the vicinity of the application site is sufficient to accommodate the additional demand generated by the proposed development.

It is noted further changes to the bus network within the application site's vicinity are planned, with analysis of planned service timetables indicating they will offer the site comparable frequency and capacity relative to the existing local PT service offer.

5. Summary and Conclusion

5.1. Summary

Transport Insights has been appointed by Fingal County Council to undertake a public transport (PT) capacity study in relation to a proposed residential development on lands at Mooretown, Swords, Co. Dublin. The study has been informed by a comprehensive bus occupancy survey, and review of a range of planning stage documents.

5.2. Conclusion

Based on the findings of the bus occupancy survey and analysis contained within this Note, it was found that the proposed development would utilise ca. 9.1% and 6.2% of the total capacity of existing locally operating AM and PM peak hour public transport services respectively.

Furthermore, it has been determined that local public transport services have ample capacity to accommodate such demand. As such, it is apparent that current public transport capacity is sufficient to accommodate the small additional passenger demand generated by the proposed development.

Appendix A: Bus Occupancy Survey (National Transport Authority Survey Specification)

Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	10381
Date:	20/01/2026	Direction:	South
Survey Hours:	07:30-09:30	Survey Sheet no.:	1

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	192	Swords	07:30	SDB	45	PSV	16%	0	1	0	☐
2	197	Airside	07:31	SDB	45	PSV	27%	0	0	0	☒
3	41B	Abbey Street	07:41	DDB	86	PSV	23%	2	0	0	☐
4	197	Airside	08:29	SDB	45	PSV	33%	0	0	0	☒
5	197	Airsdie	09:15	SDB	45	PSV	4%	0	0	0	☒
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20											
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23											
24											
25											

Bus Types: MB Mini Bus SDB Single Deck Bus DDB Double Deck Bus MC Midi Coach SDC Single Deck Coach DDC Double Deck Coach	Service Types: PSV Public Service Vehicle Priv Private SB School Bus Other	Occupancy Scale: 0% (empty) 25% (small number of people on board) 50% (bus is half full) 75% (all seats filled) 100% (all seats filled and standing space occupied)
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Comments

Transport Insights - PT Capacity Survey Sheet

Project ID:

C1361.1

Date:

20/01/2026

Survey Hours:

07:30-09:30

Bus Stop No.:

7133

Direction:

North

Survey Sheet no.:

1

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	192	Balbriggan	07:58	SDB	45	PSV	16%	0	0	0	☒
2	197	Ashbourne	08:14	SDB	45	PSV	27%	2	0	0	☐
3	192	Balbriggan	08:37	SDB	45	PSV	44%	0	0	0	☒
4	197	Ashbourne	09:27	SDB	45	PSV	33%	0	0	0	☒
5											
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8											
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10											
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21											
22											
23											
24											
25											

Bus Types:
MB Mini Bus
SDB Single Deck Bus
DDB Double Deck Bus
MC Midi Coach
SDC Single Deck Coach
DDC Double Deck Coach

Service Types:
PSV Public Service Vehicle
Priv Private
SB School Bus
Other

Occupancy Scale:
0% (empty)
25% (small number of people on board)
50% (bus is half full)
75% (all seats filled)
100% (all seats filled and standing space occupied)

Comments

Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	10381
Date:	20/01/2026	Direction:	South
Survey Hours:	16:30-18:30	Survey Sheet no.:	2

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	197	Airside	16:41	SDB	45	PSV	24%	1	1	0	☐
2	192	Swords	16:53	SDB	45	PSV	16%	0	0	0	☒
3	197	Airside	18:00	SDB	45	PSV	13%	0	0	0	☒
4	41B	Abbey Street	18:10	DDB	86	PSV	3%	0	0	0	☒
5	192	Swords	18:20	SDB	45	PSV	11%	0	1	0	☐
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22											
23											
24											
25											

Bus Types: MB Mini Bus SDB Single Deck Bus DDB Double Deck Bus MC Midi Coach SDC Single Deck Coach DDC Double Deck Coach	Service Types: PSV Public Service Vehicle Priv Private SB School Bus Other	Occupancy Scale: 0% (empty) 25% (small number of people on board) 50% (bus is half full) 75% (all seats filled) 100% (all seats filled and standing space occupied)
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Comments

Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	7133
Date:	20/01/2026	Direction:	North
Survey Hours:	16:30-18:30	Survey Sheet no.:	2

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	197	Ashbourne	16:35	SDB	45	PSV	40%	0	0	0	☒
2	41B	Rolestown	17:43	DDB	86	PSV	29%	2	0	0	☒
3	192	Balbriggan	17:50	SDB	45	PSV	29%	0	0	0	☒
4	197	Ashbourne	17:52	SDB	45	PSV	20%	0	0	0	☒
5											
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23											
24											
25											

Bus Types: MB Mini Bus SDB Single Deck Bus DDB Double Deck Bus MC Midi Coach SDC Single Deck Coach DDC Double Deck Coach	Service Types: PSV Public Service Vehicle Priv Private SB School Bus Other	Occupancy Scale: 0% (empty) 25% (small number of people on board) 50% (bus is half full) 75% (all seats filled) 100% (all seats filled and standing space occupied)
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Comments

Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	4911
Date:	20/01/2026	Direction:	South
Survey Hours:	07:30-09:30	Survey Sheet no.:	1

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	196	Knocksedan	07:37	SDB	45	PSV	5%	0	0	0	☒
2	500	Ormand Avenue	07:47	SDB	45	PSV	0%	0	0	0	☒
3	41C	Swords Manor	07:59	DDB	86	PSV	10%	0	0	0	☒
4	41	Swords Manor	08:22	DDB	86	PSV	0%	0	0	0	☒
5	500	Ormand Avenue	08:24	SDB	45	PSV	0%	0	0	0	☒
6	41C	Swords Manor	08:27	DDB	86	PSV	5%	0	0	0	☒
7	41C	Swords Manor	08:31	DDB	86	PSV	0%	0	0	0	☒
8	196	Knocksedan	08:34	SDB	45	PSV	0%	0	0	0	☒
9	41	Swords Manor	08:50	DDB	86	PSV	0%	0	0	0	☒
10	41	Swords Manor	09:08	DDB	86	PSV	10%	0	1	0	
11	41	Swords Manor	09:17	DDB	86	PSV	0%	0	0	0	☒
12	41C	Swords Manor	09:22	DDB	86	PSV	0%	0	0	0	☒
13											
14											
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19											
20											
21											
22											
23											
24											
25											

Bus Types:

MB Mini Bus
SDB Single Deck Bus
DDB Double Deck Bus
MC Midi Coach
SDC Single Deck Coach
DDC Double Deck Coach

Service Types:

PSV Public Service Vehicle
Priv Private
SB School Bus
Other

Occupancy Scale:

0% (empty)
25% (small number of people on board)
50% (bus is half full)
75% (all seats filled)
100% (all seats filled and standing space occupied)

Comments

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Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	4869
Date:	20/01/2026	Direction:	North
Survey Hours:	07:30-09:30	Survey Sheet no.:	3

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	41C	Abbey Street	07:42	DDB	86	PSV	10%	0	0	0	☒
2	500	Dublin	07:44	SDB	45	PSV	0%	0	0	0	☒
3	507	Dublin	07:45	SDB	45	PSV	5%	1	0	3	☐
4	41C	Abbey Street	07:47	DDB	86	PSV	2%	3	0	4	☐
5	41X	Abbey Street	07:49	DDB	86	PSV	70%	6	0	3	☐
6	41	Abbey Street	07:50	DDB	86	PSV	40%	3	0	2	☐
7	503	Dublin	07:51	SDB	45	PSV	0%	1	0	1	☐
8	41X	Abbey Street	07:52	DDB	86	PSV	20%	1	0	0	☐
9	41C	Abbey Street	07:59	DDB	86	PSV	5%	2	0	3	☐
10	196	Swords	08:00	SDB	45	PSV	1%	0	0	6	☒
11	500X	Dublin	08:03	SDB	45	PSV	80%	6	0	1	☐
12	500X	Dublin	08:04	SDB	45	PSV	20%	1	0	2	☐
13	500	Dublin	08:10	SDB	45	PSV	1%	2	0	2	☐
14	41	Abbey Street	08:15	DDB	86	PSV	80%	4	0	0	☐
15	500	Dublin	08:31	SDB	45	PSV	20%	1	0	6	☐
16	500	Dublin	08:36	SDB	45	PSV	2%	5	0	7	☐
17	41	Abbey Street	08:39	DDB	86	PSV	20%	12	0	0	☐
18	41C	Abbey Street	08:46	DDB	86	PSV	10%	0	0	0	☒
19	500	Dublin	08:50	SDB	45	PSV	0%	0	0	0	☒
20	41	Abbey Street	08:55	DDB	86	PSV	20%	2	0	0	☐
21	500	Dublin	09:09	SDB	45	PSV	10%	1	0	1	☐
22	41	Abbey Street	09:17	DDB	86	PSV	30%	1	0	0	☐
23	41	Abbey Street	09:24	DDB	86	PSV	30%	0	0	0	☒
24	Swords Coaches		09:24	SDC	45	Private	1%	0	1	0	☐
25											

Bus Types:

MB Mini Bus
SDB Single Deck Bus
DDB Double Deck Bus
MC Midi Coach
SDC Single Deck Coach
DDC Double Deck Coach

Service Types:

PSV Public Service Vehicle
Priv Private
SB School Bus
Other

Occupancy Scale:

0% (empty)
25% (small number of people on board)
50% (bus is half full)
75% (all seats filled)
100% (all seats filled and standing space occupied)

Comments

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Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	4911
Date:	20/01/2026	Direction:	South
Survey Hours:	16:30-18:30	Survey Sheet no.:	4

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	41C	Swords Manor	16:39	DDB	86	PSV	5%	0	0	0	☒
2	196	Knocksedan	16:45	SDB	45	PSV	5%	0	0	0	☒
3	41	Swords Manor	16:52	DDB	86	PSV	10%	0	1	0	☐
4	500	Ormond Avenue	16:56	SDB	45	PSV	5%	0	0	0	☒
5	41C	Swords Manor	17:00	DDB	86	PSV	5%	0	0	0	☒
6	500	Ormond Avenue	17:05	SDB	45	PSV	Covered Windows	0	0	0	☒
7	500	Ormond Avenue	17:17	SDB	45	PSV	5%	0	0	0	☒
8	41	Swords Manor	17:17	DDB	86	PSV	5%	0	0	0	☒
9	500	Ormond Avenue	17:21	SDB	45	PSV	5%	0	0	0	☒
10	500	Ormond Avenue	17:22	SDB	45	PSV	10%	0	1	0	☐
11	41C	Swords Manor	17:31	DDB	86	PSV	10%	0	0	0	☒
12	500	Ormond Avenue	17:31	SDB	45	PSV	2%	0	0	0	☒
13	41C	Swords Manor	17:32	DDB	86	PSV	5%	0	0	0	☒
14	500X	Ormond Avenue	17:39	SDB	45	PSV	5%	0	0	0	☒
15	500	Ormond Avenue	17:39	SDB	45	PSV	5%	0	1	0	☐
16	196	Knocksedan	17:39	SDB	45	PSV	20%	0	0	0	☒
17	41	Swords Manor	17:44	DDB	86	PSV	5%	0	0	0	☒
18	500X	Ormond Avenue	17:52	SDB	45	PSV	5%	0	2	0	☐
19	41C	Swords Manor	17:55	DDB	86	PSV	5%	0	0	0	☒
20	500	Ormond Avenue	18:04	SDB	45	PSV	0%	0	0	0	☒
21	500X	Ormond Avenue	18:11	SDB	45	PSV	20%	0	0	0	☒
22	500	Ormond Avenue	18:17	SDB	45	PSV	5%	0	0	0	☒
23	41	Swords Manor	18:19	DDB	86	PSV	40%	0	0	0	☒
24	41X	Swords Manor	18:21	DDB	86	PSV	5%	0	0	0	☒
25	41X	Swords Manor	18:21	DDB	86	PSV	1%	0	0	0	☒
26	41C	Swords Manor	18:23	DDB	86	PSV	5%	0	0	0	☒
27	41X	Swords Manor	18:25	DDB	86	PSV	1%	0	0	0	☒
28	500	Ormond Avenue	18:26	SDB	45	PSV	0%	0	0	0	☒
29	500	Ormond Avenue	18:28	SDB	45	PSV	1%	0	1	0	☐
30	41	Swords Manor	18:29	DDB	86	PSV	1%	0	0	0	☒

Bus Types:

MB Mini Bus
SDB Single Deck Bus
DDB Double Deck Bus
MC Midi Coach
SDC Single Deck Coach
DDC Double Deck Coach

Service Types:

PSV Public Service Vehicle
Priv Private
SB School Bus
Other

Occupancy Scale:

0% (empty)
25% (small number of people on board)
50% (bus is half full)
75% (all seats filled)
100% (all seats filled and standing space occupied)

Comments

Transport Insights - PT Capacity Survey Sheet

Project ID:	C1361.1	Bus Stop No.:	4869
Date:	20/01/2026	Direction:	North
Survey Hours:	16:30-18:30	Survey Sheet no.:	3

No.	Service Number	Direction/ Destination	Time	Bus Type	Est. Bus Capacity	Service Type	Occupancy on Arrival	No. Boarders	No. Alighters	No. Pax Left at Stop	Did Not Stop?
1	41	Abbey Street	16:35	DDB	86	PSV	0%	2	0	0	☐
2	41C	Abbey Street	16:39	DDB	86	PSV	0%	0	0	0	☒
3	500	Dublin	16:42	SDB	45	PSV	0%	0	0	0	☒
4	500	Dublin	16:48	SDB	45	PSV	0%	0	0	0	☒
5	500	Dublin	16:51	SDB	45	PSV	0%	0	0	0	☒
6	41	Abbey Street	16:55	DDB	86	PSV	2%	8	0	0	☐
7	196	Swords	17:02	SDB	45	PSV	5%	0	0	0	☒
8	41C	Abbey Street	17:08	DDB	86	PSV	10%	5	0	1	☐
9	41	Abbey Street	17:17	DDB	86	PSV	5%	3	0	1	☐
10	500	Dublin	17:18	SDB	45	PSV	2%	2	0	2	☐
11	41C	Abbey Street	17:24	DDB	86	PSV	1%	6	0	0	☐
12	500	Dublin	17:25	SDB	45	PSV	0%	0	0	0	☒
13	41	Abbey Street	17:36	DDB	86	PSV	5%	2	0	0	☐
14	41	Abbey Street	17:43	DDB	86	PSV	1%	0	0	0	☒
15	500	Dublin	17:44	SDB	45	PSV	1%	0	0	0	☒
16	41C	Abbey Street	17:55	DDB	86	PSV	2%	1	0	0	☐
17	41	Abbey Street	18:04	DDB	86	PSV	1%	1	0	0	☐
18	41C	Abbey Street	18:14	DDB	86	PSV	5%	1	0	0	☐
19	41	Abbey Street	18:26	DDB	86	PSV	0%	0	0	0	☒
20	500	Dublin	18:29	SDB	45	PSV	0%	0	0	0	☒
21											
22											
23											
24											
25											

Bus Types:

MB Mini Bus
SDB Single Deck Bus
DDB Double Deck Bus
MC Midi Coach
SDC Single Deck Coach
DDC Double Deck Coach

Service Types:

PSV Public Service Vehicle
Priv Private
SB School Bus
Other

Occupancy Scale:

0% (empty)
25% (small number of people on board)
50% (bus is half full)
75% (all seats filled)
100% (all seats filled and standing space occupied)

Comments

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Sample Specification for Transport Surveys

The following generic survey specifications can be used as a basis for procuring survey consultancy services for NTA funded sustainable transport projects. Items highlighted in yellow require special attention and input from the Contracting Authority.

Local Authorities should check with their procurement sections; however it is envisioned that most surveys should be under the E-tenders procurement threshold. Services less than €5,000 in value can be purchased on the basis of verbal quotes from one or more competitive competent survey suppliers; and services contracts between €5,000 and €25,000 in value can be awarded on the basis of responses to specifications sent to at least three service providers.

The NTA are currently developing a national database of traffic count data, which will be accessible to Local Authorities. This document outlines specific guidance to deliver surveys in a compatible format so that results can be incorporated into this database and reduce duplication. It is therefore prudent that all guidelines outlined in this document are followed in their entirety. Any guidelines which are not fully observed will result in complications, and consequently delays, during importation to the new standardised database. For clarification samples can be provided by the NTA modelling section.

It is envisaged that in the case of data types that can be included into the database, the traffic surveyor will supply the dataset in the new format streamlined for the new NTA Database. At present the database is only compatible with Junction Turning Counts (JTC), Junction Turning Counts – Pedestrian Counts (JTC – PED) and Automatic Traffic Counts (ATC) and templates have been supplied for these particular survey types. However, it is now necessary for all surveys tendered by the NTA to be carried out in the specified format. Please see the additional guidance documents and templates for further information.

Database support is available at counts@nationaltransport.ie

Vehicle Occupancy Guidelines:

1. For the raw data, the preferred classifications are Occ1, Occ2, Occ3, Occ4, Occ5, Occ6, and Occ7.
2. Separate lines of data should be completed for each vehicle class for each time period.
3. Spreadsheet should include: site number, site location, weather, date, start and end times, coordinates in Latitude/Longitude and Easting/Northing, explanation of occupancy classifications and a site image (photograph of the road where the count was carried out).

12. Bus Occupancy Surveys (BO) / Boarding & Alighting Surveys (B&A)

Data Required:

Bus Occupancy data is required using the following classifications:

- Operator,
- Bus Arrival Time,
- Bus Number/Route Number
- Registration Plate,
- Fleet number,
- Bus Type (double decker, single decker, single deck coach, double deck coach, mini bus/coach),
- Direction (inbound/outbound),
- Bus service type (public, private, school),
- Does bus stop or pass by the stop?,
- Number boarding the bus,
- Number alighting the bus,
- Bus departure time,
- Number of passengers left at the stop,
- Bus occupancy (for stopped and passing buses) (0%, 25%, 50%, 75%, 100%).

Survey Period:

[Contracting authority to decide times dependent on requirements] e.g.

The surveys are to be undertaken for the following periods:

BOs/BAs: 12 hour period from 07:00:00 to 19:00:00 on a neutral weekday (Tuesday-Thursday).

Extended time periods up to 24 hours are facilitated by the templates and 12 and/or 24 hour periods are recommended.

All surveys are to be undertaken over the same time period.

Survey Method:

All surveys are to be conducted by camera monitoring or manual enumerator. In each case, the manual enumerator or camera should be in a position that as such all data can be collected easily and obstructions are minimized.

Surveys are not to be carried out on a day which coincides with school or public holidays unless with explicit permission from the contracting authority.

Data Format:

All data to be presented as below in Microsoft excel format.

All buses arriving/ departing to be recorded.

Bus Occupancy Guidelines:

1. For the raw data, the preferred classifications are those stated above.
2. Counts should be conducted beside the bus stop, where vehicles are slowing down/stopping and occupancy can be easily captured. If a vehicle is travelling too quickly on approach skip this vehicle and move to the next one.
3. Counts should be done as the buses arrive/depart.
4. Counts should be done for all buses arriving/departing at the designated stop.
5. Separate lines of data should be completed for each arrival.
6. Spreadsheet should include: site number, site location, weather, date, start and end times, coordinates in Latitude/Longitude and Easting/Northing, and a site image (photograph of the road where the count was carried out).
7. The data should be collected for every bus that stops at the stop or passes by the stop.
8. The relevant direction of the bus should be recorded e.g. inbound or outbound.
9. Separate lines of data should be completed for each bus.
10. The full name of the operator should be used. E.g. in the case of Bus Eireann, the full operator name should be used, and not just 'BE'.
11. Registration numbers should be complete and checked to ensure they are in the correct format.
12. The classifications for bus type are as follows:
 - a. Double Decker
 - b. Single Decker
 - c. Single Deck Coach
 - d. Double Deck Coach
 - e. Midi Coach
 - f. Mini Bus
13. The Type of service that should be recorded is:
 - a. Public Service Vehicle
 - b. Private
 - c. School Bus
 - d. In the case that other service types exist, please record these.

14. Occupancy of buses should also be recorded where specified and should be categorized as follows
- a. 0% occupancy (empty)
 - b. 25% occupancy (small number of people on board)
 - c. 50% occupancy (bus is half full)
 - d. 75% occupancy (all seats filled)
 - e. 100% occupancy (all seats filled and standing space occupied)
15. Arrival time and departure time should be noted down to the second (hh:mm:ss), the same value should not be recorded for arrival and departure.

Appendix C DMURS Quality Audit and Stage 1 RSA

Mooretown Phase 2

Quality Audit & Stage 1 Road Safety Audit

Fingal County Council

May 2026

Mooretown Phase 2

Quality Audit & Stage 1 Road Safety Audit

May 2026

Notice

This document and its contents have been prepared and are intended solely for Fingal County Council's information and use in relation to Mooretown Phase 2.

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

Document History

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Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

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1. Introduction

1.1 Report Context

This report describes the findings of a Quality Audit & Stage 1 Road Safety Audit associated with the Mooretown Phase 2.

The Audit has been completed by Traffico on behalf of Fingal County Council.

1.2 Details of Site Inspection

Date	Daylight / Darkness	Weather & Road Conditions
03 March 2026	Daylight	Sunny with dry road pavements.

Table 1.1 – Site Inspection Details

1.3 The Road Safety Audit Team

The members of the Road Safety Audit Team have been listed following:

Status	Name / Qualifications	TII Auditor Reference No:
Audit Team Leader (ATL)	Martin Deegan BEng(Hons) MSc CEng FIEI	MD101312
Audit Team Member (ATM)	Shane Kearns MEng BEng (Hons), RSACert, MIEI, MTPS	SK*364

Table 1.2 – Audit Team Details

1.4 Design Information Examined as Part of the Audit Process

The following design information was examined as part of the Road Safety Audit (RSA) process:

Drawing No.	Drawing Title	Revision
23068/P/003E	Proposed Site Plan	P1
23068_P_003J Proposed Site Plan - Character Areas	Proposed Site Plan – Character Areas	P1
23068_P_2010-2018 - Apartment Building	Apartment Building	P1
25051-AKM-XXXX-XX-DR-C01-500001	Proposed Road – General Layout	00
25051-AKM-XXXX-XX-DR-C01-500002	Proposed Road Layout Sheet 1 of 3	00
25051-AKM-XXXX-XX-DR-C01-500003	Proposed Road Layout Sheet 2 of 3	00
25051-AKM-XXXX-XX-DR-C01-500004	Proposed Road Layout Sheet 3 of 3	00
25051-AKM-XXXX-XX-DR-C01-500005	Proposed Road - Fire Vehicle Tracking	00
25051-AKM-XXXX-XX-DR-C01-500006	Proposed Road – Refuse Vehicle Tracking	00
25051-AKM-XXXX-XX-DR-C01-500007	Proposed Road – Car Vehicle Tracking	00

Drawing No.	Drawing Title	Revision
25051-AKM-XXXX-XX-DR-C01-520001	Road Sections and Details Sheet 1 of 3	00
25051-AKM-XXXX-XX-DR-C01-520002	Road Sections and Details Sheet 2 of 3	00
25051-AKM-XXXX-XX-DR-C01-520003	Road Sections and Details Sheet 3 of 3	00

Table 1.3 – Designers Drawing List

1.5 Quality Audit & Stage 1 Road Safety Audit Content and Compliance

Procedure and Scope for Quality Audit & Stage 1 Road Safety Audit

This Quality Audit has been undertaken in accordance with Section 5.4.2 of the Design Manual for Urban Roads and Streets. The UK Department for Transport Traffic Advisory Leaflet (TAL) 5/11 has also been referred to for guidance.

This Quality Audit & Stage 1 Road Safety Audit consists of the following audit sections:

- Walking, Cycling and Access Audit – focusing on accessibility requirements of vulnerable road users (and in particular, those with visual or mobility impairments), and on the movement and place function requirements of pedestrians and cyclists
- Road Safety Audit – focusing on issues relating directly to road safety

Procedure and Scope Specific to the Road Safety Audit

The Road Safety Audit has been carried out in accordance with the procedures and scope set out in TII publication number GE-STY-01024 - Road Safety Audit.

As part of the road safety audit process, the Audit Team have examined only those issues within the design which relate directly to road safety.

Compliance with Design Standards

The road safety audit process is not a design check, therefore verification or compliance with design standards has not formed part of the audit process.

Minimizing Risk of Collision Occurrence

All problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise the risk of collision occurrence.

2. Walking, Cycling and Access Audit

2.1 Best Practice Guidance

This Quality Audit & Stage 1 Road Safety Audit has been carried out in accordance with general best practice guidance set out within the following documents:

- The Disability Act 2005
- Technical Guidance Document M 2022 – Access and Use
- Buildings for Everyone Access and use for all citizens (National Disability Authority)
- Access Auditing of the Built Environment Guidelines (National Disability Authority)
- DMURS Advice Note 4 – Quality Audit & Stage 1 Road Safety Audits
- Traffic Management Guidelines (Irish Government Publications 2003)
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport.

2.2 Objectives of the Walking, Cycling and Access Audit

The objectives of this Walking, Cycling and Access Audit are as follows:

- To ensure a high level of accessibility to the proposed development site for all vulnerable road users and in particular, for visually and mobility impaired users
- To ensure that the current and future access needs within the scheme are recognised and developed
- To ensure that advantage is afforded to walkers and cyclists at every opportunity.

2.3 General Accessibility Recommendations

Following delivery of the Walking, Cycling and Access Audit, the design team should consider all issues raised herein for inclusion into the final design. It is less costly to make the changes now, pre-construction, than later after the scheme has been commissioned.

The client should consider setting up a dedicated access team for the project, responsible for the long-term management of universal access throughout the development.

This process should be facilitated by an Access Plan, which is a strategy for improving accessibility developed from the Audit and can ensure that access is an on-going concern and help identify opportunities for change.

The access plan should incorporate planned maintenance programmes, a schedule of works that has been devised to take into account the priority information in the Audit, processes to allow regular updating of the Audit information and links to maintenance and management procedures.

It should also set out procedures to ensure that when opportunities for access improvement arise, they are recognised.

2.4 Specific Walking, Cycling and Accessibility Recommendations

A summary of the design features, together with recommended actions to be taken during the relevant stage of the design or operation of the scheme have been detailed in the following table.

Table 2.1 - Walking, Cycling and Access Audit Summary Table

I.D.	Location	Feature	Action	When
 Recommendations to Encourage Walking				
W1	Footpaths within Mooretown Phase 2	Pedestrian provision & universal access	Ensure pedestrian environments are logical, continuous, easy to understand and consistent throughout the development.	Design Stage
W2	Footpaths within Mooretown Phase 2	Pedestrian Provision / Universal Access	Ensure continuity for pedestrians is provided at crossing points, and that crossing points are located with good forward stopping sight distance for approaching vehicles.	Design Stage
W3	Pedestrian linkage to external Public Roads serving Mooretown Phase 2	Pedestrian provision – connections to external public roads	Provide seamless connections to the adjacent school and college, and onto Rathbeale Road (and Murrough Road) to encourage uptake for public transport, including existing bus routes 192, 197, 41, 41C, 41X, 196, 500, 500X, 503, 505 and 507.	Design Stage
W4	Footpaths serving Mooretown Phase 2	Street furniture positioning	Ensure street furniture is carefully positioned to avoid obstructions in footways and to maximise the effective width.	Design & Operational Stages
W5	Footpaths serving Mooretown Phase 2	Footpaths and crossing points	Ensure footpaths and crossing points are located on all significant desire lines, where they are safe and convenient to use for all vulnerable road users.	Design Stage
W6	Footpaths serving Mooretown Phase 2	Pedestrian Provision / Universal Access	Ensure continuity for pedestrians is provided at crossing points, and that crossing points are located with good forward stopping sight distance for approaching vehicles.	Design Stage
W7	Footpaths serving Mooretown Phase 2	Pedestrian Provision / Universal Access	At access points through the site boundaries which connect with existing public thoroughfares, all internal footpaths should link seamlessly with external footpaths / walking opportunities to accommodate universal access and facilitate pedestrian progression.	Design Stage

I.D.	Location	Feature	Action	When
 Recommendations to Encourage Cycling				
C1	Shared cycling and walking areas within Mooretown Phase 2	Pedestrian & cyclist facilities.	Conflicts can arise where different modes of transport share the same space. Ensure cycle environments are logical, continuous, and legible throughout the development. Where cyclists are encouraged to share with pedestrians, ensure that sufficient width and end user information are provided.	Design Stage
C2	Formal Road Crossings within Mooretown Phase 2	Continuity and crossing.	Ensure continuity for cyclists and pedestrians are provided at key crossing points, and that crossing points are located with good forward stopping sight distance for approaching vehicles (these should not be obscured with landscaping).	Design Stage
C3	All dedicated cycling provisions within Tully Residential Application 5	Street furniture positioning.	Ensure street furniture is carefully positioned to avoid obstruction in cycle paths and to maximise the effective width available to cyclists.	Design & Operational Stages
C4	Dedicated cycle tracks within Mooretown Phase 2	Commencements and terminations	Where cycle tracks commence, measures to allow ease of access for cyclists should be included. Where cycle tracks terminate, then termination points should be carefully designed to optimise cycle safety.	Design Stage
C5	Cycle Parking Areas within Mooretown Phase 2	Cycle Parking	Ensure appropriate cycle parking is provided within the development to encourage uptake of cycling. Ensure it is comfortable and safe for cyclists to access the parking.	Design Stage
C6	Cycle Parking Areas within Mooretown Phase 2	Cycle Parking & security	To encourage use and safeguard security, position cycle parking away from isolated areas and close to building entrances which are well lit and have natural passive surveillance. Consider providing cover over the cycle parking to protect cyclists from the elements where possible.	Design Stage
 Recommendations to Provide for Universal Access & Accessibility				
A1	Footpaths serving Mooretown Phase 2	Dropped kerbs & tactile paving	Ensure appropriate dropped kerbs and tactile paving are provided at key crossing points.	Design Stage
A2	Footpaths serving Mooretown Phase 2	Universal Access – footpath types and finishes	Ensure consistency in the types of footpath surface utilised and ensure that the surface provides appropriate contrast with the adjacent road pavement.	Design Stage

I.D.	Location	Feature	Action	When
A3	Footpaths serving Mooretown Phase 2	Universal Access – material contrast	Ensure contrasting colours/materials are used to define areas which are meant for sole use by vulnerable road users.	Design Stage
A4	Footpaths serving Mooretown Phase 2	Universal Access – footpaths	Ensure that measures are taken to actively maintain and police errant car parking on footpaths which might impact negatively upon pedestrian progression.	Design Stage & Operational Stage
A5	Footpaths serving Mooretown Phase 2	Definition of footpath edges & terminations	Ensure footpath edges are clearly defined and ensure that appropriate termination details are provided when footpaths end.	Design Stage
A6	Footpaths serving Mooretown Phase 2	Steps - legibility	Ensure steps are legible and easy to define by providing step nosings with contrasting colour.	Design Stage
A7	Building structures – Mooretown Phase 2	Building Entrances	Ensure that dwelling entrances are well defined and by employing colours and material finishes which contrast with the rest of the building façade.	Design Stage
A8	Building structures – Mooretown Phase 2	Building Entrances	Ensure clear sight lines to house entrances are provided from all approaches. Trees, planting or street furniture should not block these.	Design Stage
A9	Footpaths serving Mooretown Phase 2	Street Lighting	Ensure public lighting is located where pedestrian movement decisions are required (i.e. at crossing points, entrances and in shared street areas).	Design Stage
A10	External Landscaped areas serving Mooretown Phase 2	Drainage gaps	Ensure any break in surface or gap (such as a drainage gully) is no greater than 10mm and is perpendicular to line of travel. Locate drainage features both away from and up-gradient from crossing points.	Design Stage
A11	External Landscaped areas serving Mooretown Phase 2	Drainage / pavement gradients	Ensure access routes are constructed with even and gentle falls to allow proper drainage and prevent the formation of puddles. The cross-fall gradient to any access route should not exceed 1 in 50, except when associated with a dropped-kerb.	Design Stage
A12	External Landscaped areas serving Mooretown Phase 2	Obstructions from Street Furniture or landscaping	Ensure street furniture / landscaping do not encroach on the clear width of pathways.	Design Stage

I.D.	Location	Feature	Action	When
A13	External Landscaped areas Mooretown Phase 2	Street Furniture – visually impaired	Ensure street furniture contrasts in colour with the surrounding pavement surfaces.	Design Stage
A14	Car Parking Areas within Mooretown Phase 2	Universal access to parking	Ensure car parking is accessible, easy to use, and sufficient parking spaces are provided within a well-designed environment to meet the needs of all end users who might (reasonably) be expected to use them.	Design Stage
A15	Car Parking Areas within Mooretown Phase 2	Disabled parking	Ensure the location of designated spaces for car users with disabilities are located as close as possible to the building access points.	Design Stage
A16	Car Parking Areas within Mooretown Phase 2	Car park & boundary treatment	Ensure that access to/from parked vehicles is not inhibited by boundary treatments, trees, hedges, street furniture or structural features.	Design Stage
A17	Bin storage within Mooretown Phase 2	Bin storage	Bin storage and collection can lead to obstruction of the footpaths and cycle facilities. The Designer should ensure that refuse truck access and turning, bin storage and bin collection are all considered and comprehensively catered for within the development proposals.	Design Stage

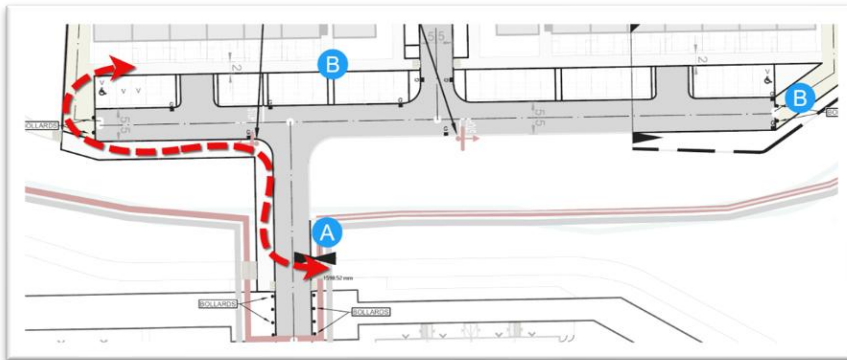
3. Stage 1 Road Safety Audit Issues

3.1 Problem: Indirect Walking Connection for Mobility Impaired

Location: Footpath Connection Between Northern Site and Adjacent Site to South

The connection between the northern site and the adjacent development includes a footpath, but it runs only along one side of the road. As a result, pedestrians (including those with mobility impairments) may walk on the road itself, which could put them in potential conflict with vehicles.

Figure 3.1 – Pedestrians Walking Between Point A & B Unlikely to Use Proposed Connection (Red)



Recommendation

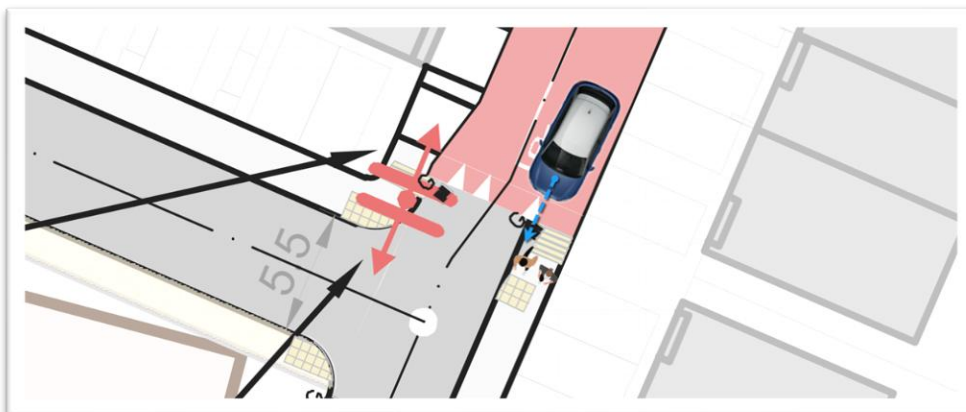
A coherent and direct footpath link should be provided for pedestrians to walk between points A and B.

3.2 Problem: Footpath Commencement Narrowing Traffic Lane

Location: Home Zone Transitions – Southern Site

The abrupt footpath commencement will serve to narrow the outbound traffic lane which may cause vehicles to accidentally drive onto the footpath, increasing the risk of conflict between vehicles and pedestrians.

Figure 3.2 – Footpath Commencement Narrowing Traffic Lanes on Footpath Approach



Recommendation

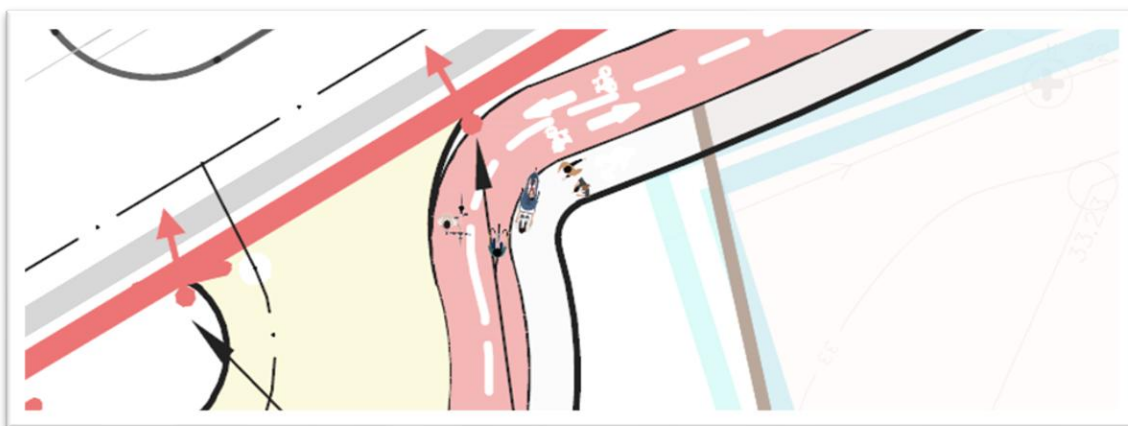
The junction should be reconfigured to guide vehicles towards the carriageway and away from the footpath commencement.

3.3 Problem: Low Radius Turns in Footpath & Cycle Track

Location: Footpath & Cycle Tracks Near Bus turnaround Loop

The combination of (unconventional) cycling on the right, and unusually low radius turns in the cycle track and adjacent footpath could lead to an increase in conflict between buses, cyclists and pedestrians.

Figure 3.3 – Cycling on the Right Near and Low Radius Turns



Recommendation

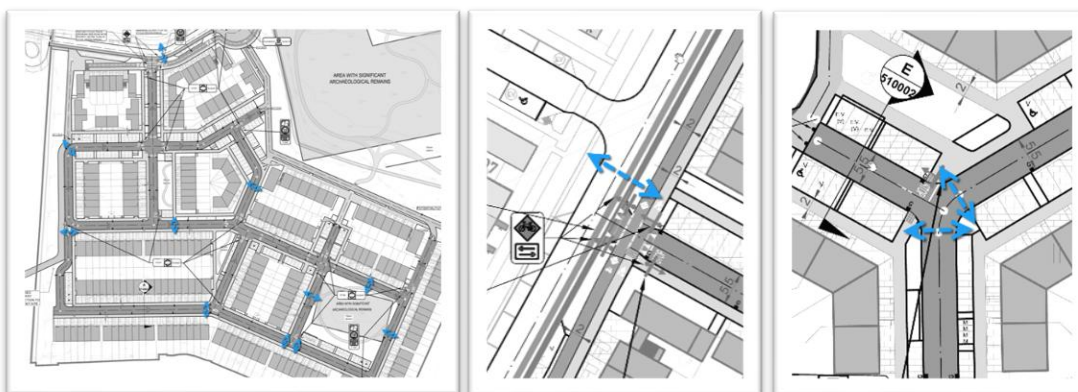
The cycle track should direct cyclists to travel on the left, and both the cycle track and footpath should have larger turn radii.

3.4 Problem: Facilitating Pedestrian Crossing Desire Lines

Location: Various Locations on Internal Streets

Failing to provide for these key pedestrian desire lines could lead to progression issues for mobility impaired road users and an increased risk of conflict with vehicles.

Figure 3.4 – Key Pedestrian Crossing Desire Line Locations on Internal Streets



Recommendation

Suitable pedestrian crossings should be provided at these locations.

4. Audit Team Statement

4.1 Certification & Purpose

We certify that we have examined the drawing(s) listed in Chapter 1 of this Report.

Sole Purpose of the Road Safety Audit

The Road Safety Audit has been carried out with the sole purpose of identifying any features of the design which could be removed or modified to improve the road safety aspects of the scheme.

4.2 Implementation of RSA Recommendations

The problems identified herein have been noted in the Report together with their associated recommendations for road safety improvements.

We (the Audit Team) propose that these recommendations should be studied with a view to implementation.

Audit Team's Independence to the Design Process

No member of the Audit Team has been otherwise involved with the design of the measures audited.

4.3 Road Safety Audit Team Sign-Off

Martin Deegan

Audit Team Leader
Road Safety Engineering Team

traffico

Signed:



Date: 10th March 2026

Shane Kearns

Audit Team Member
Road Safety Engineering Team

traffico

Signed:



Date: 10th March 2026

5. Designers Response

5.1 Using the Feedback form to Respond to the Road Safety Audit

The Designer and the Client should prepare an Audit Response for each of the recommendations using the Road Safety Audit Feedback Form attached in Appendix A.

When completed, this form should be signed by the Designer and the Client and returned to the Audit Team for consideration. See flow-chart following for further description.



Figure 5.1 – Road Safety Audit Sign-Off and Completion Process

5.2 Returning the Completed Feedback Form

The Designer should return the completed Road Safety Audit Feedback Form attached in Appendix A of this report to the following email address:

- Email address: martin@traffico.ie
- Telephone: 01 699 1551

The Audit Team will consider the Designer's response and reply indicating acceptance or otherwise of the Designers response to each recommendation.

5.3 Triggering the Need for an Exception Report

If the Designer and Audit Team cannot agree on how to address a safety issue identified as part of the road safety audit process, then the Designer must prepare an Exception Report for each disputed item in the audit report.

Refer to *GE-STY-01027 Road Safety Audit Guidelines, Section 3.4.3 Exception Report* for further guidance.

Appendix A

A.1 Road Safety Audit Feedback Form

Road Safety Audit Feedback Form

Scheme: Mooretown Phase 2

Audit Stage: Quality Audit & Stage 1 Road Safety Audit

Audit Date: 12th March 2026

Problem Reference (Section 2)	Designer Response Section			Audit Team Response Section
	Problem Accepted (yes / no)	Recommended Measure Accepted (yes / no)	Alternative Measures or Comments	Alternative Measures Accepted (yes / no)
3.1	Yes	Yes		
3.2	Yes	Yes		
3.3	Yes	Yes		
3.4	Yes	Yes		

**The Designer should complete the Designer Response Section above, then fill out the designer details below and return the completed form to the Road Safety Audit Team for consideration and signing.*

Designer's Name: Cillian O'Reilly

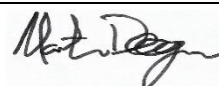
Designer's Signature:



Date: 18.03.2026

Audit Team's Name: Martin Deegan

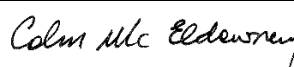
Audit Team's Signature:



Date: 27.03.2026

Client's Name: Colm McElDowney

Client's Signature:



Date: 18.03.2026



traffico

w: www.traffico.ie
e: hello@traffico.ie

Appendix D Statement of Consistency with CDM

Mooretown, Swords Phase 2 CDM Statement of Consistency

Contract Number	C1361 2026
Topic	Glenveagh Mooretown Swords Phase 2 Transport Support – Statement of Consistency with the Cycle Design Manual
Version Number	v1.3
Status	Final
Author(s)	Conor O’Brien
Reviewer	Eoin Munn
Date	01 May 2026

1. Introduction

1.1. Overview

Transport Insights has been appointed by Fingal County Council to produce a Statement of Consistency with the Cycle Design Manual in relation to a proposed residential development (henceforth know as Mooretown Phase 2) at Mooretown, Swords, Co. Dublin.

1.2. Cycle Design Manual

The Cycle Design Manual (CDM) was published in 2023 by the NTA to replace the previous National Cycle Manual. The CDM provides guidance on the design of both on-road and off-road cycle facilities for both urban and rural locations. The manual should be used to inform the design of all new or improved cycle facilities unless otherwise agreed with the relevant oversight body.

1.3. Scope

Transport Insights has undertaken a review of the proposed development layout drawings, including the internal transport network and associated signage, to verify the proposal’s consistency with the Cycle Design Manual. The drawings were produced by AKM Design Group in February 2026, with relevant drawing numbers being as follows:

- 25051-AKM-XXXX-XX-DR-C01-500001, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-500002, rev. 00

- 25051-AKM-XXXX-XX-DR-C01-500003, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-500004, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-520001, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-520002, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-520003, rev. 00

This note describes the findings of the review, with focus on identified issues related to compliance with design standards, and sets out arising recommendations.

1.4. Relevant Design Standards

Design standards considered in preparing this Statement of Compliance have been enshrined in the following:

- Cycle Design Manual

The design review has also been informed by the following supplementary guidelines:

- Design Manual for Urban Roads and Streets (DMURS), version 1.1, 2019
- DMURS Frequently Discussed Issues – Shared Spaces, 2019
- UK Department of Transport Guidance on the Use of Tactile Paving Surfaces, December 2021

1.5. Consistency with Cycle Design Manual

The proposed signage for the scheme is generally considered to be consistent with the Cycle Design Manual. This Statement of Consistency is prepared as a second opinion or ‘peer review’ of the cycle infrastructure provided currently proposed throughout the scheme. This document is envisaged as providing a review and challenge function to the signage drawings prepared in support of the application.

1.6. Note Structure

This Note sets out suggestions to better align proposed signage with the Cycle Design Manual. The suggestions should be considered by the Designer and incorporated into the scheme (if deemed beneficial) at either the preliminary or detailed design stages of the development.

2. Guidance Consistency Suggestions

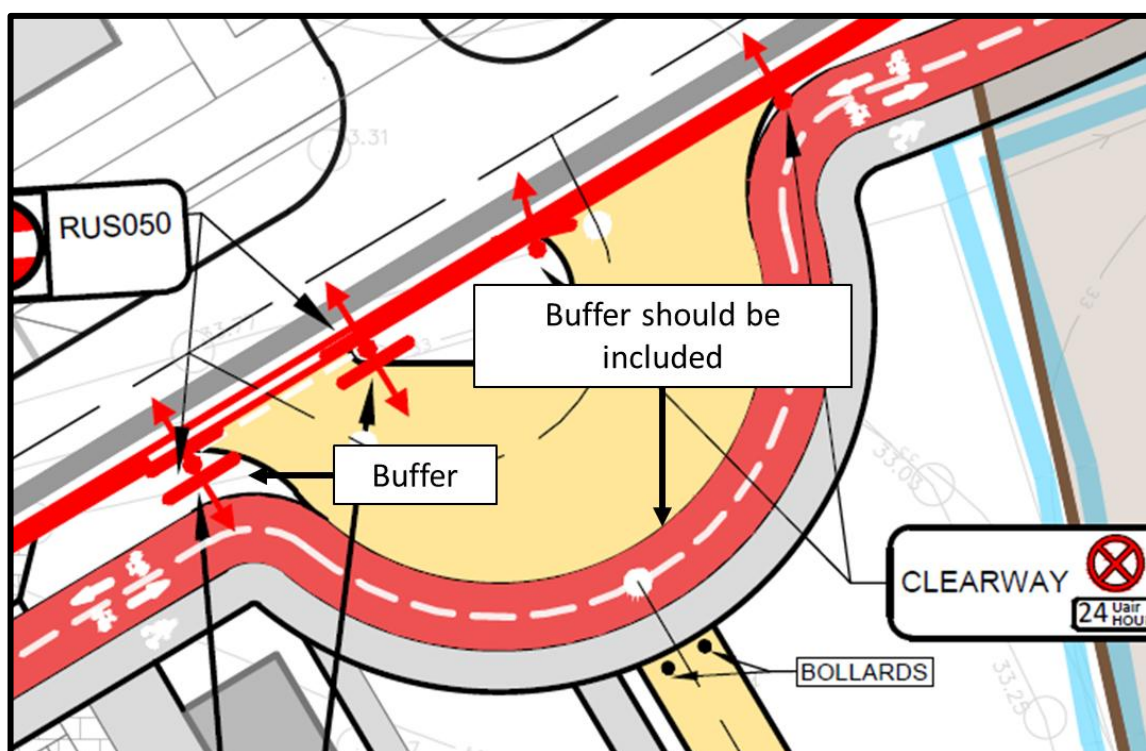
2.1. Bus Turning Area Buffer

As per CDM section 2.6 *“It should be noted that a buffer is always required adjacent to a two-way cycle facility to provide separation between cyclists and on-coming motor traffic and prevent*

cyclists from veering out onto the carriageway.” The width of the buffer is not specified, however, the preferred form of buffer on two-way cycle tracks is a raised or planted verge. This provides a degree of separation between cyclists and traffic and prevents veering out onto the carriageway.

Cycle lanes within the proposed development have a buffer throughout its length excluding the bus turning area. As per section 2.6 of the CDM, all two-way cycle lanes must have a buffer to the carriageway. This section of road is noted to not to primarily serve light vehicular traffic. However, a buffer should be considered for this section of cycleway to ensure that there is adequate separation between cyclists and buses making use of the area.

Figure 2.1 Lack of Buffer at Bus Turning Area



Initial Recommendation: Introduction of a buffer to the cycleway and bus turning area border should be considered, therefore ensuring an adequate level of separation between cyclists and oncoming traffic.

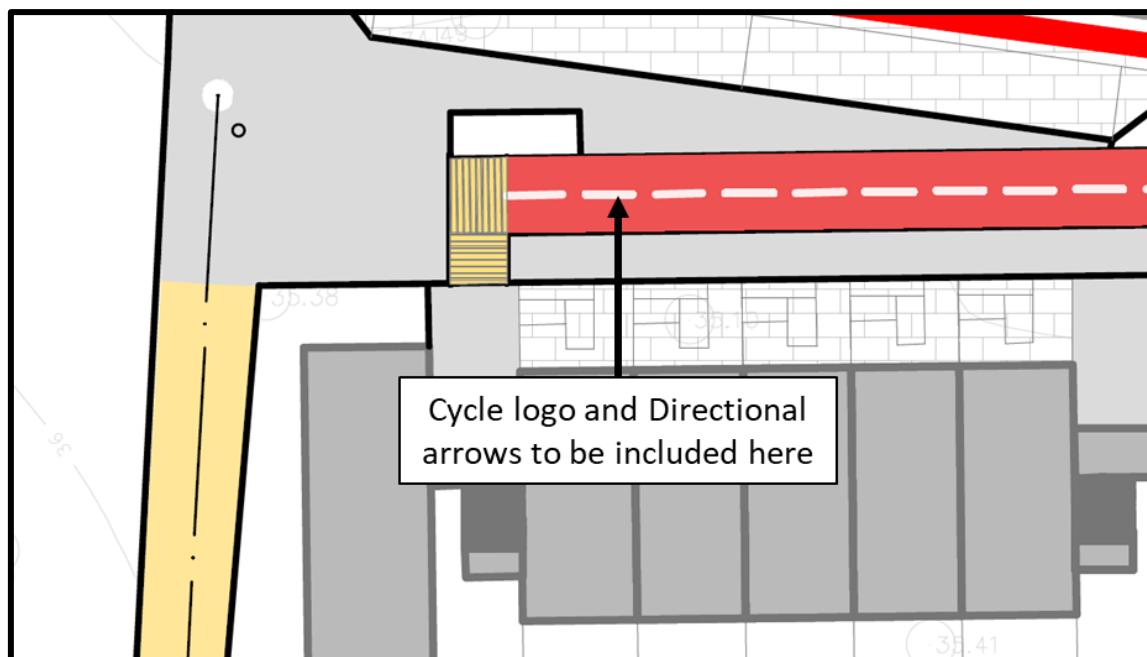
Outcome of Discussion with Designer: The proposed site layout plan has now been amended to include a buffer between the cycle path and the bus turning area at this location.

Further Design Changes (April 2026): The proposed section of cycle lane adjacent the bus turning area has been revised and a 4m wide shared pedestrian/ cycle facility is now proposed for this section. A buffer to the cycleway is maintained.

2.2. Two-way Cycle Markings

While centre line markings and cycle logos with directional arrows are provided at all junctions, no directional arrows are provided at the most westerly point of the cycle lane. Section TL107 of the CDM states “Centre line markings and cycle logos should be used on two-way cycle tracks so that it is readily apparent to all road users that the track is two-way.” With the direction of cycling on the right, cycle logo/ directional arrows at the beginning of the cycle path would indicate this non-standard direction of travel.

Figure 2.2 Lack of Logo and Directional Arrows



Initial Recommendation: Cycle logos should be provided at the western end of the two-way cycle lane to ensure those who join the cycle path at this point, do so on the correct direction of travel.

Outcome of Discussion with Designer: The proposed site layout plan has now been amended to include cycle logos as set out above.

Further Design Changes (April 2026): The proposed section of cycle lane has been revised and a 4m wide shared pedestrian/ cycle facility is now proposed for this section. Appropriate, signage and markings identifying the shared facility are proposed.

2.3. Direction of Tactile Paving

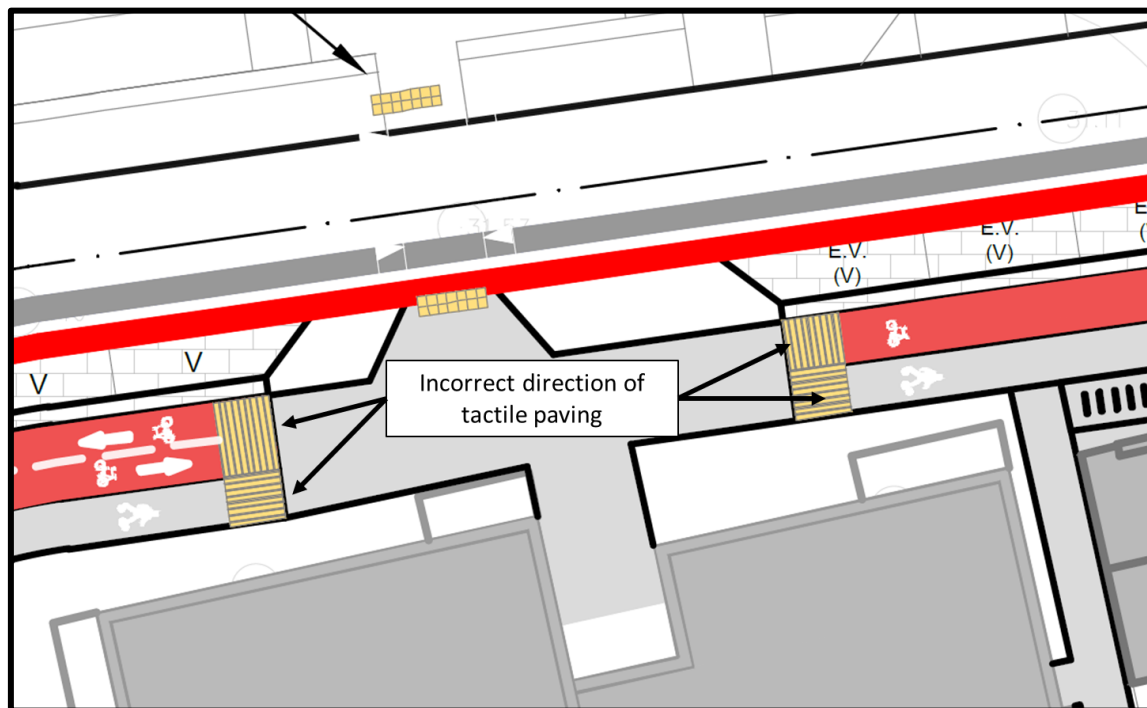
As per section 1.3 of the CDM, tactile paving shall be provided as part of all active travel corridors. The layout of tactile paving shall be in accordance with the UK Department of Transport *Guidance on the Use of Tactile Paving Surfaces*.

Within the UK Department of Transport guidance section 5.2 it states the following:

“On the footway side, the surface is laid so that the bars are transversely across the main direction of travel for people walking, and it is called the ‘ladder’ surface in this orientation. On the cycle track side, the surface is laid so that the bars are in line with the main direction of travel for people cycling, and it is called the ‘tramline’ surface in this orientation. This arrangement was chosen because it was felt the rumble effect created by the transverse pattern would deter cyclists from entering on the pedestrian side”

Located at adjacent to the apartment block and creche building there are tactile paving in the incorrect direction based on the guidance which would not deter cyclists from entering on the pedestrian side.

Figure 2.3 Incorrect tactile paving direction



Initial Recommendation: The tactile paving located adjacent to the apartment block and creche shall be rotated so that the bars are laid transversely across the main direction of travel for the pedestrian section. On the cycle track, the bars shall be rotated so that the bars are in line with the direction of travel for cyclists.

Outcome of Discussion with Designer: The proposed site layout plan has now been amended to include tactile paving set out in the correct orientation.

Appendix E Statement of Consistency with TSM

Mooretown, Swords Phase 2

TSM Statement of Consistency

Contract Number	C1361 2026
Topic	Glenveagh Mooretown Swords Phase 2 Transport Support – Statement of Consistency with the Traffic Signs Manual
Version Number	v1.3
Status	Final
Author(s)	Jurek Gozdek
Reviewer	Eoin Munn
Date	01 May 2026

1. Introduction

1.1. Overview

Transport Insights has been appointed by Fingal County Council to produce a Statement of Consistency with the Traffic Signs Manual in relation to a proposed residential development (henceforth know as Mooretown Phase 2) at Mooretown, Swords, Co. Dublin.

1.2. Scope

Transport Insights has undertaken a review of the proposed development layout drawings, including the internal transport network and associated signage, to verify the proposal's consistency with the Traffic Signs Manual (relevant design standards are detailed in Section 1.3). The drawings were produced by AKM Design Group in February 2026, with relevant drawing numbers being as follows:

- 25051-AKM-XXXX-XX-DR-C01-500001, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-500002, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-500003, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-500004, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-520001, rev. 00
- 25051-AKM-XXXX-XX-DR-C01-520002, rev. 00

- 25051-AKM-XXXX-XX-DR-C01-520003, rev. 00

This note describes the findings of the review, with focus on identified issues related to compliance with design standards, and sets out arising recommendations.

1.3. Relevant Design Standards

Design standards considered in preparing this Statement of Compliance have been enshrined in the following:

- Traffic Signs Manual (TSM), revision October 2025
- Traffic Signs Advice Notes:
 - Slow Zones Advice Note (TSAN-2016-02), January 2016
 - Shared Spaces Sign Advice Note (TSAN-2021-01), November 2021

The design review has also been informed by the following supplementary guidelines:

- Design Manual for Urban Roads and Streets (DMURS), version 1.1, 2019
- DMURS Frequently Discussed Issues – Shared Spaces, 2019
- Guidelines for Setting and Managing Speed Limits in Ireland, March 2015 (revised September 2025).

1.4. Consistency with Traffic Signs Manual

The proposed signage for the scheme is generally considered to be consistent with the Traffic Signs Manual. This Statement of Consistency is prepared as a second opinion or ‘peer review’ of the signage plan which is currently proposed. It should be noted that consistency with the TSM is a judgement call in many cases. This document is therefore envisaged as providing a review and challenge function to the signage drawings prepared in support of the application.

1.5. Statement Structure

The remainder of this Note sets out suggestions to better align proposed signage with the Traffic Signs Manual. The suggestions should be considered by the Designer and incorporated into the scheme (if deemed beneficial) at either the preliminary or detailed design stages of the development.

2. Guidance Consistency Suggestions

2.1. Application of 20 km/h Shared Space Signage

As per TSM Advice Note TSAN-2021-01, “when applying a Special Speed Limit, particular regard should be had to Section 4.3.4 of DMURS which states that the key condition for the design of any shared surface is that drivers, upon entering the street, recognise that they are in a Shared Space and react by driving very slowly (i.e. 20km/h or less)”. With respect to setting speed limits in Shared Space zones,

- *a 20 km/h speed should be applied to streets where there is no, or minimal, distinction between pedestrian, bicycle and vehicle space so that pedestrians feel that they can move freely anywhere and where cyclists and drivers should feel they are a guest.*
- *A 30 km/h speed limit may be applied where there are clear distinctions between pedestrian and cyclist/vehicle space, however, the public realm has been enhanced to create a slow traffic environment and where formal traffic controls (signs, markings and signals) are absent or reduced.*

In multiple locations across the proposed development, it is proposed to apply Shared Space signage with a 20 km/h speed limit to short sections of parking aisles, with perpendicular car parking spaces on both sides (as shown in Figure 2.1 below). These road sections are noted to primarily serve vehicular traffic to and from the adjacent parking spaces, with no direct housing frontage on either side of the carriageway and no pedestrian desire lines (apart from parking space access). By their function and design, such road sections fail to meet the description of an area where “drivers should feel they are a guest” and therefore the proposed combination of shared street signage and 20 km/h speed limit should be considered.

Figure 2.1 Parking Aisles Designated as 20 km/h Shared Space


Initial Recommendation: Application of Shared Street signage to traffic aisles should be considered, with the general 30 km/h Slow Zone being extended onto those road sections instead. It is recommended that Shared Street signage with a 20 km/h speed limit be applied only to such road sections where there is direct housing frontage on either side of the carriageway not served otherwise by a segregated footpath.

Outcome of Discussion with Designer: Due to the absence of a dedicated pedestrian footpath at this location, and the requirement for a shared space, the Designer suggests that the 20 km/h speed limit is retained. This will encourage more appropriate vehicle speeds for all road users.

2.2. Slow Zone and Shared Street Egress Signage

While access signage is provided at vehicular entrance points to the Slow Zone and Shared Street areas (F 403 and F 404 respectively), no egress signage is provided. TSM Advice Note TSAN-2016-02 states that “when leaving Slow Zones, appropriate speed limit signs should be posted on the reverse side of the entry signage. For exits to high speed roads, i.e. where the speed limit is greater than 60 km/h, appropriate warning signs also need to be considered”. While TSM Advice Note TSAN-2021-01 states does not explicitly provide equivalent direction on Shared Street egress signage, figure “Typical Layout – Entire Area” suggests that equivalent approach should apply.

Initial Recommendation: Appropriate egress signage should be provided on the reverse side of the Slow Zone and Shared Street entrance signs, including e.g. the RUS 043 signs at the egress onto a 50 km/h road or the F 403 signs at the egress from a Shared Street into a Slow Zone.

Outcome of Discussion with Designer: The Designer has now updated the proposed signage plan to include egress signage as set out above.

2.3. Lack of Non-Vehicular Shared Street Access Signage

As per TSM Advice Note TSAN-2021-01, a sign including the blue top panel of Shared Street icons or the full combination sign consisting of the blue top panel of icons with the Shared Space (Limistéar Comhroinnta) text panel beneath may be erected in locations where non-vehicular streets enter the Shared Space area. However, the proposed development layout includes no non-vehicular access signage at Shared Street entry locations.

Initial Recommendation: Above-described signs should be erected at transition points between a standalone active travel/ pedestrian way and a Shared Street. On the opposite side of the Shared Street entrance sign (i.e. at the entrance to the active travel facility), an appropriate regulatory sign (e.g. RUS 058 or RUS 058CL/CR as the case may be) should be erected.

Outcome of Discussion with Designer: The Designer has now updated the proposed signage plan to include non-vehicular signage at Shared Street entry locations.

2.4. Excessive use of signage in slow zones

TSM Section 1.1.13 prescribes that *“signs should only be erected where there is a demonstrable need, because unnecessary, incorrect or inconsistent signs detract from the effectiveness of those that are required and tend to lead to disrespect for all signs”*. As per TSM Advice Note TSAN-2021-01, Shared Street signage may be used *“where formal traffic controls (signs, markings and signals) are absent or reduced.”* In this context, the proliferation of Stop signs (RUS 027) and associated road markings within Shared Street areas is excessive, detracts from the primarily non-vehicular purpose of such areas, and may lead to drivers disregarding their obligation to stop at the sign or the stop line.

Initial Recommendation: Limiting the use of stop-control to Shared Street egress points is recommended, with removal of signage within the Shared Street areas and application of general priority rules.

Outcome of Discussion with Designer: Concern has been raised that removal of stop-control at internal junctions may result in an ambiguous form of control, and that this may not be

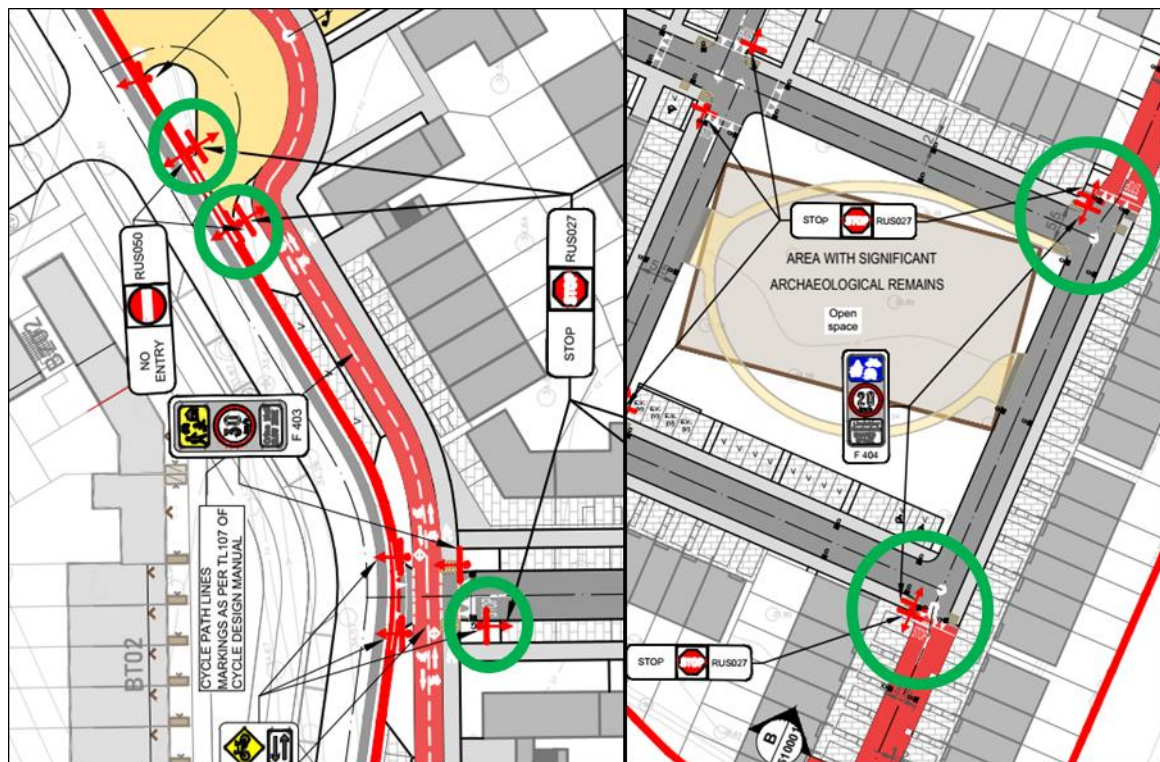
acceptable to an independent road safety auditor. As such, stop-control signage has been retained.

2.5. Co-Location of Stop Signs with Other Signs

As per TSM Sections 5.2.7 and 5.2.8, it is not permitted to mount any other sign on the same post as a Stop sign (RUS 027) facing in the same direction, whereas if it is required to provide a sign for traffic travelling in the opposite direction (for example, a No Entry sign), this may be mounted back-to-back with a Stop Sign providing their relative sizes are such that the silhouette of the Stop Sign is not compromised.

In the proposed development's layout, it is proposed in several locations to mount the Stop sign together with the Cyclists sign (W 143) with a Both Ways supplementary plate (P 005) facing the same direction. At several other locations, it is proposed to mount the Stop sign together with the Shared Street sign (F 404) or the No Entry sign (RUS 050) facing the opposite direction (as shown in Figure 2.2).

Figure 2.2 Co-Location of Stop Signs with Other Signs



Initial Recommendation: As per TSM Sections 5.2.7 and 5.2.8 (see above). Guidance on locating the Stop sign and the Cyclists sign at the approach to a two-way cycle track crossing is provided in the Cycle Design Manual (TL 408). With respect to signs mounted back-to-back, their size

should be such that the shape of the Stop sign is not obstructed or, where this is not possible (e.g. for large F 404 signs), signs should be mounted in separate locations. Sufficient distance between subsequent signs (facing the same direction or opposite directions) should be maintained to ensure sign visibility (including visibility of the Stop sign shape from the back).

Outcome of Discussion with Designer: The Designer has now updated the proposed signage plan to remove inappropriate back-to-back signage.

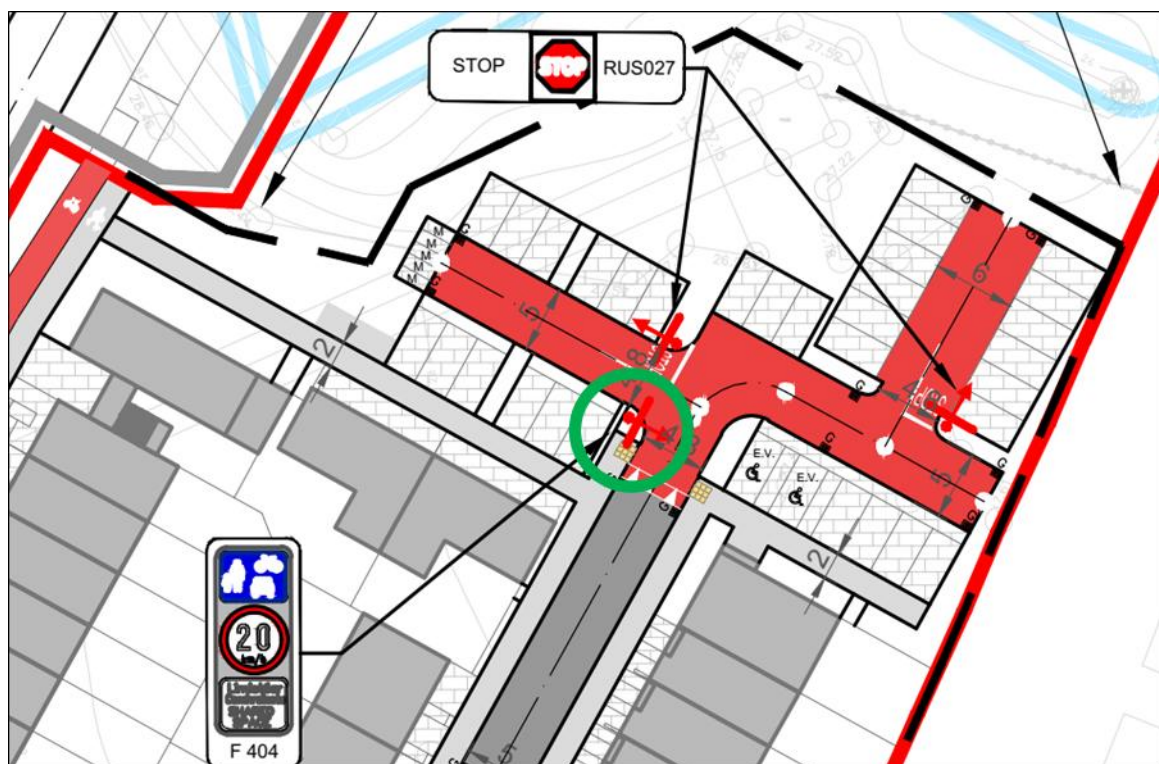
2.6. Incorrect Sign Orientation

In one location, the proposed Shared Street (F 404) sign appears to be oriented incorrectly, facing east rather than south, as shown in Figure 2.3.

Initial Recommendation: Orientation of the proposed sign in the layout drawing to be amended.

Outcome of Discussion with Designer: The Designer has now updated the proposed signage plan with the Shared Street sign reoriented.

Figure 2.3 Incorrect Sign Orientation



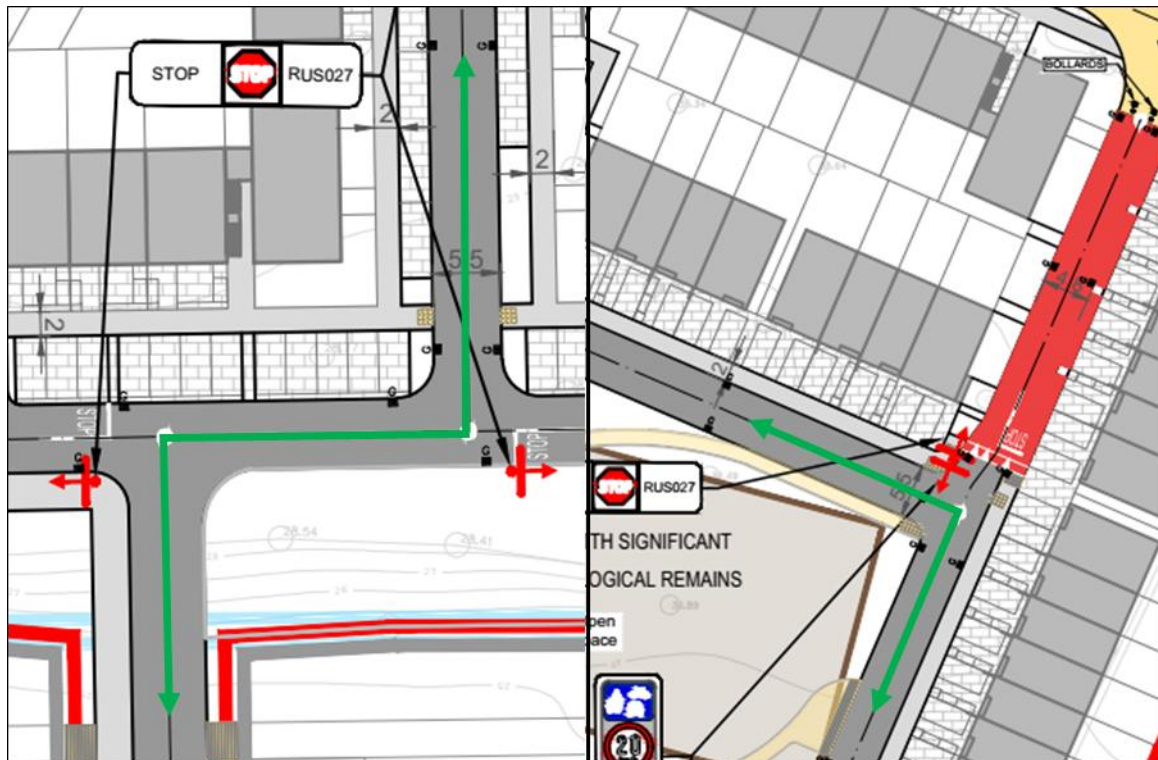
2.7. Unclear Major Road Alignment at T-Junctions

In several locations, a minor road joins the major road at a sharp corner such that the major road appears to be a continuation of the minor road (as shown in Figure 2.4 overleaf). According to the proposed development layout, the minor arms of such three-arm junctions are to be stop-controlled. However, no signage on the major road is provided to illustrate its alignment.

Initial Recommendation: T-Junction signs (W 003 to W 004 as appropriate) should be placed at the major road approaches to the three-arm junctions where the traffic travelling straight ahead does not have a right of way.

Outcome of Discussion with Designer: The Designer has now updated the proposed signage plan with the T-junction signs placed on the major road on approach to the three-arm junction outlined above.

Figure 2.4 Major Road Signage



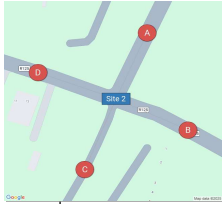
Appendix F Raw Survey Data



Arm A - R125 Rathbeale Rd
Arm B - R108
Arm C - R125

TIME	A => A								A => B								A => C								B => A								B => B														
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT			
07:00	0	0	0	0	0	0	0	0	0	0	0	38	3	0	0	0	41	41	0	0	23	5	0	1	0	29	30.3	0	0	7	4	1	1	0	13	14.8	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	28	3	0	1	0	32	33.3	0	0	35	5	2	1	5	48	55.3	0	0	8	4	0	3	0	15	18.9	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	33	4	0	1	0	38	39.3	0	0	53	9	3	1	1	67	70.8	0	0	13	1	0	3	0	17	20.9	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	38	3	1	2	0	44	47.1	0	0	41	7	1	3	0	52	56.4	0	0	21	2	1	0	2	26	28.5	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	137	13	1	4	0	155	160.7	0	0	152	26	6	6	6	196	212.8	0	0	49	11	2	7	2	71	83.1	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	45	1	1	2	0	49	52.1	0	0	56	8	2	1	1	68	71.3	0	0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	70	2	0	0	0	72	72	0	1	60	8	1	2	1	73	76.5	0	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0
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08:45	0	0	0	0	0	0	0	0	0	0	0	43	7	2	0	2	54	57	0	0	47	5	1	4	1	58	64.7	0	0	7	1	2	3	1	14	19.9	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	181	18	3	2	2	206	212.1	0	1	218	26	4	7	4	260	274.5	0	0	41	3	2	4	1	51	58.2	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	20	4	5	2	0	31	36.1	0	0	46	5	2	2	0	55	58.6	0	0	3	1	0	1	0	5	6.3	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	33	4	5	9	0	51	65.2	0	0	153	18	2	4	0	177	183.2	0	0	17	4	1	7	0	29	38.6	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	35	10	3	1	0	49	51.8	1	0	124	21	3	3	2	154	160.6	0	0	22	6	2	9	0	39	51.7	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	68	16	3	11	3	101	119.8	1	0	185	21	6	1	2	216	221.5	0	0	33	9	4	7	2	55	68.1	0	0	0	0	0	0	0	0	0	0	0
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B => C										C => A										C => B										C => C									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU		
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0	0	0	0	138	12	3	14	0	167	186.7	0	1	204	33	7	2	3	250	258.5	0	0	242	32	12	12	2	300	323.6	0	0	0	0	0	0	0	0	0		
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0	0	0	0	74	12	5	7	0	98	109.6	0	0	183	26	4	4	1	218	226.2	0	0	106	19	16	11	0	152	174.3	0	0	0	0	0	0	0	0	0		
0	0	0	0	15	5	3	4	0	27	33.7	0	0	33	5	1	1	0	40	41.8	0	0	27	4	1	3	0	35	39.4	0	0	0	0	0	0	0	0	0		
0	0	0	0	19	4	1	1	0	25	26.8	0	0	30	2	1	2	1	36	40.1	0	0	19	7	2	3	0	31	35.9	0	0	0	0	0	0	0	0	0		
0	0	0	0	24	3	0	2	0	29	31.6	0	0	36	1	1	1	1	40	42.8	0	0	13	5	1	1	0	20	21.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	12	4	2	1	0	19	21.3	0	0	38	2	3	0	0	43	44.5	0	0	20	4	1	1	0	26	27.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	70	16	6	8	0	100	113.4	0	0	137	10	6	4	2	159	169.2	0	0	79	20	5	8	0	112	124.9	0	0	0	0	0	0	0	0	0		
0	0	0	0	11	2	1	1	0	15	16.8	0	0	26	3	0	0	0	29	29	0	0	13	4	1	4	0	22	27.7	0	0	0	0	0	0	0	0	0		
0	0	0	0	16	2	3	2	0	23	27.1	0	0	41	7	0	0	1	49	50	0	0	17	3	1	1	1	23	25.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	10	2	0	3	0	15	18.9	0	0	37	4	0	2	0	43	45.6	0	0	22	6	2	2	0	32	35.6	0	0	0	0	0	0	0	0	0		
0	0	0	0	19	4	2	0	0	25	26	0	0	40	5	0	1	0	46	47.3	1	0	21	4	2	3	0	31	35.1	0	0	0	0	0	0	0	0	0		
0	0	0	0	56	10	6	6	0	78	88.8	0	0	144	19	0	3	1	167	171.9	1	0	73	17	6	10	1	108	124.2	0	0	0	0	0	0	0	0	0		
0	0	0	0	14	3	0	4	0	21	26.2	0	0	40	3	1	0	0	44	44.5	0	0	22	4	0	1	0	27	28.3	0	0	0	0	0	0	0	0	0		
0	0	0	0	14	4	2	1	0	21	23.3	0	0	42	6	0	0	2	50	52	0	0	21	10	3	3	0	37	42.4	0	0	0	0	0	0	0	0	0		
0	0	0	0	16	5	1	2	0	24	27.1	0	0	54	4	0	4	0	62	67.2	0	0	18	4	0	2	0	24	26.6	0	0	0	0	0	0	0	0	0		
0	0	0	0	25	2	2	1	0	30	32.3	0	0	51	5	1	5	1	63	71	0	0	16	3	0	0	0	19	19	0	0	0	0	0	0	0	0	0		
0	0	0	0	69	14	5	8	0	96	108.9	0	0	187	18	2	9	3	219	234.7	0	0	77	21	3	6	0	107	116.3	0	0	0	0	0	0	0	0	0		
0	0	0	0	19	1	4	5	0	29	37.5	0	0	41	6	1	0	0	48	48.5	0	0	19	0	2	4	0	25	31.2	0	0	0	0	0	0	0	0	0		
0	0	0	0	19	5	1	3	0	28	32.4	0	0	57	3	4	1	2	67	72.3	0	0	18	2	2	1	0	23	25.3	0	0	0	0	0	0	0	0	0		
0	0	0	0	23	3	3	1	0	30	32.8	0	0	40	4	1	1	0	46	47.8	0	0	23	3	2	4	0	32	38.2	0	0	0	0	0	0	0	0	0		
0	0	0	0	25	2	0	0	0	27	27	0	0	40	1	0	1	0	42	43.3	0	0	19	3	2	3	0	27	31.9	0	0	0	0	0	0	0	0	0		
0	0	0	0	86	11	8	9	0	114	129.7	0	0	178	14	6	3	2	203	211.9	0	0	79	8	8	12	0	107	126.6	0	0	0	0	0	0	0	0	0		
0	0	0	0	39	2	3	3	0	47	52.4	0	0	40	5	1	3	0	49	53.4	0	0	13	2	3	1	0	19	21.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	34	6	0	1	0	41	42.3	0	0	38	6	2	1	0	47	49.3	0	0	27	4	1	1	0	33	34.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	42	9	2	3	0	56	60.9	0	0	50	2	0	0	2	54	56	0	0	43	5	4	1	1	54	58.3	0	0	0	0	0	0	0	0	0		
0	0	0	0	38	1	3	4	0	46	52.7	0	0	49	3	2	1	0	55	57.3	0	0	40	4	1	1	0	46	47.8	0	0	0	0	0	0	0	0	0		
0	0	0	0	153	18	8	11	0	190	208.3	0	0	177	16	5	5	2	205	216	0	0	123	15	9	4	1	152	162.7	0	0	0	0	0	0	0	0	0		
0	0	0	0	43	11	2	5	1	62	70.5	0	0	42	2	0	2	0	46	48.6	0	0	41	9	3	0	0	53	54.5	0	0	0	0	0	0	0	0	0		
0	0	0	0	44	3	1	2	1	51	55.1	0	0	43	4	0	2	0	49	51.6	0	0	27	4	1	9	0	41	53.2	0	0	0	0	0	0	0	0	0		
0	0	0	1																																				



IDASO

Survey Name: 251092 - Swords, Co. Dublin
Site: Site 2
Location: R125 Rathbeale Road/Western Distributor Link Road
Date: Thu 20-Nov-2025
AM Peak: 07:30 — 08:30 **Total:** 1430
PM Peak: 16:15 — 17:15 **Total:** 1251
15 Min Peak: 08:00 — 08:15 **Total:** 400

Arm A - Glen Ellan Rd
Arm B - R125 Rathbeale Rd
Arm C - Access to Cronan's Well Gate
Arm D - R125 Rathbeale Rd

TIME	A => A								A => B								A => C								A => D								B => A																
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU				
07:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	6	9.9	0	0	2	1	0	0	0	3	3	0	0	16	1	1	0	0	18	18.5	0	0	4	4	0	0	0	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3.3	0	0	5	3	0	0	0	8	8	0	0	20	2	0	1	2	25	28.3	0	0	6	2	0	0	0	0	0	0	0	0	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	15	1	0	0	0	16	16	0	0	32	3	0	0	1	36	37	0	0	3	3	0	0	1	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	45	0	0	0	0	45	45	0	0	33	1	1	1	0	36	37.8	0	0	0	0	0	0	1	0	0	0	0		
H/TOT	0	0	0	0	0	0	0	0	0	0	0	5	1	0	4	0	10	15.2	0	0	67	5	0	0	0	72	72	0	0	101	7	2	2	3	115	121.6	0	0	13	9	0	0	2	0	0	0	2	0	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	1	0	0	0	63	63	0	0	29	5	2	0	0	36	37	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	1	0	22	23.3	0	0	26	4	0	1	0	31	32.3	0	0	5	0	1	0	0	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	0	0	0	0	6	0	0	1	0	7	8.3	0	0	18	1	1	0	0	20	20.5	0	0	31	5	0	0	0	36	36	0	0	4	1	1	0	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0	6	2	0	0	0	8	8	0	0	34	2	1	1	3	41	45.8	0	0	7	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	13	1	0	1	0	15	16.3	0	0	107	4	1	1	0	113	114.8	0	0	120	16	3	2	3	144	151.1	0	0	16	1	2	0	0	0	0	0	2	0	
09:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0	0	2	1	0	0	0	3	3	0	0	25	2	2	0	0	29	30	0	0	6	0	0	0	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	4	1	0	0	0	5	5	0	0	18	0	1	0	0	19	19.5	0	0	1	0	0	0	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	5	6	0	0	5	1	1	0	0	7	7.5	0	0	14	4	1	0	0	19	19.5	0	0	2	1	1	0	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	4	1	1	0	0	6	6.5	0	0	10	1	1	0	0	12	12.5	0	0	3	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	5	1	3	0	0	9	10.5	0	0	15	4	2	0	0	21	22	0	0	67	7	5	0	0	79	81.5	0	0	12	2	1	0	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	5	1	0	0	0	6	6	0	0	9	0	0	0	0	9	9	0	0	4	0	0	0	2	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	10	2	0	0	0	12	12	0	0	11	2	0	2	0	15	17.6	0	0	4	0	0	1	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1	1	0	0	0	2	2	0	0	5	2	3	1	0	11	13.8	0	0	2	1	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2	2	1	0	0	5	5.5	1	0	10	0	0	0	0	11	10.2	0	0	2	2	1	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	18	6	1	0	0	25	25.5	1	0	35	4	3	3	0	46	50.6	0	0	12	3	2	2	0	0	0	0	2	0	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	0	0	14	3	2	0	0	19	20	0	0	4	1	1	0	0	0	0	0	0	0		
11:15	0	0	0	0	0	0	0	0	0	0	0	1	2	0	2	0	5	7.6	0	0	6	0	0	0	0	6	6	0	0	7	2	2	0	0	11	12	0	0	0	0	0	0	0	0	0	0	0		
11:30	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	4	0	0	0	0	4	4	0	0	9	2	0	0	0	11	11	0	0	1	2	1	0	0	0	0	0	0		
11:45	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	0	2	0	0	0	2	2	0	0	10	2	0	0	0	12	12	0	0	1	2	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	6	4	0	2	0	12	14.6	0	0	14	2	1	0	0	17	17.5	0	0	40	9	4	0	0	53	55	0	0	6	5	2	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	11	2	0	0	0	13	13	0	0	1	0	0	0	0	0	0	0	0	0		
12:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	16	2	1	3	0	22	26.4	0	0	1	1	0	0	1	0	0	0	0	0	
12:30	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	3	1	0	0	0	4	4	0	0	7	1	0	0	0	8	8	0	0	4	2	0	0	0	0	0	0	0		
12:45	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	0	0	3	3	0	0	0	6	6	0	0	11	2	0	0	0	13	13	0	0	2	2	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	6	1	1	0	0	8	8.5	0	0	8	5	0	0	0	13	13	0	0	45	7	1	3	0	56	60.4	0	0	8	5	0	0	1	0	0	0	1	0	
13:00	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5	5	2	0	11	0	1	0	0	14	12.9	0	0	9	2	1	1	0	13	14.8	0	0	1	1	0	0	1	0	0	0	1	0	
13:15	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	2	0	6	1	0	0	0	9	7.4	0	0	12	4	0	0	0	16	16	0	0	1	1	0	0	0	0	0	0	0	0	
13:30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	1	0	5	1	0	0	0	7	6.2	0	0	18	2	0	2	0	22	24.6	0	0	1	1	0	0	0	0	0	0	0	0	
13:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	5	1	0	0	0	6	6	1	0	17	3	0	0	0	21	20.2	0	0	2	2	1	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	13	3	0	0	0	16	16	5	0	27	3	1	0</																									

B => B										B => C										B => D										C => A										C => B									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV					
8	8	0	0	0	0	0	0	0	0	0	2	0	0	34	8	0	1	0	12	11.7	0	0	0	34	8	0	1	0	43	44.3	0	0	0	0	0	1	0	2.3	0	0	0	0	0	0	0	0			
8	8	0	0	0	0	0	0	0	0	0	0	0	9	4	0	0	0	13	13	0	0	38	8	1	1	3	51	55.8	0	0	2	0	0	0	0	2	2	0	0	1	1	0	0	0	0				
7	8.3	0	0	0	0	0	0	0	0	0	0	0	22	1	1	1	0	25	26.8	1	0	52	5	3	2	0	63	66.3	0	0	6	0	0	0	0	6	6	0	0	4	0	0	0	0	0				
1	2.3	0	0	0	0	0	0	0	0	0	0	0	57	1	0	0	0	58	58	0	0	38	8	0	3	0	49	52.9	0	0	18	0	0	0	0	18	18	0	0	19	0	1	0	0	0				
24	26.6	0	0	0	0	0	0	0	0	0	2	0	95	8	1	2	0	108	109.5	1	0	162	29	4	7	3	206	219.3	0	0	26	0	0	1	0	27	28.3	0	0	24	1	1	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	2	0	73	4	0	1	1	81	81.7	0	1	35	5	1	0	1	43	43.9	0	0	25	1	0	0	1	27	28	0	0	39	3	0	0	0	0				
6	6.5	0	0	0	0	0	0	0	0	0	1	0	22	1	0	1	0	25	25.5	1	0	50	5	1	1	0	58	59	0	0	41	0	0	0	0	41	41	0	0	65	3	0	0	1	0				
6	6.5	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	40	8	0	1	1	50	52.3	0	0	15	2	0	0	0	17	17	0	0	9	2	0	0	0	0				
7	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	42	7	3	2	0	54	58.1	0	0	11	1	0	2	0	14	16.6	0	0	11	0	0	0	0	0				
19	20	0	0	0	0	0	0	0	0	0	3	0	112	5	0	2	1	123	124.2	1	1	167	25	5	4	2	205	213.3	0	0	92	4	0	2	1	99	102.6	0	0	124	8	0	0	0	0				
6	6	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	1	9	10.5	0	0	42	5	3	3	0	53	58.4	0	0	3	0	0	0	0	3	3	0	0	6	1	0	0	0	0				
1	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	0	26	4	1	0	1	33	33.7	0	0	4	2	0	0	0	6	6	0	5	0	0	0	1	0					
4	4.5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	5.3	0	0	25	1	1	0	1	28	29.5	0	0	3	0	0	0	0	3	3	0	0	3	0	0	1	0	0				
4	4	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	4	4.5	0	0	32	10	2	0	0	44	45	0	0	4	2	2	0	0	8	9	0	0	7	0	0	1	2	0				
15	15.5	0	0	0	0	0	0	0	0	0	0	0	17	0	2	1	1	21	24.3	1	0	125	20	7	3	2	158	166.6	0	0	14	4	2	0	0	20	21	0	0	21	1	0	2	3	0				
6	8.6	0	0	0	0	0	0	0	0	0	2	0	4	1	1	0	0	8	6.9	0	0	23	3	1	0	0	27	27.5	0	0	3	2	0	0	0	5	5	0	0	3	0	0	0	0	0				
5	5.5	0	0	0	0	0	0	0	0	0	0	0	6	1	0	1	0	8	9.3	0	0	34	6	2	4	0	46	52.2	0	0	0	1	0	0	0	1	1	1	0	6	1	2	0	0	0				
3	3	0	0	0	0	0	0	0	0	0	1	0	5	1	0	1	0	8	8.5	0	0	42	5	0	0	0	47	47	0	0	4	0	0	0	0	4	4	0	0	4	0	0	0	0	0				
5	5.5	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	3	2.2	0	0	43	3	0	0	0	46	46	0	0	3	0	1	0	0	4	4.5	1	0	0	0	0	0	0	0				
19	22.6	0	0	0	0	0	0	0	0	0	4	0	17	3	1	2	0	27	26.9	0	0	142	17	3	4	0	166	176.7	0	0	10	3	1	0	0	14	14.5	2	0	13	1	2	0	0	0				
6	6.5	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	32	3	1	1	0	37	38.8	0	0	2	0	2	0	0	4	5	1	0	4	1	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	19	3	0	0	0	24	26	0	0	3	0	0	0	0	3	3	0	0	5	1	0	0	0	0				
4	4.5	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4	4.5	0	0	28	8	1	1	0	38	39.8	0	0	0	0	0	0	0	0	0	0	2	3	0	1	0	0	0				
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	3.8	0	0	32	6	0	0	0	38	38	0	0	5	1	1	0	0	7	7.5	0	0	5	1	0	0	0	0				
13	14	0	0	0	0	0	0	0	0	0	0	0	11	1	2	1	0	15	17.3	0	0	111	20	2	2	2	137	142.6	0	0	10	1	3	0	0	14	15.5	1	0	16	6	0	1	0	0				
1	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	46	2	0	2	0	50	52.6	0	0	1	0	0	1	0	2	3.3	0	0	3	0	0	0	0	0				
3	4.3	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	39	2	1	1	1	44	46.8	0	0	1	1	1	1	0	4	5.8	0	0	0	3	0	0	1	0				
6	6	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	31	3	0	2	0	36	38.6	0	0	3	1	0	0	0	4	4	0	0	3	1	0	0	0	0				
4	4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	32	6	1	1	1	41	43.8	1	0	11	3	0	0	0	15	14.2	0	0	7	1	0	1	0	1	0			
14	15.3	0	0	0	0	0	0	0	0	0	0	0	19	1	0	0	0	20	20	0	0	148	13	2	6	2	171	181.8	1	0	16	5	1	2	0	25	27.3	0	0	13	2	0	2	0	0				
3	4.3	0	0	0	0	0	0	0	0	0	0	0	8	2	1	1	0	12	13.8	0	0	41	3	1	0	0	45	45.5	0	0	2	0	0	0	0	2	2	0	0	3	2	0	0	0	0				
2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	41	5	1	1	1	49	51.8	0	0	11	2	0	0	0	13	13	0	0	5	1	1	0	0	0				
3	3.5	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	2	5	7	0	0	49	4	3	1	1	58	61.8	3	0	3	0	1	0	0	7	5.1	0	0	3	0	0	0	0	0				
5	5.5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	51	8	2	4	0	65	71.2	0	0	7	1	0	0	0	8	8	0	0	5	0	0	0	0	0				
13	13.5	0	0	0	0	0	0	0	0	0	0	0	15	4	1	1	2	23	26.8	0	0	182	20	7	6	2	217	230.3	3	0	23	3	1	0	0	30	28.1	0	0	16	3	1	0	0	0	0			
10	11.2	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	1	66	7	1	0	0	75	74.9	1	0	4	0	0	0	0	5	4.2	0	0	5	0	0	0	0	0				
5	5	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	1	10	11	0	0	60	18	1	2	0	81	84.1	0	0	10	1	0	0	0	12	13.3	0	0	11	0	1	0	0	0				
4	4	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	69	13	2	0	0	84	85	0	0	10	0	0	0	0	10	10	0	0	9	0	0	0	0	0				
3	3	0	0	0	0	0	0	0	0	0	0	0	18	3	0	0	0	21	21	0	2	44	14	1	5	0	66	71.8	0	0	6	1	0	0	0	7	7	0	0	2	2	0	0	0	0				
22	23.2	0	0	0	0	0	0	0	0	0	0	0	49	4	0	0	1	54	55	0	3	239	52	5	7	0	306	315.8	1	0	30	2	0	1	0	34	34.5	0	0	27	2	1	0	0	0				
1	1	0	0	0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	58	7	0	2	0	67	69.6	0	0	4	1	2	0	0	7	8	0	0	7	0	0	0	0	0				
2	2.5	0																																															

C => C										C => D										D => A										D => B										D => C									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV					
0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	12	14	0	0	0	26	26	0	0	37	9	3	0	0	49	50.5	0	0	9	4	0	2	0					
2	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	15	10	0	0	0	25	25	0	0	45	14	1	2	3	65	71.1	0	0	9	8	0	0	0					
4	4	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	7	7	0	0	20	4	0	1	0	25	26.3	0	0	46	12	1	3	1	63	68.4	0	0	14	1	0	2	0					
20	20.5	0	0	0	0	0	0	0	0	0	0	0	15	0	1	3	0	19	23.4	0	0	18	9	2	0	0	29	30	0	0	44	13	1	0	0	58	58.5	0	0	31	1	0	0	2					
26	26.5	0	0	0	0	0	0	0	0	0	0	0	29	2	1	3	0	35	39.4	0	0	65	37	2	1	0	105	107.3	0	0	172	48	6	5	4	235	248.5	0	0	63	14	0	4	2					
42	42	0	0	0	0	0	0	0	0	0	0	0	37	0	0	1	1	39	41.3	0	0	9	1	0	1	0	11	12.3	0	0	20	5	1	0	1	27	28.5	1	0	27	2	0	0	1					
69	70	0	0	0	0	0	0	0	0	0	0	55	1	0	0	0	56	56	0	0	15	4	0	0	0	19	19	0	0	35	3	1	0	0	39	39.5	0	0	23	3	0	0	0						
11	11	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	32	4	1	0	1	38	39.5	0	0	27	7	2	1	2	39	43.3	0	0	1	1	0	1	0						
11	11	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0	0	24	2	2	0	0	28	29	0	0	54	6	0	2	0	62	64.6	0	0	3	1	1	0	1						
133	134	0	0	0	0	0	0	0	0	0	0	0	103	2	0	1	1	107	109.3	0	0	80	11	3	1	1	96	99.8	0	0	136	21	4	3	3	167	175.9	1	0	54	7	1	1	2					
7	7	0	0	0	0	0	0	0	0	0	0	0	4	1	2	1	0	8	10.3	0	0	14	0	1	0	0	15	15.5	0	0	44	6	0	0	0	50	50	0	0	4	0	0	3	0					
6	7	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	5	7.6	0	0	12	1	3	0	0	16	17.5	0	0	40	2	1	1	0	44	45.8	0	0	9	1	0	0	1					
4	5.3	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	9	1	0	0	0	10	10	0	0	31	8	1	1	1	42	44.8	0	0	3	0	0	1	0					
10	13.3	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	1	6	8.8	0	0	9	3	1	0	0	13	13.5	0	0	39	4	0	0	0	43	43	0	0	1	1	1	0	0					
27	32.6	0	0	0	0	0	0	0	0	0	0	0	15	2	3	4	1	25	32.7	0	0	44	5	5	0	0	54	56.5	0	0	154	20	2	2	1	179	183.6	0	0	17	2	1	4	1					
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	1	0	12	13.3	0	0	35	4	1	2	0	42	45.1	0	0	0	1	0	0	0						
10	10.2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	3	4.3	0	0	9	2	1	0	0	12	12.5	0	0	20	2	1	2	1	26	30.1	0	0	1	0	0	4	0					
4	4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	3	0	9	12.9	0	0	5	0	0	1	0	6	7.3	0	0	35	2	1	0	0	38	38.5	0	0	1	0	0	1	0					
1	0.2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	4.3	0	0	8	2	2	0	0	12	13	0	0	38	3	2	0	1	44	46	0	0	1	0	0	0	0					
18	17.4	0	0	0	0	0	0	0	0	0	0	0	9	1	0	5	0	15	21.5	0	0	32	5	3	2	0	42	46.1	0	0	128	11	5	4	2	150	159.7	0	0	3	1	0	5	0					
6	5.2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3.3	0	0	9	0	0	0	0	9	9	0	0	20	1	0	0	0	21	21	0	0	1	1	0	0	0					
6	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	8	1	0	0	0	9	9	0	0	43	6	1	0	1	51	52.5	0	0	1	0	0	2	0					
6	7.3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	11	3	0	0	0	14	14	0	0	26	3	0	1	0	30	31.3	0	0	2	0	0	4	0					
6	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	5.3	0	0	10	1	0	0	0	11	11	0	0	34	2	0	3	0	39	42.9	0	0	1	1	0	1	0					
24	24.5	0	0	0	0	0	0	0	0	0	0	0	9	1	0	2	0	12	14.6	0	0	38	5	0	0	0	43	43	0	0	123	12	1	4	1	141	147.7	0	0	5	2	0	7	0					
3	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	10	3	0	1	0	14	15.3	0	0	35	5	0	0	0	40	40	0	0	0	1	0	1	0					
1	2.3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3	5.6	0	0	7	1	0	1	0	9	10.3	0	0	35	5	1	1	2	44	47.8	0	0	2	1	1	3	0					
4	4	0	0	0	0	0	0	0	0	0	0	0	3	2	0	4	0	9	14.2	0	0	11	1	0	0	0	12	12	0	0	50	1	0	0	0	51	51	0	0	2	3	0	1	0					
9	10.3	0	0	0	0	0	0	0	0	0	0	0	3	1	0	2	0	6	8.6	0	0	18	0	0	0	0	18	18	0	0	44	4	1	8	1	58	69.9	0	0	0	0	0	0	0					
17	19.6	0	0	0	0	0	0	0	0	0	0	0	9	3	0	8	0	20	30.4	0	0	46	5	0	2	0	53	55.6	0	0	164	15	2	9	3	193	208.7	0	0	4	5	1	5	0					
5	5	0	0	0	0	0	0	0	0	0	0	0	3	2	0	1	1	7	9.3	0	0	16	0	0	0	0	16	16	0	0	30	2	1	0	0	33	33.5	0	0	3	3	0	1	1					
7	7.5	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0	0	15	0	0	1	0	16	17.3	0	0	52	4	1	2	63	68.3	0	0	1	0	1	0	0						
3	3	0	0	0	0	0	0	0	0	0	0	0	2	3	0	2	0	7	9.6	0	0	11	5	1	0	0	17	17.5	0	0	31	1	0	0	0	32	32	0	0	1	1	0	3	0					
5	5	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	2	8	10	0	0	9	3	1	0	0	13	13.5	0	0	43	3	0	1	0	47	48.3	0	0	1	0	0	1	0					
20	20.5	0	0	0	0	0	0	0	0	0	0	0	17	6	0	3	3	29	35.9	0	0	51	8	2	1	0	62	64.3	0	0	156	10	5	2	2	175	182.1	0	0	6	4	1	5	1					
5	5	0	0	0	0	0	0	0	0	0	0	0	2	2	0	3	0	7	10.9	0	0	13	0	0	1	0	14	15.3	0	0	37	2	2	2	1	44	48.6	0	0	4	1	0	1	0					
12	12.5	0	0	0	0	0	0	0	0</																																								



IDASO

Survey Name: 251092 - Swords, Co. Dublin
Site: Site 3
Location: R125 Rathbeale Road/Holymount/Site Access
Date: Thu 20-Nov-2025
AM Peak: 07:30 — 08:30 **Total:** 896
PM Peak: 14:45 — 15:45 **Total:** 755
15 Min Peak: 15:15 — 15:30 **Total:** 254

Arm A - Holymount Rd
Arm B - R125 Rathbeale Rd
Arm C - Site Access
Arm D - R125 Rathbeale Rd

TIME	A => A								A => B								A => C								A => D								B => A													
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			
07:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0		
H/TOT	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	2	1	0	0	0	0		
08:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0		
08:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0		
08:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	0	2	0	1	0	6	4.1	0	0	0	0	0	0	0	0		
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	0	0	2	0	0	0	0	0		
H/TOT	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	9	6.3	0	0	2	0	0	0	0	0		
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:15	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	4	0	1	0	0	0	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	0	0	2	0	0	0	0	0	0
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14:15	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	0	0	0	1	0	0	0	0	0	
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																										

C => C										C => D										D => A										D => B										D => C									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	11	3	1	0	52	54.8	0	0	0	0	0	1	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	54	11	1	0	2	69	70.7	0	0	0	0	0	2	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	12	1	1	2	76	79.8	0	0	0	0	0	3	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	17	0	1	0	90	91.3	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	223	51	5	3	4	287	296.6	0	0	0	0	0	6	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	72	9	2	0	1	85	86.2	0	0	0	0	0	0	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	1.2	0	0	77	5	0	0	0	82	82	0	0	0	0	0	2	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	1	0	2	0	1	0	0	4	3.7	5	0	307	29	5	4	4	354	361.7	0	0	0	0	0	3	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	3	1	1	0	52	53.8	0	0	0	0	0	0	0						
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0	1	0	40	7	2	2	2	54	58.8	0	0	0	0	2	0	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0	2	0	198	23	3	4	4	234	243.1	0	0	0	0	2	1	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	34	3	2	2	1	43	46.8	0	0	0	0	0	1	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	47	3	1	0	0	52	51.7	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	4	2	0	1	47	49	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	0	166	15	6	3	2	194	201.3	0	0	0	0	0	2	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	4	0	3	0	48	51.9	0	0	0	0	0	0	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	41	4	0	2	0	48	49.8	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	40	6	0	1	2	49	52.3	0	0	0	0	0	1	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	3	0	1	0	64	65.3	0	0	0	0	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	6	2	7	0	70	80.1	0	0	0	0	0	2	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	1	0	196	19	2	11	2	231	247.5	0	0	0	0	0	3	0					
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	60	4	4	0	2	70	74	0	0	0	0	1	1	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	2	0	0	0	47	47	0	0	0	1	0	0	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	61	3	0	0	0	64	64	0	0	0	0	0	1	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5	5	0	0	207	15	5	0	3	230	235.5	0	0	0	1	1	2	0					
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	41	3	2	1	1	50	51.9	0	0	0	1	0	1	0					
0	0	0	0	0	0	0	0	0	0	0	0																																						

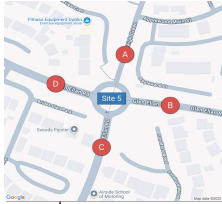


Arm A - Glen Ellan Rd
Arm B - R125 Rathbeale Rd
Arm C - Murrough Rd
Arm D - R125 Rathbeale Rd

[illegible]

B => B										B => C										C => A										C => B														
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV									
8	8	0	0	0	0	0	0	0	0	0	0	0	9	3	0	0	1	13	14	2	0	28	15	0	1	2	48	49.7	0	0	7	3	1	0	4	15	19.5	0	0	7	2	0	0	3
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14	14	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	6	8	0	0	56	8	1	2	0	67	70.1	0	0	21	0	2	0	8	31	40	0	0	13	0	1	0	2
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38	38	0	0	0	0	0	0	0	0	0	0	0	30	4	4	0	5	43	50	3	0	189	51	3	5	4	255	264.6	0	0	58	5	4	0	17	84	103	0	0	39	6	1	0	8
19	19	0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	1	14	15	13	1	55	4	0	0	0	73	62	0	0	23	3	1	0	4	31	35.5	1	0	25	0	0	0	3
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32	32.5	0	0	0	0	0	0	0	0	0	0	0	17	2	0	0	0	19	19	0	0	30	4	2	0	0	36	37	0	0	10	1	1	0	1	13	14.5	0	0	8	4	1	0	1
119	121.5	0	0	0	0	0	0	0	0	0	0	0	73	5	2	0	4	84	89	1	0	113	12	5	0	2	133	136.7	1	0	154	6	3	0	6	170	176.7	0	0	85	11	3	0	5
12	12	0	0	0	0	0	0	0	0	0	0	0	17	1	1	0	1	20	21.5	0	0	16	3	3	0	0	22	23.5	1	0	12	1	1	0	1	16	16.7	0	0	12	0	1	0	1
25	25	0	0	0	0	0	0	0	0	0	0	0	12	1	2	0	1	16	18	0	0	32	6	1	0	0	39	39.5	0	0	18	1	1	0	2	22	24.5	0	0	13	1	2	0	1
17	17	0	0	0	0	0	0	0	0	0	0	0	10	1	1	0	2	14	16.5	0	0	43	2	0	0	0	45	45	0	0	11	4	1	0	0	16	16.5	0	0	17	1	0	0	1
17	17	0	0	0	0	0	0	0	0	0	0	0	14	4	1	0	1	20	21.5	0	0	37	6	0	1	0	44	45.3	0	0	13	0	2	0	3	18	22	0	0	14	1	1	0	0
71	71	0	0	0	0	0	0	0	0	0	0	0	53	7	5	0	5	70	77.5	0	0	128	17	4	1	0	150	153.3	1	0	54	6	5	0	6	72	79.7	0	0	56	3	4	0	3
23	23	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	13	13	0	0	31	2	1	0	0	34	34.5	0	0	15	0	0	0	0	15	15	0	0	16	1	0	0	2
20	20	0	0	0	0	0	0	0	0	0	0	0	17	1	1	0	1	20	21.5	0	0	24	2	0	0	2	28	30	0	0	8	1	0	0	3	12	15	0	0	19	0	0	0	1
33	33	0	0	0	0	0	0	0	0	0	0	0	17	6	0	0	2	25	27	0	0	26	9	0	1	0	36	37.3	0	0	17	4	1	0	0	22	22.5	0	0	16	4	0	0	1
27	27	0	0	0	0	0	0	0	0	0	0	0	18	1	0	0	1	20	21	1	0	20	3	0	0	0	24	23.2	0	0	23	2	0	0	2	27	29	0	0	20	2	1	0	1
103	103	0	0	0	0	0	0	0	0	0	0	0	65	8	1	0	4	78	82.5	1	0	101	16	1	1	2	122	125	0	0	63	7	1	0	5	76	81.5	0	0	71	7	1	0	5
26	26	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	1	15	16	0	0	37	1	0	0	0	38	38	1	0	16	2	0	0	1	20	20.2	0	0	18	1	0	0	1
36	37	0	0	0	0	0	0	0	0	0	0	0	20	5	2	0	1	28	30	0	0	46	2	0	0	1	49	50	1	0	17	1	0	0	2	21	22.2	0	0	22	0	1	0	1
27	27	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	27	27	0	0	29	5	0	1	1	36	38.3	0	0	15	2	1	0	1	19	20.5	0	0	18	0	2	0	1
38	39	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	1	15	16	0	0	31	6	2	1	0	40	42.3	0	0	23	4	2	0	2	31	34	0	0	24	3	0	0	0
127	129	0	0	0	0	0	0	0	0	0	0	0	72	8	2	0	3	85	89	0	0	143	14	2	2	2	163	168.6	2	0	71	9	3	0	6	91	96.9	0	0	82	4	3	0	3
27	27	0	0	0	0	0	0	0	0	0	0	0	21	0	1	0	2	24	26.5	0	0	32	3	0	0	0	35	35	0	0	15	0	0	0	1	16	17	0	0	15	0	2	0	1
30	28.9	0	0	0	0	0	0	0	0	0	0	0	24	2	0	0	2	28	30	0	0	38	5	1	1	2	47	50.8	0	0	23	5	0	0	2	30	32	0	0	16	2	0	0	1
40	40	0	0	0	0	0	0	0	0	0	0	0	22	2	2	0	0	26	27	0	0	33	4	2	0	0	39	40	0	0	24	0	1	0	0	25	25.5	0	0	13	2	0	0	1
39	40	0	0	0	0	0	0	0	0	0	0	0	29	2	0	0	1	32	33	0	0	38	6	2	0	0	46	47	0	0	41	1	0	0	2	44	46	0	0	28	1	0	0	1
136	135.9	0	0	0	0	0	0	0	0	0	0	0	96	6	3	0	5	110	116.5	0	0	141	18	5	1	2	167	172.8	0	0	103	6	1	0	5	115	12							

TOT	PCU	C >= C							TOT	PCU	C >= D							TOT	PCU	D >= A							TOT	PCU	D >= B							TOT	PCU	D >= C								
		P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV		
12	15	0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	9	9	0	0	13	3	0	1	0	1	17	18.3	0	0	23	7	2	0	0	32	33	0	0	2	1	0	0	0	0
7	8	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	19	4	0	0	0	1	24	25	0	0	36	7	2	0	1	46	48	0	0	2	0	0	0	0	0
16	18.5	0	0	0	0	0	0	0	0	0	0	1	12	1	0	0	0	14	13.2	0	0	15	4	0	1	0	20	21.3	1	0	40	8	1	0	2	52	53.7	0	0	5	0	0	0	0	0	
19	21	0	0	0	0	0	0	0	0	0	10	0	38	2	0	0	0	50	42	0	0	20	7	0	1	0	28	29.3	0	0	47	10	0	0	0	57	57	0	0	3	1	0	0	0	0	
54	62.5	0	0	0	0	0	0	0	0	0	0	11	0	61	6	0	0	0	78	69.2	0	0	67	18	0	3	1	89	93.9	1	0	146	32	5	0	3	187	191.7	0	0	12	2	0	0	0	0
29	31.2	0	0	0	0	0	0	0	0	0	23	0	23	1	0	0	1	48	30.6	0	0	17	1	1	0	0	0	19	19.5	1	0	42	7	1	0	1	52	52.7	0	0	10	1	0	0	0	0
26	26	0	0	0	0	0	0	0	0	0	5	0	6	0	0	0	0	11	7	1	0	17	0	1	1	0	20	21	2	0	54	6	0	0	0	62	60.4	0	0	12	0	0	0	1	0	
17	18.5	0	0	0	0	0	0	0	0	0	1	0	9	1	0	0	0	11	10.2	0	0	10	1	0	3	0	14	17.9	0	0	48	4	1	0	2	55	57.5	1	0	15	0	0	0	0	0	
22	22.5	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	5	5.5	0	0	11	4	0	0	0	15	15	0	0	55	5	1	0	0	61	61.5	0	0	15	0	0	0	0	0	
94	98.2	0	0	0	0	0	0	0	0	0	29	0	41	3	1	0	1	75	53.3	1	0	55	6	2	4	0	68	73.4	3	0	199	22	3	0	3	230	232.1	1	0	52	1	0	0	0	0	
41	43	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	10	1	0	0	0	11	11	1	0	41	5	0	0	0	47	46.2	0	0	3	0	0	0	0	0	
33	35	0	0	0	0	0	0	0	0	0	1	0	8	0	0	0	0	9	8.2	0	0	11	1	0	1	0	13	14.3	0	0	42	3	1	0	0	46	46.5	0	0	5	1	0	0	0	0	
16	17	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	6	6.5	0	0	10	4	1	1	1	17	19.8	1	0	28	3	1	0	1	34	34.7	0	0	4	0	0	0	0	0	
14	15.5	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5	5	0	0	11	1	0	2	2	16	20.6	0	0	39	2	0	0	0	41	41	0	0	4	2	0	0	0	0	
104	110.5	0	0	0	0	0	0	0	0	0	0	1	0	26	2	1	0	30	29.7	0	0	42	7	1	4	3	57	65.7	2	0	150	13	2	0	1	168	168.4	0	0	16	3	0	0	0	0	
14	15.5	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	0	5	5.5	0	0	8	2	1	1	0	12	13.8	0	0	37	2	0	0	0	39	39	0	0	3	1	0	0	0	0
17	19	0	0	0	0	0	0	0	0	0	0	1	0	3	2	0	0	6	5.2	0	0	11	2	1	2	0	16	19.1	0	0	21	2	0	0	1	24	25	1	0	2	0	1	0	0	0	
19	20	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	7	0	0	0	0	7	7	0	0	33	3	0	0	0	36	36	1	0	3	0	0	0	0	0	
16	16.5	0	0	0	0	0	0	0	0	0	0	1	0	3	0	1	0	5	4.7	0	0	12	0	1	0	0	13	13.5	0	0	31	4	2	0	1	38	40	0	0	1	0	0	0	0	0	
66	71	0	0	0	0	0	0	0	0	0	0	3	0	13	2	1	1	20	19.4	0	0	38	4	3	3	0	48	53.4	0	0	122	11	2	0	2	137	140	2	0	9	1	1	0	0	0	
19	21	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	1	1	1	0	0	3	3.5	0	0	28	1	0	0	0	29	29	1	0	2	0	0	0	0	0	
20	21	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	5	1	0	0	0	6	6	0	0	37	9	1	1	1	49	51.8	0	0	1	0	0	0	0	0	
21	22	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	0	0	9	1	0	1	0	11	12.3	0	0	25	3	1	0	0	29	29.5	0	0	1	0	0	0	0	0	
24	25.5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	4	1	0	2	0	7	9.6	0	0	37	2	0	1	0	40	41.3	0	0	3	1	0	0	0	0	
84	89.5	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	19	4	1	3	0	27	31.4	0	0	127	15	2	2	1	147	151.6	1	0	7	1	0	0	0	0
20	21	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	5	1	0	2	0	8	10.6	1	0	35	3	0	0	0	39	38.2	0	0	2	0	0	0	0	0	
24	25.5	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	5	5.5	0	0	4	1	0	0	0	5	5	0	0	30	5	0	0	0	35	35	0	0	2	0	0	0	0	0
21	23	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	6	7.3	0	0	11	3	0	2	0	16	18.6	0	0	47	1	0	0	2	50	52	0	0	4	0	0	0	0	0
27	27	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6	0	0	11	0	0	4	0	15	20.2	0	0	38	5	1	3	0	47	51.4	0	0	9	1	1	0	0	0	
92	96.5	0	0	0	0	0	0	0	0	0	0	0	0	18	1	1	1	0	21	22.8	0	0	31	5	0	8	0	44	54.4	1	0	150	14	1	3	2	171	176.6	0	0	17	1	1	0	0	0
18	20	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	8	0	0	8	0	0	0	0	1	9	10	0	0	26	3	1	0	0	30	30.5	0	0	2	1	0	0	0	0
19	20	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	18	2	1	0	0	21	21.5	0	0	45	5	3	0	2	55	58.5	0	0	4	0	0	0	0	0	
16	17	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5	0	0	15	2	0	0	0	17	17	0	0	25	1	0	0	0	26	26	0	0	5	0	0	0	0	0	
30	31	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	10	10	0	0	7	3	0	0	0	10	10	0	0	52	0	0	0	0	52	52	0	0	3	0	0	0	0	0	
83	88	0	0	0	0	0	0	0	0	0	0	0	0	21	4	0	0	0	25	25	0	0	48	7	1	0	1	57	58.5	0	0	148	9	4	0	2	163	167	0	0	14	1	0	0	0	0
34	35	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10	0	0	9	1	0	1	1	12	14.3	1	0	30	1	2	0	0	34	34.2	0	0	2	1	0	0	0	0	
19	20	0	0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	9	9	0	0	4	1	0	1	0	6	7.3	0	0	1	35	5	1	0	0	42	41.9	1	0	9	0	0	0	0	0
38	40.5	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	8	0	0	10	0	1	0	0	11	11.5	1	0	29	0	0	0	2	32	33.2	0	0	8	1	0	0	0	0	
21	22	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9	0	0	8	1	1	0	0	10	10.5	0	0	41	5	0	0	0	46	46	0	0	7	1	0	0	0	0	
112	117.5	0	0	0	0	0	0	0	0	0	0	0	0	33	3	0	0	0	36	36	0	0	31	3	2	2	1	39	43.6	2	1	135	11	3	0	2	154	155.3	1	0	26	3	0	0	0	0
31	32.5	0	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	14	14	0	0																									



IDASO

Survey Name: 251092 - Swords, Co. Dublin
Site: Site 5
Location: Glen Ellan Road/Ashton Distributor Road (Applewood Roundabout)
Date: Thu 20-Nov-2025
AM Peak: 08:00 – 09:00 **Total:** 1671
PM Peak: 17:15 – 18:15 **Total:** 1713
15 Min Peak: 17:45 – 18:00 **Total:** 465

Arm A - Thornleigh Green
Arm B - Glen Ellan Rd
Arm C - Glen Ellan Rd
Arm D - Glen Ellan Rd

TIME	A => A								A => B								A => C								A => D								B => A																
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU				
07:00	0	0	0	0	0	0	0	0	0	1	0	7	2	0	0	0	10	9.2	0	0	4	2	0	0	0	6	6	0	0	2	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9	9	0	0	9	2	0	0	0	11	11	0	0	3	1	0	0	0	4	4	0	0	9	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	17	1	1	0	0	19	19.5	0	0	10	1	1	0	0	12	12.5	0	0	3	0	0	0	0	3	3	0	0	7	0	1	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0	0	9	0	0	0	0	9	9	0	0	12	0	0	0	0	12	12	0	0	17	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	1	0	40	4	1	0	0	46	45.7	0	0	32	5	1	0	0	38	38.5	0	0	20	1	0	0	0	21	21	0	0	35	0	1	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	2	0	8	0	0	0	0	10	8.4	0	0	12	1	0	0	0	13	13	0	0	11	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	18	0	0	24	0	0	0	0	24	24	0	0	13	0	0	0	0	13	13	0	0	15	1	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	3	0	15	0	0	0	0	18	15.6	0	0	23	0	1	0	0	24	24.5	0	0	14	0	0	0	0	14	14	0	0	8	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	27	0	1	0	0	28	28.5	0	0	6	1	0	0	0	7	7	0	0	2	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	3	0	49	1	0	0	0	53	50.6	2	0	82	0	2	0	0	86	85.4	0	0	45	2	0	0	0	47	47	0	0	36	1	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	13	1	2	0	0	16	17	0	0	12	0	1	0	0	13	13.5	0	0	6	0	0	0	0	6	6	0	0	6	0	1	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	3	0	0	0	0	3	3	0	0	2	0	0	0	0	2	2	0	0	5	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0	0	10	2	1	0	0	13	13.5	0	0	4	1	0	0	0	5	5	0	0	4	1	1	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	12	0	0	0	0	12	12	0	0	3	0	0	0	0	3	3	0	0	5	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	32	2	2	0	0	36	37	0	0	37	2	2	0	0	41	42	0	0	15	1	0	0	0	16	16	0	0	20	2	2	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	7	7	0	0	7	0	0	0	0	7	7	0	0	6	0	0	0	0	6	6	0	0	1	1	0	0	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	0	1	4	2	1	0	0	8	7.9	0	0	15	1	0	0	0	16	16	0	0	4	0	0	0	0	4	4	0	0	2	2	0	0	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	0	10	3	0	0	0	13	13	0	0	4	2	0	0	0	6	6	0	0	4	1	0	0	0	5	5	0	0	4	3	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	11	1	2	0	0	14	15	0	0	5	0	0	0	0	5	5	0	0	9	1	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	1	23	8	1	0	0	33	32.9	0	0	37	4	2	0	0	43	44	0	0	19	1	0	0	0	20	20	0	0	16	7	0	0	0	0	0	0	0	0	0
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11:30	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	10	3	0	0	0	13	13	0	0	7	0	0	0	0	7	7	0	0	1	0	0	0	0	0	0	0	0	0	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	33	2	1	0	0	36	36.5	0	0	41	4	0	0	0	45	45	0	0	22	0	0	0	0	22	22	0	0	17	1	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4	3.2	1	0	9	1	0	0	0	11	10.2	0	0	8	0	0	0	0	8	8	0	0	3	1	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	2	0	0	0	0	2	2	1	0	26	4	0	0	0	31	30.2	1	0	38	3	1	0	0	43	42.7	0	0	26	0	0	0	0	26	26	0	1	20	2	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	0	0																																													

B => B										B => C										B => D										C => A										C => B									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV					
2	2	0	0	0	0	0	0	0	0	0	0	0	13	4	0	1	1	19	21.3	0	0	24	4	1	2	0	31	34.1	0	0	6	0	0	0	0	6	6	0	0	15	7	0	0	5					
9	9	0	0	0	0	0	0	1	1	2	1	0	23	3	0	1	0	28	28.5	0	0	24	8	0	2	2	36	40.6	0	0	5	2	0	0	0	7	7	0	0	29	3	0	0	1					
8	8.5	0	0	0	0	0	0	0	0	0	0	0	21	2	2	2	1	28	32.6	0	0	37	7	1	0	1	46	47.5	0	0	9	0	1	0	0	10	10.5	0	0	30	5	0	1	8					
17	17	0	0	0	0	0	0	0	0	0	0	0	24	1	1	1	2	29	32.8	0	0	40	5	0	0	1	46	47	0	0	9	0	0	0	0	9	9	0	0	33	10	0	1	4					
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11	11	0	0	0	0	0	0	0	0	0	1	0	25	1	2	2	1	32	35.8	0	0	53	3	1	0	0	57	57.5	0	0	11	0	0	0	0	11	11	0	0	33	4	1	0	4					
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37	37	0	0	2	0	0	0	0	2	2	2	0	112	13	6	5	4	142	153.9	2	0	229	19	3	0	1	254	254.9	1	0	50	1	2	0	0	54	54.2	1	0	111	12	4	3	8					
7	7.5	0	0	0	0	0	0	0	0	0	0	0	23	5	2	1	1	32	35.3	0	0	33	7	3	0	0	43	44.5	0	0	26	0	0	0	0	26	26	1	0	32	2	1	0	1					
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24	25	0	0	2	0	0	0	0	2	2	1	0	71	10	7	2	8	99	112.3	0	0	158	21	7	0	1	187	191.5	0	0	64	4	2	0	0	70	71	1	0	144	10	4	4	9					
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4	4	0	0	0	0	0	0	0	0	0	0	0	16	3	1	2	2	24	29.1	0	0	29	2	1	0	0	32	32.5	0	0	10	1	0	0	0	11	11	0	1	18	2	1	2	2					
7	7	0	0	0	0	0	0	0	0	0	0	0	19	5	1	2	1	28	32.1	0	0	26	1	2	0	0	29	30	0	0	1	0	0	0	0	1	1	0	0	30	4	0	0	0					
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23	23	0	0	2	0	0	0	0	2	2	0	0	75	14	2	5	5	101	113.5	0	0	122	7	5	1	0	135	138.8	1	0	21	4	1	0	0	27	26.7	0	1	91	9	3	3	6					
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4	4	0	0	0	0	0	0	0	0	0	1	0	23	1	2	1	1	29	31.5	0	0	36	9	2	2	0	49	52.6	1	0	8	2	0	0	0	11	10.2	0	0	21	3	0	1	1					
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6	6	0	0	1	0	0	0	0	1	1	0	0	17	2	1	0	1	21	22.5	0	0	39	1	0	0	0	40	40	0	0	6	1	0	0	0	7	7	0	0	29	2	2	2	1					
9	8.4	0	0	0	0	0	0	0	0	0	0	0	28	3	2	1	1	35	38.3	0	0	28	1	1	0	0	30	30.5	0	0	16	2	0	0	0	18	18	0	0	28	3	1	4	2					
23	22.4	0	0	1	0	0	0	0	1	1	1	0	90	11	5	2	4	113	121.3	0	0	149	17	3	2	0	171	175.1	1	0	42	8	0	0	0	51	50.2	1	0	102	8	3	8	7					
11	11	0	0	0	0	0	0	0	0	0	0	0	32	2	1	1	1	37	39.8	0	0	50	4	1	0	0	55	55.5	0	0	8	0	1	0	0	9	9.5	0	0	27	1	1	0	1					
6	6	0	0	0	1	0	0	0	1	1	0	0	33	2	0	0	3	38	41	0	0	54	4	0	0	1	59	60	1	0	4	1	0	0	0	6	5.2	0	0	34	2	1	0	2					
7	7.5	0	0	0	0	0	0	0	0	0	0	0	26	1	1	0	4	32	36.5	0	0	48	2	0	0	1	51	52	0	0	17	0	1	0	0	18	18.5	0	0	36	1	0	0	0					
21	21	0	0	0	0	0	0	0	0	0	0	0	26	5	1	1	3	36	40.8	0	0	42	4	0	0	0	46	46	0	0	19	0	0	0	0	19	19	0	0	24	3	0	0	3					
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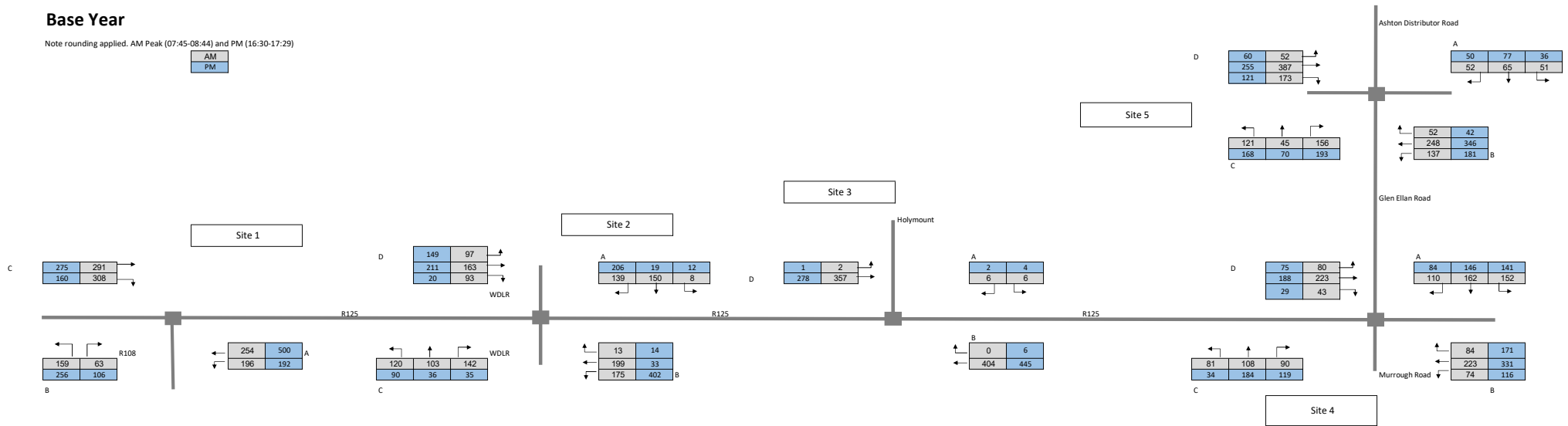
C => C										C => D										D => A										D => B										D => C									
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV					
27	32	0	0	0	0	0	0	0	0	0	0	0	9	2	1	1	1	14	16.8	0	0	0	0	0	0	0	0	0	0	0	43	6	0	0	0	50	49.4	0	0	9	2	0	0	0					
33	34	0	0	0	0	0	0	1	1	2	0	0	10	1	1	0	0	12	12.5	0	0	4	0	1	0	0	5	5.5	0	0	47	13	1	0	1	62	63.5	0	0	19	2	0	0	0					
44	53.3	0	0	0	0	0	0	0	0	0	0	0	11	3	1	0	0	15	15.5	0	0	4	0	0	0	0	4	4	0	0	81	9	1	0	0	91	91.5	1	0	12	1	0	1	0					
48	53.3	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	14	14	0	0	2	2	0	0	0	4	4	0	0	85	8	1	1	0	95	96.8	0	0	18	4	0	0	0					
152	172.6	0	0	0	0	0	0	1	1	2	0	0	43	7	3	1	1	55	58.8	0	0	10	2	1	0	0	13	13.5	0	1	256	36	3	1	1	298	301.2	1	0	58	9	0	1	0					
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139	152.1	0	0	0	0	0	0	0	0	0	1	0	136	5	1	1	2	146	149	0	0	66	2	0	0	0	68	68	4	0	368	24	0	3	2	401	403.7	0	0	233	4	4	0	0					
37	37.7	0	0	0	0	0	0	0	0	0	0	0	51	1	0	0	0	52	52	0	0	10	0	1	0	0	11	11.5	0	0	68	3	2	0	0	73	74	0	0	17	2	0	0	0					
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43	48.3	0	0	0	0	0	0	0	0	0	0	0	18	0	1	0	0	19	19.5	0	0	4	0	0	0	0	4	4	0	0	47	5	3	0	0	55	56.5	0	0	16	0	1	0	0					
48	54.1	0	0	0	0	0	0	0	0	0	0	0	18	1	0	0	1	20	21	0	0	7	2	0	0	0	9	9	0	0	49	5	2	0	0	56	57	0	0	21	1	0	0	0					
172	187.4	0	0	0	0	0	0	0	0	0	0	0	106	6	1	0	1	114	115.5	0	0	24	4	1	0	0	29	29.5	0	0	239	15	8	0	0	262	266	0	0	66	3	1	0	0					
28	30.8	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	12	12.5	0	0	10	1	0	0	0	11	11	0	0	36	3	0	0	0	39	39	0	0	14	0	0	0	0					
26	30.5	0	0	0	0	0	0	0	0	0	0	0	19	2	1	0	0	22	22.5	0	0	2	1	2	0	0	5	6	0	0	50	4	1	0	0	55	55.5	0	0	11	1	0	1	0					
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25	28.5	0	0	0	0	0	0	0	0	0	0	0	13	1	1	0	0	15	15.5	0	0	7	2	1	0	0	10	10.5	0	0	36	5	2	1	0	44	46.3	0	0	13	0	0	0	0					
113	123.8	0	0	0	0	0	0	0	0	0	0	0	52	4	4	0	0	60	62	0	0	23	4	3	0	0	30	31.5	0	0	141	15	3	1	0	160	162.8	0	0	57	2	0	1	0					
23	23.5	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	7	1	0	0	0	8	8	0	0	32	0	1	0	0	33	33.5	0	0	14	1	0	0	0					
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24	25.8	0	0	0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	3	0	1	0	0	4	4.5	0	0	27	2	1	0	1	31	32.5	0	0	25	0	0	0	0					
31	35.6	0	0	0	0	0	0	0	0	0	0	0	23	1	0	0	0	24	24	0	0	7	0	0	0	0	7	7	0	0	45	5	0	0	0	50	50	0	0	23	0	1	0	0					
100	109.9	0	0	0	0	0	0	0	0	0	0	0	73	2	0	0	0	75	75	0	0	21	2	1	0	0	24	24.5	0	0	137	11	2	0	1	151	153	0	0	74	4	1	0	0					
26	28.3	0	0	0	0	0	0	0	0	0	0	0	16	2	0	0	0	18	18	0	0	3	0	0	0	0	3	3	0	0	58	5	1	0	0	64	64.5	0	0	14	4	0	0	0					
29	32.5	0	0	1	0	0	0	0	1	1	0	0	22	1	0	1	0	24	25.3	0	0	3	0	0	0	0	3	3	0	0	45	3	1	1	0	50	51.8	0	0	20	0	0	0	0					
36	40.6	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	13	13	0	0	4	0	0	0	0	4	4	0	0	45	4	2	0	0	51	52	0	0	14	1	1	0	0					
38	45.7	0	0	0	0	0	0	0	0	0	0	0	22	1	2	0	0	25	26	0	0	12	0	0	0	0	12	12	0	0	44	3	0	1	0	48	49.3	0	0	16	1	0	0	0					
129	147.1	0	0	1	0	0	0	0	1	1	0	0	73	4	2	1	0	80	82.3	0	0	22	0	0	0	0	22	22	0	0	192	15	4	2	0	213	217.6	0	0	64	6	1	0	0					
30	31.5	0	0	0	0	0	0	0	0	0	0	0	26	2	0	0	1	29	30	0	0	7	0	0	0	0	7	7	0	0	41	7	0	0	1	49	50	0	0	21	1	0	0	0					
39	41.5	0	0	0	0	0	0	0	0	0	1	0	25	3	1	0	0	30	29.7	0	0	9	1	0	0	0	10	10	0	0	45	2	2	0	0	49	50	0	0	22	2	0	0	0					
37	37	0	0	0	0	0	0	0	0	0	0	0	29	3	0	0	0	32	32	0	0	9	1	1	0	0	11	11.5	1	0	59	5	1	2	0	68	70.3	0	0	25	0	0	0	0					
30	33	0	0	0	0	0	0	0	0	0	0	0	36	1	0	0	0	37	37	0	0	13	0	0	0	0	13	13	0	0	43	10	1	0	1	55	56.5	0	0	27	1	0	0	0					
136	143	0	0	0	0	0	0	0	0	0	1	0	116	9	1	0	1	128	128.7	0	0	38	2	1	0	0	41																						

D => D											
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	
11	11	0	0	0	0	0	0	0	0	0	
21	21	0	0	1	0	0	0	0	1	1	
15	15.5	0	0	0	1	0	0	0	1	1	
22	22	0	0	0	0	0	0	0	0	0	
69	69.5	0	0	1	1	0	0	0	2	2	
54	55	0	0	0	0	0	0	0	0	0	
46	46	0	0	0	0	0	0	0	0	0	
51	51.5	0	0	0	0	0	0	0	0	0	
90	90.5	0	0	0	1	0	0	0	1	1	
241	243	0	0	0	1	0	0	0	1	1	
19	19	0	0	0	0	0	0	0	0	0	
12	12	0	0	1	0	0	0	0	1	1	
17	17.5	0	0	0	0	0	0	0	0	0	
22	22	0	0	0	0	0	0	0	0	0	
70	70.5	0	0	1	0	0	0	0	1	1	
14	14	0	0	0	0	0	0	0	0	0	
13	14.3	0	0	0	0	0	0	0	0	0	
20	20	0	0	0	0	0	0	0	0	0	
13	13	0	0	0	0	0	0	0	0	0	
60	61.3	0	0	0	0	0	0	0	0	0	
15	15	0	0	0	0	0	0	0	0	0	
15	15	0	0	0	0	0	0	0	0	0	
25	25	0	0	0	0	0	0	0	0	0	
24	24.5	0	0	0	0	0	0	0	0	0	
79	79.5	0	0	0	0	0	0	0	0	0	
18	18	0	0	0	0	0	0	0	0	0	
20	20	0	0	1	0	0	0	0	1	1	
16	16.5	0	0	0	0	0	0	0	0	0	
17	17	0	0	0	0	0	0	0	0	0	
71	71.5	0	0	1	0	0	0	0	1	1	
22	22	0	0	0	0	0	0	0	0	0	
24	24	0	0	0	0	0	0	0	0	0	
25	25	0	0	0	0	0	0	0	0	0	
28	28	0	0	0	0	0	0	0	0	0	
99	99	0	0	0	0	0	0	0	0	0	
23	23	0	0	0	0	0	0	0	0	0	
43	42.4	0	0	0	0	0	0	0	0	0	
54	54	0	0	0	0	0	0	0	0	0	
24	23.4	0	0	0	0	0	0	0	0	0	
144	142.8	0	0	0	0	0	0	0	0	0	
23	23	0	0	0	0	0	0	0	0	0	
22	21.2	0	0	0	0	0	0	0	0	0	
35	35	0	0	0	0	0	0	0	0	0	
27	28.8	0	0	1	0	0	0	0	1	1	
107	108	0	0	1	0	0	0	0	1	1	
21	21	0	0	0	0	0	0	0	0	0	
23	23	0	0	2	0	0	0	0	2	2	
34	34	0	0	0	0	0	0	0	0	0	
24	24	0	0	0	0	0	0	0	0	0	
102	102	0	0	2	0	0	0	0	2	2	
37	37	0	0	0	0	0	0	0	0	0	
26	26.5	0	0	0	0	0	0	0	0	0	
13	13.5	0	0	0	0	0	0	0	0	0	
31	31.5	0	0	0	0	0	0	0	0	0	
107	108.5	0	0	0	0	0	0	0	0	0	
27	27	0	0	1	0	0	0	0	1	1	
20	20	0	0	0	0	0	0	0	0	0	
15	15	0	0	0	0	0	0	0	0	0	
29	29	0	0	0	0	0	0	0	0	0	
91	91	0	0	1	0	0	0	0	1	1	
1240	1246.6	0	0	7	2	0	0	0	9	9	

Appendix G 2025 Baseline Traffic Flows Schematic – AM and PM Network Peak Hour

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

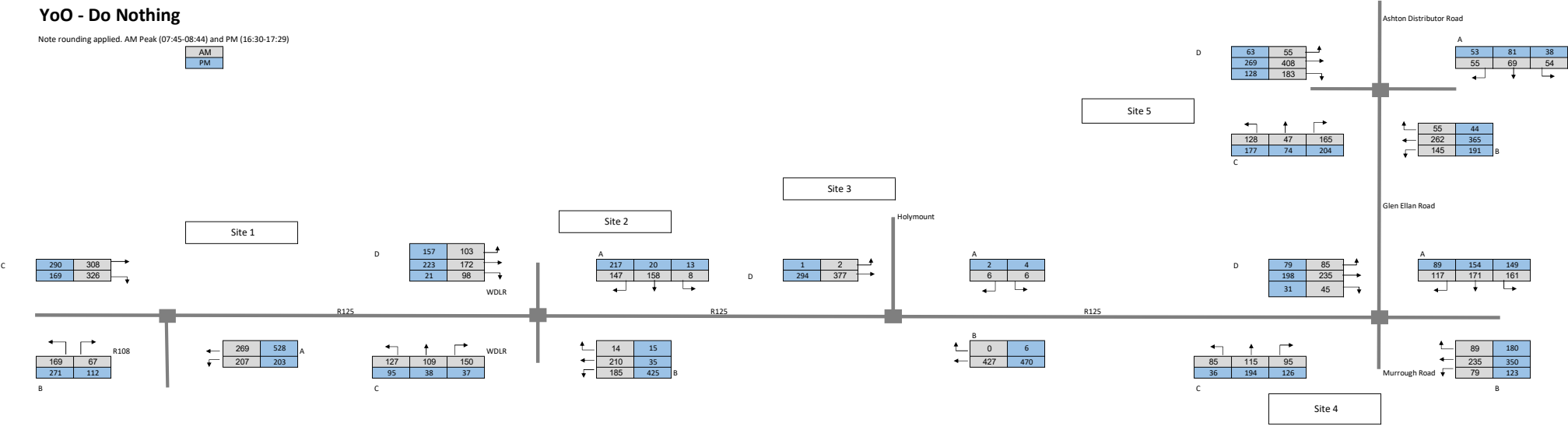


Appendix H Do Nothing Traffic Volumes

YoO - Do Nothing

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

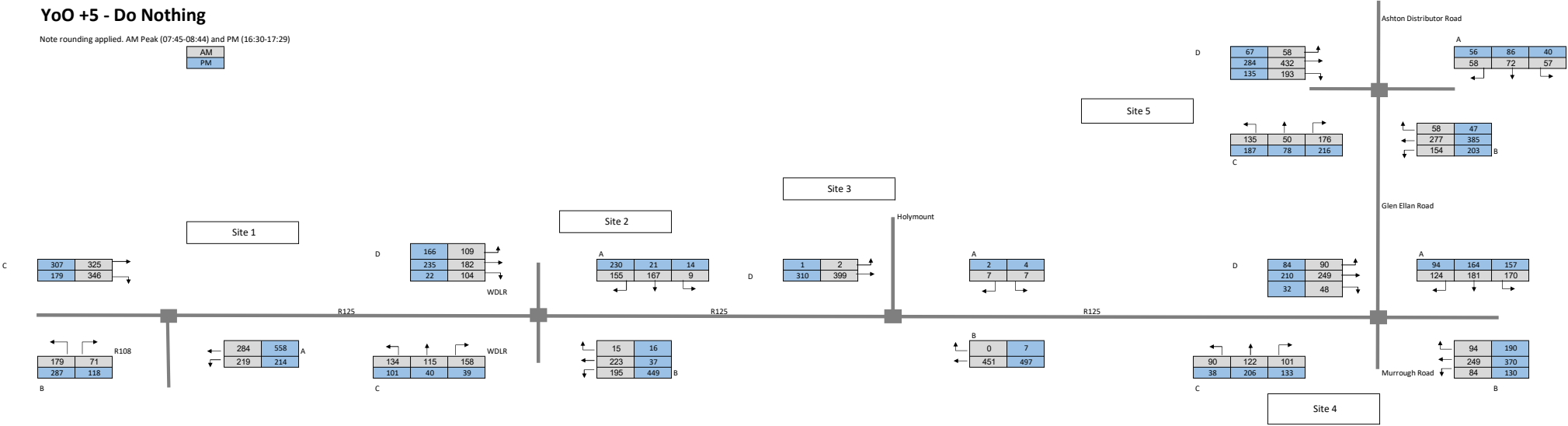
AM
PM



YoO +5 - Do Nothing

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

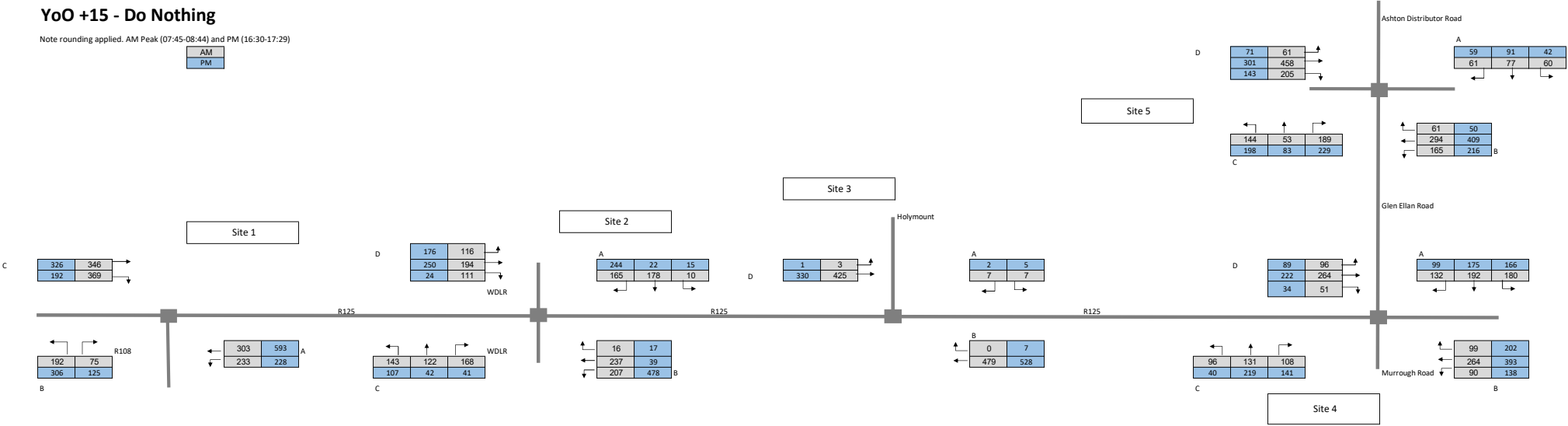
AM
PM



YoO +15 - Do Nothing

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

AM
PM

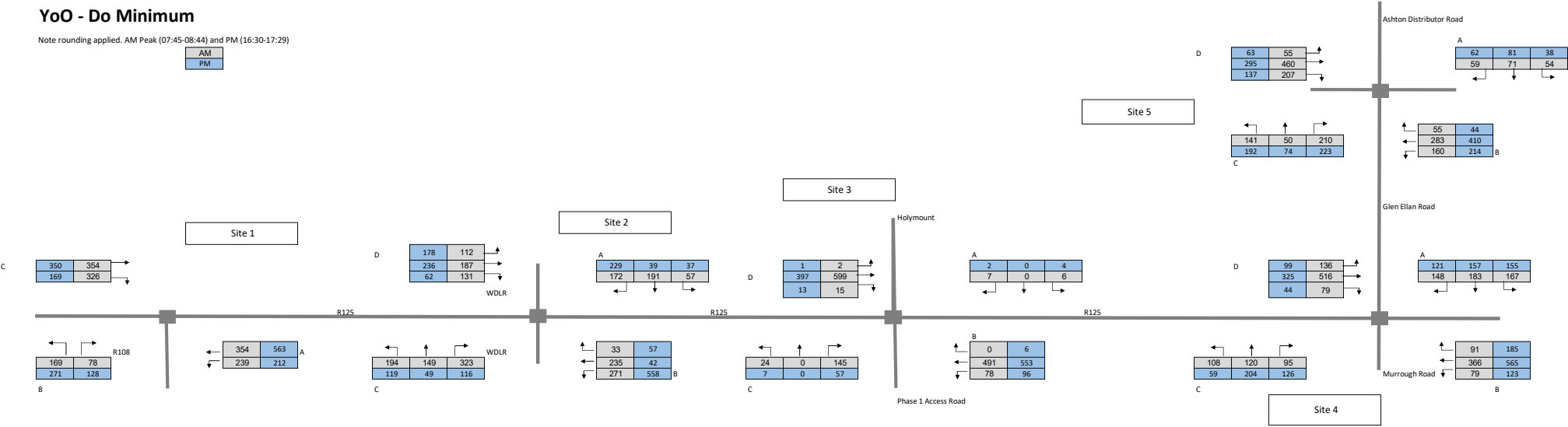


Appendix I Do Minimum Traffic Volumes

YoO - Do Minimum

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

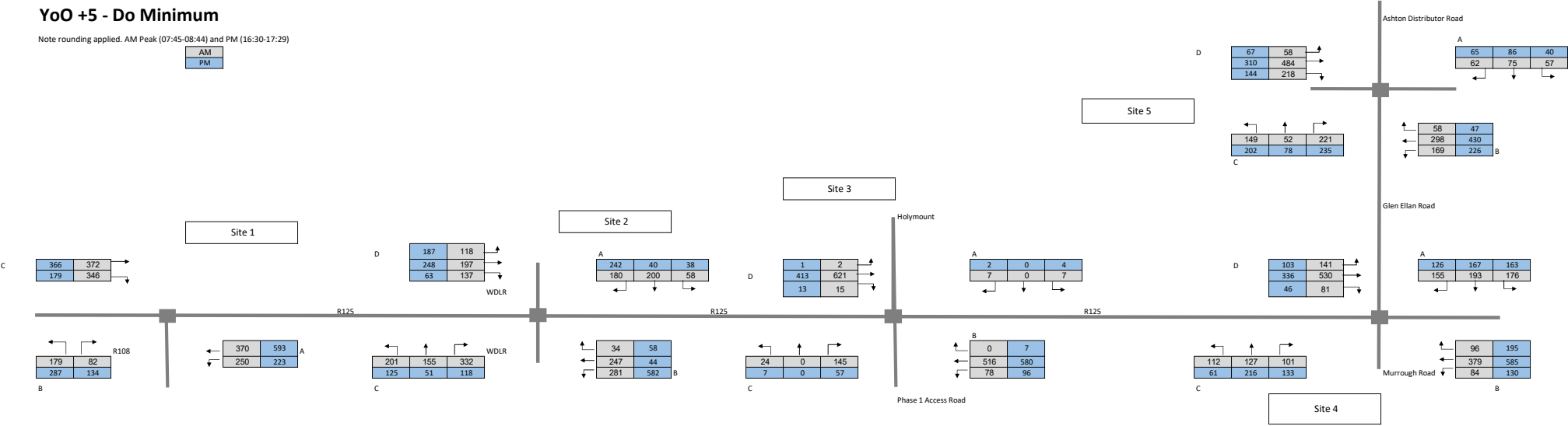
AM
PM



YoO +5 - Do Minimum

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

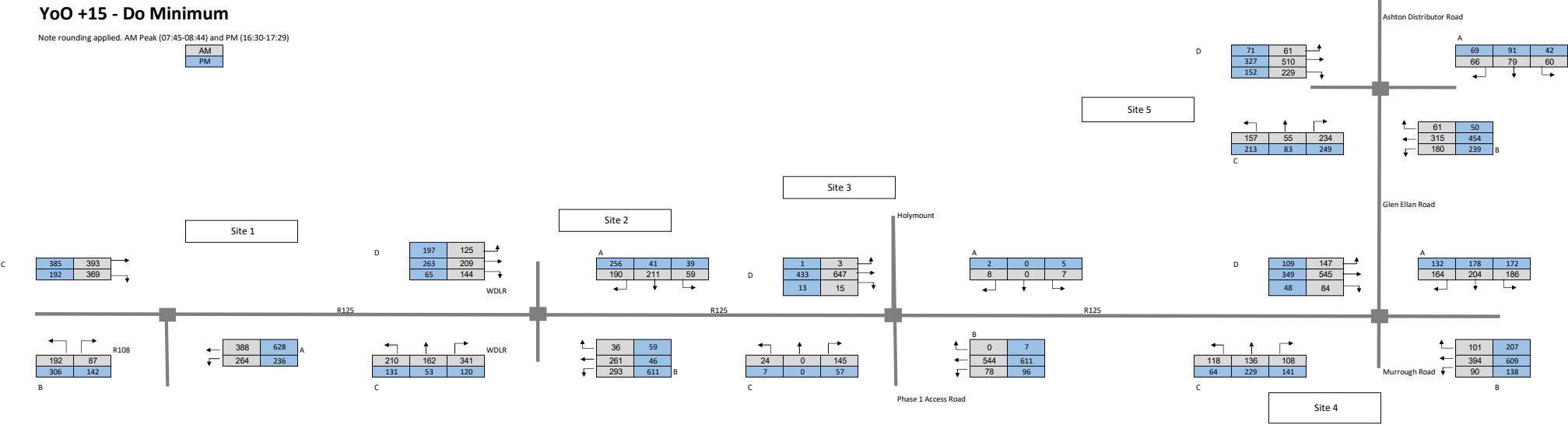
AM
PM



YoO +15 - Do Minimum

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

AM
PM

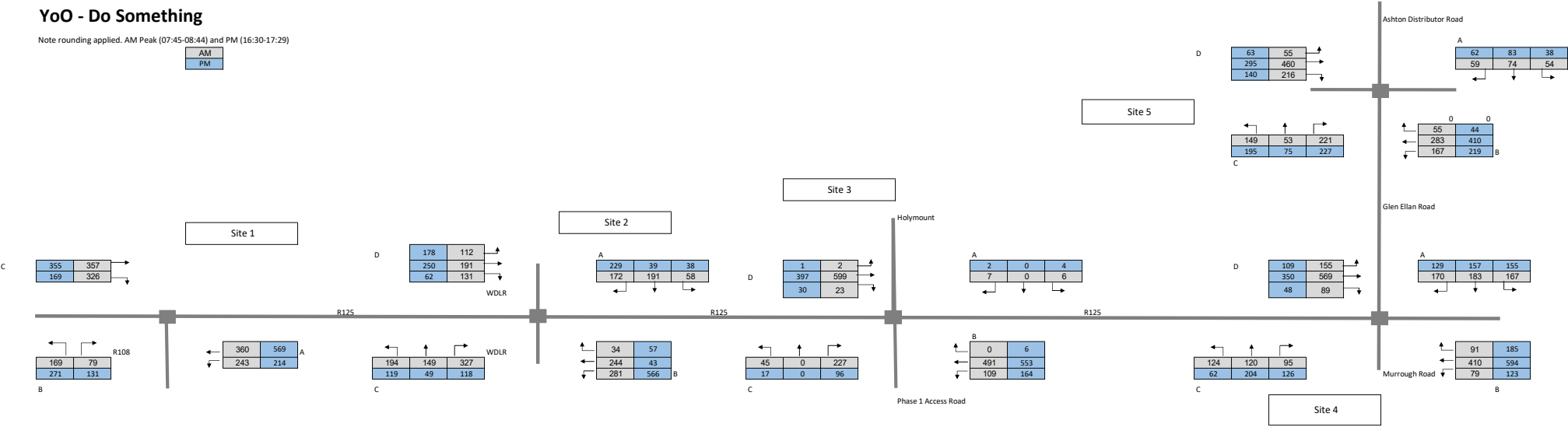


Appendix J Do Something Traffic Volumes

YoO - Do Something

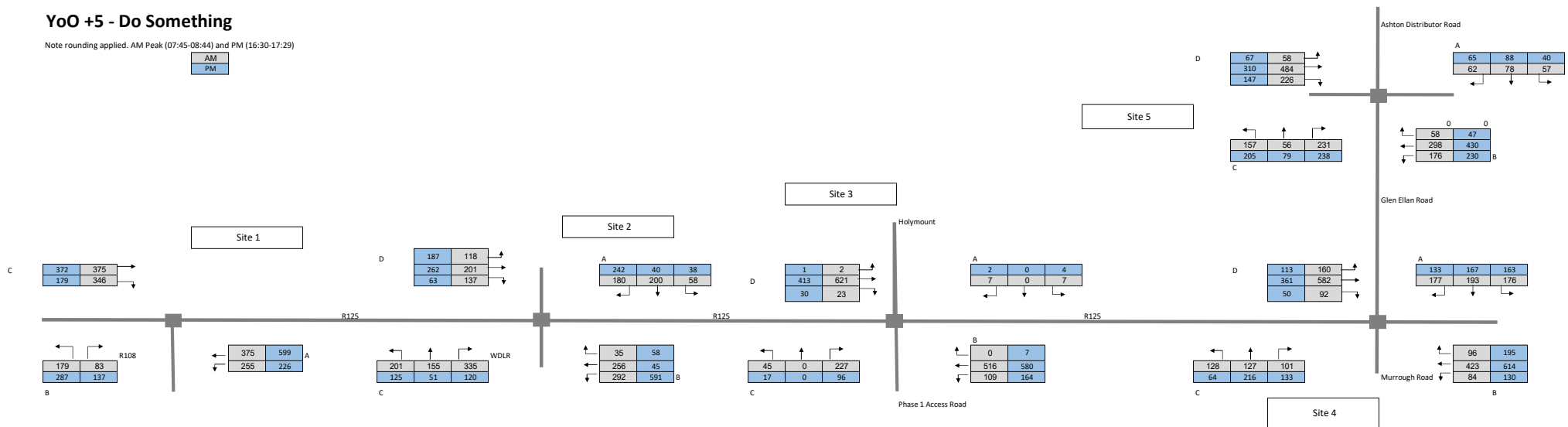
Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

AM
PM



Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

AM
PM



YoO +15 - Do Something

Note rounding applied. AM Peak (07:45-08:44) and PM (16:30-17:29)

AM
PM

