Santry Avenue LRD, Santry, Dublin 9

Traffic and Transport Assessment

230146-X-90-X-XXX-RP-DBFL-CE-0001

TRANSPORTATION

February 2024

DBFL CONSULTING ENGINEERS

Project Title:	**Santry Avenue LRD, Santry, Dublin 9**		
Document Title:	**Traffic and Transport Assessment**		
File Ref:	**230146-X-90-X-XXX-RP-DBFL-CE-0001**		
Status:	**P3 - Planning**	Rev:	**0**
	S - Issued		

Rev.	Date	Description	Prepared	Reviewed	Approved
0	29/02/24	Issued for Planning	Daniel Gill	Thomas Jennings	Thomas Jennings

Disclaimer

This document has been prepared for the exclusive use of our Client and unless otherwise agreed in writing with DBFL Consulting Engineers no other party may use, make use of or rely on the contents of this document. The document has been compiled using the resources agreed with the Client and in accordance with the agreed scope of work. DBFL Consulting Engineers accepts no responsibility or liability for any use that is made of this document other than for the purposes for which it was originally commissioned and prepared, including by any third party or use by others of opinions or data contained in this document. DBFL Consulting Engineers accepts no liability for any documents or information supplied by others and contained within this report. It is expressly stated that no independent verification of any documents or information supplied by others for this document has been made. DBFL Consulting Engineers has used reasonable skill, care and diligence in compiling this document and no warranty is provided as to the report's accuracy.

Copyright

The contents and format of this report are subject to copyright owned by DBFL Consulting Engineers unless that copyright has been legally assigned by us to another party or is used by DBFL Consulting Engineers under licence. This report may not be copied or used for any purpose other than the intended purpose.

Contents

Figures

Tables

1 INTRODUCTION

1.1 BACKGROUND

DBFL Consulting Engineers (DBFL) has been commissioned by Dwyer Nolan Developments to compile a Traffic and Transport Assessment (TTA) report in support of a planning application for proposed Large-scale Residential Development (LRD) on a site of c. 1.5 hectares, located at the junction of Santry Avenue and Swords Road, Santry, Dublin 9. The development site is bounded to the north by Santry Avenue, to the east by Swords Road, to the west by Santry Avenue Industrial Estate, and to the south by the permitted Santry Place development (granted under Dublin City Council Ref's. 2713/17 (as extended under Ref. 2713/17/X1), 2737/19 & 4549/22.

The proposed development provides for 321 no. apartments, comprised of 104 no. 1 bed, 198 no. 2 bed, & 19 no. 3 bed dwellings, in 4 no. seven to thirteen storey buildings, over basement level, with 3 no. retail units, a medical suite / GP Practice unit and community/arts & culture space (total c.1,483sq.m), all located at ground floor level, as well as a one storey residential amenity unit, facing onto Santry Avenue, located between Blocks A & D.

A basement level car park (c.5,470.8sq.m) will accommodate 161 no. car parking spaces and 664 no. bicycle parking spaces. Internal access to the basement level is provided from the cores of Blocks A, B, C, D, E, & F. External vehicular access to the basement level is from the south, between Blocks B & C. Additional 33 no. car parking spaces & 58 no. bicycle parking spaces will also be provided at surface level.

Vehicular access to the development will be via 2 no. existing / permitted access points: (i) on Santry Avenue in the north-west of the site (ii) off Swords Road in the south-east of the site, as permitted under the adjoining Santry Place development (Ref. 2713/17).

1.2 SCOPE OF ASSESSMENT

The purpose of this TTA is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of transport impact generated as a result of proposed development.

The scope of the assessment covers transport and sustainability Issues including access, pedestrian, cyclist and public transport connections. Recommendations contained within this

report are based on existing and proposed road layout plans, site visits, on site traffic observations and the review of junction vehicle turning count data.

During the development of this report, traffic surveys have been undertaken specifically for this assessment, with the objective of providing up to date background information relating to existing traffic movement patterns across the local road network surrounding the subject development site. This information has been supplemented with data obtained from site audits of the local road network, subsequently enabling the identification of existing local travel characteristics and an appreciation of the local receiving environment from a transportation perspective.

1.3 METHODOLOGY

Our approach to the study accords with policy and guidance both at a national and local level. Accordingly, the adopted methodology responds to best practices, current and emerging guidance, exemplified by a series of publications, all of which advocate this method of analysis. Key publications consulted include: -

- Traffic and Transport Assessment Guidelines (May 2014) TII;
- Traffic Management Guidelines' Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- Design Manual for Urban Roads and Streets (DMURS) (2019);
- Guidelines for Traffic Impact Assessments' The Institution of Highways and Transportation;
- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024); and
- Dublin City Development Plan 2022 - 2028;

Our methodology incorporated a number of key inter-related stages, including;

- **Site Audit:** A site audit was undertaken to quantify existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of accessibility to the site in terms of walking, cycling and public transport. An inventory of the local road network was also developed during this stage of the assessment.

- **Traffic Counts:** Junction turning traffic counts were undertaken and analysed with the objective of establishing local traffic characteristics in the immediate area of the proposed development.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of vehicle trips that could be generated by the proposed development.
- **Trip Distribution:** Based upon both the existing and future network characteristics, a distribution exercise has been undertaken to assign site generated vehicle trips across the local road network.
- **Network Analysis:** Further to quantifying the predicted impact of vehicle movements across the local road network for the adopted site access strategy more detailed computer simulations have been undertaken to assess the operational performance of key junction in the post development 2027, 2032 and 2042 development scenarios in accordance with TII best practice guidelines.

1.4 REPORT STRUCTURE

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

Chapter 2 of this report describes the existing conditions at the proposed development location and surrounding area, whilst **Chapter 3** provides a summary of the relevant transport policies that influence the design and appraisal of the subject proposal.

A description of the proposed development scheme from a transportation perspective is described in **Chapter 4** whilst **Chapter 5 and 6** outlines the vehicle trip generation and distribution exercise carried out and the adopted methodology for applying growth factors to establish design year network traffic flows and the predicted scale of impact upon the local road network.

The predicted demand on the public transport network that is created by the proposed development is discussed in **Chapter 7**.

The operational performance of key local junctions is assessed for the 2027 Opening Year and the 2032 (Opening Year +5 years) and the 2042 (Opening Year +15 years) Horizon Years are summarised within **Chapter 8**.

Further to the issuing of a Notice of LRD Opinion by Dublin City Council (DCC), **Chapter 9** provides a formal response to the transportation queries raised within the Opinion. The main conclusions and recommendations derived from the analysis are summarised in **Chapter 10**.

2 RECEIVING ENVIRONMENT AND PROPOSED DEVELOPMENT

2.1 SITE LOCATION

The proposed development is located to the south of R104 Santry Avenue Road corridor and west of R132 Swords Road in Santry (approximately 6.5km north of Dublin City Centre). The western boundaries are formed by existing commercial buildings and the southern boundary is formed by the recently completed Santry Plance (Phase 1) development. The general location of the subject site in relation to the surrounding road network is illustrated in **Figure 2.1** below whilst **Figure 2.2** indicatively shows the full extent of the subject site lands.

Figure 2.1 : Site Location (Source: Google Maps)

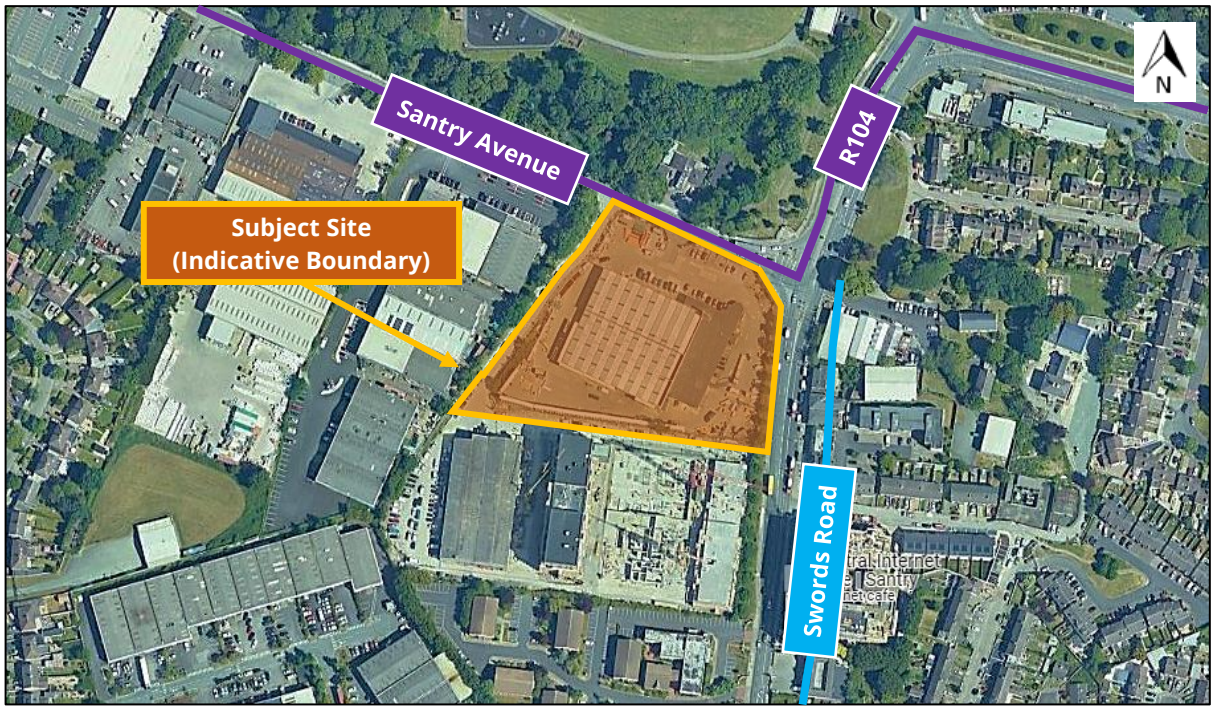


Figure 2.2: Indicative Site Boundary (Source: Google Maps)

2.2 LAND USE

The subject site is currently being used as a builders merchants (Chadwicks) comprising 4,196.8 m^2 of existing buildings and stores. The site has an approximate area of 1.49 hectares and currently benefits from two existing vehicle access/egress directly onto Santry Avenue (one of which is utilised solely by the on-site Chadwicks operation.

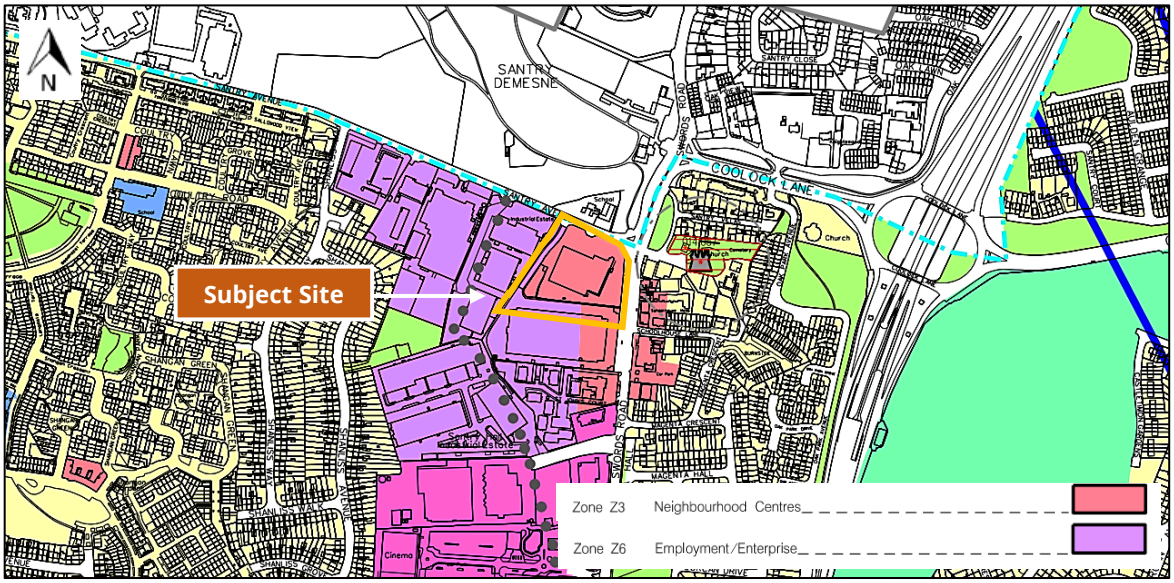


Figure 2.3: Land Use Zoning Objective (Source: Map B Dublin City Dev. Plan (2022 – 2028)

The site is located within Dublin City Council (DCC) development plan boundary and designated as both land use zoning Objective Z3 – ***"To provide for and improve neighbourhood facilities"*** and zoning objective Z6 – ***"To provide for the creation and protection of enterprise and facilitate opportunities for employment creation"***.

2.3 EXISTING TRANSPORT FACILITIES & SERVICES

2.3.1 Existing Road Network

The subject development site lies adjacent to the north-south aligned R132 Swords Road corridor and will post construction benefit from having site accesses onto both (i) the R132 Swords Road (Left In-Left Out) and (ii) the R104 Santry Avenue. Travelling northbound from the subject site, the R132 Swords Road continues towards Swords and Balbriggan to the north and also allows access to the M50/M1 motorway via Junction No. 2. Travelling southbound from the subject site along the R132 Swords Road access is provided to Whitehall, Drumcondra and southwards to Dublin City Centre via the N1 corridor. Travelling east along the R104 corridor, the R104 Santry Avenue joins the R132 Swords Road whereas travelling westwards it connects the site with Ballymun and Finglas as well as M50 via Junction 4 at Ballymun.

2.3.2 Pedestrian And Cycle Facilities

The R132 Swords Road is subject to a speed limit of 50kph with street lighting available on both sides of the road. In the vicinity of the subject site pedestrians can benefit from the provision of footways on both sides of the carriageway, in addition to the pedestrian crossing facilities provided as part of the traffic signal controls at the R132 Swords Rd / R104 Santry Avenue Junction (**Figure 2.5**).

Figure 2.4: Pedestrian Facilities along Swords Road, Facing South

The R104 Santry Avenue is subject to a speed limit of 50kph with street lights on one side of the road. Footpaths are provided on both sides of the road with signal-controlled pedestrian crossing (60m to the west of the existing Chadwicks Access) in close proximity of the subject site exiting entrance, in addition to the pedestrian crossing provided at Swords Road/Santry Avenue Junction.

Figure 2.5: Pedestrian Crossing at Swords Road/Santry Avenue Junction

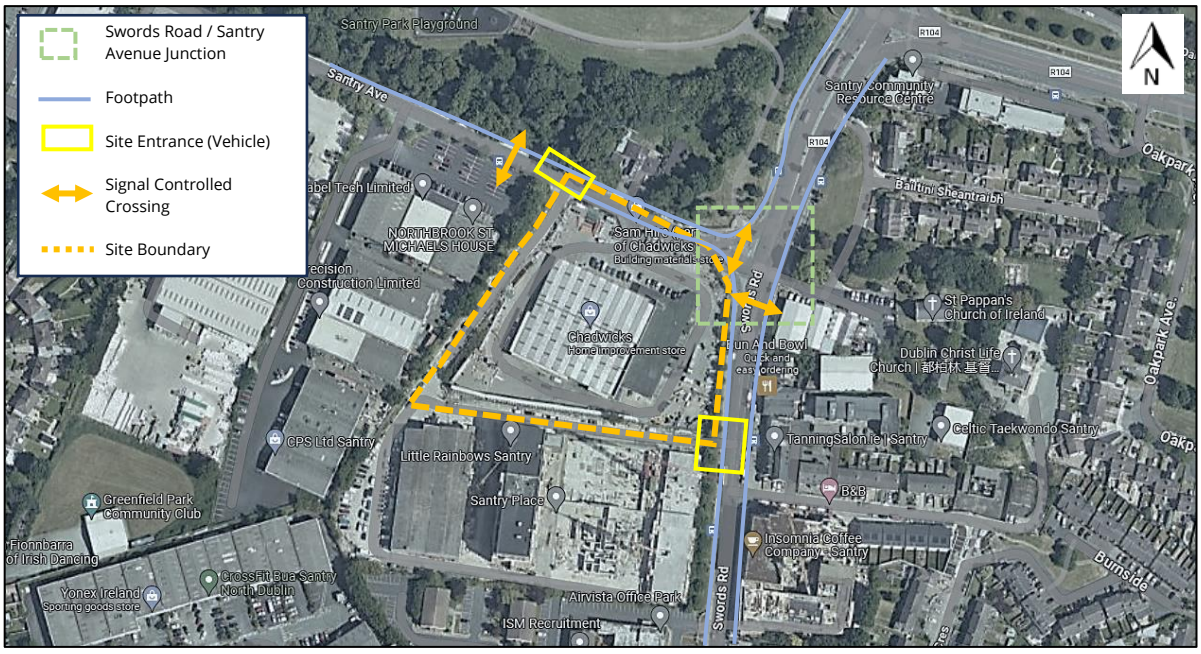


Figure 2.6: Exiting Pedestrian Facilities near vicinity of the Subject site

Cycle lanes are provided on both sides of R132 Swords Road corridor north of the Swords Road/ Santry Avenue signalised junction whereas no dedicated cycle facilities are currently provided towards the south of the junction along the R132 corridor. However, southbound

cyclists along the R132 Swords Road corridor can benefit from the use of a bus lane though, whilst northbound cyclists along this corridor must share the road carriageway with vehicular traffic.

2.3.3 Existing Public Transport

Dublin Bus currently operates six services in the vicinity of the subject site. These routes provide access to destinations such as Dublin Airport, Dublin City Centre, Swords and Balbriggan. An additional route between Finglas and Kilbarrack is operated by Go Ahead Ireland. **Table 2.1** summarises the current no. of buses per day operating on each route while **Figure 2.7** presents the location of the nearest bus stop to the site entrance.

Operator	Route	Route Description	No. of Services		
			Mon - Fri	Sat	Sun
Dublin Bus	16	Dublin Airport – Ballinteer (Kingston)	86	81	63
		Ballinteer (Kingston) – Dublin Airport	88	83	65
	33	Lower Abbey St – Balbriggan	22	14	12
		Balbriggan – Lower Abbey St	25	14	12
	41	Lower Abbey St – Swords Manor	61	58	48
		Swords Manor – Lower Abbey St	68	56	53
	41b	Lower Abbey St – Rolestown	5	4	3
		Rolestown – Lower Abbey St	4	4	2
	41c	Lower Abbey St – Swords Manor	43	42	28
		Swords Manor – Lower Abbey St	50	41	29
	41d	Lower Abbey St – Swords Business Park	2	-	-
		Swords Business Park – Lower Abbey St	2	-	-
Go Ahead	N6	Finglas to Kilbarrack	106	98	56
		Kilbarrack to Finglas	106	99	56

Table 2.1 Existing Bus Services by No. of Buses per Day (Source: Transport for Ireland)

Figure 2.7: Existing Bus Stops in the Vicinity of the Subject Site

2.4 SITE ACCESSIBILITY

2.4.1 Pedestrian Catchment

As illustrated in **Figure 2.8** pedestrians from the site benefit from footpaths along the R132 Swords Road and R104 Santry Road corridors, as well as routes through Santry Park. In relation to permeability, pedestrians experience severance from the M50 & N1 road corridors and poor connections and linkages between established low-density residential areas sandwiched between Santry and Ballymun.

Nevertheless, within the 10-minutes walking time catchment, pedestrians from the site are able to reach Omni Shopping Centre and Aldi. Within the 20-minute walking time catchment, pedestrians are able to access Ballymun centre, industrial estates in Northwood and Gulliver's

Retail Park to the north-west. Dublin City University (DCU), Beaumont Hospital and Clonshaugh Business & Technology Park can be accessed within the 20-30 minutes walking range.

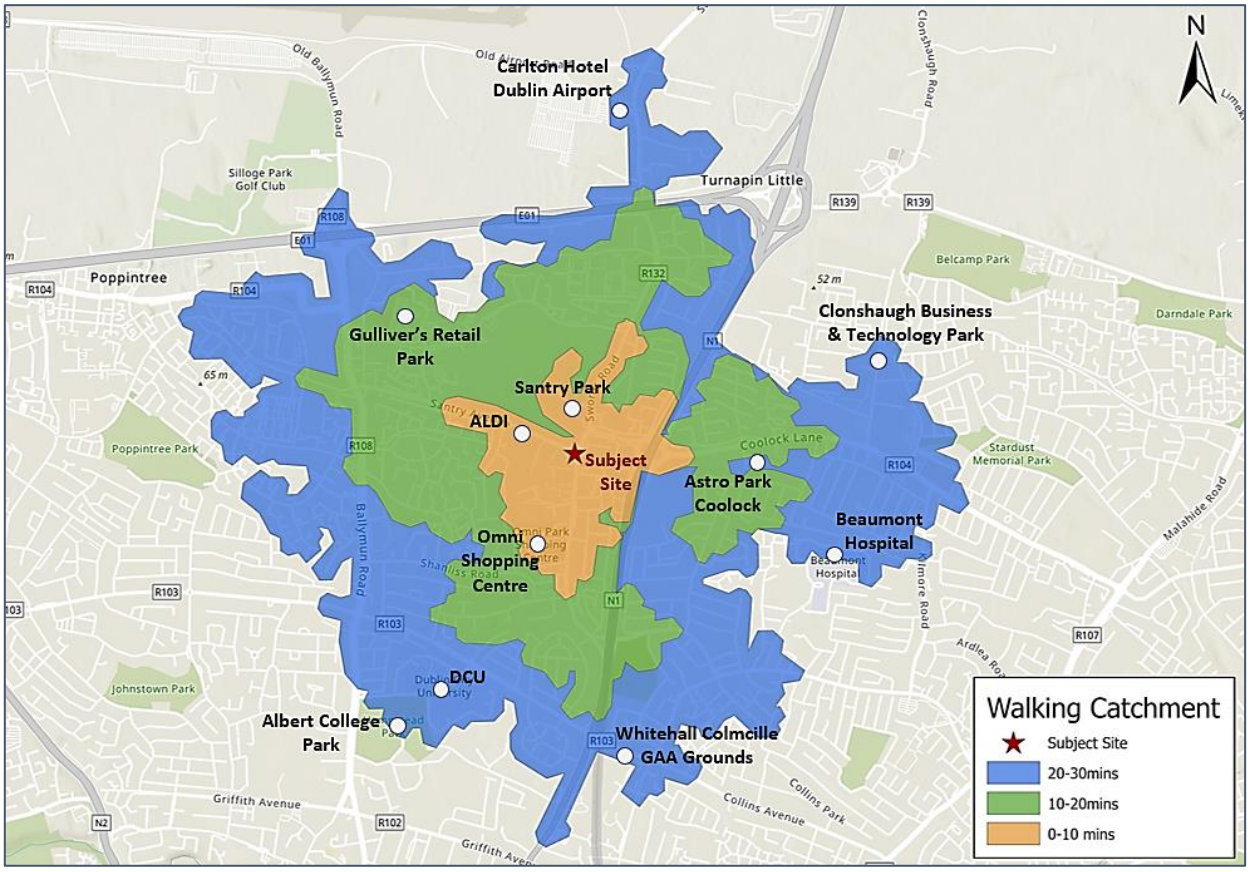


Figure 2.8: Pedestrian Accessibility- Walking Time from Site

2.4.2 Cycling Catchment

The site is very accessible by bicycle within a network of cyclable streets and dedicated cycle facilities in the vicinity of the site. The previous section outlines the surrounding bicycle environment relative to the subject site. **Figure 2.9** illustrates cycle travel time catchment areas reachable from the subject site.

Cyclists from the site can travel to Finglas, Dublin Airport, Swords, Donaghmede and most of Dublin City Centre within 30-minutes. Within a 45-minutes cycle time catchment, cyclists from the subject site can travel as far as Blanchardstown, Chapelizod, Terenure, Blackrock, Malahide and just short of Howth.

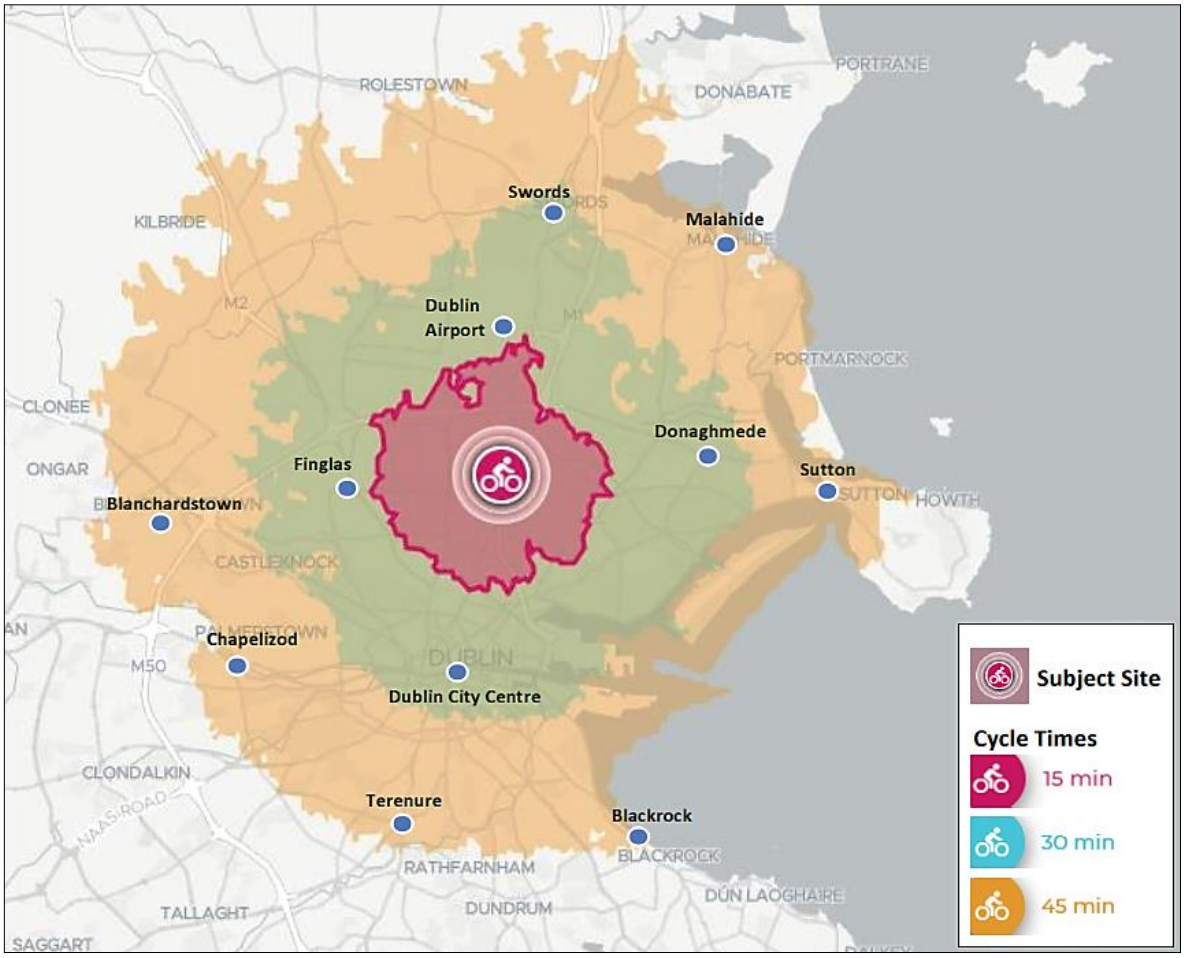
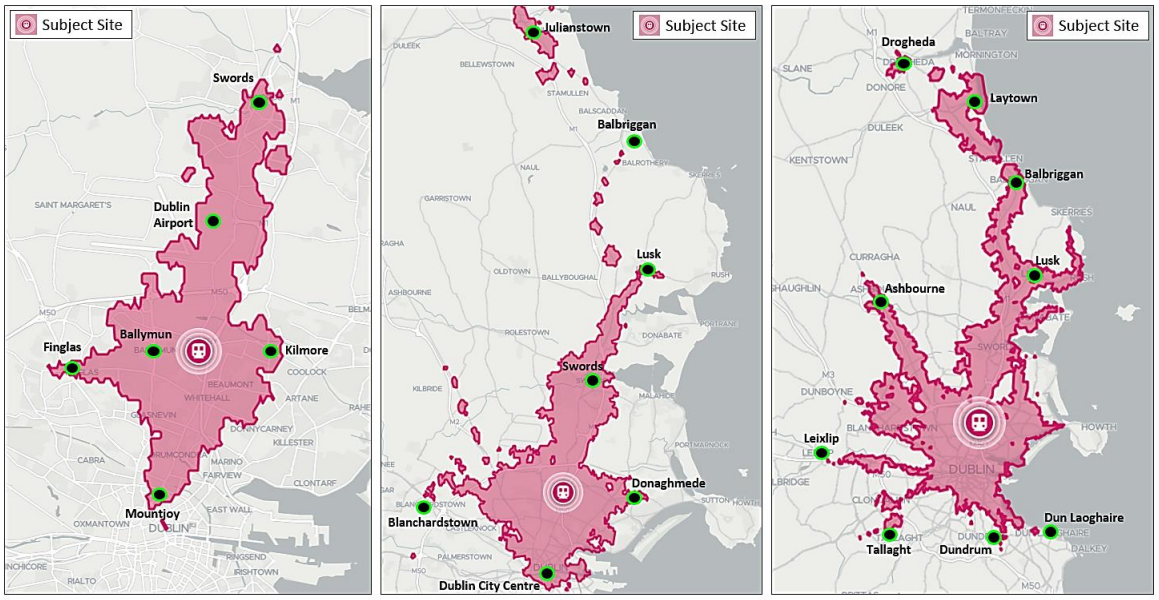


Figure 2.9: Bicycle Accessibility (Cycle Time from Site) (Source: TravelTime)

2.4.3 Public Transport Catchment

Regarding public transport accessibility, the subject development site benefits from a range of bus services in close proximity to the site as outlined in the previous section. In order to obtain realistic journey times, the following maps give total time travel time (incl. the walking time towards the chosen transport hub) during the AM peak time hours, in this case 08:00 on a Tuesday (Source: TravelTime platform).

Figure 2.10 illustrates analysis of public transport catchment areas from the site. Areas such as Swords, Dublin Airport, Ballymun, Finglas, Kilmore and the northern edge of Dublin City Centre are within a 30-minute transit and walking time catchment from the site. Catchments for transit and walking times within 45-minutes and 60-minutes from the site are also illustrated in **Figure 2.10**.



Transit and Walking Time (Within 30mins) from Site at 8am on Typical Tuesday

Transit and Walking Time (Within 45mins) from Site at 8am on Typical Tuesday

Transit and Walking Time (Within 60mins) from Site at 8am on Typical Tuesday

Figure 2.10: Public Transport Accessibility (Public Transit and Walking Time from Site) (Source: TravelTime)

2.5 PUBLIC TRANSPORT CAPACITY ASSESSMENT

2.5.1 Existing Public Transport Capacity

With the objective of establishing the available capacity on the local public transport network, Nationwide Data Collection Ltd, a specialist data collection firm, were commissioned to undertake surveys of the local bus routes. The public transport capacity surveys were undertaken between 07:00 – 10:00 (AM Peak Period) and 16:00 – 19:00 (PM Peak Period) at the following locations:

- Bus Stop 7847 – Santry Villas (Northbound)
- Bus Stop 7848 – Santry Villas (Southbound)
- Bus Stop 1624 – Schoolhouse Lane (Northbound)
- Bus Stop 1639 – Schoolhouse Lane (Southbound)

It is widely accepted in the industry that the periods of maximum demand generated upon the public transport networks on a typical weekday are focused upon the AM (0700-1000) and PM (1600-1900) periods as predominantly influenced by travel to work, school, and college at any given location. Accordingly, in reference to the baseline modal data and considering the journey times required to reach potential work, school, and college destinations by bus, the number of existing (February 2024) public transport services stopping at interchanges in close

proximity to the proposed development have been the focus of the public transport capacity analysis. The surveys were undertaken at four bus stops on Thursday 8th February 2024 along Swords Road. **Figure 2.11** shows the survey locations.

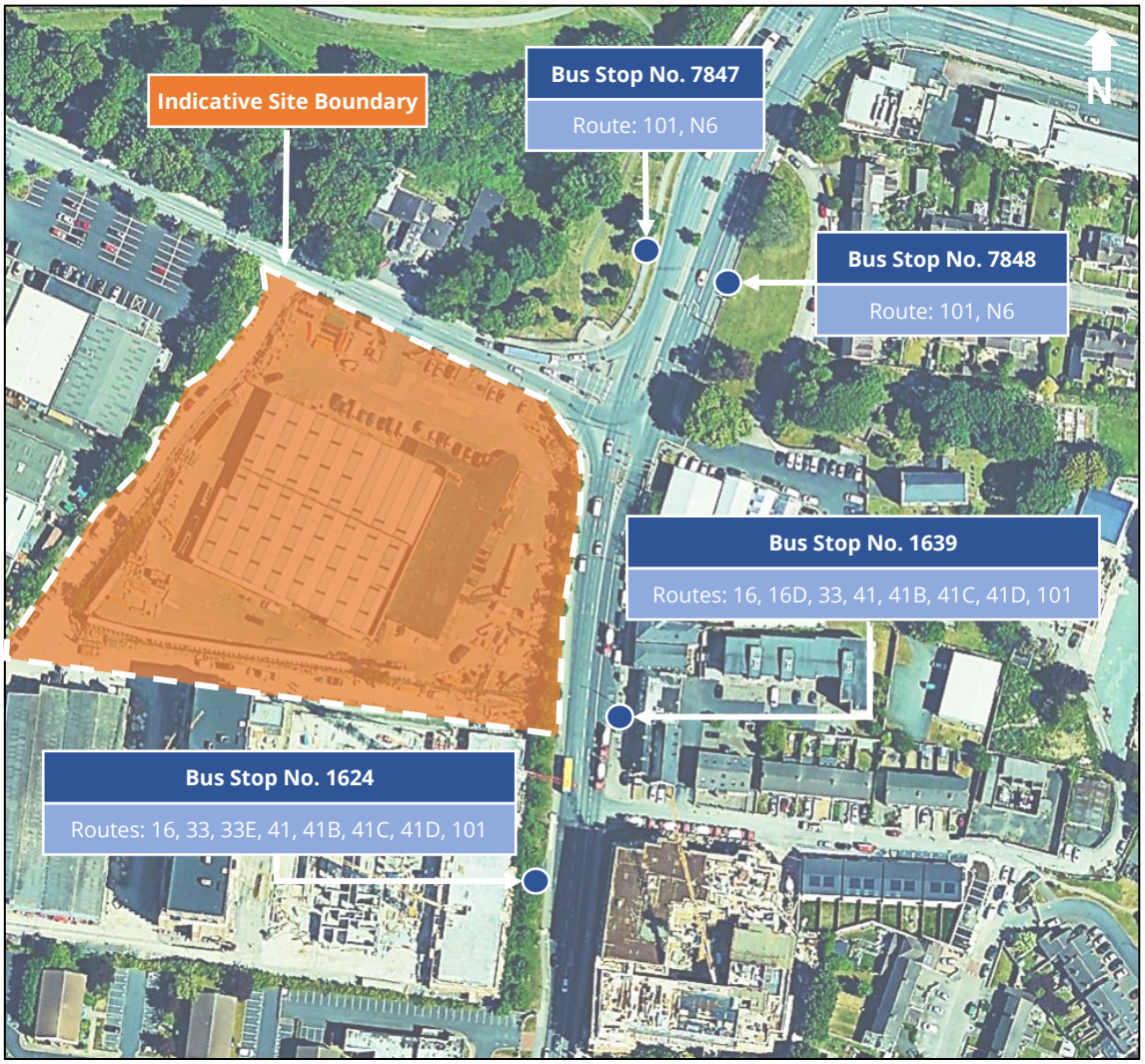


Figure 2.11: Public Transport Capacity Survey Locations

2.5.2 Public Transport Survey Methodology

The demand profile for public transport services, like road traffic, is quite seasonal in nature. The timing and basis for the survey undertaken was dictated by current public transport usage patterns. Furthermore:

- Demand for bus services, in general, is materially lower in the Summer and school holiday periods.
- Demand tends to be somewhat higher in the late Autumn and in the run up to the busy Christmas holiday. Surveying in the non-holiday weeks in the opening four or five

months of the year, and early Autumn, represent a reliable indication of base-level predevelopment expressed demand for transport.

- Demand also varies by day of the week, with traffic demand generally lower on Mondays and Fridays, with some exceptions. Public transport usage on Saturdays and Sundays (in particular) are materially lower than mid-week demand.
- Demand for travel varies throughout the standard weekday but the morning peak is shorter and has patronage levels that are higher than the corresponding evening peak flows.

It follows that in determining whether spare capacity is available to meet increasing demand from any development site it is best to undertake surveys and test the midweek, morning peaks outside of the summer period when schools are open. The survey methodology provided the following information:

- Location of Stop
- Bus Route Number
- Whether the Bus Passes by or Stops
- Number of Passengers Boarding
- Number of Passengers Alighting
- Occupancy Count on Arrival
- Occupancy Count on Departure
- Number of Passengers Remaining at Stop

2.5.3 Reserve Capacity of Existing Bus Services

The reserve capacity (Thursday 8th February 2024) for the bus services is detailed in **Table 2.2** for the three-hour AM Peak Period and **Table 2.3** for the three-hour PM Peak Period. The analysis of the survey data reveal that the existing bus network benefits from a reserve capacity of 72% in the AM Period and 76% in the PM Period.

Route No.	Description	AM Period (07:00 - 10:00)				
		Services	Capacity*	Occupancy at Departure	Reserve Capacity No. Passengers	Reserve Capacity %
16	Dublin Airport - Ballinteer (Kingston)	10	950	217	733	77%
	Ballinteer (Kingston) - Dublin Airport	7	665	116	549	83%
16D	Dublin Airport - Ballinteer (Kingston) (D Route)	5	475	242	233	49%
	Ballinteer (Kingston) - Dublin Airport (D Route)	0	0	0	0	-
33	Balbriggan - Lower Abbey Street	6	570	235	335	59%
	Lower Abbey Street - Balbriggan	2	190	44	146	77%
33E	Mourne View - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Mourne View	1	95	38	57	60%
41	Swords Manor - Lower Abbey Street	10	950	350	600	63%
	Lower Abbey Street - Swords Manor	8	760	204	556	73%
41B	Rolestown - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Rolestown	0	0	0	0	-
41C	Swords Manor - Lower Abbey Street (C Route)	9	855	417	438	51%
	Lower Abbey Street - Swords Manor (C Route)	7	665	129	536	81%
41D	Swords Business Park - Lower Abbey Street	1	95	18	77	81%
	Lower Abbey Street - Swords Business Park	2	190	71	119	63%
101	Drogheda - Dublin (Airport)	5	425	62	363	85%
	Dublin (Airport) - Drogheda	5	425	16	409	96%
N6	Finglas - Kilbarrack (Howth Junction)	12	1140	242	898	79%
	Kilbarrack (Howth Junction) - Finglas	12	1140	318	822	72%
Total		**102**	**9590**	**2719**	**6871**	**Avg = 72%**

Table 2.2 Existing Bus Service Utilisation – AM Period (07:00 – 10:00)

Route No.	Description	PM Period (16:00 - 19:00)				
		Services	Capacity	Occupancy at Departure	Reserve Capacity No. Passengers	Reserve Capacity %
16	Dublin Airport - Ballinteer (Kingston)	14	1330	398	932	70%
	Ballinteer (Kingston) - Dublin Airport	14	1330	191	1139	86%
16D	Dublin Airport - Ballinteer (Kingston) (D Route)	0	0	0	0	-
	Ballinteer (Kingston) - Dublin Airport (D Route)	0	0	0	0	-
33	Balbriggan - Lower Abbey Street	4	380	109	271	71%
	Lower Abbey Street - Balbriggan	7	665	251	414	62%
33E	Mourne View - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Mourne View	0	0	0	0	-
41	Swords Manor - Lower Abbey Street	9	855	196	659	77%
	Lower Abbey Street - Swords Manor	8	760	237	523	69%
41B	Rolestown - Lower Abbey Street	1	95	7	88	93%
	Lower Abbey Street - Rolestown	1	95	19	76	80%
41C	Swords Manor - Lower Abbey Street (C Route)	6	570	241	329	58%
	Lower Abbey Street - Swords Manor (C Route)	8	760	328	432	57%
41D	Swords Business Park - Lower Abbey Street	1	95	35	60	63%
	Lower Abbey Street - Swords Business Park	0	0	0	0	-
101	Drogheda - Dublin (Airport)	5	475	0	475	100%
	Dublin (Airport) - Drogheda	2	190	0	190	100%
N6	Finglas - Kilbarrack (Howth Junction)	13	1235	239	996	81%
	Kilbarrack (Howth Junction) - Finglas	14	1330	381	949	71%
Total		**107**	**10165**	**2632**	**7533**	**Avg = 76%**

Table 2.3 Existing Bus Service Utilisation – PM Period (16:00 – 19:00)

2.6 PROPOSED TRANSPORTATION INFRASTRUCTURE

2.6.1 Cycle Network Proposals

2022 Greater Dublin Area Cycle Network Plan

The subject site lies within the "Dublin North Central Sector" as defined by the 2022 Greater Dublin Area Cycle Network Plan. This sector "*extends between the Malahide Road to the east, the M50 motorway to the north, Finglas to the west and the North Circular Road to the South*." **Figure 2.12** below displays the proposed cycle routes within the vicinity of the subject site.

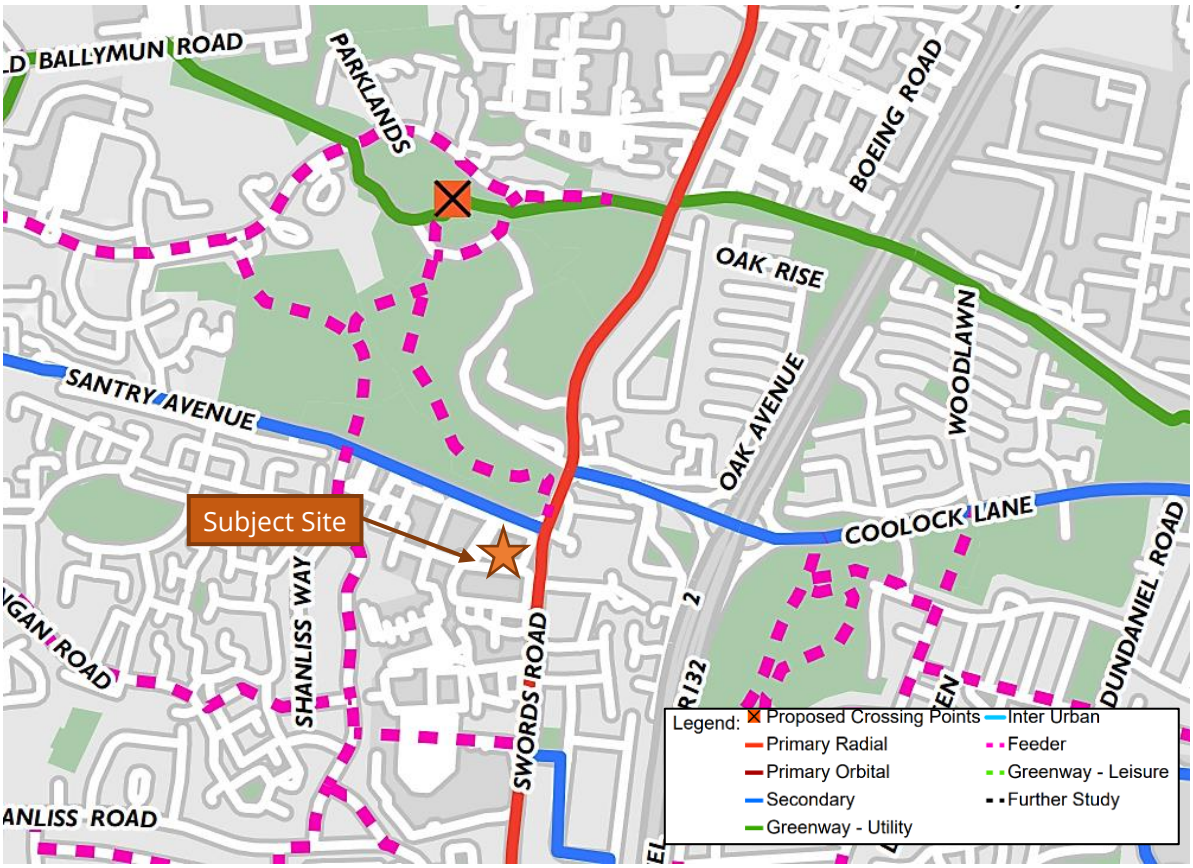


Figure 2.12: 2022 GDA Cycle Network Proposals (Source: GDA Cycle Network Plan)

2.6.2 Public Transport Proposals – BusConnects

In relation the subject site, following the BusConnects redesign of the bus network, the proposed development will be located in close proximity to the following new routes:

- **A Spine, Branch A2:** Airport – City Centre – Ballinteer - Dundrum
- **A Spine, Branch A4:** Swords – City Centre – Tallaght
- **D Spine, Branch D4:** Swords Road – City Centre – Clondalkin

- **Orbital Route N6:** Finglas – Santry – Coolock – Donaghmede
- **Radial Route 22:** Glen Ellan road – River Valley – City Centre

A summary of the frequency at which these routes operate is presented below in **Table 2.4**.

Route No.	Description	Frequency		
		Mon - Fri	Sat	Sun
A2	Airport – City Centre – Ballinteer - Dundrum	12-15	15-20	20-30
A4	Swords – City Centre – Tallaght	12-15	15-20	20-30
D4	Swords Road – City Centre – Clondalkin	30	30-40	40-60
N6	Finglas – Santry – Coolock – Donaghmede	10	10-15	15-20
22	Glen Ellan road – River Valley – City Centre	15	15-20	20-30

Table 2.4 Proposed BusConnects Service Frequency (In minutes)

Figure 2.13 illustrates the potential future bus service provision in the vicinity of the subject site as detailed within the BusConnects network redesign.

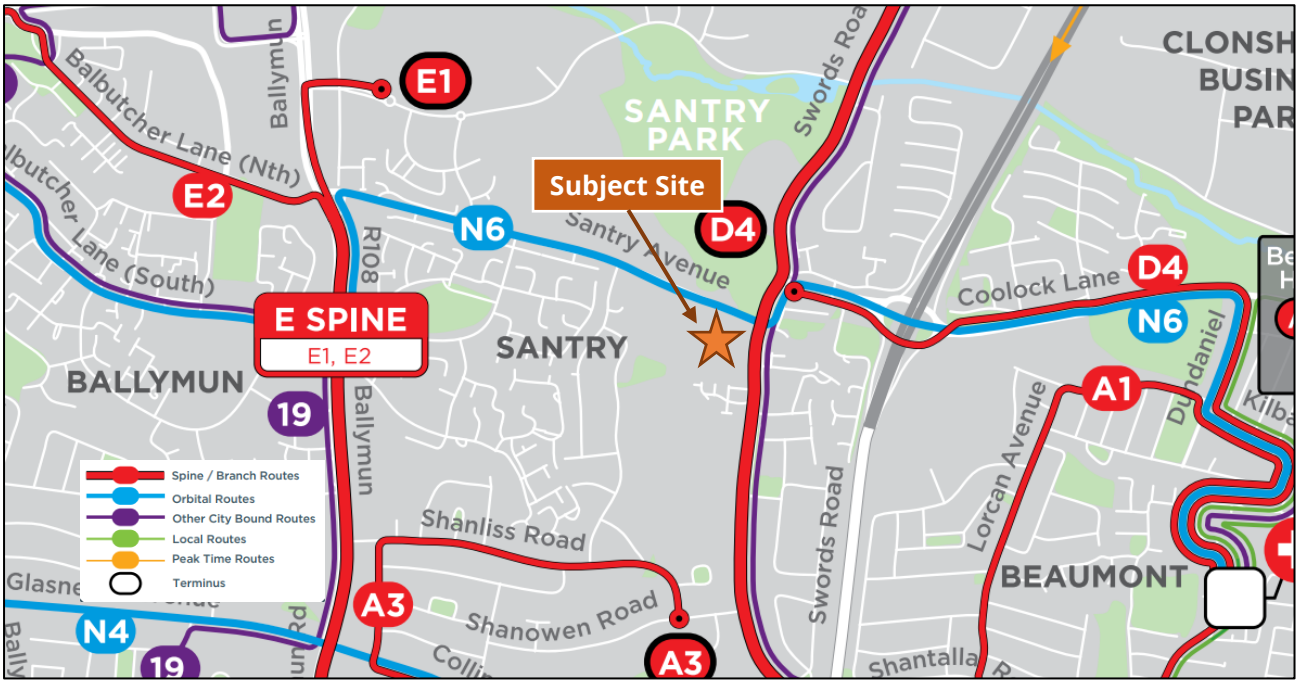


Figure 2.13 Proposed Bus Network (Source: BusConnects)

Responding to the number of routes and the frequency of these same bus services operating along the northern and eastern site frontages the subject site would be classified as an "Urban Neighbourhood" by the accessibility characteristics defined within the *Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities* (2024).

In relation to the subject site, the proposed development lies immediately adjacent to Swords to City Centre Core Bus Corridor (CBC) Scheme as illustrated in **Figure 2.14**. The corridor will commence south of Swords at the Pinnock Hill Junction, travelling in a southerly direction along the R132 Swords Road past Airside Retail Park, Dublin Airport and Santry Park. The route will continue on the R132 past Santry Demesne, where the Swords Road joins the R104 at Coolock Lane. The route will continue on the R132 in a southerly direction through Santry village. It will continue along the Swords Road past Whitehall to Griffith Avenue. The route will follow Drumcondra Road Upper past the DCU St Patrick's Campus to the river Tolka. It will continue through Drumcondra, on Drumcondra Road Lower to Binns Bridge on the Royal Canal. From there it will continue on Dorset Street Lower as far as Eccles Street, from where it will continue on Dorset Street Upper to North Frederick Street. The Statutory Planning Application for the Swords to City Centre Core Bus Corridor Scheme has been submitted to An Bord Pleanála (Pl. Ref. ABP-317121-23). The case is due to be decided by 22nd March 2024.

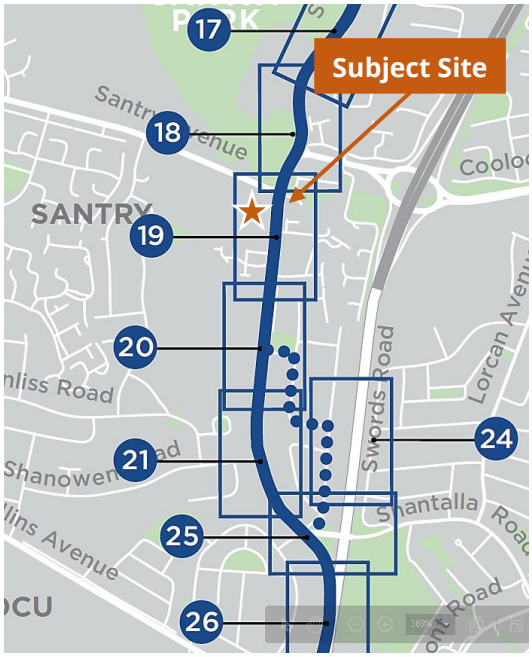


Figure 2.14: Swords to City Centre Core Bus Corridor Scheme

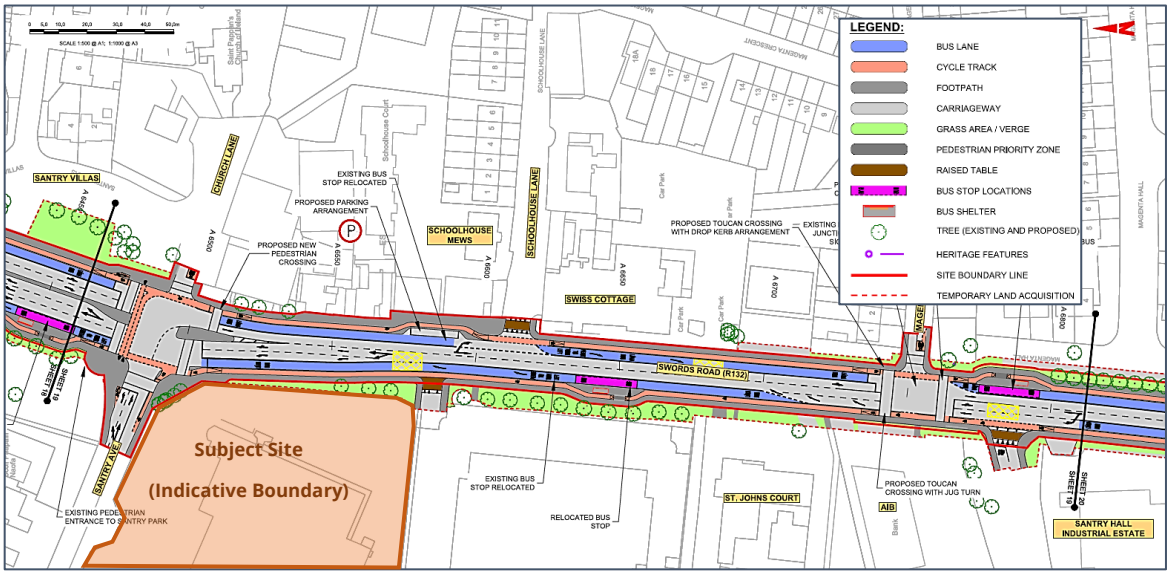


Figure 2.15: Swords to City Centre Core Bus Corridor Scheme (Source: BusConnects)

Figure 2.15 above is an extract of Sheet 19 of the BusConnects Swords-City Centre Corridor's general arrangement illustrates that the site does not cause any hindrance to the proposed corridor (Ref. DBFL Drawing No. 230146-X-90-X-DTM-DR-DBFL-CE-1401). It also shows improved pedestrian and cycle facilities as well as new bus stop that will be provided adjacent to the proposed site entrance along Swords Road (as delivered by the neighbouring permitted / completed scheme Ref. 2713/17). The subject site will benefit from enhanced levels of accessibility (being classified as an 'Urban neighbourhood') and mobility offered by NTA BusConnects proposals. BusConnects will also offer improved cycle and walking facilities surrounding the site in addition to the efficient and high frequency bus service and connectivity.

2.6.3 Public Transport Proposals – MetroLink

The MetroLink project is the proposed North-South urban high-capacity rail service that will operate between Swords and Dublin City Centre while serving Dublin Airport. MetroLink will allow for journey times of 25 minutes between Swords and the City Centre with the capacity to carry up to 20,000 passengers per direction per hour. This capacity will be delivered by running up to 30 fully automated driverless trains per hour. The subject site is situated approximately within 1.8km walking distance from the proposed Northwood and Ballymun Stations. **Figure 2.16** below highlights the proximity of the subject site to these future metro stations.

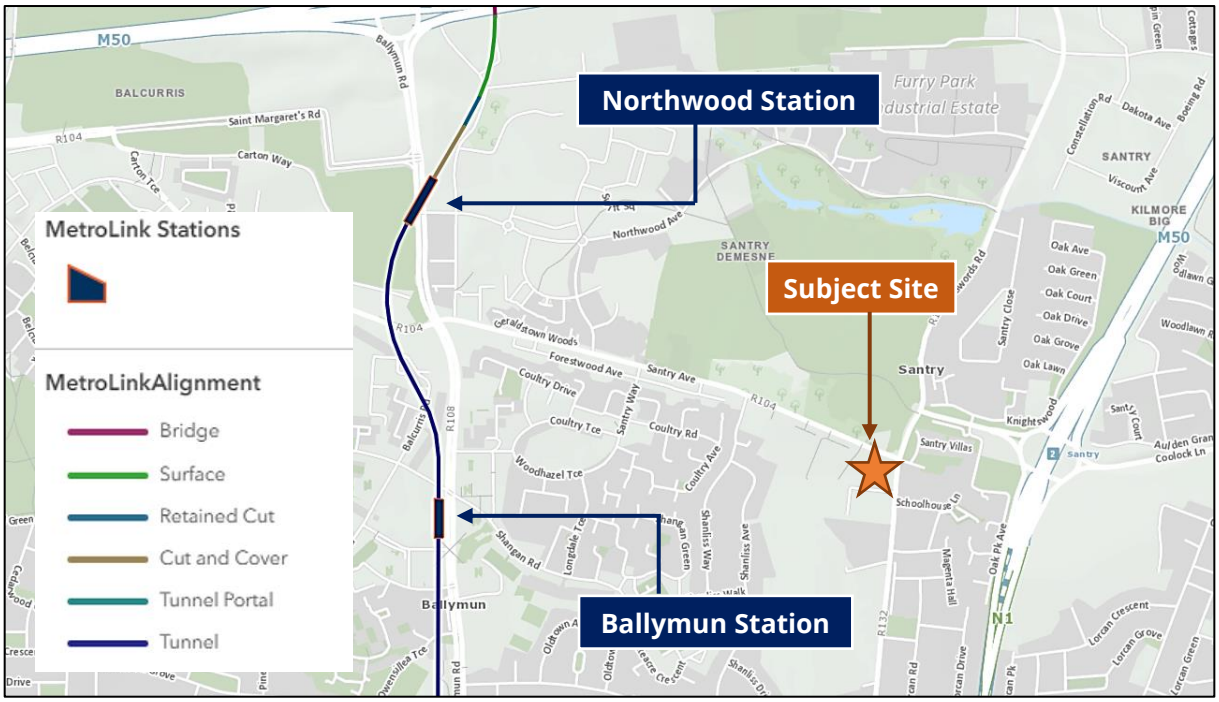


Figure 2.16 Proposed Future Metro Stations

As of February 2023, the proposal is currently progressing through An Bord Pleanála's oral hearing which will scheduled to conclude on the 28th of March 2024.

2.7 LOCAL AMENITIES

The proposed development site is very well placed in terms of the availability of local amenities. These include the large retail outlet Omni Shopping Centre which is located approximately 450m south of the subject development site. Other amenities include the Northwood Demesne located to the north west of the subject site, approximately 1.5km distance. Northwood incorporates Santry Park, Industrial Estates and Retail Parks.

In addition to the Dublin City University campus being located within 1.6km from the subject site, there are a number of schools accessible within 3km including Virgin Mary Primary School, Trinity Comprehensive Secondary School, Scoil an Tseachtar Laoch Primary School, Our lady of Victories Boys National School, and Holy Child Boys National School. Furthermore, the subject site benefits from good access to leisure facilities such as public parks, GAA Clubs and Fitness Clubs. Beaumont Hospital is also within approximately 3km.

Figure 2.17 below shows indicatively the subject site's location in relation to the aforementioned local amenities.

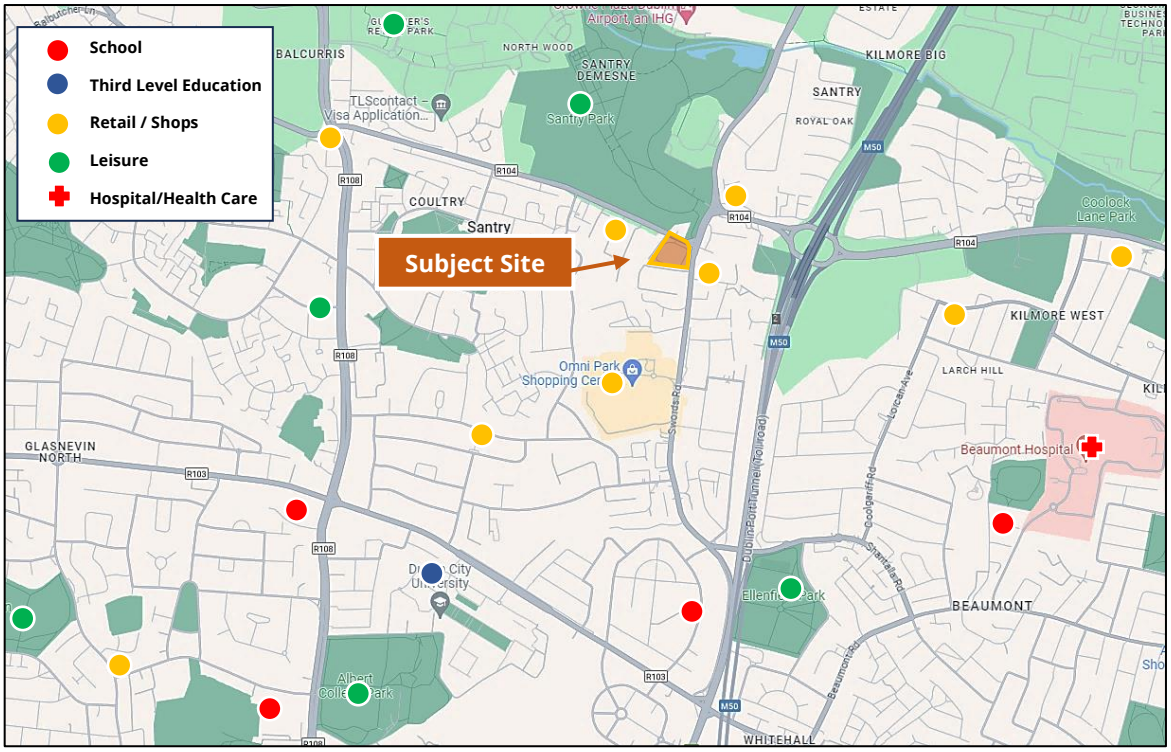


Figure 2.17: Subject Site Local Amenities

2.8 CAR OWNERSHIP COMPARISON & USAGE

The existing baseline demand for car parking within the surrounding residential areas of the proposed development site at Santry Avenue have been evaluated using 2022 Central Statistics Office (CSO) data and 2022 CSO SAPMAP (Small Area Population map). The 'Apartments' within the 9 small areas across the immediate vicinity of the proposed development site are included to establish baseline travel patterns and car ownership levels. **Figure 2.18** below illustrates the areas selected for this analysis.

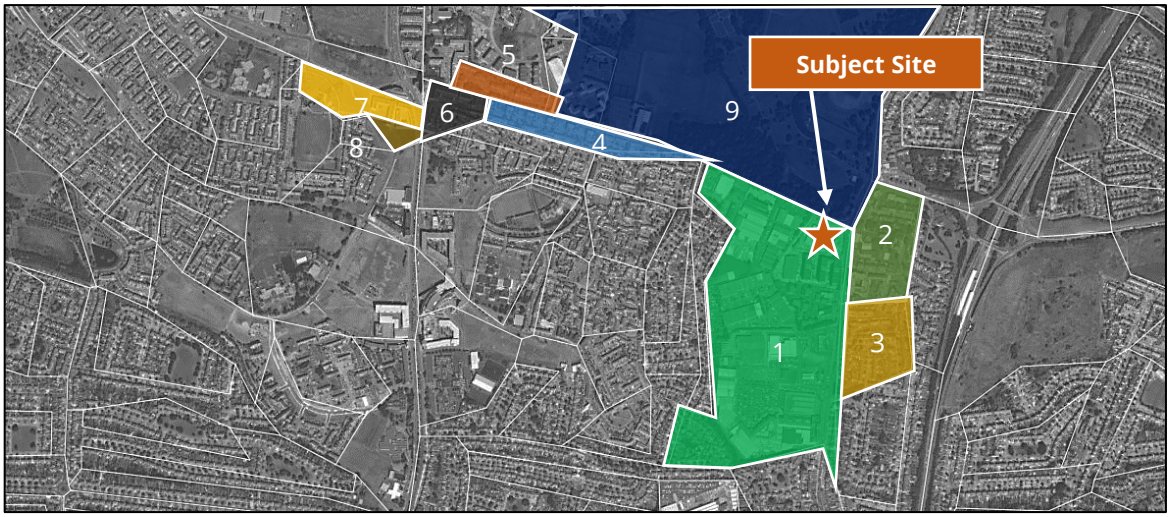


Figure 2.18: Apartment Areas of Interest for Trend Analysis (Source: 2022 SAPMAP)

A total of 1,171 residential units which include 930 apartments and 241 houses, are included in this assessment. The 2022 CSO data for households with no car are presented in **Table 2.5**.

Small Area	No. Apts	No. Houses	No. Households with No Car	% of Households with No Car	Equivalent Rate of Parking Required (Space/Unit)
1	167	61	76	33%	0.67
2	44	80	37	30%	0.70
3	102	19	59	49%	0.51
4	64	73	56	41%	0.59
5	103	0	27	26%	0.74
6	110	4	28	25%	0.75
7	120	0	40	33%	0.67
8	76	0	37	49%	0.51
9	144	4	34	23%	0.77
				Average	**0.64 (64%)**

Table 2.5: 2022 CSO Car Ownership

The residential settlements / areas in Figure 2.18 were selected due to their proximity to the subject site and comparable unit types and as such best represent a worst case representation of the proposed development's future travel trends as car parking is not restricted at these locations.

It is evident from **Table 2.5** that the level of households that do not own a car within the assessment area near the vicinity of subject site varies between as low as 23% in Area 9 to as high as 49% in Area 3 and Area 8. The average level of car ownership within these locations is 0.64 spaces per unit.

Small Area	No. Commuters	% Households with No Car	No. Commuters that Drive	% Commuters that Drive
1	442	33%	75	17%
2	230	30%	60	26%
3	248	49%	37	15%
4	253	41%	40	16%
5	190	26%	39	21%
6	208	25%	54	26%
7	250	33%	37	15%
8	154	49%	17	11%
9	427	23%	77	18%
				18%

Table 2.6: 2022 CSO Data – Percentage of Commuters that use their Vehicle

It should also be considered that whilst many households own a car, they may not avail of their car for commuting purposes and may use their vehicle infrequently. Using a vehicle for commuting purposes could also be hindered by a commuter's destination, for example, does their place of work have restricted car parking allocation in force. Therefore, in order to assess the level of daily use for commuters who drive their vehicle to work, the 2022 CSO data was again reviewed for the modal split for people travelling to Work, School or College. This was assessed for the same Census Areas as previously discussed. The results of this assessment are detailed in **Table 2.6** above.

The assessment outlines that whilst level of car ownership within the areas assessed is an average of 64%, the percentage of commuters that use their vehicle to drive to work, college or school is lower at an average of 18%. This highlights that although commuters may own vehicles within this area, a high proportion of them avail of other, more sustainable, modes of travel for commuting purposes.

3 POLICY FRAMEWORK

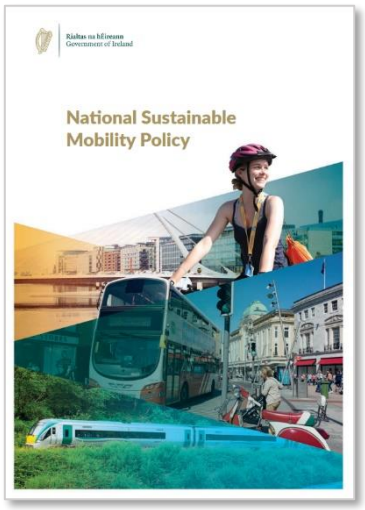
3.1 Development Policy

In the context of transportation, the subject site policy framework is influenced by the following key documentations. A common theme through each of these key documents is the emphasis placed upon the importance of travel demand management, with many identifying the need to implement mobility management plans with the objective of promoting sustainable travel patterns. These documents include;

- National Sustainable Mobility Policy Action Plan 2022-2025
- Greater Dublin Area Transport Strategy 2022-2042
- Design Manual for Urban Roads and Streets (DMURS) (2019)
- Sustainable Residential Development and Compact Settlements (2024)
- Dublin City Council Development Plan 2022-2028

3.1.1 National Sustainable Mobility Policy

The National Sustainable Mobility Policy was published in April 2022 by the Department of Transport and replaces Smarter Travel (2009). The overall aim of the Policy is to "set out a strategic framework for 2030 for active travel and public transport to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade".



The Policy is a direct response to the fact that continued growth in demand for road transport is not sustainable due to the resulting adverse impacts of increasing congestion levels, localised air pollution, contribution to global warming and the additional negative impacts to health through promoting increasingly sedentary lifestyles. The following 3 key Policy areas and 10 goals form the basis of the National Sustainable Mobility Policy:

Safe and Green Mobility

- Improve mobility safety
- Decarbonise public transport
- Expand availability of sustainable mobility in metropolitan areas

- Expand availability of sustainable mobility in regional and rural areas
- Encourage people to choose sustainable mobility over the private car

People Focuses Mobility

- Take a whole journey approach to mobility, promoting inclusive access for all
- Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model
- Promote sustainable mobility through research and citizen engagement

Better Integrated Mobility

- Better integrate land use and transport planning at all levels
- Promote smart and integrated mobility through innovative technologies and development of appropriate regulation

The policy is accompanied by an Action Plan with a total 91 actions organised by goal to be completed by 2025. Each action has been assigned to a specific government department or body with the hope of creating accountability for their implementation. The success of the policy will be measured using an annual National Household Travel Survey administered by the National Transport Authority.

As part of this Policy, the Department of Transport has also published the National Sustainable Mobility Policy Action Plan 2022-2025. This documentation aims to improve and expand sustainable mobility options by providing safe, green, accessible and efficient alternatives to car journeys. Demand management and behavioural changes measures have been included to manage daily travel demand more efficiently to reduce the journeys taken by private car. Action plans include;

- Continue to protect and renew road infrastructure for all road users including sustainable mobility users.
- Transition Dublin Metropolitan PSO bus services to low/zero emission bus fleet.
- Develop pedestrian enhancement plans.
- Expand the operation of bike share schemes (including electric bikes).
- Deliver additional cycling infrastructure projects.
- Commence delivery of BusConnects network redesign.
- Ensure all transport operators are contractually obliged to put in place operational procedures to assist people with mobility difficulties.

3.1.2 Greater Dublin Area Transport Strategy 2022-2042

The Transport Strategy for the Greater Dublin Area 2022-2042 is a document compiled by the National Transport Authority which sets out the Strategic Transport Plan for the Greater Dublin Area for the period up to 2042. This sets out an integrated long-term strategy for the area and includes new public transport proposals such as DART and Luas expansion, as well as a new Metro route.

This document will influence transport planning across the region until 2042 and thereby underpins all transportation strategies, traffic management schemes and development plans prepared by Dún Laoghaire–Rathdown County Council during this timeframe. Four primary objectives have been identified as part of the Greater Dublin Area Transport Strategy 2022-2042. These are:

- An Enhanced Natural and Built Environment - To create a better environment and meet our environmental obligations by transitioning to a clean, low emission transport system, increasing walking, cycling and public transport use, and reducing car dependency.
- Connected Communities and a Better Quality of Life – To enhance the health and quality of life of our society by improving connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for walking and cycling.
- A Strong Sustainable Economy – To support sustainable economic activity and growth by improving the opportunity for people to travel for work or business where and when they need to and facilitating the efficient movement of goods.
- An Inclusive Transport System – To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.

The Strategy sets out a clear hierarchy of transport users, commencing with the sustainable modes of travel such as walking, cycling and public transport users at the very top of the hierarchy. The Strategy adopts the general principle that these users should have their safety and convenience needs considered first and that the hierarchy is applied where a large share of travel is (or could be) made by walking, cycling and public transport.

In addition to guiding the development of specific Strategy measures, the NTA sets out the road user hierarchy, which is deemed as a fundamental input into the Transport Strategy: *'The NTA, in the decision-making process around the design, planning and funding of transport schemes in the GDA, will be guided by the priority afforded to each mode in the Road User Hierarchy as set out in the Transport Strategy.'*

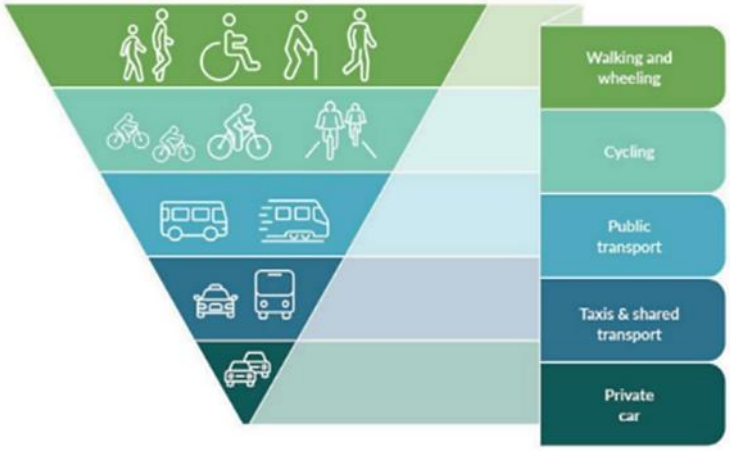
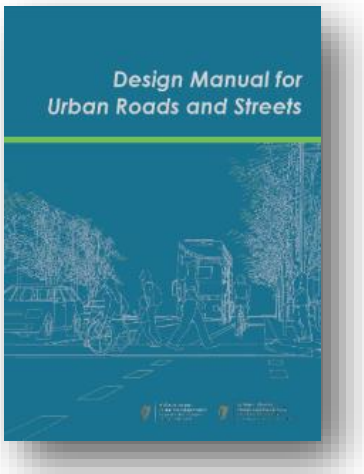


Figure 3-1: Measure PLAN2 – The Road User Hierarchy

3.1.3 Design Manual for Urban Roads and Streets (DMURS) - 2019



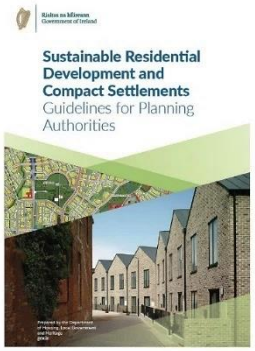
DMURS guidance document was produced by the Department of Transport, Tourism and Sports and the Department of Environment, Community and Local Government in March 2013 and updated in May 2019. It provides guidance relating to the design of urban roads and streets. It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets.

The manual places a significant emphasis on car dominance in Ireland and the implications this has had regarding the pedestrian and cycle environment. The document encourages more sustainable travel patterns and safer streets by proposing a hierarchy for user priorities. This hierarchy places pedestrians at the top, indicating that walking is the most sustainable form of transports and that by prioritizing pedestrians first, the number of short car journeys can be reduced, and public transport made more accessible. Second in the hierarchy are cyclists with public transport third in the hierarchy and private motor vehicles at the bottom. By placing private vehicles at the bottom of the

hierarchy, the document indicates that there should be a balance on street networks and cars should no longer take priority over the needs of other users.

The focus of the manual is to create a place – based sustainable street network that balances the pedestrian and vehicle movements. The manual references the different types of street networks, including arterial streets, link streets, local streets, and highlights the importance of movement.

3.1.4 Sustainable Residential Development and Compact Settlements (2024)



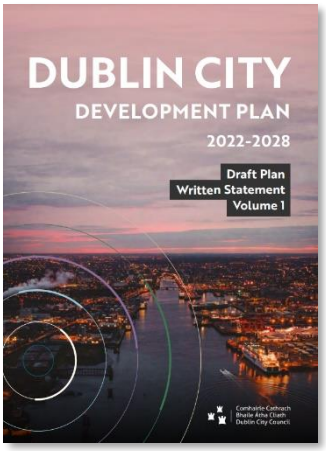
The 'Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities' (January 2024) set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

These Guidelines replace the Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities issued as Ministerial guidelines under Section 28 of the Act in 2009, which in turn replaced the Residential Density Guidelines issued in 1999. They build on and update previous guidance to take account of current Government policy and economic, social and environmental considerations. There is a renewed focus in the Guidelines on the renewal of existing settlements and on the interaction between residential density, housing standards and quality urban design and placemaking to support sustainable and compact growth.

The new guidance suggests that car parking provision at residential developments should be provided in response to its accessibility credentials. Furthermore cycling is advocated as it provides a flexible, efficient and attractive transport option for urban living and subsequently should be fully integrated into the design of all new residential scheme whilst access to secure storage of bicycles is identified a key requirement in new housing developments.

3.1.5 Dublin City Development Plan 2022-2028

The Dublin City Council Development Plan 2022-2028 sets out the strategic policies and objectives that will guide development in the city over the coming six years.



The following sustainable movement and transport policies and objectives as outlined in the plan are of particular relevance to the proposed residential development:

SMT1: *"To continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as active mobility and public transport, and to work with the National Transport Authority (NTA), Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives to achieve compact growth".*

SMT2: *"To support the decarbonising of motorised transport and facilitate the rollout of alternative low emission fuel infrastructure, prioritising electric vehicle (EV) infrastructure".*

SMTO1: *"To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the development plan, in line with the city mode share targets of 26% walking/cycling/micro mobility; 57% public transport (bus/rail/LUAS); and 17% private (car/ van/HGV/motorcycle)".*

SMT4: *"To support and encourage intensification and mixed-use development along public transport corridors and to ensure the integration of high-quality permeability links and public realm in tandem with the delivery of public transport services, to create attractive, liveable and high quality urban places".*

SMT6: *"To promote best practice mobility management and travel planning through the requirement for proactive mobility strategies for new developments focussed on promoting and providing for active travel and public transport use while managing vehicular traffic and servicing activity".*

SMT9: *"To encourage and facilitate the delivery of high-quality public realm in tandem with new developments throughout the city in collaboration with private developers through the Development Management process".*

SMT10: *"To protect, improve and expand on the pedestrian network inclusive of facilities for people with mobility impairment and/or disabilities, including the elderly and people with children, linking key public buildings, shopping streets, public transport points and tourist and recreational attractions".*

SMT15: *"To prioritise the development of walking and cycling facilities and encourage a shift to active travel for people of all ages and abilities, in line with the city's mode share targets".*

SMT16: *"To promote and help develop community-based coordinated initiatives at local level that encourage active travel and modal switch to sustainable transport modes, and to target underrepresented cohorts/groups in such initiatives and specifically to target a significant increase in the number of children cycling to primary school".*

SMT17: *"To continue to maintain and improve the pedestrian environment and promote the development of a network of pedestrian routes which link residential areas with recreational, educational and employment destinations to create a pedestrian environment that is safe, accessible to all in accordance with best accessibility practice".*

3.2 DEVELOPMENT MANAGEMENT STANDARDS

3.2.1 Car Parking Standards

In order to determine the appropriate quantum of vehicle parking for the proposed development, reference is made to the following guidance: -

- Maximum parking standards pertaining to Zone 2 of Section 4 (Table 2) within Volume 2 Appendix of the Dublin City Development Plan (2022-2028). Parking Zone 2 occurs alongside key public transport corridors.
- Table 3.8 of the Sustainable Residential Development and Compact Settlements (2024).

The subject site is located in **Zone 2** as designated in Map J of Dublin City Development Plan (2022-2028) which is illustrated in Error! Reference source not found..

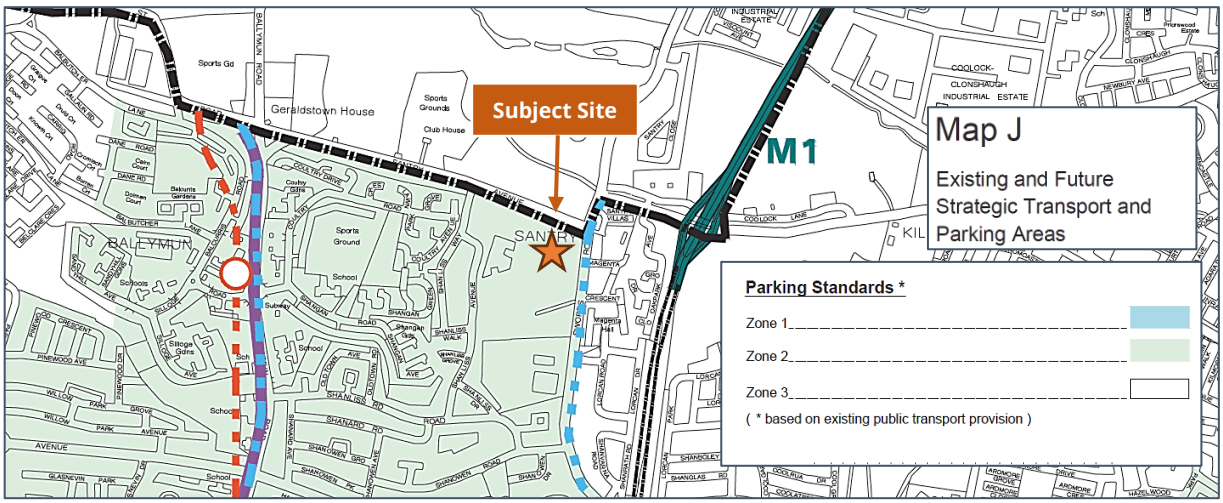


Figure 3.2: Subject site Parking Zone (Map J, DCC Development Plan 2022-2028)

In relation to the parking requirement stated within the Compact Settlement Guidelines, quantum of car parking or the requirement for any such provision for new developments will vary, having regard to the types of location in cities and towns that may be suitable for development. The location of any scheme within the Guidelines is now broadly based on proximity and accessibility to public transport. As the development is located adjacent the future Swords to City Centre CBC, the development is located under the 'High Capacity Public Transport Node or Interchange' location which, as per the guidelines, are lands located within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor' stop.

In reference to SPPR 3 (iii) for Car Parking in City Centres and Urban Neighbourhoods, which is of particular importance for this proposed development, the Guidelines state:

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

"The maximum car parking standards do not include bays assigned for use by a car club, designated short stay on–street Electric Vehicle (EV) charging stations or accessible parking spaces. The maximum car parking standards do include provision for visitor parking."

With regard to the proposed development schedule, the associated maximum car parking requirements for residential component and non-residential development are outlined in **Table 3.1**.

Unit Type	No of units/ GFA (sqm) / No. of Rooms	DCC Dev Plan (2022-28) Standard (Zone 2: Maximum)	Compact Settlement Standard	DCC Dev Plan (2022-28) Requirement	Compact Settlement Requirement
Apartments	**321**	1 space per dwelling	1 space per dwelling	321	321
Retail	**468**	1 per 275 sq. m. GFA	N/A	2	-
Medial GP	**4 Consulting Rooms**	2 per consulting room	N/A	8	-
Community Space	**1,483**	1 per 275 sq. m. GFA	N/A	5	-
Total Car Parking Required				**336**	**321**

Table 3.1: Car Parking Requirements

3.2.2 Accessible Car Parking

Dublin City County Development Plan 2022 – 2028 includes provision for the accessible parking (disabled space) which is provided at minimum of 5% of the total number of car parking spaces provided at a development.

3.2.3 Electric Vehicles

The Dublin City County Development Plan 2022 – 2028 states that in all new developments, a minimum of 50% of all car parking spaces shall be equipped with fully functional EV Charging Point. The remaining spaces shall be designed to facilitate the relevant infrastructure to accommodate future EV charging.

3.2.4 Motorcycle Parking

The Dublin City County Development Plan 2022 – 2028 states that in new developments provision for motorcycle parking in designated, signposted areas at a rate of 5% of the number of car parking spaces is to be provided.

3.2.5 Cycle Parking

The 2022 – 2028 DCC Development Plan encourages integrated, accessible, and secure bike parking in new developments which accommodate various bike types and needs. The Plan states that off-street storage and parking amenities should offer more than just space; they should guarantee shelter, well-lit surroundings, safety, and security, ensuring easy access and supervision. The Plan recommends Sheffield stand type racks for added convenience and security.

The 2024 Compact Guidelines state the following requirements for cycle parking and storage are recommended for developments at all locations, as per SPPR 4 (i) and SPPR 4 (ii):

(i) "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."

(ii) "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."

The appropriate level of cycle parking provision for the development proposals is to be provided in reference to standards stated within both (i) the current Dublin City Development Plan 2022 – 2028, and (ii) the Compact Settlement Guidelines (2024). The corresponding cycle parking standards and requirement for proposed developments are detailed in Table 3.2 and Table 3.2 below.

Unit Type		No of units/ GFA (sqm) / No. of Rooms	DCC Dev Plan (2022-2028) Standard		Compact Settlement Guidelines Standards	
			Long Stay	Short Stay	Long Stay	Short Stay
Apartments	1-bed	104	1 per unit	1 per 5 dwellings	1 cycle storage space per bedroom	*"Visitor cycle parking should also be provided."*
	2-beds	198				
	3-beds	19				
Retail		468	1 per 5 staff	1 per 100 sq. m. GFA	-	-
Medial GP		4 Consulting Rooms	1 per 5 staff	*"...determined by the planning authority on case by case basis."*	-	-
Community Centre		1,483	1 per 5 staff	1 per 100 sq. m. GFA	-	-

Table 3.2: Cycle Parking Standards

Unit Type		No of units/ GFA (sqm) / No. of Rooms	DCC Dev Plan (2022-2028) Requirement		Compact Settlement Guidelines Requirement	
			Long Stay	Short Stay	Long Stay	Short Stay
Apartments	1-bed	104	321	64	557	-
	2-beds	198				
	3-beds	19				
Retail		468	1	5	-	-
Medial GP		4 Consulting Rooms	1	-	-	-
Community Centre		1,483	1	15	-	-
Sub-Total Cycle Parking			324	84	557	-
Total Cycle Parking			408		557	

Table 3.3: Cycle Parking Requirements

4 CHARACTERISTICS OF PROPOSALS

4.1 OVERVIEW

Dwyer Nolan Developments Ltd. wishes to apply for permission for a Large-Scale Residential Development (LRD) on this site, c. 1.5 hectares, located at the junction of Santry Avenue and Swords Road, Santry, Dublin 9. The development site is bounded to the north by Santry Avenue, to the east by Swords Road, to the west by Santry Avenue Industrial Estate, and to the south by the permitted Santry Place development (granted under Dublin City Council Reference 2713/17 (as extended under Ref. 2713/17/X1), 2737/19 & 4549/22).

The proposed development provides for 321 no. apartments, comprised of 104 no. 1 bed, 198 no. 2 bed, & 19 no. 3 bed dwellings, in 4 no. seven to thirteen storey buildings, over basement level, with 3 no. retail units, a medical suite / GP Practice unit and community/arts & culture space (total c.1,483sq.m), all located at ground floor level, as well as a one storey residential amenity unit, facing onto Santry Avenue, located between Blocks A & D.

The development consists of the following:

i. Demolition of the existing building on site i.e. the existing Chadwicks Builders Merchants (c. 4,196.8m^2).

ii. Construction of 321 no. 1, 2, & 3 bed apartments, retail units, medical suite / GP Practice, community/arts & culture space, and a one storey residential amenity unit in 4 no. buildings that are subdivided into Blocks A-G as follows:

   a. Block A is a 7-13 storey block consisting of 52 no. apartments comprised of 22 no. 1 bed, 24 no. 2 beds & 6 no. 3 bed dwellings, with 2 no. retail units located on the ground floor (c. 132sq.m & c.172sq.m respectively). Adjoining same is Block B, which is a 7 storey block consisting of 44 no. apartments comprised of 22 no. 1 bed, 15 no. 2 bed, & 7 no. 3 bed dwellings, with 1 no. retail unit (c.164sq.m) and 1 no. medical suite / GP Practice unit located on the ground floor (c. 130sq.m). Refuse storage areas are also provided for at ground floor level.

   b. Block C is a 7 storey block consisting of 53 no. apartments comprised of 14 no. 1 bed & 39 no. 2 bed dwellings. Adjoining same is Block D which is an 8 storey block consisting of 44 no. apartments comprised of 22 no. 1 bed, 15 no. 2 bed, & 7 no. 3 bed dwellings. Ground floor, community/arts & culture space

(c,606sq.m) is proposed in Blocks C & D, with refuse storage area also provided for at ground floor level.

c. Block E is an 8 storey block consisting of 49 no. apartments comprised of 7 no. 1 bed & 42 no. 2 bed dwellings. A refuse storage area, substation, & switchroom are also provided for at ground floor level. Adjoining same is Block F which is a 7 storey block consisting of 52 no. apartments comprised of 13 no. 1 bed & 39 no. 2 bed dwellings. Ground floor, community/arts & culture space (c.877sq.m) is proposed in Blocks E & F. A refuse storage area, bicycle storage area, substation, & switchroom are also provided for at ground floor level of Blocks E & F.

d. Block G is a 7 storey block consisting of 34 no. apartments comprised of 20 no. 1 bed & 14 no. 2 bed dwellings. A refuse storage area & bicycle storage area are also provided for at ground floor level.

iii. Construction of a 1 storey residential amenity unit (c. 166.1sq.m) located between Blocks A & D.

iv. Construction of basement level car park (c.5,470.8sq.m), accommodating 161 no. car parking spaces and 664 no. bicycle parking spaces. Internal access to the basement level is provided from the cores of Blocks A, B, C, D, E, & F. External vehicular access to the basement level is from the south, between Blocks B & C. 33 no. car parking spaces & 58 no. bicycle parking spaces are also provided for within the site at surface level.

v. Public open space of c. 1,791sq.m is provided for between Blocks C-D & E-F. Communal open space is also proposed, located between (i) Blocks E-F & G, (ii) Blocks A-B & C-D, and (iii) in the form of roof gardens located on Blocks A, C, & F and the proposed residential amenity use unit, totalling c.3,116sq.m. The development includes for hard and soft landscaping & boundary treatments. Private open spaces are provided as terraces at ground floor level of each block and balconies at all upper levels.

vi. Vehicular access to the development will be via 2 no. existing / permitted access points: (i) on Santry Avenue in the north-west of the site (ii) off Swords Road in the south-east of the site, as permitted under the adjoining Santry Place development (Ref. 2713/17).

vii. The development includes for all associated site development works above and below ground, bin & bicycle storage, plant (M&E), sub-stations, public lighting, servicing, signage, surface water attenuation facilities etc

With reference to the Davey + Smith Architect's scheme drawings, the layout of the proposed development is illustrated in **Figure 4.1**.

Figure 4.1: Proposed Site Layout (Extract: Davey + Smith Architect Drawing No. D1809.P03)

4.2 SITE ACCESS ARRANGEMENTS

4.2.1 Pedestrian & Cyclists

Pedestrians and cyclist will be able access the subject site from both Santry Avenue and Swords Road. Pedestrians and cyclists are given priority within both internally and externally within the site to ensure desire lines within the site are accommodated. This is to provide a good level of service and ensure the risk of vehicle/pedestrian-cyclists conflict is minimised.

The site will benefit from several entry points situated internally via lifts at teach of the proposed blocks. Pedestrians will also benefit from direct access towards the proposed public amenity and communal open spaces from a number of locations internally within the site.

4.2.2 Vehicle Access

The proposed development will be accessed by vehicles via the two existing priority junction access points (i) on R104 Santry Avenue to the north-west of the site (ii) off R132 Swords Road to the south-east of the site (left-in and left-out configuration), as permitted under the adjoining Santry Place development (DCC Pl. Ref. 4549/22). **Figure 4.2** illustrates site layout and locations of the site accesses. Vehicles will be able to access the proposed basement parking facility via a ramp located at the internal road on the southern boundary of the site (between Blocks B and C), west of Access 2 on Swords Road.

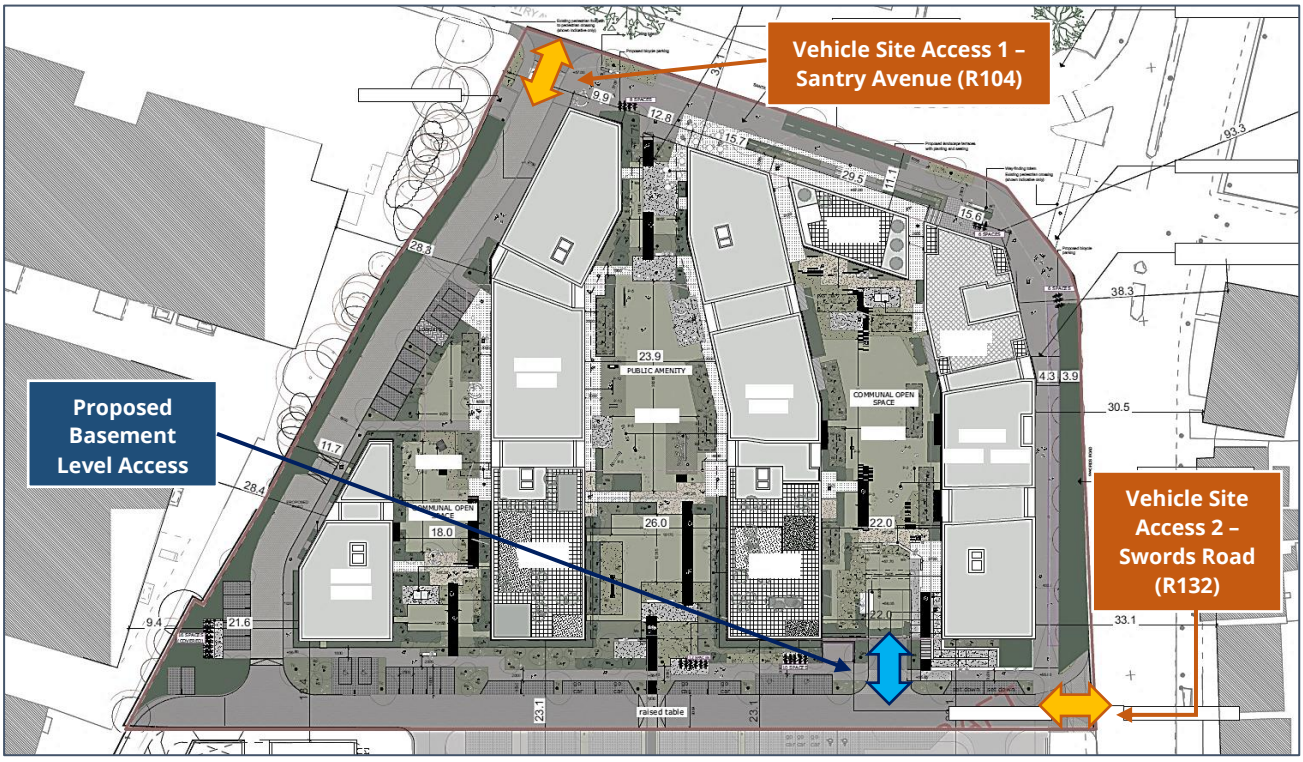


Figure 4.2: Proposed Development Vehicle Access Arrangements

4.3 PARKING PROVISION

4.3.1 Car Parking

As discussed in Section 3.2, the appropriate quantum of vehicle parking required by the development has been proposed in reference to (i) Maximum parking standards pertaining to Zone 2 of Section 4 (Table 2) within Volume 2 Appendix of the Dublin City Development Plan (2022-2028) and (ii) Table 3.8 of the Sustainable Residential Development and Compact Settlements (2024).

The proposed development proposes a total of 194 no. on-site dedicated car parking spaces, of which 161 no. spaces (residential only) will be located within the basement level and the

remaining 33 no. spaces (30 parking bays, 1 loading bay and 2 set-down/collection bay) will be located at surface level. Proposed car parking type and the spaces allocated for each land use at surface level include (i) 15 no. Residential Spaces, (ii) 4 no. Car Share/Car Club spaces, (iii) 2 no. Set Down spaces, (iv) 2 no. Retail spaces, (v) 6 no Medical GP spaces, (vi) 3 no. Community spaces and (vii) 1 no. dedicated 24/7 operational loading bay on-site.

Unit Type	No of units/ GFA (sqm) / No. of Rooms	DCC Dev Plan (2022-28) Requirement (Zone 2 – Maximum)	Compact Settlement Requirement	Proposed Car Parking
Apartments	321	321	321	180*
Retail	468	2	-	2
Medial GP	4 Consulting Rooms	8	-	6
Community Space	1,483	5	-	3
Set-Down / Collection Bays	-	n/a	n/a	2
Loading Bay	-	n/a	n/a	1
Total Car Parking Required		336	321	194

* Includes 4 No. dedicated Car Share (GoCar) spaces for the sole use by residents

Table 4.1: Car Parking Requirement & Proposed Provision

The implementation of the proposed mitigation strategy and associated management and promotional interventions mean that 180 no. car parking provision (residential only) equating to 0.56 spaces per unit is considered appropriate for the subject development particularly considering the sites (i) excellent public transport accessibility characteristics by the existing bus services (as well as the proposed BusConnects proposals as discussed in Section 2.6.2) (ii) the proximity of both local, national and post-primary schools within walking distance of the development, (iii) the sites convenient location to both local retail and strategic Omni Park Shopping Centre, (iv) with a number of strategic employment centres being within a convenient walking / cycling distance, (v) the emerging car ownership trends across Dublin and (vi) the provision of 4 number car share vehicles (which equates to a further potential 60 bays as detailed further in section 5.2 and reduces the need to own a private motor vehicle.

4.3.2 Accessible Car Parking

In terms of accessible (disabled) parking, the DCC Development Plan 2022 – 2028 outlines that 5% of total car parking provision is to be allocated as accessible spaces. The development proposes a total of 18 no. spaces (equating to 9.3% of all parking spaces) disabled spaces

comprising 12 no. spaces at basement level and 6 no. spaces at surface level. The provision is in accordance with DCC development management requirements.

4.3.3 Electric Vehicles

The Dublin City County Development Plan 2022 – 2028 states that in all new developments, a minimum of 50% of all car parking spaces shall be equipped with fully functional EV Charging Point. It is proposed to provide a total of 96 no. electric vehicle car parking spaces incorporating 81 number at basement level and 15 number at surface level.

This equates to 50% of the total car parking spaces (excluding the single loading bays and two set-down/collection bays) of the proposed development and as such is in accordance with DCC's requirements.

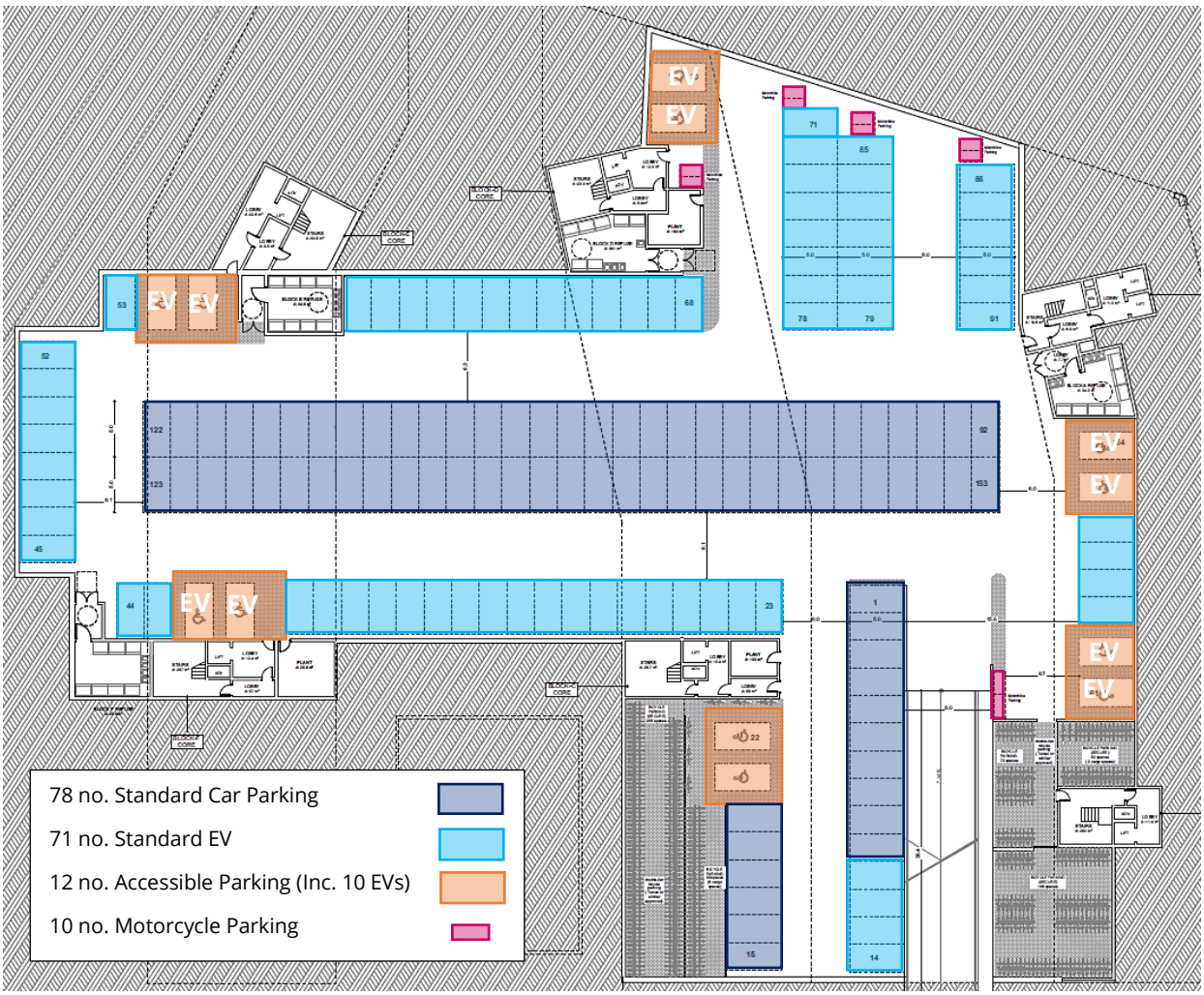


Figure 4.3: Proposed Basement Level Residential Parking Allocation

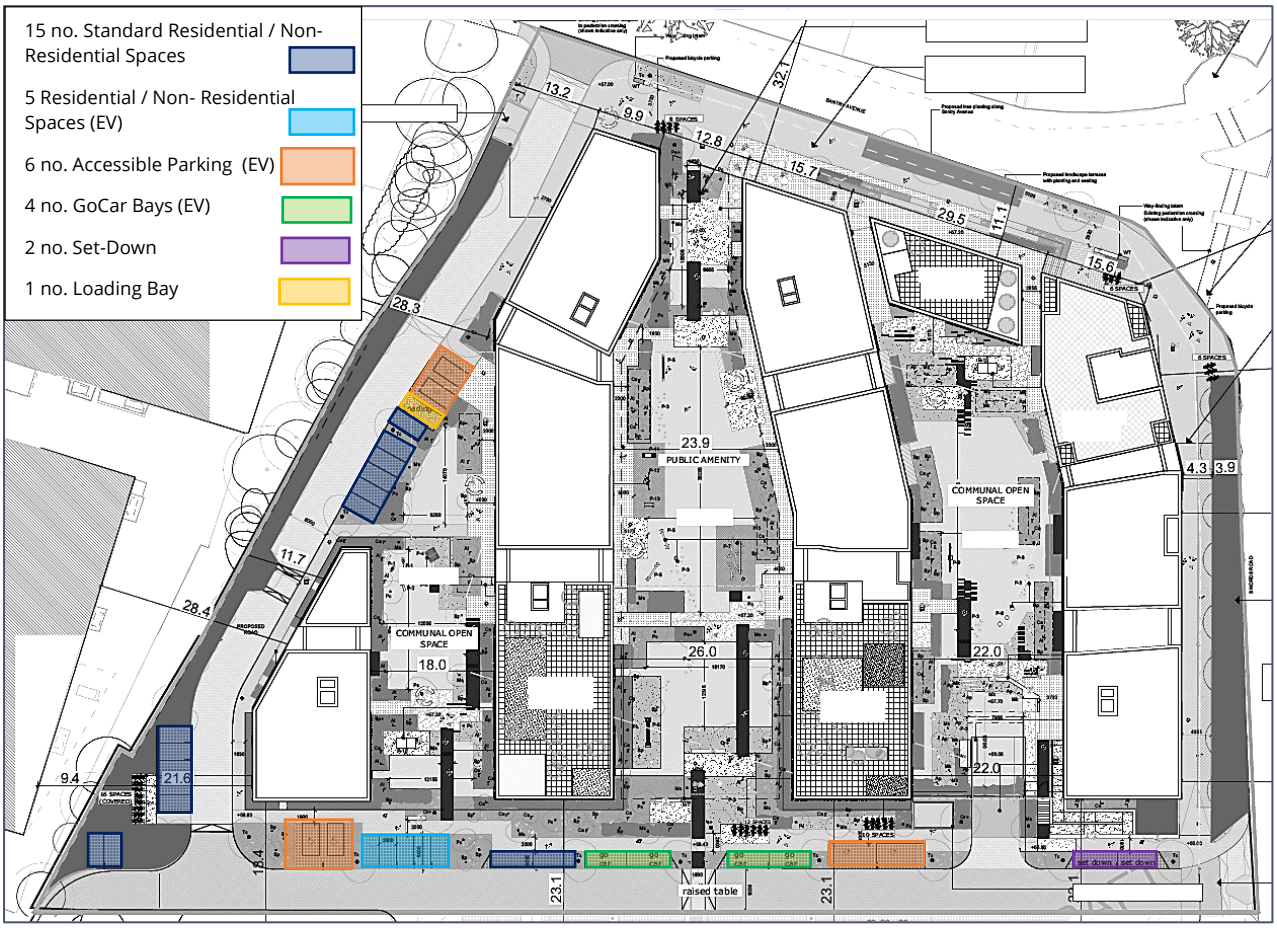


Figure 4.4: Proposed Surface Level Residential Parking Allocation

4.3.4 Car Share Spaces

As detailed in **Figure 4.4**, the LRD scheme proposals include the provision of 4 no. dedicated Car Share (GoCar) bays on-site at surface level. Located in a high profile visible area at the centre of the site, these 4 no. vehicles (which will be EV enabled) will be made available for the sole use of residents of the proposed LRD development thereby maximising their availability for intended residential users.

4.3.5 Motorcycle Parking

The Dublin City County Development Plan 2022 – 2028 states that in new developments provision for motorcycle parking in designated, signposted areas at a rate of 5% of the number of car parking spaces is to be provided. The proposed development provides a total of 10 no. motorbike space all located at surface level as illustrated in **Figure 4.3**.

4.4 Bicycle Parking Provision

A total of 740 no. cycle parking spaces are proposed for this development. The proposed spaces will be provided in a combination of two-tier racks and Sheffield stands and comprises;

- 690 no. standard 'long term' spaces (664 no. spaces at basement level, 10 no. spaces within the ground floor level at Block G and 16 no. covered spaces at surface level). These will be allocated to both residents (660) and staff (14).
- 8 no. cargo parking spaces is proposed within the secure basement area.
- 42 no. 'short term' parking located at surface level.

Cyclists when accessing / egressing the basement level will benefit from a dedicated bicycle ramp (7% gradient to accommodate cyclists) segregated but running parallel alongside the vehicle ramp.

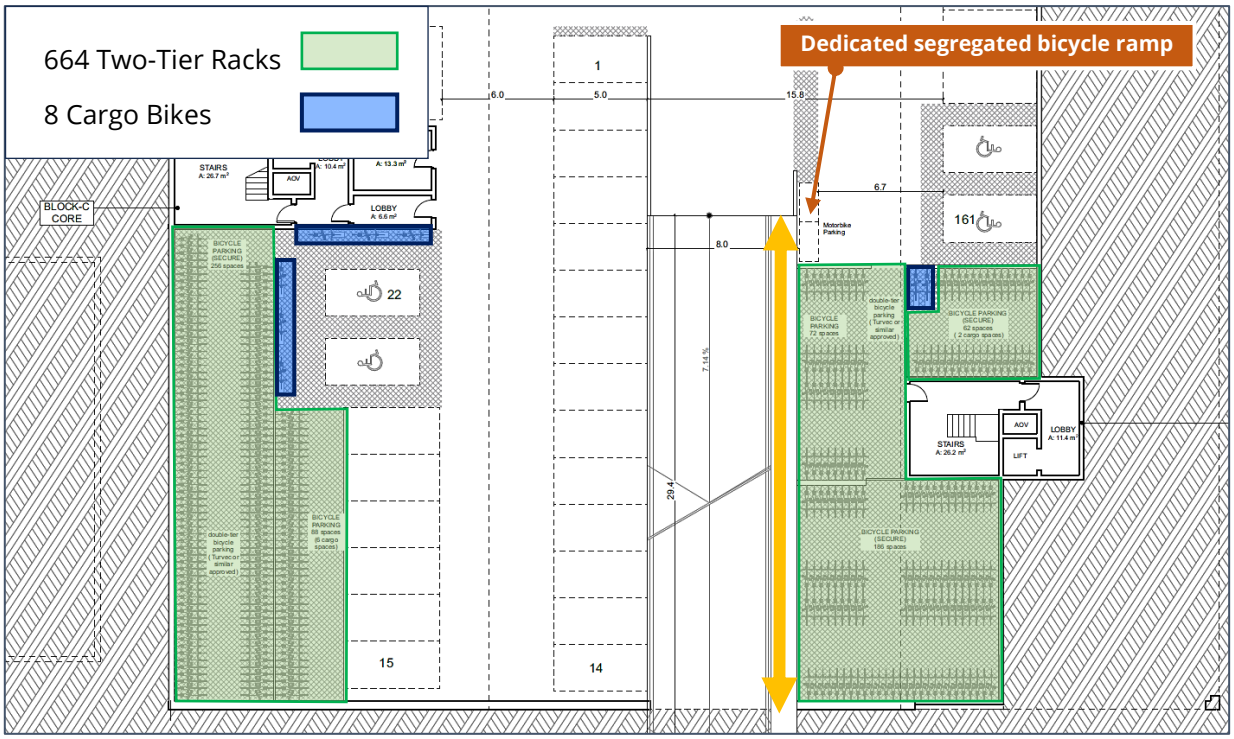


Figure 4.5: Proposed Basement Level Cycle Parking Location

It is noted that the provision of long term residents and staff cycle parking proposed within the development exceeds both DCC standards (which requires 324 spaces) and the Compact Settlement Guidelines (which requires 560 spaces including 3 spaces for staff as per DCC requirements) as discussed in Section 3.2.5 of this TTA.

The provision is therefore considered adequate to accommodate residents' requirements as well as support and encourage a modal split that aims to shift away from private cars to a more sustainable travel by cycle.

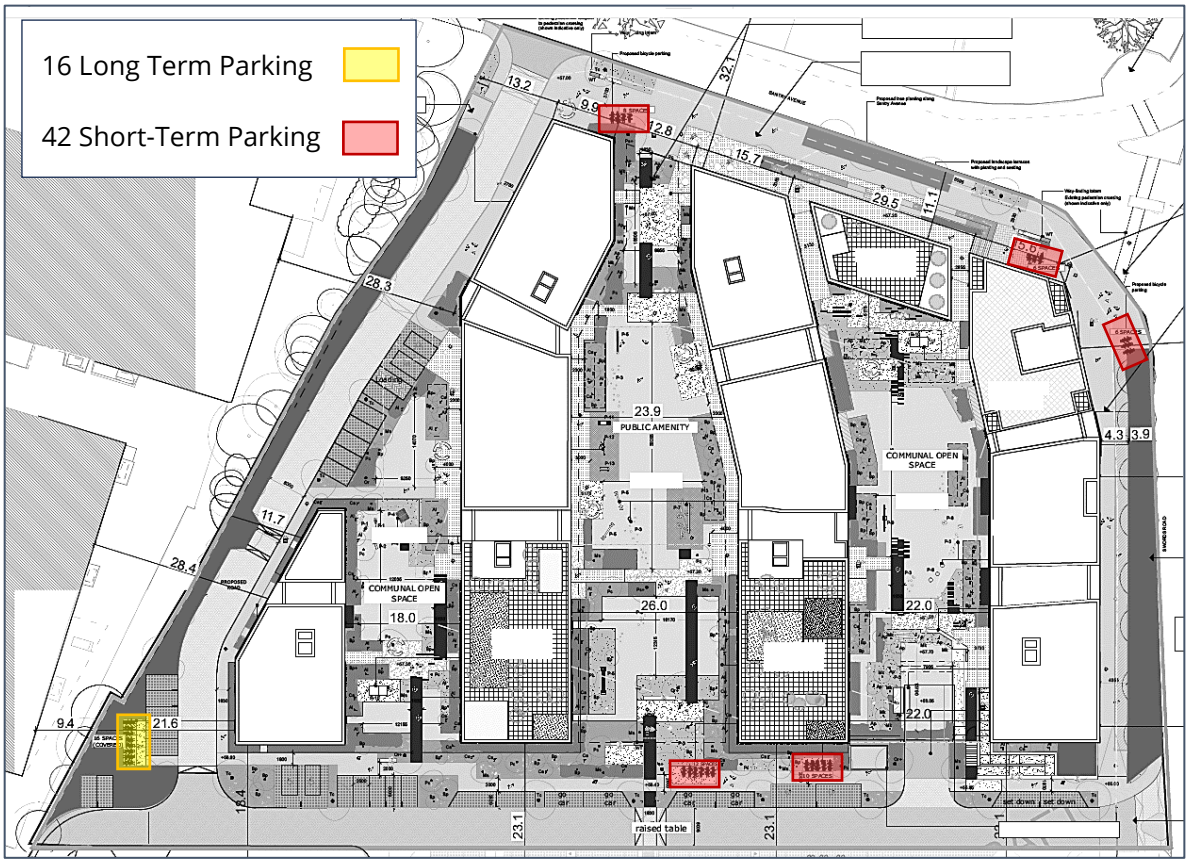


Figure 4.6: Proposed External Surface Level Cycle Parking

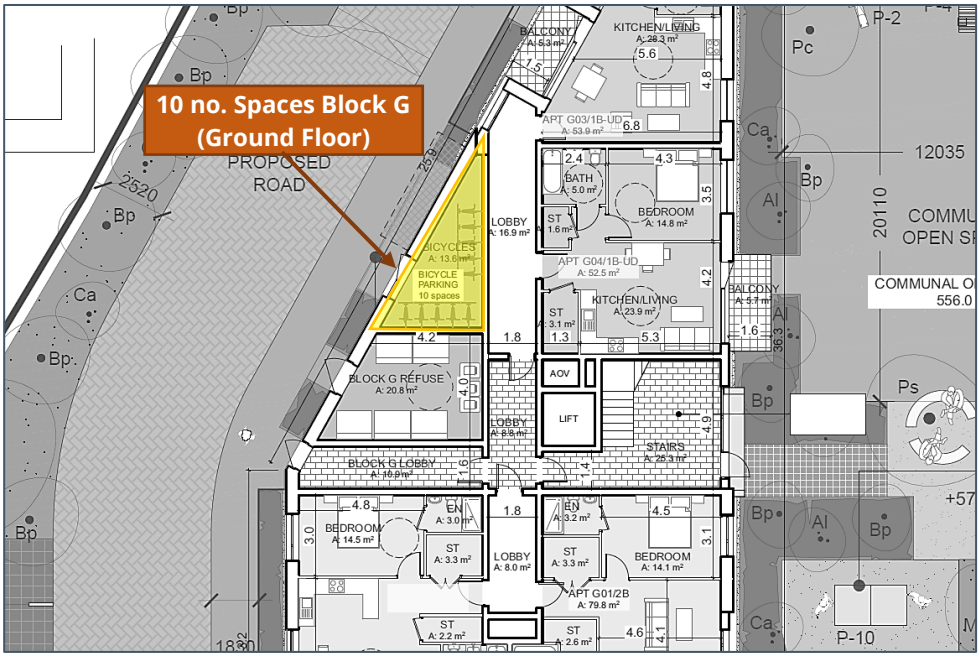


Figure 4.7: Proposed Surface Level Cycle Parking (Located within Block G)

5 CAR PARKING MANAGEMENT PLAN

5.1 Context

This chapter sets out the principles of the car parking management plan that is to be implemented at the proposed development with the objective of governing access to the on-site parking provision as proposed as part of the subject Santry Avenue LRD development. The car parking management plan is required to;

- Inform all potential new residents and visitors that the residential development, being located on a key high frequency public transport corridor, is 'car lite' with access to the limited on-site car parking actively controlled and enforced.
- Control access to the available on-site car parking spaces through a formal electronic permit scheme and facilitates access for registered users only to a specific on-site numbered parking bay.
- Provide a formal management strategy and point of contact that residents, staff and visitors alike can approach in regard to the administration and payment process of the parking regime
- Administer an enforcing regime with the objective of discouraging inappropriate and discriminate on-site car parking practices.

The context of the proposed management strategy and associated initiatives is set against the following site specific characteristics.

Accessibility Levels

Section 2.3.3 of this report details the availability of existing bus services directly passing the subject site. Section 2.5 details the reserve capacity available (as of February 2024) on these existing bus services. The planned BusConnects proposals along the site frontages are detailed in Section 2.6.2 which will deliver enhanced services along both the Swords Rd and Santry Avenue corridors adjoining the site. Furthermore Section 2.4 details how a range of retail, service, employment and leisure facilities are located within a 15 minutes sustainable travel distance of the site subsequently demonstrating the proposed developments synergy with the 15-minute neighbourhood urban design concept.

Section Table 3.8 of the *Sustainable and Compact Settlements Guidelines for Planning Authorities* sets out definitions for terms used to define accessibility to allow for consistent application by

all authorities and stakeholders. The area entitled '***High Capacity Public Transport Node or Interchange***' is defined as;

> ***"Lands within 1,000 metres (1km) walking distance of an existing or planned high capacity urban public transport node or interchange, namely an interchange or node that includes DART, high frequency Commuter Rail11, light rail or MetroLink services; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor'[12] stop."***

In reference to the above classification and the NTA BusConnects proposals the proposed development is found to lie well within the 500 metres walking catchment of a planned BusConnects 'Core Bus Corridor stop. Accordingly the location of the proposed development is found to the highly accessible and subsequently its location can be defined as an 'urban neighbourhood' as per the *Sustainable and Compact Settlements Guidelines for Planning Authorities* definition.

National Policy Context

The *Sustainable and Compact Settlements Guidelines for Planning Authorities* sets out how to approach car parking provision in relation to the site's level of accessibility. The guidelines state that the "***approach should take account of proximity to urban centres and sustainable transport options, in order to promote more sustainable travel choices. Car parking ratios should be reduced at all urban locations, and should be minimised, substantially reduced or wholly eliminated at locations that have good access to urban services and to public transport***." Located adjoining the existing Swords Road public transport corridor which is be further enhanced as part of the NTA BusConnects initiatives (new bus routes, higher frequency and implementation of core bus corridor infrastructure) the subject development will benefit from excellent accessibility levels by public transport. Furthermore a range of amenities including retail, services and leisure facilities are also located within a convenient walk / cycle distance of the site as advocated by the 15-minute urban neighbourhood design philosophy. Accordingly, the principle of reducing car parking provision at the proposed development, compared to local standards, is very much support by national policy for locations such as the subject Santry Avenue site.

Baseline Car Ownership Levels

The analysis of the 2022 CSO data for 8 areas (with apartments) in the general area of the subject Santry Avenue site demonstrated that the existing baseline average car ownership amounts to 0.64 spaces per unit. In these areas were car parking is not restricted the demand is found to be only slightly above that of the proposed provision of 0.56 spaces per unit. When consideration is afford to the proposed developments car share provision (4 no. vehicles) the proposed ratio is found (using GoCar's own conservative estimate of 15 spaces per car share vehicle) to be 0.735 spaces per unit. This value at the proposed Santry Avenue LRD scheme is found to be greater than the average baseline data in neighbouring residential areas.

Local Development Standards

As detailed in Section 3.2.1 of this report, the subject development site is located in parking 'Zone 2' as defined in Map J of the DCC Development Plan establishing that the proposed development lies with the catchment of public transport corridors. The DCC development management standards for residential car parking for Zone 2 are noted as being 'Maximum' standards and should not exceed 1 space per dwelling.

Proposed Car Parking Provision

The scheme proposals include the provision of a total of 194 car parking spaces compromising 161 at basement level and 33 at surface level. This total includes 180 spaces assigned to the residential element (161 No. for residents and 15 No. for visitors) of the development which equates to 0.56 car parking spaces per dwelling unit. The visitor spaces are located at surface level whilst the residents parking is provided for in the basement.

A total of 8 spaces, located at surface level are assigned to the non-residential users (2 No. Retail, 6 No. Medial GP and 3 No. Community Space) whilst 2 No. set down bays and a dedicated loading bay are also proposed on-site at surface level. As detailed further in Section 4.3 the above car paring provision incorporates;

- **Standard Car Parking** –Total of 173 standard bays (2.5m by 5.0m) including 149 within the basement area (of which 71 are EV bays) and 24 (of which 9 are EV bays and include the 4 No Car Share bays) at surface level.
- **EV Car Parking** –Total of 96 spaces including 81 within the basement area and 15 at surface level as outlined previously in Section 4.3.2.

- **Accessible Car Parking** –Total of 18 spaces including 12 within the basement area (of which 10 are EV bays) and 6 at surface level (of which all are EV bays) as outlined previously in Section 4.3.2.
- **Car Share Parking** –Total of 4 at surface level (all EV's).
- **Set-Down / Collection Spaces** –Total of 2 at surface level (adjoining Medical unit).
- **Dedication Loading Bay** – Total of 1 dedicated loading bay on-site within the development at surface level as outlined previously in Section 4.3 and Figure 4.4.

5.2 Proposed Parking Management Strategy

Car Lite Business Strategy

It is intended that the proposed development will be, in relative terms, be 'car-lite' when compared to DCC development management standards for car paring provision in this Zone 2 location. The business plan for the development recognizes that this level of provision (0.56 spaces per residential unit) may limit the overall number of tenants / owners with 1 or more cars, however the residual market is considered more than sufficient to support a viable business strategy.

Development Marketing

All marketing material produced for the proposed development, both residential and non-residential units; will make it clear that the Santry Avenue development is a 'car-lite' development and that all on-site car parking spaces will remain within the control of the appointed management company. Residents and staff will have the opportunity to register (and pay) in order to gain access to on-site car parking up to a defined maximum limit. The maximum limit will be 1 car parking space per dwelling, 6 no for the medical unit and 2 no. for the retail unit.

Provision of Car Share Vehicles

As introduced in Section 4.3.4 the LRD scheme proposals include the provision of 4 No. dedicated Car Share (GoCar) bays on-site at surface level. Located in a high profile visible area at the centre of the site, these 4 No. vehicles will be made available for the sole use of residents of the proposed LRD development thereby maximising their availability for intended users.

The parking ratio associated with the proposed development can be justified by the integration of GoCar's car-sharing initiative which reduces the need to own a private motor car through a greater emphasises upon more sustainable readily available travel options and the promotion of financial cost savings for residents. GoCar suggests that each residential car share vehicle has the potential to eliminate between 15-20 private car trips and their associated parking demand. Assessing this reduction in car trips in hand with the number of car parking spaces provided, a conservative reduction of 15 parking spaces per car share vehicle (opposed to GoCar's own 15-20 number) is used as a moderate estimate with the inclusion of GoCar car sharing spaces. With the inclusion of 4 number GoCar vehicles as part of the development proposals, this could potentially eliminate the need for 60 number on-site car parking spaces using the conservative estimate.

In terms of the overall parking ratio, the total parking provision can therefore be argued to be 250 spaces, which comprises 176 physical car parking spaces (which are assigned to the residential element of the development) and 4 car share spaces (1 car share space replaces 15 standard car parking spaces). This results in a parking ratio of (176+60)/321 or 0.735 spaces per residential unit. This ratio is comparable and even larger when compared to each of the 'small areas' baseline household car ownership / availability as reported in Section 2.8. Considering the overall site's excellent accessibility, the established baseline demand at both neighbouring residential areas and off-site comparable donor sites (were car parking is not restricted), the proposed car parking strategy and associated quantum of car parking is appropriate to more than accommodate the predicted demand to be generated by residents. Furthermore, the parking ratio of 0.735 reflects a forward-thinking approach that prioritises a solution to private car ownership which is in line with sustainable development goals within policy documentations such as the National Sustainable Mobility Policy (2022) and the Transport Strategy for the Greater Dublin Area (2022-2042). Additionally, the integration of car-sharing services fosters a sense of community by encouraging residents to share resources and reduce their overall carbon footprint.

Parking Management Regime

All marketing material will make it clear that the Santry Avenue developments on-site car parking spaces will remain within the control of the appointed management company. A management regime will be implemented by the development's management company to

control access to these on-site apartment car parking bays thereby actively managing the availability of on-site car parking between residents and visitors.

Nevertheless, all residents of the proposed residential apartment scheme will have the opportunity to apply (for a maximum of 1 permit per unit) to the management company for the following;

- Residents car parking permit (updated weekly, fortnightly, monthly, quarterly or annually) and subsequently access to a dedicated (assigned) on-site basement car parking space, or
- Visitor's car parking permit for a defined short period of time for the use of the dedicated visitor spaces at surface level

The building management team will be responsible for the day-to-day management of car parking operations. Residents who request a private car parking space will be allocated one on a 'first come, first served' basis.

A charge will be applied to obtain a permit with the objective of covering the associated management costs, discouraging long term usage of the car parking space and encouraging travel by sustainable modes of travel.

Access to the basement car park will be strictly controlled by barriers. Entry will be facilitated by coded entry and/or number plate recognition which will permit registered vehicles only to enter. The car parking management regime in place at the Santry Avenue residential development will therefore ensure that the risk of any 'overspill' car parking on the surrounding streets is minimised.

Enforcement of the Planning Management Plan

Due to the potential demand from (i) neighbouring developments and the adjoining future BusConnects Core Bus Corridor, in parallel with (ii) ensuring that residents and staff based in the proposed LRD development to not exploit any of the on-site car parking opportunities; it is considered a necessity that access to on-site car parking and set-down / collection bays (especially at surface level) is actively managed 24/7 to safeguard on-site car parking availability for the use of residents and visitors to the development and minimise the potential for inappropriate use by external parties.

Initial access to the on-site car parking bays will be controlled by signage, bay surface treatments and road markings. All visitor car parking at surface level will be subject to parking

duration restrictions during the day time period. Following a successful application to the building management team, entry to the basement car parking bays for residents (and staff at surface level) will be facilitated by permit (displayed in vehicle window with corresponding vehicle registration plate number) to registered vehicles only. The appointed management company will administer, manage and enforce (e.g. clamping in extreme cases) the adopted strategy. All inappropriate and discriminate car parking practices within the development private car parking spaces will be discouraged through the risk (as highlighted / disseminated by signage) of exposure to the potential 'clamping' of vehicles. Should the need arise a specialised company will be appointed to manage the clamping and release of clamped vehicles.

5.3 Parking Strategy Conclusion

The parking strategy has been developed having regard to;

- Proximity to public transport services and level of service and interchange available.
- Walking and cycling accessibility/permeability and the range of retail, employment, services and leisure amenities within a short 15 minute travel distance of the proposed Santry Avenue development site.
- The need to safeguard investment in sustainable transport and encourage a modal shift. The proposed development reinforces the ongoing investment in the NTA BusConnects proposals.
- Availability of car sharing. The proposed scheme includes the provision of two (4) number dedicated car share vehicles as part of the scheme proposals subsequently negating the need to own a private motor vehicle.
- The robustness of Mobility Management Plan that accompanies the planning application which seeks to support the uptake of sustainable travel habits by residents, staff and visitors to the subject LRD development. A key initiative of the MMP with be the car parking management strategy which will actively manage access to the proposed developments on-site car parking.

The design team believe that the subject Santry Avenue site is ideally located / suited to consider a deviation from the 'maximum' car parking management standards detailed in the DCC development management standards. This approach however necessitates that a comprehensive car parking management plan is identified, implemented, disseminated and

reviewed / updated as required on an ongoing basis by the building management company. In parallel with the accompanying Mobility Management Plan the above roll-out of the above Parking Management Plan will ensure that sufficient facilities are provided to meet the projected demand for car parking at the proposed Santry Avenue LRD.

6 TRIP GENERATION AND DISTRIBUTION

6.1 Baseline Traffic Conditions

In order to establish the existing local road networks traffic characteristics and subsequently enable the identification of the potential impact of the proposed residential development, traffic survey data recorded on Thursday 8th February 2024 was used for the purpose of this assessment.

The aforementioned traffic surveys (weekday classified junction turning counts - JTCs) were conducted by IDASO between 07:00 AM and 19:00 PM. JTCs were carried out at four junctions within close proximity to the proposed development site. The following locations were included within the survey Figure 6.1):

- J1 – R132 Swords Road / R104 Santry Avenue / Santry Villas Signalised Junction;
- J2 – R132 Swords Road / Santry Place Site Access
- J3 – R104 Santry Avenue / Chadwicks Site Access
- J4 – R104 Santry Avenue / Site Access (west of Chadwicks Entrance)

Figure 6.1: IDASO Traffic Survey locations

The traffic surveys established;

- The local AM and PM peak hours occur between 07:45-08:45 and 16:30-17:30 respectively on a typical neutral weekday.
- The AM peak hour is the criterial period experiencing higher volumes (+13%) of traffic flows compared to the corresponding PM peak hour period.
- The existing on-site Chadwick's operation (Junction 3) is found to currently generate some 675 two-way vehicle trips between 0700 and 1900 on a typical neutral weekday. This equates to 67 (including 10 HGV's) and 10 (including 1 HGV's) two-way vehicle trips during the local road networks AM and PM perk hour periods respectively.

In order to analyse and assess the predicted traffic generation from the proposed residential development upon the local road network, an area wide traffic model (MS Excel based) incorporating these key local junctions was created. Base traffic flows and the Flow Diagrams for all scenarios are illustrated within Appendix B.

6.2 Traffic Growth

An Opening Year of 2027 has been assumed for this assessment. In accordance with TII (NRA) Guidance, Future Design years (+5 and +15 years) of 2032 and 2042 have also been adopted.

The TII Project Appraisal Guidelines (PAG) have been utilized to determine the traffic growth forecast rates. The traffic growth forecast rates within the PAG ensures local and regional variations and demographic patterns are accounted for.

Table 6.1: Link Based Growth Rates within the PAG (2019) provides Annual National Traffic Growth Factors for the different regions within Ireland. The subject site lies within Dublin Metropolitan Area with the growth factors as outlined within **Table 6.1** below.

Name	Central Growth Rate					
	2016-2030		2030-2040		2040-2050	
	LV	HV	LV	HV	LV	HV
Dublin	1.0162	1.0295	1.0051	1.0136	1.0044	1.0162

Table 6.1: National Traffic Growth Forecasts: Annual Growth

Applying the annual factors (central growth) as outlined in **Table 6.1** above for the adopted Opening Year of 2027, Future Horizon Years of 2032 and 2042, the following growth rates have been adopted to establish corresponding baseline network flows: -

- 2024 to 2027 – 1.0494 (or 4.94%);
- 2024 to 2032 – 1.1125 (or 11.25%); and
- 2024 to 2042 – 1.1689 (or 16.89%).

6.3 Traffic Generation – Proposed Development

TRICS generated trip rates for the proposed apartment development during the weekday morning and evening peak hour periods are outlined in **Table 5.2**. The trip rate is then adjusted to reflect the basic car allocation characteristics of the development based upon the ratio of proposed car parking to the corresponding Equivalent parking (1 space / 1 unit) parking level. It has been assumed that the developments non-residential units will serve predominantly the proposed development, the local walking catchment and passing traffic. As such these non-residential uses are not predicted to give rise to material levels of the additional vehicular traffic. A summary of the adopted trip rates and forecast traffic generation of the proposed development is provided in **Table 5.2**.

Period	AM Peak (07:45-08:45)			PM Peak (16:30 - 17:30)		
Vehicle Movement	Arr	Dep	Total	Arr	Dep	Total
Original Trip Rates	0.065	0.152	0.217	0.154	0.096	0.250
Adjusted Trip Rates	0.036	0.083	0.119	0.084	0.052	0.137

Table 6.2: Proposed Development Vehicle Trip Rates

Based on the above trip rates, potential peak hour traffic generation is calculated, and the predicted peak hour AM and PM traffic generated by the proposed development are presented in **Table 5.3** below. The table below outlines the potential peak hour vehicle trips for the horizon years, that have been calculated based on the proposed development schedule.

Unit Type	No. of Units	AM Peak Hour (07:45-08:45)			PM Peak Hour (16:30-17:30)		
		Arr	Dep	Total	Arr	Dep	Total
Apartments	321 units	11	27	38	27	17	44

Table 6.3: Predicted Vehicle Trip Generation

The trip generation exercise reveals that the proposed development has the potential to generate total 38 two-way vehicle trips during AM peak hour and 44 two-way vehicle trips during PM peak hour period.

6.4 Trip Distribution & Assignment

The proposed residential developments vehicle trips have been assigned to the network based on the internal parking configuration within the development site. For the proposed development, it is assumed that 75% of the traffic would enter and exit the site via the Santry Avenue junction and the remaining 25% traffic will enter and exit via the permitted Swords Road junction (Left In/Left Out). Traffic entry and exit via Santry Avenue and Swords Road Accesses are illustrated in **Table 5.4** and **Table 5.5**.

AM PEAK (07:45-08:45)			PM PEAK (16:30-17:30)		
IN	OUT	Total	IN	OUT	Total
9	20	29	20	13	33

Table 6.4: Predicted Traffic Entry/ Exit Via Santry Avenue Access (Vehicles)

AM PEAK (07:45-08:45)			PM PEAK (16:30-17:30)		
IN	OUT	Total	IN	OUT	Total
3	7	10	7	4	11

Table 6.5: Predicted Traffic Entry/ Exit Via Swords Road Access (Vehicles)

6.5 Traffic Generation – Committed Developments

There are a number of third party committed developments in the immediate vicinity of the subject site which have obtained planning permission but not yet constructed. These committed developments have been included within this appraisal as it may has an impact on the capacity of the local road network influencing traffic flows and the performance of key local junctions, once they is all completed, occupied and operational. These include:

- **DCC Pl. Ref. 4549/22**: The Santry Place will consist of modifications to the development permitted on site under DCC Reg. Ref. 2713/17 and 2737/19. The proposed development's predicted peak hour vehicle trips as outlined in the TTA submitted as part of the planning application are incorporated into the subject development assessment.
- **DCC Pl. Ref. 3811/20**: The proposed new development will consist of a 3 storey multi-tenant commercial building c. 1992 sqm with full banking and financial service uses. The proposed development predicted peak hour vehicle trips were analysed using TRICS.

- **ABP-312202-21 (Omni Plaza SHD)**: Strategic Housing Development which comprises the demolition of the existing industrial / warehouse buildings northwest of Omni Park Shopping Centre, Santry, Dublin 9 and the construction of 457 no. apartments across 4 no. blocks. The proposed residential development's predicted vehicle trips have been included and were obtained from the third-party TTA as submitted part of the planning application.
- **ABP-307011-20 (Omni Living SHD)**: Construction of a mixed-use development generally ranging in height from 5 no. storeys to 12 no. storeys (over basement level) set out in 3 no. blocks (Block A, B and C). The development will comprise a total of 324 no. apartment units. The proposed development's predicted vehicle trips have been included and were obtained from the third-party TTA as submitted part of the planning application.

Figure 6.2: Committed Development Locations

7 NETWORK IMPACT ANALYSIS

7.1 Assessment Scope

Two different traffic scenarios have been assessed within this TTA, namely (a) the 'Base' (Do Minimum) traffic characteristics and (b) the 'Post Development' (Do Something) traffic characteristics.

The proposed development traffic flows have then been added to the network's Adjusted 'Base' (Base + Committed Development) traffic flows to establish the new 'Post' Development Do Something traffic flows. Base Flows for the future design years were derived based on the projection detailed in the Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections published by Transport Infrastructure Ireland (TII). In summary the following network scenarios are considered.

Do Minimum

- A1 – 2027 Base Flows + Committed Development
- A2 – 2032 Base Flows + Committed Development
- A3 – 2042 Base Flows + Committed Development

Do Something

- B1 – 2027 Do Minimum (A1) + Proposed Development Flows
- B2 – 2032 Do Minimum (A2) + Proposed Development Flows
- B3 – 2042 Do Minimum (A3) + Proposed Development Flows

7.2 Assessment Periods

The weekday AM and PM peak hour flows have been identified in traffic survey as occurring between **07:45-08:45** and **16:30-17:30** respectively. These peak hour periods form the basis of the network assessments.

7.3 Network Vehicle Flows

The following Figures as included in Appendix B present the vehicle flows across the local road network for each of the adopted development assessment scenarios:

- Figure 10 – 2027 Do Minimum (A1)
- Figure 11 – 2032 Do Minimum (A2)

- Figure 12 – 2042 Do Minimum (A3)
- Figure 15 – 2027 Do Something (B1)
- Figure 16 – 2032 Do Something (B2)
- Figure 17 – 2042 Do Something (B3)

7.4 Network Impact

The Institute of Highways and Transportation document 'Guidelines for Traffic Impact Assessments' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. When such levels of impact are generated, a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. These same thresholds are reproduced in the TII document entitled Traffic and Transport Assessment Guidelines (2014).

In accordance with the IHT and NRA guidelines, assessments have been undertaken to establish the potential level of impact upon the key junctions of the local road network. To enable this calculation to be undertaken, the analysis took account of the following traffic scenarios:

- 2027 Opening Year (Do Minimum & Do Something);
- 2032 Future Design Year Scenario (Do Minimum & Do Something); and
- 2042 Future Design Year Scenario (Do Minimum & Do Something).

Table 6.1 details the percentage impact of the relevant key junctions for the 2027, 2032 and 2042 design years are the following:

- **Junction 1** – R132 Swords Road / R104 Santry Avenue / Santry Villas Signalised Junction
- **Junction 2** – R104 Santry Avenue Site Access (Entrance 1)
- **Junction 3** – R132 Swords Road / Santry Place Site Access (Entrance 2)

Junction ID	Junction	Design Year	AM PEAK (07:45-08:45)			PM PEAK (16:30-17:30)		
			DN	DS	% Impact	DN	DS	% Impact
1	R132 Swords Road / R104 Santry Avenue / Santry Villas Signalised Junction	2027	2302	2323	**0.91%**	2301	2321	**0.90%**
		2032	2430	2451	**0.86%**	2428	2449	**0.85%**
		2042	2545	2566	**0.83%**	2543	2563	**0.81%**
2	R104 Santry Avenue Site Access (Entrance 1)	2027	1189	1220	**2.64%**	1112	1146	**3.09%**
		2032	1252	1284	**2.51%**	1172	1206	**2.93%**
		2042	1309	1341	**2.40%**	1225	1259	**2.81%**
3	R132 Swords Road / Santry Place Site Access (Entrance 2)	2027	1628	1645	**1.05%**	1797	1819	**1.18%**
		2032	1715	1732	**1.00%**	1896	1917	**1.12%**
		2042	1793	1810	**0.96%**	1983	2005	**1.07%**

Table 7.1: Network Impact Assessment

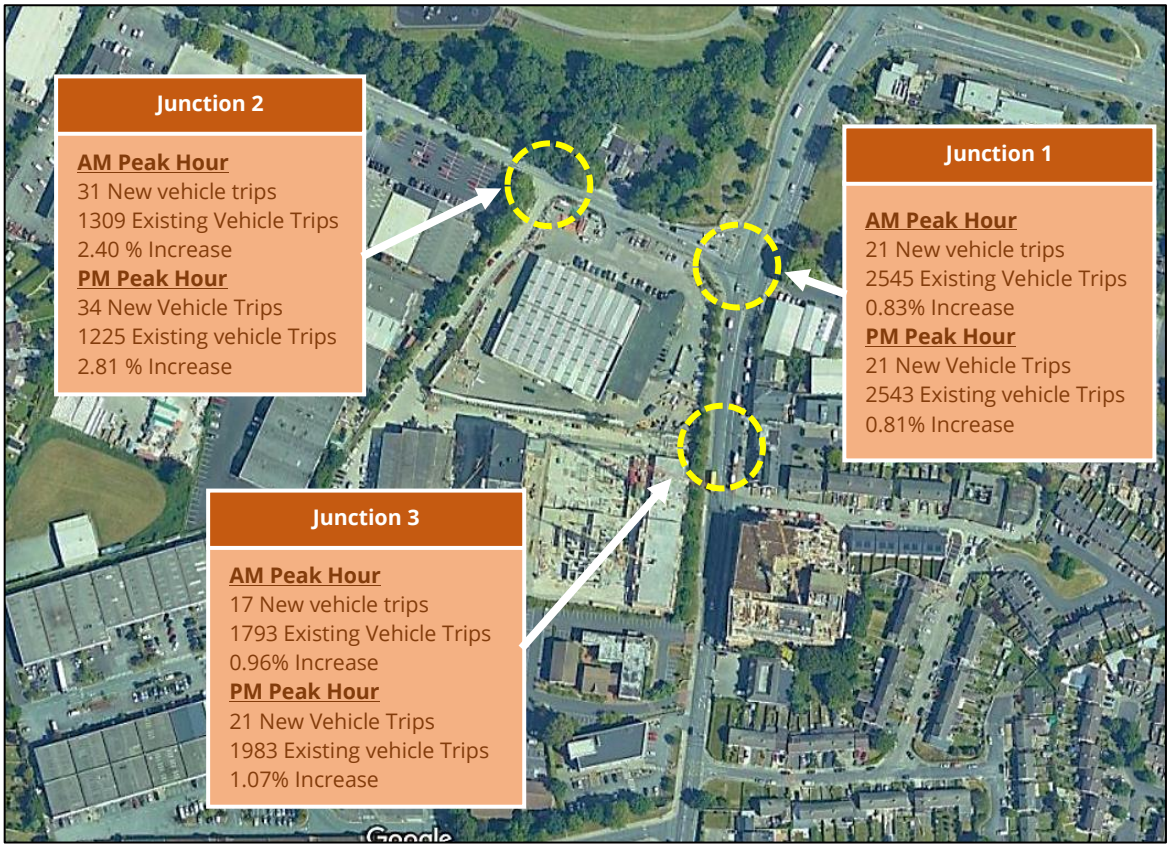


Figure 7.1: Increase in Vehicle Trips Generated at Local Junctions (2042 Future Design Year)

With the addition of the proposed development's traffic, the impact predicted for all the three junctions within all design years is considered to be insignificant and well below the 5% threshold for necessitating further more detailed analysis. However, for the purpose of robust analysis both site access junctions will be subject to further assessment in order to determine

pre-development and post-development performance of the junctions using the modelling software Junction PICADY, respectively.

8 PUBLIC TRANSPORT IMPACT

8.1 Introduction

In reference to **Section 2.5** which discussed the existing public transport capacity, the following sections discuss the predicted demand on the local public transport (bus) network that is created by the proposed development.

8.1.1 Predicted Public Transport Demand

To determine the number of person trips that the proposed development will generate, the TRICS database was used to determine the vehicular trip rate associated with proposed development during the AM (07:00 – 10:00) and PM (16:00 – 19:00) Peak Periods. Peak three-hour periods were assessed as opposed to peak hourly periods for the following reasons:

- Examining the peak three-hour periods ensures that any fluctuations in traffic volumes that may occur outside of the peak-hour are accounted for, thereby allowing for a more comprehensive analysis.
- Examining three-hour peak periods ensures that the full commuter peak during the morning and afternoon/evening hours is accounted for.

The vehicular trip rate was adjusted to reflect the vehicle trip characteristics associated with the development based upon the ratio of proposed car parking to the number of residential apartment units. It has been assumed that the development's non-residential units are not predicted to give rise to material levels of the additional vehicular traffic and, as such, only the number of person trips generated by the residential apartments of the proposed development are assessed in this section. **Table 7.1** shows the adjusted vehicular trip rate based on the number of parking spaces proposed in relation to the number of residential apartment units.

Residential Trip Rate (TRICS)	AM Period (07:00 - 10:00)			PM Period (16:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total
Original Trip Rates	0.188	0.399	0.587	0.433	0.289	0.722
Adjusted Trip Rates	0.110	0.234	0.344	0.254	0.169	0.423

Figure 8.1: Vehicular Trip Rate associated with Apartment Units

The vehicular trip rate associated with the proposed development was then used to determine the number of person trips associated with different modes of transport. **Table 7.2** shows the number of vehicle person trips predicted to be generated by the subject site over the three-

hour AM and PM periods. In total, 110 no. two-way trips will be generated during the AM Period (07:00-10:00) and 135 no. two-way trips during the PM Peak (16:00-19:00).

Land Use	AM Period (07:00 - 10:00)			PM Period (16:00 - 19:00)		
	Arr	Dep	Total	Arr	Dep	Total
Apartments	35	75	110	81	54	135

Figure 8.2: Predicted Three-hour AM & PM Vehicle Person Trips Generated by Proposed Development

This vehicle person trip generation was then used to determine the person trips associated with different modes of transport as shown in **Table 7.3**. In total, 607 and 747 no. person trips are predicted to be generated during the AM Peak three-hour period (07:00-10:00) and PM Peak three-hour period (16:00-19:00) respectively. The modal split applied to the person trip generation is obtained from the assessment of the Census 2022 Small Areas Population Map (SAPMAP) as discussed in further detail in the Mobility Management Report **(230146-X-90-X-XXX-RP-DBFL-CE-0002).**

Means of Travel	Modal Split	AM Peak Period (07:00-10:00)			PM Peak Period (16:00-19:00)		
		Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Walking	12.8%	25	53	77	57	38	95
Cycling	4.0%	8	17	24	18	12	30
Bus	28.4%	55	117	172	127	85	212
Train, DART or LUAS	1.1%	2	5	7	5	3	8
Motorcycle or scooter	0.5%	1	2	3	2	2	4
Car Driver	18.2%	35	75	110	81	54	135
Car passenger	7.3%	14	30	44	33	22	54
Van	0.9%	2	4	5	4	3	6
Work From Home	7.5%	15	31	45	34	22	56
Not stated	19.4%	38	80	118	87	58	145
Total		**194**	**413**	**607**	**448**	**299**	**747**

Figure 8.3: Predicted Person Trip Generation

The predicted person trips to be generated by sustainable modes of transport are shown in **Table 7.4**. The proposed development is predicted to generate 172 no. new bus person trips during the AM Peak Period (07:00-10:00) and 212 no. during the PM Peak Period (16:00-19:00).

Peak Period	PT (Rail)	PT (Bus)	Cycling	Walking
AM (07:00-10:00)	7	172	24	77
PM (16:00-19:00)	8	212	30	95

Figure 8.4: Predicted Person Trips to be Generated using Sustainable Modes of Transport

8.1.2 Person Trip Distribution and Assignment

The predicted person trips generated by the proposed development were assigned to the surveyed bus routes based on the number of services that were recorded during surveys. Distributing the person trips this way provides for a better understanding of the anticipated demand on each of the different bus routes during both the AM (07:00-10:00) and PM (16:00-19:00) Peak Periods.

8.1.3 Public Transport Impact

Table 7.5 and **Table 7.6** illustrates the impact that the proposed development is predicted to have on the local bus network during the AM and PM Peak three-hour periods respectively. With the inclusion of the proposed development's new bus passengers onto the existing bus services, the bus network capacity is predicted to continue to operate with significant reserve capacity with an average reserve capacity of 70% during the AM Peak Period and 74% during the PM Peak Period. The reserve capacity is therefore only reduced by 2% during both the AM Peak Period and PM Peak Period following the addition of the proposed development's new bus passengers to the existing bus network.

Route No.	Description	AM Period (07:00-10:00)				
		Services	Capacity	Generated Trips	New Reserve Capacity (No. of Pass.)	New Reserve Capacity %
16	Dublin Airport - Ballinteer (Kingston)	10	950	17	716	75%
	Ballinteer (Kingston) - Dublin Airport	7	665	12	537	81%
16 D	Dublin Airport - Ballinteer (Kingston) (D Route)	5	475	8	225	47%
	Ballinteer (Kingston) - Dublin Airport (D Route)	0	0	0	0	-
33	Balbriggan - Lower Abbey Street	6	570	10	325	57%
	Lower Abbey Street - Balbriggan	2	190	3	143	75%
33E	Mourne View - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Mourne View	1	95	2	55	58%
41	Swords Manor - Lower Abbey Street	10	950	17	583	61%
	Lower Abbey Street - Swords Manor	8	760	14	542	71%
41B	Rolestown - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Rolestown	0	0	0	0	-
41C	Swords Manor - Lower Abbey Street (C Route)	9	855	15	423	49%

Route No.	Description	AM Period (07:00-10:00)				
		Services	Capacity	Generated Trips	New Reserve Capacity (No. of Pass.)	New Reserve Capacity %
	Lower Abbey Street - Swords Manor (C Route)	7	665	12	524	79%
41 D	Swords Business Park - Lower Abbey Street	1	95	2	75	79%
	Lower Abbey Street - Swords Business Park	2	190	3	116	61%
101	Drogheda - Dublin (Airport)	5	425	8	355	83%
	Dublin (Airport) - Drogheda	5	425	8	401	94%
N6	Finglas - Kilbarrack (Howth Junction)	12	1140	20	878	77%
	Kilbarrack (Howth Junction) - Finglas	12	1140	20	802	70%
TOTAL		**102**	**9590**	**172**	**6699**	**Avg = 70%**

Figure 8.5: Total AM Peak Demand for Bus Services due to Proposed Development

Route No.	Description	PM Period (16:00 - 19:00)				
		Services	Capacity	Generated Trips	New Reserve Capacity (No. of Pass.)	New Reserve Capacity %
16	Dublin Airport - Ballinteer (Kingston)	14	1330	28	904	68%
	Ballinteer (Kingston) - Dublin Airport	14	1330	28	1111	84%
16 D	Dublin Airport - Ballinteer (Kingston) (D Route)	0	0	0	0	-
	Ballinteer (Kingston) - Dublin Airport (D Route)	0	0	0	0	-
33	Balbriggan - Lower Abbey Street	4	380	8	263	69%
	Lower Abbey Street - Balbriggan	7	665	14	400	60%
33E	Mourne View - Lower Abbey Street	0	0	0	0	-
	Lower Abbey Street - Mourne View	0	0	0	0	-
41	Swords Manor - Lower Abbey Street	9	855	18	641	75%
	Lower Abbey Street - Swords Manor	8	760	16	507	67%
41B	Rolestown - Lower Abbey Street	1	95	2	86	91%
	Lower Abbey Street - Rolestown	1	95	2	74	78%
41C	Swords Manor - Lower Abbey Street (C Route)	6	570	12	317	56%
	Lower Abbey Street - Swords Manor (C Route)	8	760	16	416	55%
41 D	Swords Business Park - Lower Abbey Street	1	95	2	58	61%
	Lower Abbey Street - Swords Business Park	0	0	0	0	-
101	Drogheda - Dublin (Airport)	5	475	10	465	98%
	Dublin (Airport) - Drogheda	2	190	4	186	98%
N6	Finglas - Kilbarrack (Howth Junction)	13	1235	26	970	79%
	Kilbarrack (Howth Junction) - Finglas	14	1330	28	921	69%
TOTAL		**107**	**10165**	**212**	**7321**	**Avg = 74%**

Figure 8.6: Total PM Peak Demand for Bus Services due to Proposed Development

9 NETWORK ANALYSIS

The operational assessment of the local road network has been undertaken using the Transport Research Laboratory (TRL) computer package Junction 9 PICADY for the priority junctions. For Priority junctions, a Ratio of Flow to Capacity (RFC) of greater than 85% (0.85) would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly. A 90-minute weekday AM and PM period has been simulated, from 07:30 to 9:00 and 16:15 to 17:45. Traffic flows were entered using an Origin-Destination table for the peak hours.

In order to analyse and assess the impact of the proposed development on the surrounding road network, network, traffic the junctions were created and analysed for the scheme's following Opening and Future Design Years:

- 2027 Opening Year
- 2032 Future Design Year (Opening Year +5 years)
- 2042 Future Design Year (Opening Year +15 years)

As introduced previously, the following junction has been considered for further analysis: -

- **Junction 2** – R104 Santry Avenue Site Access (Entrance 1)
- **Junction 3** – R132 Swords Road / Santry Place Site Access (Entrance 2)

Figure 9.1: Junctions for PICADY analysis

9.1 R104 Santry Avenue Site Access 1

The results of the operational assessment of this three-arm priority-controlled R104 Santry Avenue Site Access (Entrance 1)junction during the weekday morning and evening peaks are summarised in **Tables 8.1** to **8.6** below. The arms were labelled as follows within the PICADY model:

a. Arm A: Santry Avenue (East)

b. Arm B: Site Access (Access 1)

c. Arm C: Santry Avenue (West)

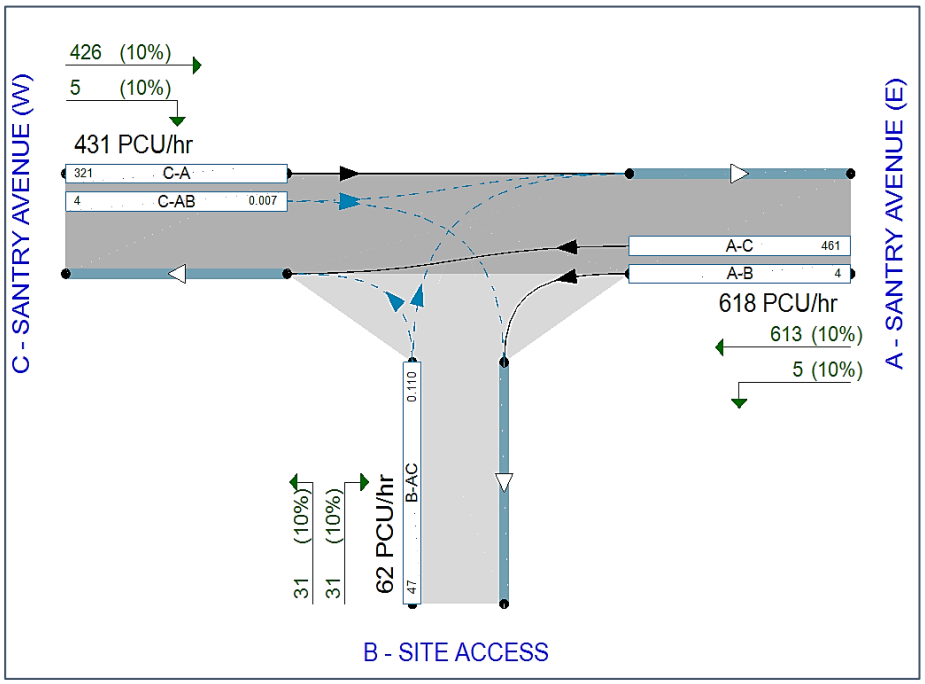


Figure 9.2: Site Access 1 Junction Diagram

9.1.1 Scenario 2027 AM Peak

The PICADY results (**Table 8.1**) indicate that the Site Access on Santry Avenue junction will operate within capacity for the 2027 "Do Minimum" AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.05, a delay of 12.78 seconds and a corresponding queue of 0.1 vehicles recorded on the minor arm. With the inclusion of the proposed development and the committed development, the 2027 "Do Something" AM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum Ratio of Flow to Capacity (RFC) value of 0.12, a delay of 13.87 seconds and a corresponding queue of 0.1 vehicles being recorded. A copy of the PICADY output files can be found in Appendix D.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.05	12.78	0.1
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.1	9.94	0.1
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.12	13.87	0.1
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	10.09	0.1

Table 9.1: 2027 PICADY Results (AM Peak)

9.1.2 Scenario 2027 PM Peak

The PICADY results (**Table 8.2**) indicate that the junction will operate within capacity for the 2027 "Do Minimum" PM peak hour with a maximum RFC value of 0.19, a delay of 13.59 seconds and a corresponding queue of 0.3 is observed. The 2027 "Do Something" PM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC of 0.24, a delay of 14.56 seconds and a corresponding queue of 0.3 vehicles is observed. This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.05.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.19	13.59	0.3
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.01	8.44	0
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.24	14.56	0.3
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.04	8.69	0

Table 9.2: 2027 PICADY Results (PM Peak)

9.1.3 Scenario 2032 AM Peak

The PICADY results (**Table 8.3**) indicate that the junction will operate within capacity for the 2032 "Do Minimum" AM peak hour with a maximum RFC value of 0.05, a delay of 13.36 seconds and a corresponding queue of 0.1 vehicles recorded on the minor arm. The 2032 "Do Something" PM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC of 0.12, a delay of 14.56 seconds and a corresponding queue of 0.2 vehicles is observed.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.05	13.36	0.1
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.1	10.2	0.1
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.12	14.56	0.2
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	10.36	0.1

Table 9.3: 2032 PICADY Results (AM Peak)

9.1.4 Scenario 2032 PM Peak

The PICADY results (**Table 8.4**) indicate that the Site Access on Santry Avenue junction will operate within capacity for the 2032 "Do Minimum" PM peak hour with a maximum RFC value of 0.20, a delay of 14.18 seconds and a corresponding queue of 0.3 vehicles recorded. The 2032 "Do Something" PM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum Ratio of Flow to Capacity (RFC) value of 0.24, a delay of 15.24 seconds and a corresponding queue of 0.4 vehicles being recorded.

This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.04.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.20	14.18	0.3
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.01	8.6	0
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.24	15.24	0.4
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.04	8.87	0

Table 9.4: 2032 PICADY Results (PM Peak)

9.1.5 Scenario 2042 AM Peak

The PICADY results (**Table 8.5**) indicate that the junction will operate within capacity for the 2042 "Do Minimum" AM peak hour with a maximum RFC value of 0.18, a delay of 13.94 seconds and a corresponding queue of only 0.1 vehicles recorded. The 2042 "Do Something" AM peak hour, the RFC increases to 0.13 with a corresponding delay of 15.24 seconds and a queue of 0.2 vehicles being recorded.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.05	13.94	0.1
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.1	10.46	0.1
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.13	15.25	0.2
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	10.62	0.1

Table 9.5: 2042 PICADY Results (AM Peak)

9.1.6 Scenario 2042 PM Peak

The PICADY results (**Table 8.6**) indicate that the Site Access on Santry Avenue junction will operate within capacity during both the 2042 "Do Minimum" and "Do Something" PM peak hour scenarios. A maximum RFC of 0.20, a delay of 14.75 seconds and a corresponding queue of 0.3 vehicles recorded in the AM peak. With the inclusion of both the proposed and the committed developments during the 2042 "Do Something" PM peak hour, a maximum Ratio of Flow to Capacity (RFC) value of 0.25, a delay of 15.90 seconds and a corresponding queue of 0.4 vehicles is observed. This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.05.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.20	14.75	0.3
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.01	8.75	0
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.25	15.9	0.4
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.04	9.03	0

Table 9.6: 2042 PICADY Results (PM Peak)

9.2 R132 Swords Road / Santry Place Site Access 2

The results of the operational assessment of this three-arm priority controlled junction during the weekday morning and evening peaks are summarised in **Tables 8.7** to **8.12** below. The arms were labelled as follows within the PICADY model:

a. Arm A: Swords Road (S)

b. Arm B: Site Access (Access 2)

c. Arm C: Swords Road (N)

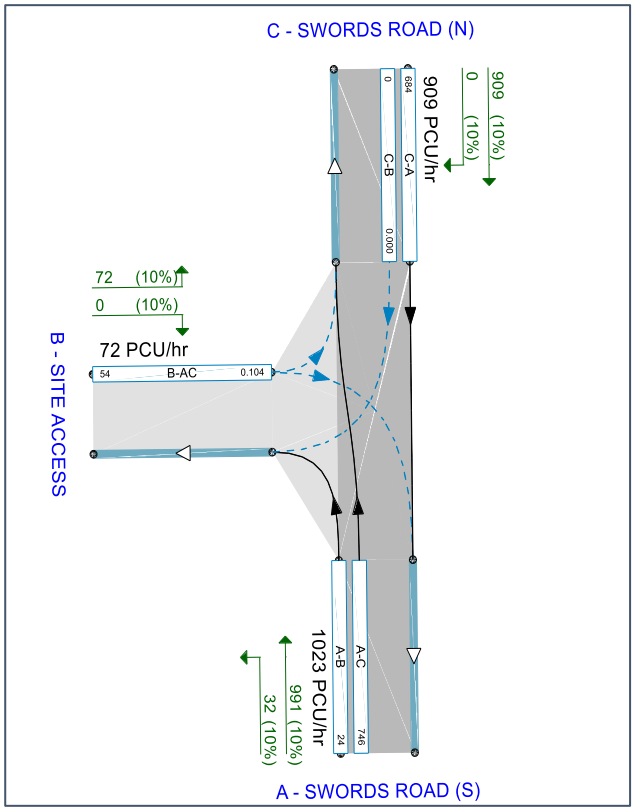


Figure 9.3: Access 2 Junction Diagram

9.3 Scenario 2027 AM Peak

The PICADY results (**Table 8.7**) indicate that the Site Access on Swords Rd (Access 2) junction will operate within capacity for the 2027 "Do Minimum" AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.12, a delay of 8.48 seconds and a corresponding queue of 0.1. With the inclusion of the proposed development and the committed development, the 2027 "Do Something" AM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC value of 0.13, a delay of 8.63 seconds and a corresponding queue of 0.2.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.12	8.48	0.1
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.13	8.63	0.2

Table 9.7: 2027 PICADY Results (AM Peak)

9.3.1 Scenario 2027 PM Peak

The PICADY results (**Table 8.8**) indicate that the junction will operate within capacity for the 2027 "Do Minimum" PM peak hour with a maximum RFC value of 0.14, a delay of 9.47 seconds and a corresponding queue of 0.2 vehicles recorded. During the 2027 "Do Something" PM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC value of 0.15, a delay of 9.60 seconds and a queue of 0.2 remaining unchanged from the Do Minimum scenario.

This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.01.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.14	9.47	0.2
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.15	9.60	0.2

Table 9.8: 2027 PICADY Results (PM Peak)

9.3.2 Scenario 2032 AM Peak

The PICADY results (**Table 8.9**) indicate that Access 2 will operate within capacity for the 2032 "Do Minimum" AM peak hour with a maximum RFC value of 0.13, a delay of 8.66 seconds and a corresponding queue of 0.2 vehicles recorded on the minor arm. In the 2032 "Do Something" PM peak hour, the junction experiences a maximum RFC value of 0.14, a delay of 8.79 seconds and a corresponding queue of 0.2 vehicles is observed.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.13	8.66	0.2
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.14	8.79	0.2

Table 9.9: 2032 PICADY Results (AM Peak)

9.3.3 Scenario 2032 PM Peak

The PICADY results (**Table 8.10**) indicate that second access on Swords Rd junction will operate within capacity for the 2032 "Do Minimum" PM peak hour with a maximum RFC value of 0.15, a delay of 9.71 seconds and a queue of 0.2. The 2027 "Do Something" PM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC

value of 0.16, a delay of 9.88 seconds and a corresponding queue of 0.2 vehicles being recorded. This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.01.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.15	9.71	0.2
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.16	9.88	0.2

Table 9.10: 2032 PICADY Results (PM Peak)

9.3.4 Scenario 2042 AM Peak

The PICADY results (**Table 8.11**) indicate that the junction will operate within capacity for the 2042 "Do Minimum" AM peak hour with a maximum RFC value of 0.14, a delay of 8.81 seconds and a corresponding queue of 0.2. The 2042 "Do Something" AM peak hour analysis reveals that the junction will continue to be operating within capacity with a maximum RFC value of 0.15, a delay of 8.95 seconds and a corresponding queue of 0.2 vehicles being recorded.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.14	8.81	0.2
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.15	8.95	0.2

Table 9.11: 2042 PICADY Results (PM Peak)

9.3.5 Scenario 2042 PM Peak

The PICADY results (**Table 8.12**) indicate that the Site Access on Swords Rd junction will continue to operate within capacity during both the 2042 "Do Minimum" and "Do Something" PM peak hour scenarios. A maximum RFC value of 0.16, a delay of 9.98 seconds and a corresponding queue of 0.0 vehicles is recorded in the AM peak. In the PM peak, a maximum RFC value of 0.17, a delay of 10.13 seconds and a corresponding queue of 0.2 vehicles is observed.

This "Do Something" result is comparable to the "Do Minimum" scenario with the maximum RFC increasing by only 0.02.

Scenario	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)
Do Minimum (A1)	B-AC -Site Access to Swords Road (N)	0.16	9.98	0.2
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.17	10.13	0.2

Table 9.12: 2042 PICADY Results (PM Peak)

10 RESPONSE TO DCC LRD OPINION

10.1 INTRODUCTION

Further to the issuing of a Notice of LRD Opinion by Dublin City Council (DCC), DBFL Consulting Engineers has reviewed the scheme proposals and provided a formal response to the transportation queries raised within the Opinion.

In this context, the planning authority raised a total of four transport related queries (Item 5) which have been labelled 5 (a) through to 5 (d); are addressed in this chapter in reference to accompanying drawings and documentation prepared by the Davey + Smith Architecture.

10.2 ITEM 5 (A)

DCC Query 5 (a)

There are discrepancies in submitted documentation regarding quantum of bicycle parking, as well as the proposed works to the public realm which differs on varying drawings (e.g. Road Layout Plan still identifies the provision of a set down area to the north of the site which has been removed in the Proposed Site Layout Plan). The final application submission should be consistent.

DBFL Response to Transportation Query 5 (a)

This has been noted and addressed in the updated final planning documentation.

10.3 ITEM 5 (B)

DCC Query 5 (b) (i)

Security for cycle parking at basement level requires revision. Where a rationale for reduced quantum of car parking is proposed, alternative high quality sustainable transport options should be provided. All cycle parking at present is proposed to be left unsecured in an open basement car park. Consideration should be given to providing additional security measures (e.g. segregated cages, store rooms etc) for bicycles. Detailed drawings should be submitted for each bicycle parking area clearly identify the quantum of bicycle parking in that area the type of standard to be use and clearly identifying adequate separation distances have been provided for ease of access and functionality. The applicant is referred to the National Cycle Design Manual (2023) in relation to the required separation distances for varying types of bicycle parking facilities.

DBFL Response to Transportation Query 5 (b) (i)

The vast majority of cycle parking at basement level are now proposed to be located within a secure cage / compounds for which only residents assigned to that specific store will have access to. The security measures and the quantum of bicycle parking within each of the 4 No. secured cage/compounds within the basement are illustrated in Davey + Smith Architect Basement Level Drawing No. D1809.P05 (Ref. **Figure 10.1**).

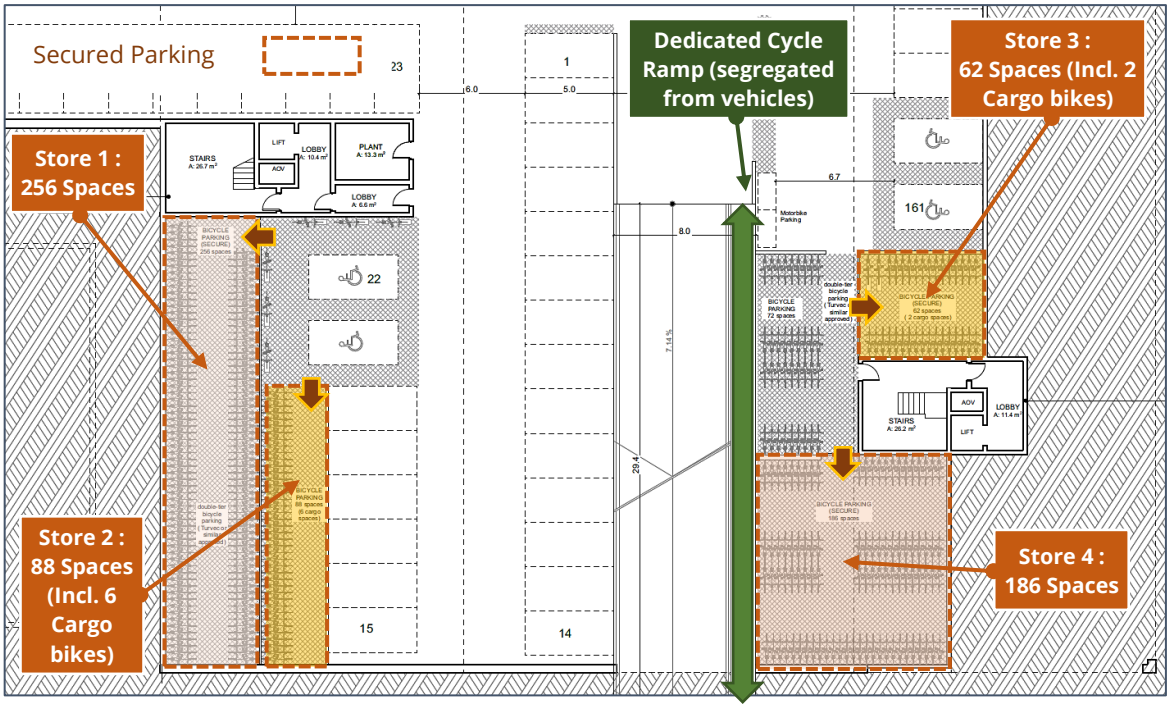
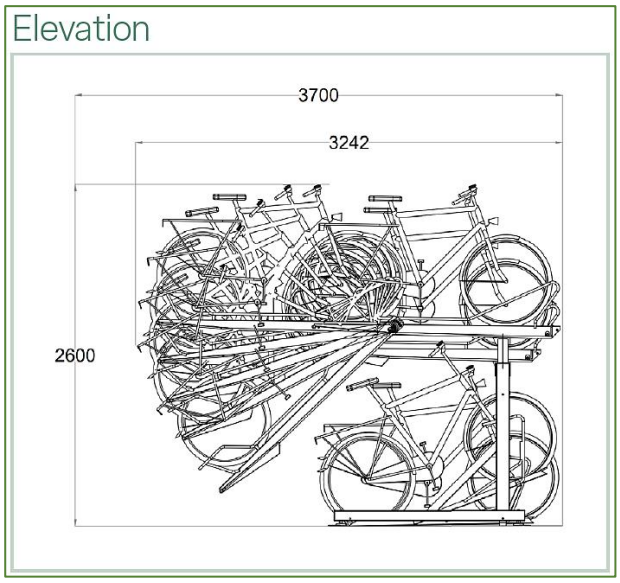
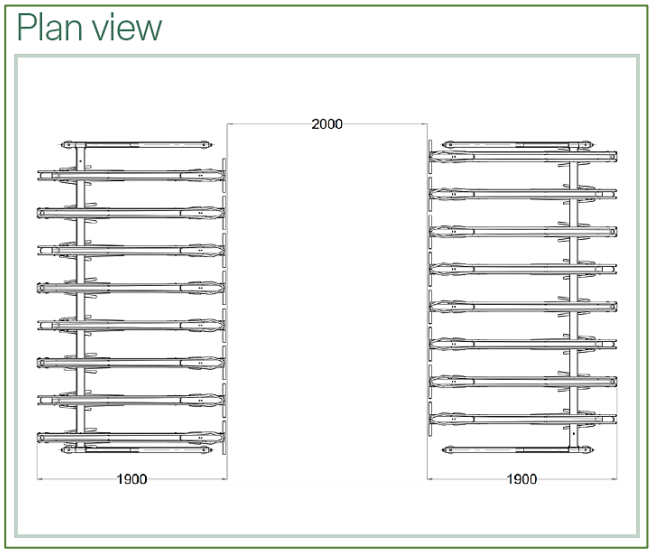


Figure 10.1: Secure Cycle Parking Store Areas at Basement Level

Parking for cycles at the basement level would be provided in the form of two-tier racks. These racks have been specified using suppliers Turvec's specific Dimensions and Specifications data sheet (Ref. **Figure 10.2**). The design proposals meet Turvec's separation distances to provide easy access and functionality in addition to the accessibility requirements (2.0m width) stated within the NTA's new Cycle Design Manual (2023).





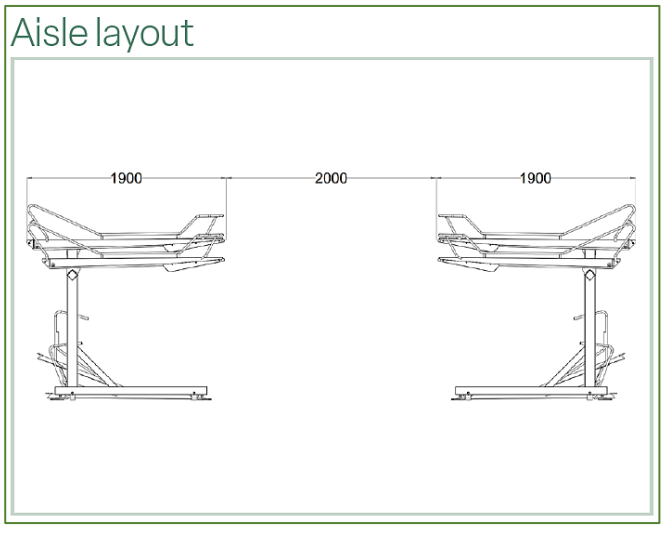


Figure 10.2: Two-Tier Bike Rack Dimensions and Specifications (Extract: Turvec)

Figure 10.3: Citihoop Cargo Bike Stand (Bellsure)

Cargo bike spaces will be provided by way of stands which will be similar in nature to the Citihoop Cargo Bike Stand which is supplied by Bellsure as detailed in **Figure 10.3**.

DCC Query 5 (b) (ii)

Section 3.2 of Appendix 5 of the City Development Plan 2022-2028 outlines provisions for shower/changing facilities for employees of commercial developments. Applicant should clarify compliance where applicable and identity the locations of same for future employees of the non-residential elements of the development.

DBFL Response to Transportation Query 5 (b) (ii)

The amended scheme now complies with Section 3.2 of Appendix 5 of the DCC Development Plan 2022-2028 in regards to the inclusion of suitable shower and changing facilities for employees of the proposed retail units within the development. A total of three shower/changing rooms (1 per retail unit) will be provided within each retail unit at ground floor level in Block A and Block B as illustrated in **Figure 10.4**.

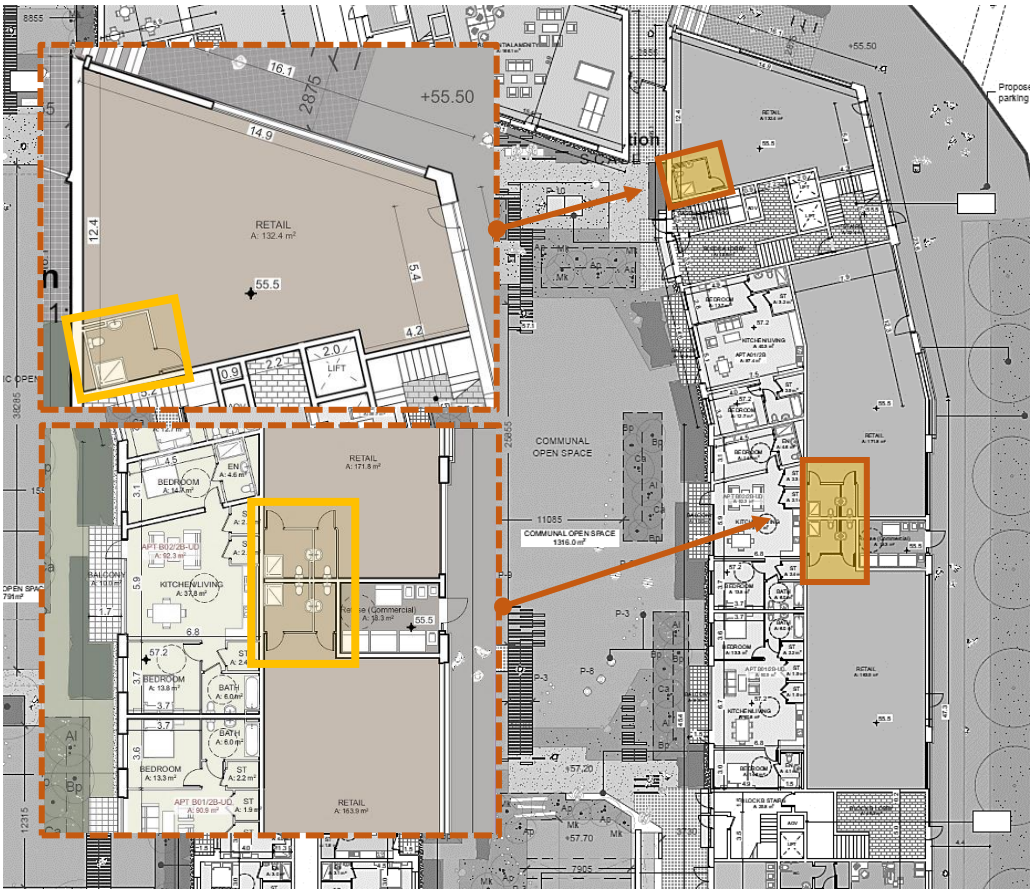


Figure 10.4: Proposed Shower/Changing Rooms at Retail Units at Blocks A and B

10.4 ITEM 5 (C)

DCC Query 5 (c) (i)

A Stage 1 Road Safety Audit should be provided which examines the proposed access. Issue have previously been raised in applications on the site for minor amendments to be made to the footpaths, junctions and access ways that should be clarified.

DBFL Response to Transportation Query 5 (c) (i)

A Stage 1 Road Safety Audit (RSA) Report has been compiled by Bruton Consulting Engineers and subsequent amendments made in response to the issues identified. The RSA has been submitted as a standalone report as part of the planning application documentation.

DCC Query 5 (c) (ii)

In the north-eastern corner of the site on the public footpath, there appears to be conflict with proposed landscaping and providing a free flowing public footpath as pinch points are created as a result of the street infrastructure. Applicant should revisit the landscaping proposal in this area.

DBFL Response to Transportation Query 5 (c) (ii)

The proposed landscaping and public footpath to the north-east has been redesigned to eliminate pinch points and ensure pedestrian accessibility is clear and unobstructed (Ref. **Figure 10.5**). The placement and design of landscaping features in this area has been addressed to ensure the landscaping is incorporated efficiently with the footpath layout. This involved the repositioning of a wayfinding totem and other landscape elements to optimize space utilization and minimize any potential conflicts.

The footpath at the northern boundary has an available width of 2.9m (larger than the 2.5m recommended by DMURS) and extends beyond 6m to allow pedestrian safety and convenience, thereby providing ample space for individuals to traverse the area to the north-east comfortably.

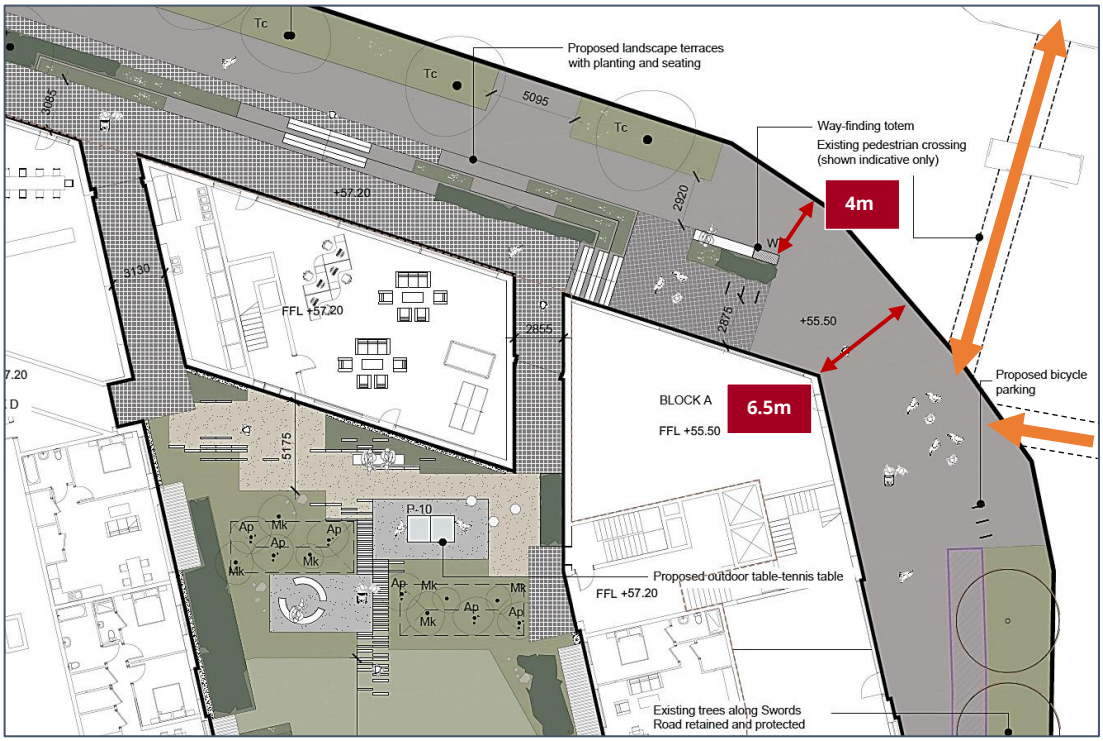


Figure 10.5: Proposed Landscaping and Footpath to the North-East of Subject Site

10.5 ITEM 5 (D)

DCC Query 5 (d)

Details should be provided on the operational servicing and delivery strategy for the site taking into consideration the location of the set down areas in close proximity to the access junction on the Swords Road and the increase in non–residential development proposed as part of this application.

DBFL Response to Transportation Query 5 (d)

A Delivery & Servicing Plan has been compiled (DBFL Report No. 230146-X-90-X-XXX-RP-DBFL-CE-0004 and submitted as part of the planning application documentation) which outlines a strategy for managing deliveries and servicing activities at the proposed development, considering the proximity of surface level waste transfer areas to the adjoining internal carriageway areas.

The report specifies the locations of the proposed (i) internal loading bay, (ii) set-down areas, and (iii) waste transfer areas with all bin collections being undertaken from the internal on-site carriageway and no longer from Santry Avenue nor Swords Rd corridors. These arrangements seek to minimize congestion, optimize accessibility for delivery vehicles. Additionally, the plan includes measures to minimize disruptions, such as scheduling deliveries during off-peak hours, promoting sustainable transportation options and consolidating delivery / collection activities.

11 SUMMARY AND CONCLUSION

11.1 SUMMARY

DBFL Consulting Engineers (DBFL) has been commissioned by Dwyer Nolan Developments to compile a Traffic and Transport Assessment (TTA) report in support of a planning application for proposed Large-scale Residential Development (LRD) on a site of c. 1.5 hectares, located at the junction of Santry Avenue and Swords Road, Santry, Dublin 9. The development site is bounded to the north by Santry Avenue, to the east by Swords Road, to the west by Santry Avenue Industrial Estate, and to the south by the permitted Santry Place development (granted under Dublin City Council Ref's. 2713/17 (as extended under Ref. 2713/17/X1), 2737/19 & 4549/22.

The proposed development provides for 321 no. apartments, comprised of 104 no. 1 bed, 198 no. 2 bed, & 19 no. 3 bed dwellings, in 4 no. seven to thirteen storey buildings, over basement level, with 3 no. retail units, a medical suite / GP Practice unit and community/arts & culture space (total c.1,483sq.m), all located at ground floor level, as well as a one storey residential amenity unit, facing onto Santry Avenue, located between Blocks A & D.

A basement level car park (c.5,470.8sq.m) will accommodate 161 no. car parking spaces and 664 no. bicycle parking spaces. Internal access to the basement level is provided from the cores of Blocks A, B, C, D, E, & F. External vehicular access to the basement level is from the south, between Blocks B & C. Additional 33 no. car parking spaces & 58 no. bicycle parking spaces will also be provided at surface level.

Vehicular access to the development will be via 2 no. existing / permitted access points: (i) on Santry Avenue in the north-west of the site (ii) off Swords Road in the south-east of the site, as permitted under the adjoining Santry Place development (Ref. 2713/17).

The analysis of the existing receiving environment has established;

- The existing on-site Chadwick's operation is found to currently generate some 675 two-way vehicle trips between 0700 and 1900 on a typical neutral weekday. This equates to 67 (including 10 HGV's) and 10 (including 1 HGV's) two-way vehicle trips during the local road networks AM and PM perk hour periods respectively.
- The existing Chadwick's dedicated site access junction on Santry Avenue is to be closed as part of the LRD scheme proposals.

- The site is ideally located to benefit from the existing and emerging Cycle Network Plan proposals as being promoted by both DCC and the NTA.
- A comprehensive range of high frequency bus services, operated by Dublin Bus and Go-Ahead currently operate along both Swords Road QBC and Santry Avenue, which have interchanges located within a convenient short walking distance of the subject site enhance the sustainability credentials of the subject site.
- The proposed development will benefit from enhanced public transport accessibility levels as part of the NTA's BusConnects proposal. The site is located adjoining Core Bus Corridors (Swords to/from City Centre) proposals with are currently at planning stage with ABP. The proposed development has been found to not impinge upon the NTA's emerging CBC infrastructure proposals along Swords Road.
- Due to the convenient and accessible location of the proposed development, the sustainable travel modes of public transport, cycling and walking are highly likely to be the dominant modes associated with trips to / from the proposed new development. Such trips will further enhance the commercial viability of the existing (and proposed) public transport services which in turn may lead to an increase in the frequency of these services which further enhances their attractiveness.
- The site is ideally located in respect of the 15-minute neighbourhood urban design concept with a range of retail, employment, leisure and amenity facilities all located with a convenient travel distance (by sustainable modes of travel) from the proposed LRD development.
- In reference to both the DCC Development Plan 2022-2028 and the recently published Compact Settlement Guidelines (2024), an appropriate amount of on-site car parking (0.56 spaces per unit) is being provided as part of the scheme proposals in respect of the site's excellent accessibility credentials in parallel with the implementation of a robust Mobility Management Plan and associated Car Parking Management Plan. This quantum of parking will ensure that no overspill of car parking onto the external local network will arise.
- The proposed development incorporates a total of 194 no. on-site dedicated car parking spaces to be provided, of which 161 no. spaces will be provided within the basement car parking and 33 no. spaces are provided as surface car parking. The

surface car parking includes 4 no. car share spaces, 2 set-down spaces, and 1 no. dedicated 24/7 loading bay. In accordance with DCC standards a total of 18 number dedicated accessible spaces are also being provided. The non-residential element of the scheme proposes 2 no. car pakring spaces assigned to the retail, 6 no. spaces assigned to the medical GP unit and 3 no. community centre spaces. A total of 96 no. electric vehicle parking spaces is proposed (81 within the basement and 15 at surface level). All remaining spaces will be designed to facilitate the relevant infrastructure to accommodate future EV charging rollout as and when demand necessiates.

- The overall quantum of bicycle parking proposed (740 spaces) on-site as part of the development proposals is higher the minimum requirements outlined within DCC Development Plan 2022-2028 (which require 408 spaces) and the Compact Settlement Guidelines (which require 557 spaces).
- It is predicted that the proposed development will generate criteria 38 and 44 two-way vehicle trips during the weekday AM and PM Peak hour periods respectively.
- The assessment has considered the accumulative impact arising from off-site third-party committed development (including Santry Place to the South) with the objective of providing a robust appraisal of the network's future operational performance.
- The network analysis has demonstrated that the scale of impact predicted to be generated by the proposed development is found to be sub-threshold at (i) the key off-site Santry Ave / Swords Rd Junction and (ii) the two site access / egress junctions.
- The AM and PM Peak Hour PICADY based assessment undertaken of both proposed priority-controlled site access junction's (i.e. Santry Ave and Swords Rd) established that both junctions will continue to operate within acceptable operational parameters and with reserve capacity being recorded in all future design year scenarios.

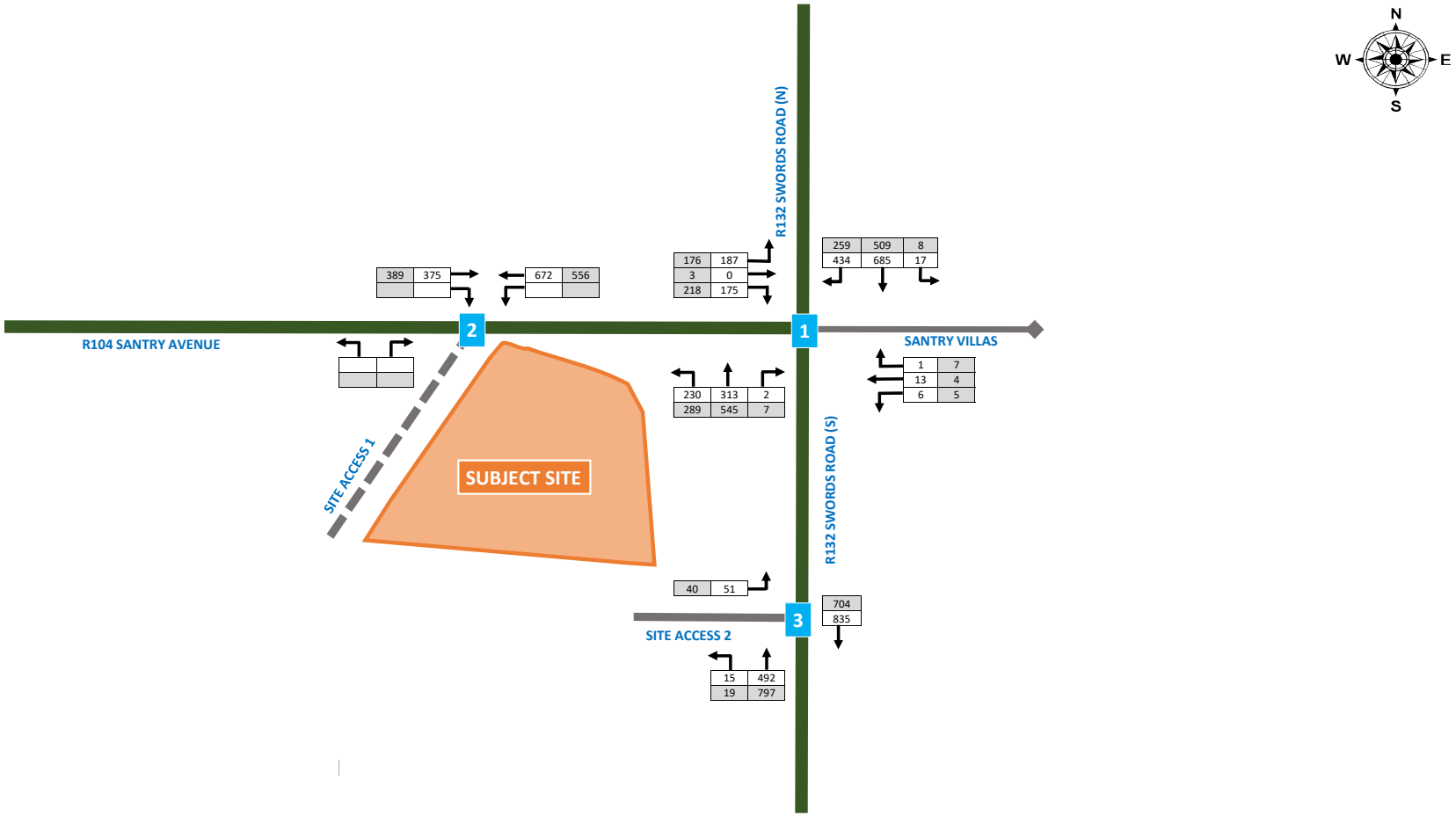
11.2 CONCLUSION

In conclusion, it is considered that the scale of impact on the surrounding off-site road network, as a result of the proposed development on Santry Avenue will be modest. This is based on the anticipated levels of additional traffic generated by the proposed development and the information and network analysis summarised in the above report which demonstrate that

both site accesses junction are predicted to operate within capacity in each future design year scenario.

It is concluded that the proposals represent a sustainable and practical approach to development on the subject brownfield lands and there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed Santry Avenue LRD.

Appendix A : Traffic Flow Diagrams



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Base Flow 2024 (PCU)

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 1

Rev: -

DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Existing Building (Chadwicks) Trips (PCU)

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 2

Rev: -

DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Adjusted Base Flow 2024 (PCU)

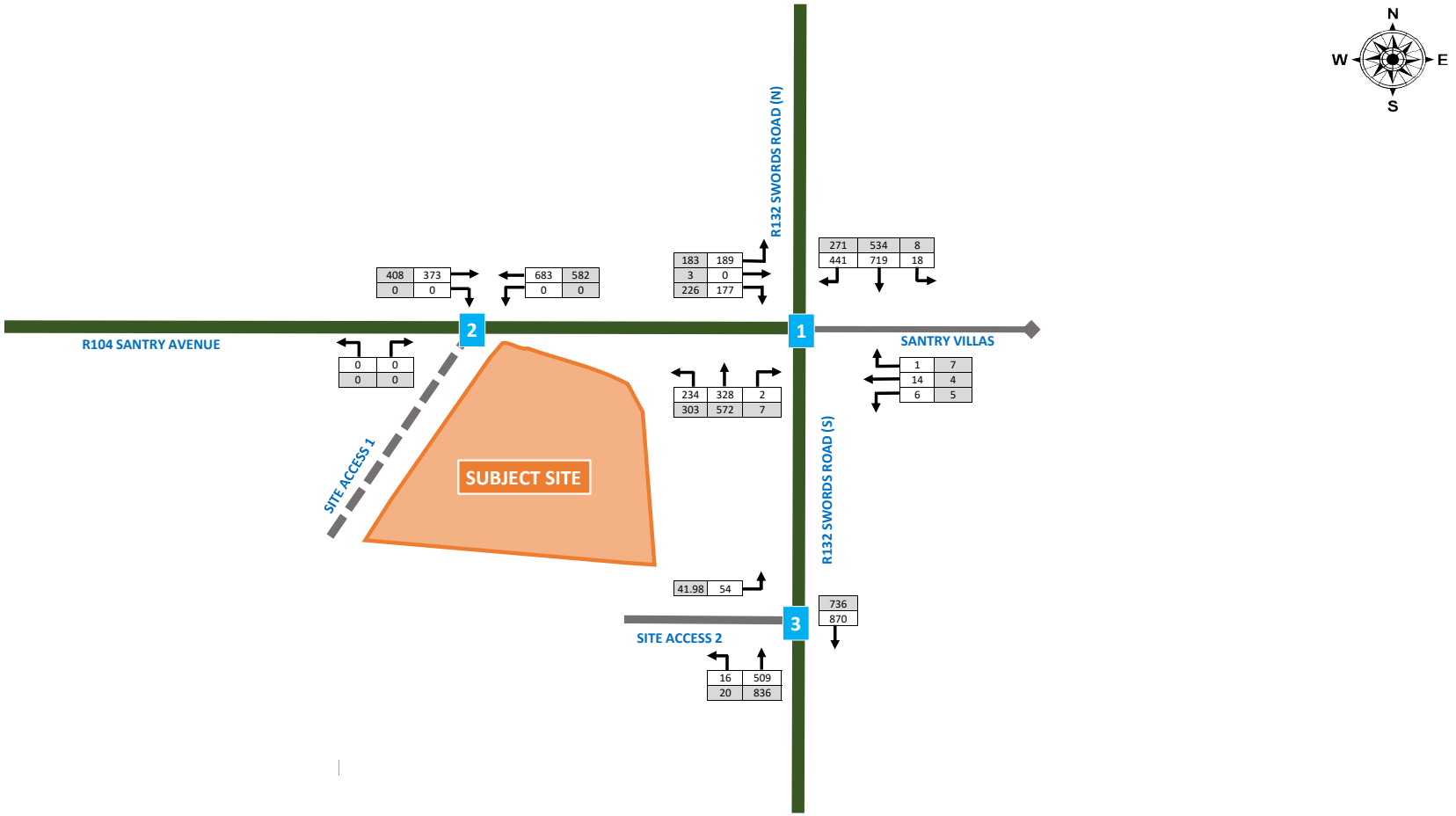
Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 3

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Nothing 2027 (PCU)

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Growth Factor 2027 1.049

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 4

Rev: -

DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Nothing 2032 (PCU)

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

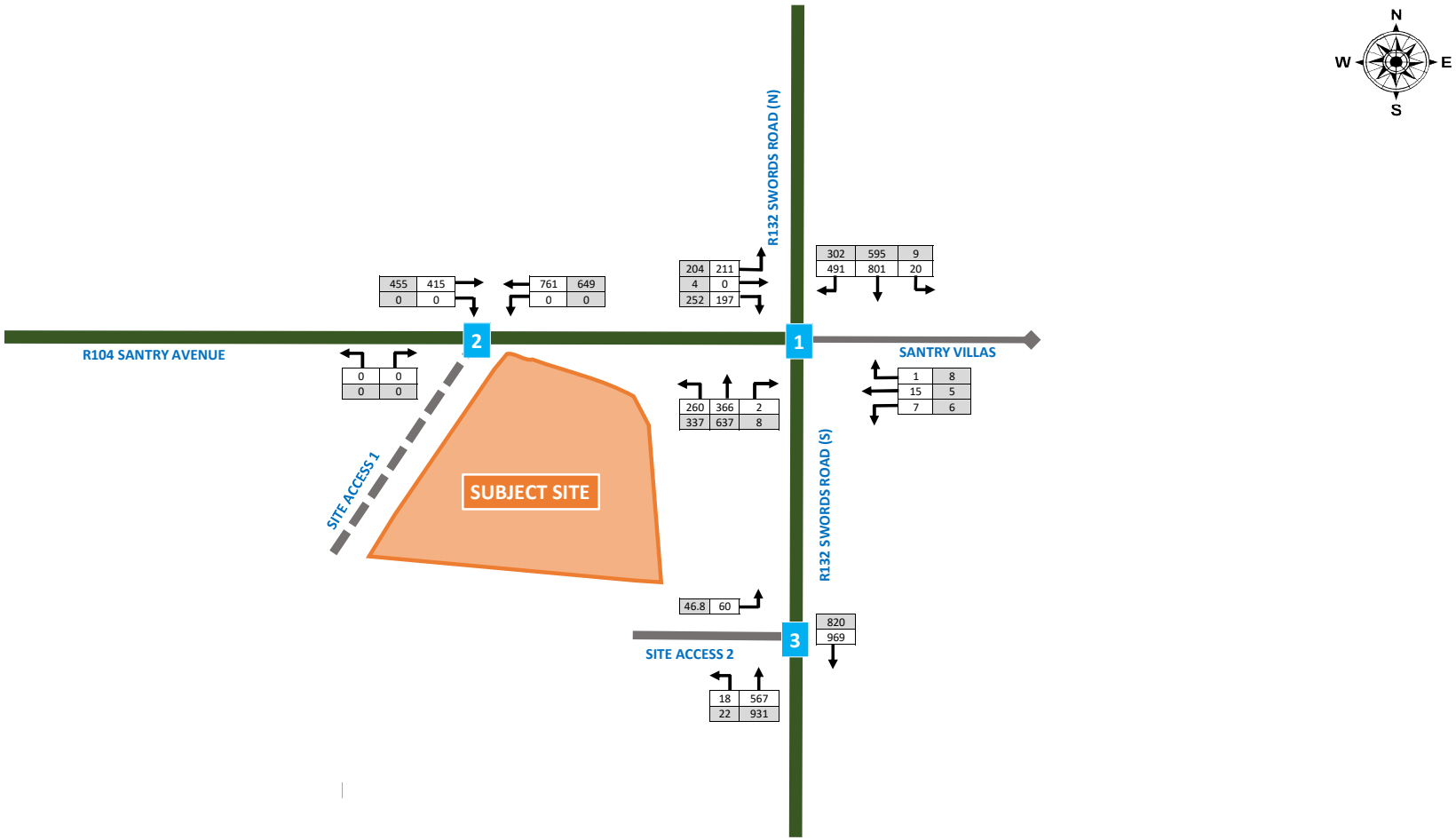
Growth Factor 2032 1.112

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 5

Rev: -



DBFL Consulting Engineers	**Dublin Office** Ormond House Upper Ormond Quay Dublin 7 D07 W704 **phone:** +353 1 400 4000	**Cork office** 14 South Mall Cork T12 CT91 **phone:** +353 21 202 4538	**Waterford Office** Suite 8b The Atrium Maritana Gate, Canada St Waterford X91 W028 **phone:** +353 51 309 500	**Galway Office** Odeon House 7 Eyre Square Galway H91 YNC8 **phone:** +353 91 33 55 99	**Project :** SANTRY AVENUE LRD, SANTRY, DUBLIN 9 **DRG. Title :** Network Traffic Flows - Vehicles Do Nothing 2042 (PCU)	**Key:** AM Peak Hour (07:45 to 08:45) PM Peak Hour (16:30 to 17:30) Growth Factor 2042 1.169	**Dwn:** DG **Ckd:** TJ **Date:** 21/02/2024 **Ref:** G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model **Figure:** 6 **Rev:** -

email: info@dbfl.ie

DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project :
SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title :
Network Traffic Flows - Vehicles

Committed Development 1 Trips (Santry Place - Phase 1 B (Ref. 4549/22))

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

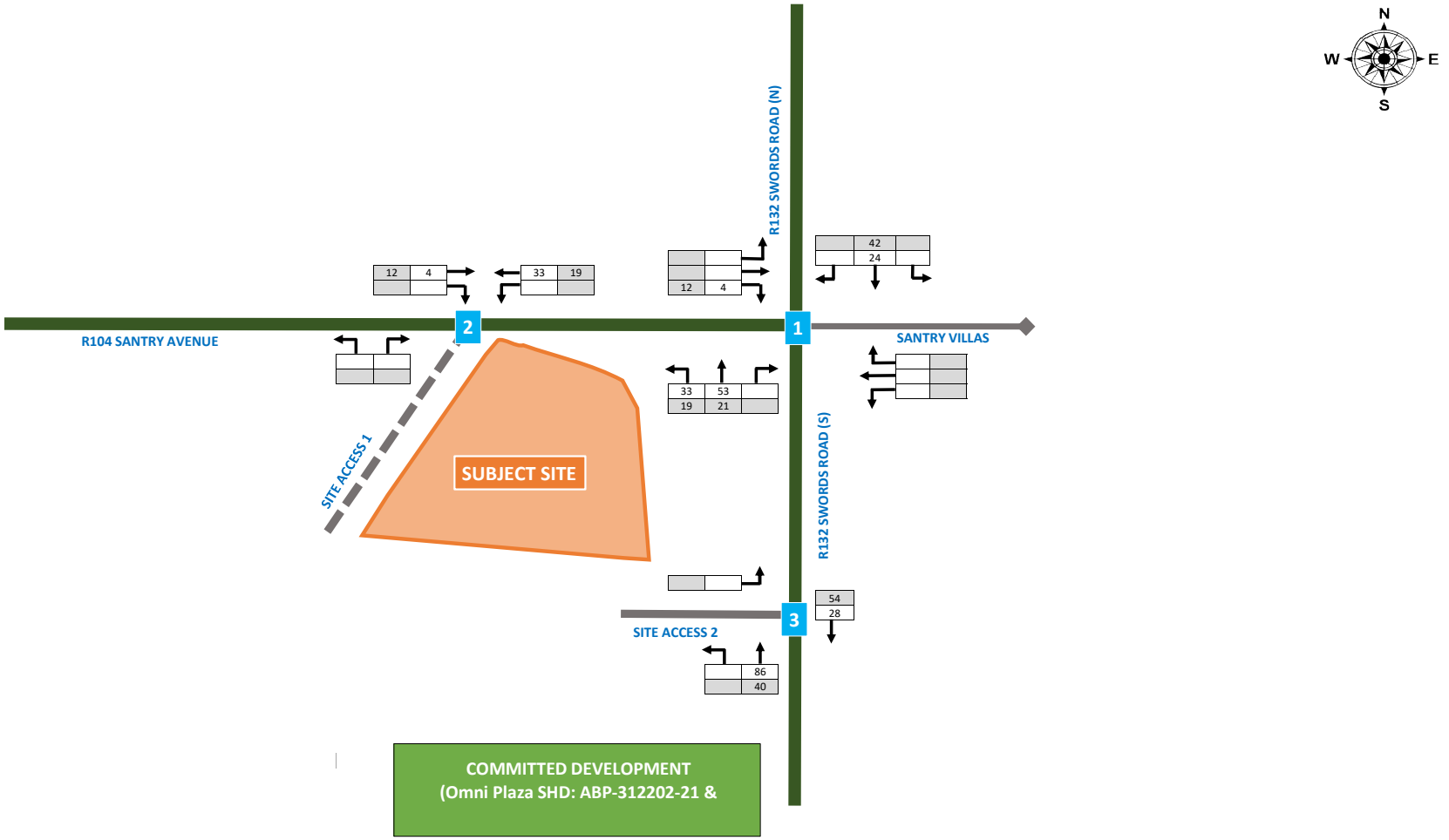
AM		PM	
ARR	DEP	ARR	DEP
102	20	14	84

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref:
G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 7

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project :
SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title :
Network Traffic Flows - Vehicles
Committed Development 2 Trips (Omni Plaza SHD: ABP-312202-21 & Omni Living SHD: ABP-307011-20)

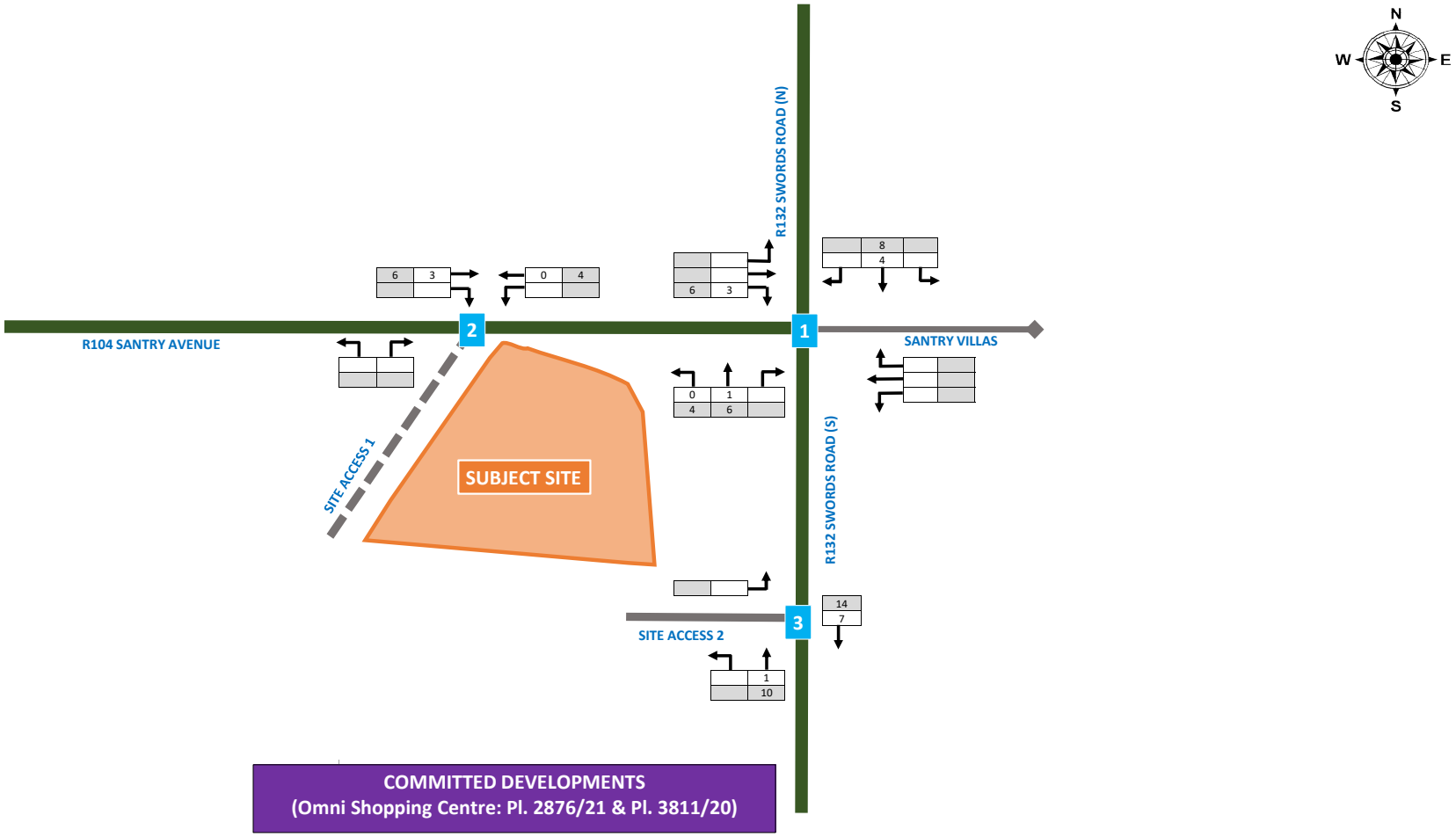
Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref:
G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 8

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project :
SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title :
Network Traffic Flows - Vehicles
Committed Development 3 Trips (Omni Shopping Centre: Pl. 2876/21 & Pl. 3811/20)

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

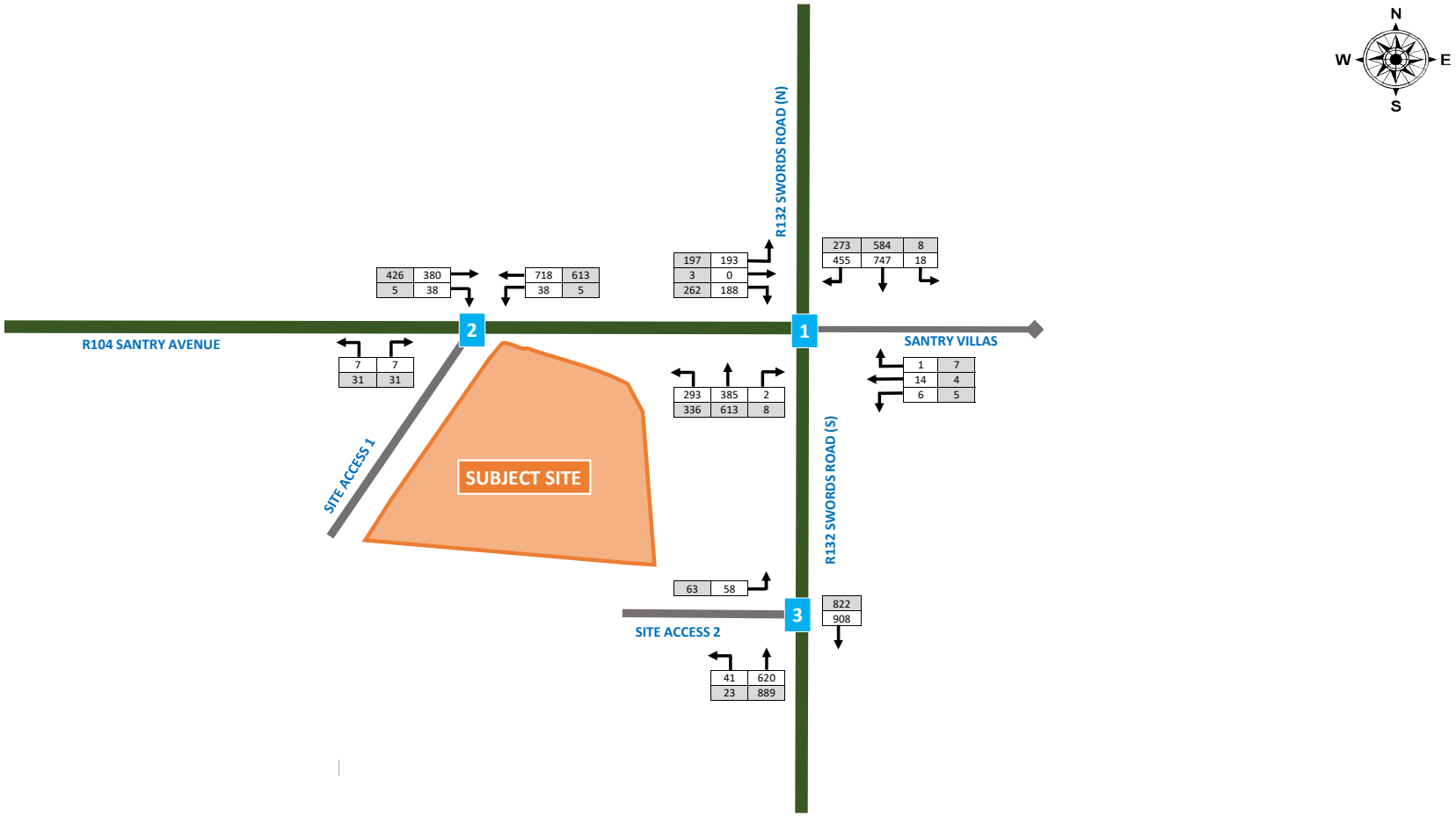
AM		PM	
ARR	DEP	ARR	DEP
9	4	20	14

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref:
G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 9

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Minimum 2027

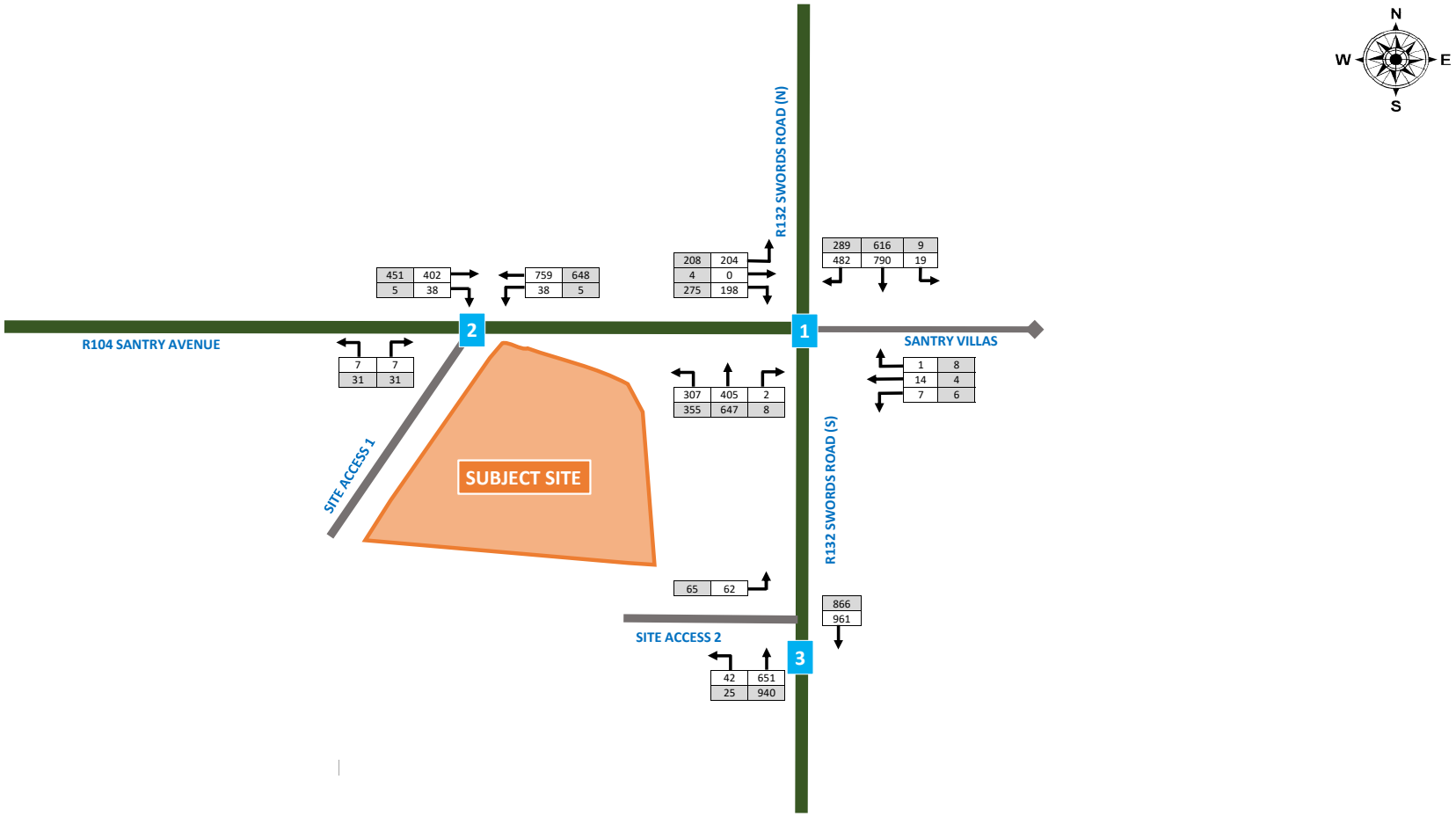
Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 10

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Minimum 2032

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

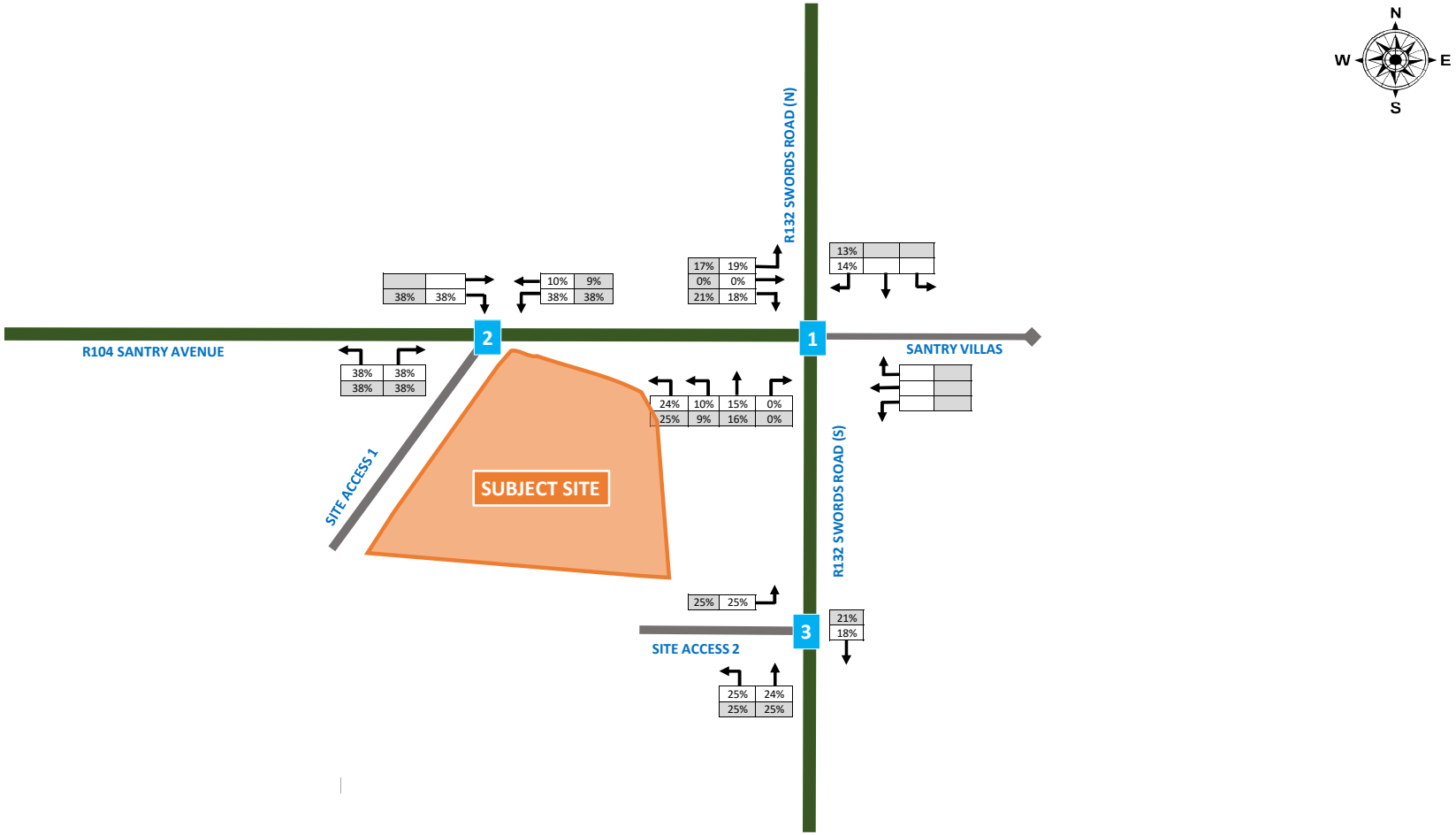
Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 11

Rev: -

DBFL Consulting Engineers	**Dublin Office** Ormond House Upper Ormond Quay Dublin 7 D07 W704 **phone:** +353 1 400 4000	**Cork office** 14 South Mall Cork T12 CT91 **phone:** +353 21 202 4538	**Waterford Office** Suite 8b The Atrium Maritana Gate, Canada St Waterford X91 W028 **phone:** +353 51 309 500	**Galway Office** Odeon House 7 Eyre Square Galway H91 YNC8 **phone:** +353 91 33 55 99	**Project :** SANTRY AVENUE LRD, SANTRY, DUBLIN 9 **DRG. Title :** Network Traffic Flows - Vehicles Do Minimum 2042	**Key:** AM Peak Hour (07:45 to 08:45) PM Peak Hour (16:30 to 17:30)	**Dwn:** DG **Ckd:** TJ **Date:** 21/02/2024 **Ref:** G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model **Figure:** 12 **Rev:** -

email: info@dbfl.ie



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate, Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Proposed Development Trip Distribution

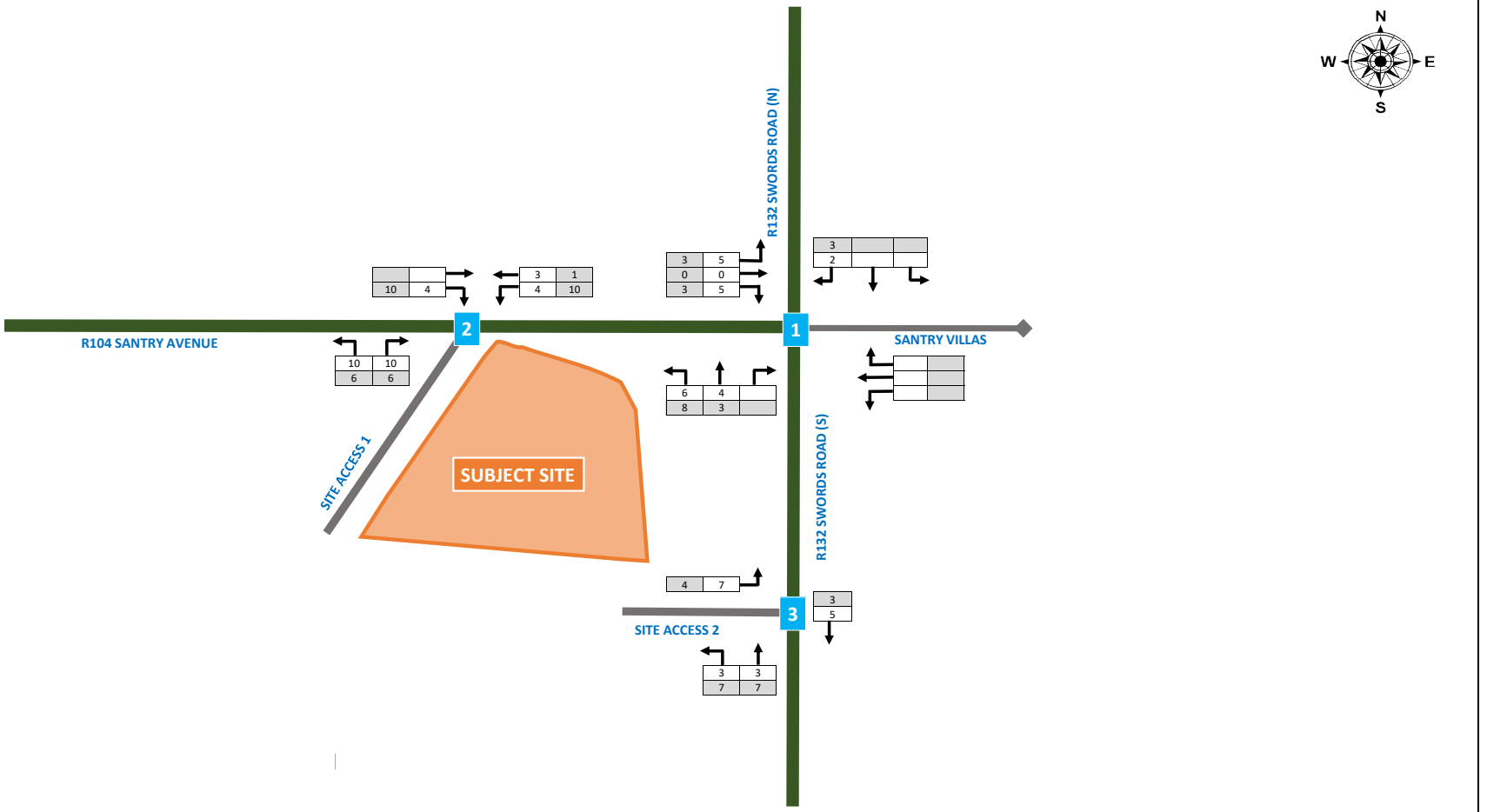
Key:
- AM Peak Hour (07:45 to 08:45)
- PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 13

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Proposed Development Trips

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

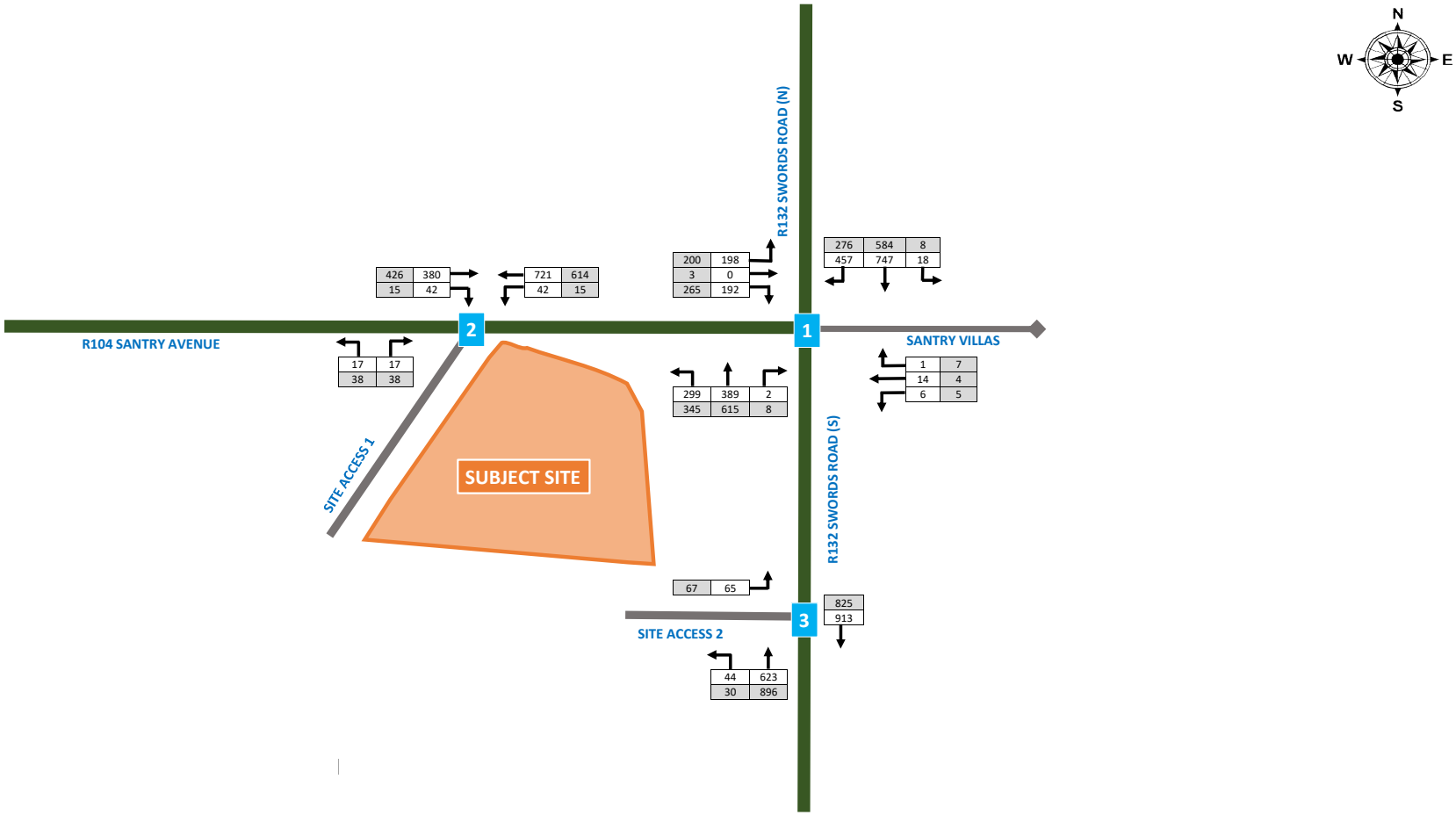
AM		PM	
ARR	DEP	ARR	DEP
11	27	27	17

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 14

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project :
SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title :
Network Traffic Flows - Vehicles
Do Something 2027

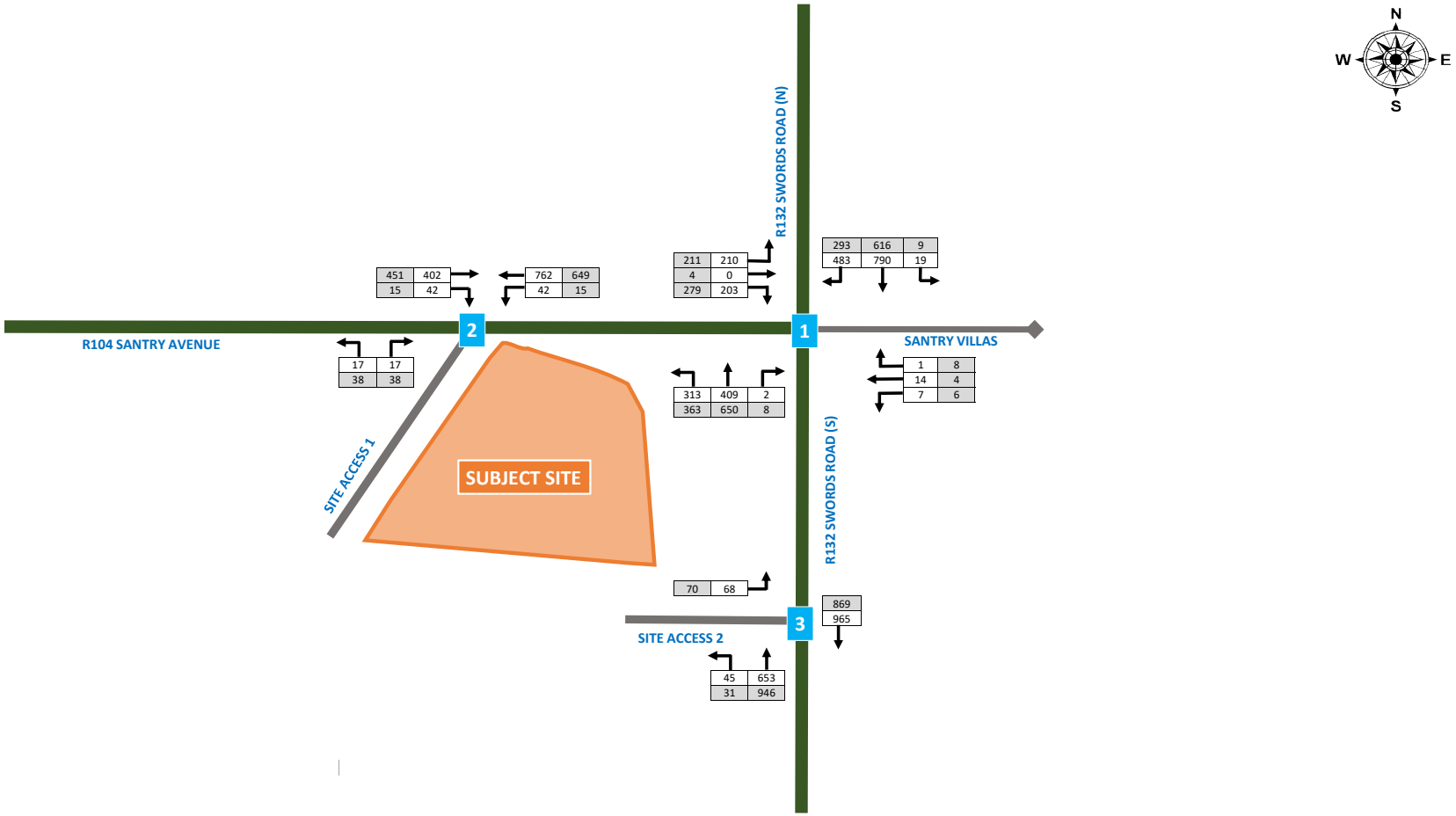
Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref:
G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 15

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Something 2032

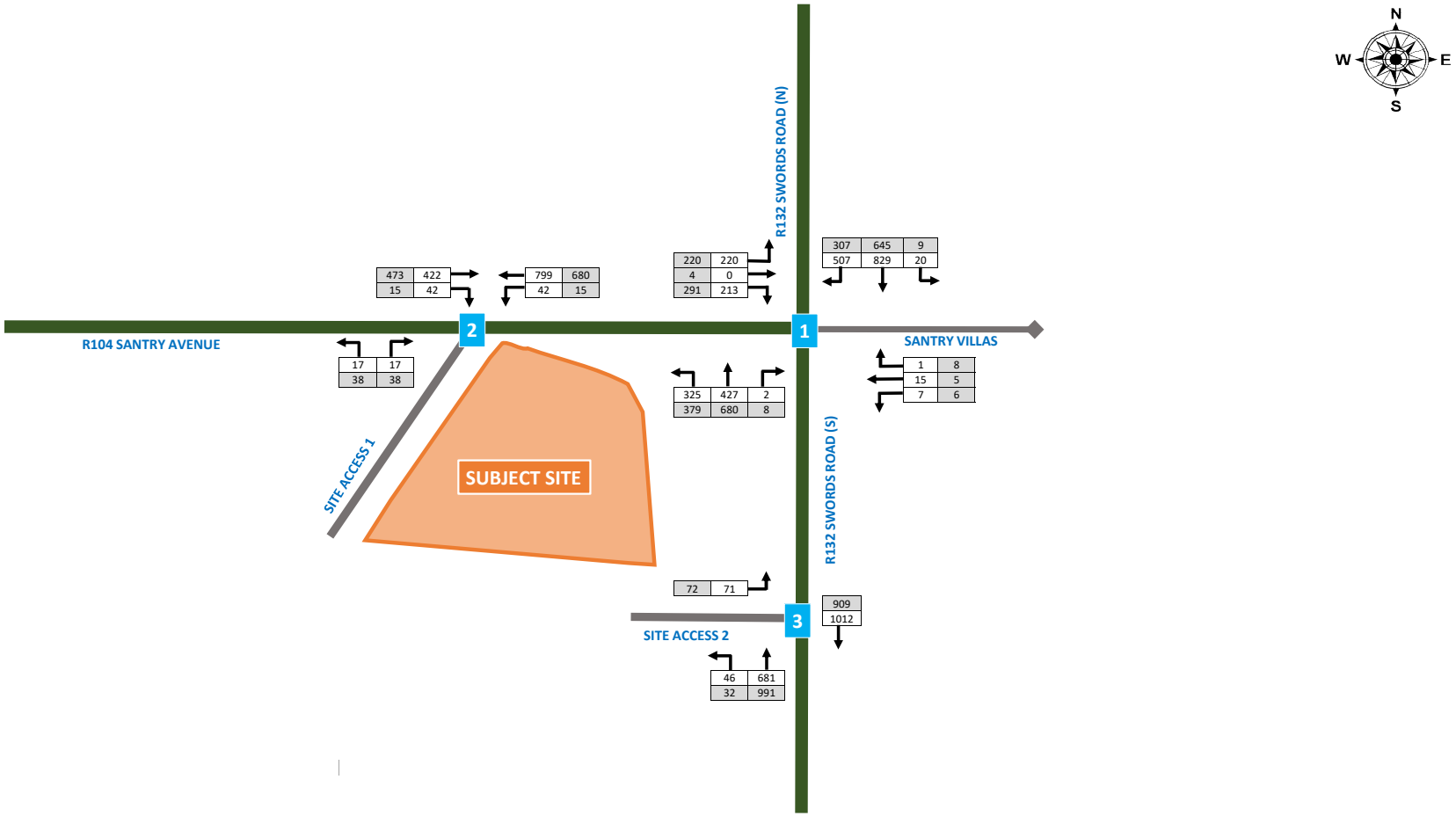
Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 16

Rev: -



DBFL Consulting Engineers

Dublin Office
Ormond House
Upper Ormond Quay
Dublin 7
D07 W704
phone: +353 1 400 4000

Cork office
14 South Mall
Cork
T12 CT91
phone: +353 21 202 4538

Waterford Office
Suite 8b The Atrium
Maritana Gate,
Canada St
Waterford
X91 W028
phone: +353 51 309 500

Galway Office
Odeon House
7 Eyre Square
Galway
H91 YNC8
phone: +353 91 33 55 99

email: info@dbfl.ie

Project : SANTRY AVENUE LRD, SANTRY, DUBLIN 9

DRG. Title : Network Traffic Flows - Vehicles
Do Something 2042

Key:
AM Peak Hour (07:45 to 08:45)
PM Peak Hour (16:30 to 17:30)

Dwn:	Ckd:	Date:
DG	TJ	21/02/2024

Ref: G:\2023\p230146\calcs\excel\traffic\2024 Traffic Model

Figure: 17

Rev: -

Appendix B : TRICS Output Files

Calculation Reference: AUDIT-638801-231002-1046

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
05	**EAST MIDLANDS**		
	DY	DERBY	1 days
	LE	LEICESTERSHIRE	1 days
	NG	NOTTINGHAM	2 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days
11	**SCOTLAND**		
	EB	CITY OF EDINBURGH	1 days
	SR	STIRLING	1 days
13	**MUNSTER**		
	WA	WATERFORD	1 days
14	**LEINSTER**		
	LU	LOUTH	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 19 to 135 (units:)
Range Selected by User: 8 to 372 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 15/10/21

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

Selected survey days:

Monday	2 days
Tuesday	4 days
Wednesday	4 days
Friday	2 days

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

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	8
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	9
No Sub Category	3

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	5 days - Selected
Servicing vehicles Excluded	12 days - Selected

Secondary Filtering selection:

Use Class:

C3	12 days

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

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	4 days

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

Population within 5 miles:

50,001 to 75,000	3 days
125,001 to 250,000	4 days
250,001 to 500,000	5 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	5 days
1.1 to 1.5	6 days

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

Travel Plan:

No	12 days

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

PTAL Rating:

No PTAL Present	12 days

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

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

LIST OF SITES relevant to selection parameters

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

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

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

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

3 **EB-03-C-01** **BLOCKS OF FLATS** **CITY OF EDINBURGH**
MYRESIDE ROAD
EDINBURGH
CRAIGLOCKHART
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 32
Survey date: TUESDAY *26/05/15* *Survey Type: MANUAL*

4 **LE-03-C-01** **BLOCK OF FLATS** **LEICESTERSHIRE**
NEW STREET
LEICESTER
OADBY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 19
Survey date: FRIDAY *16/10/20* *Survey Type: MANUAL*

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

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

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

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

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

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

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

LIST OF SITES relevant to selection parameters (Cont.)

9 **SF-03-C-04** **BLOCKS OF FLATS** **SUFFOLK**
SAINT MARY'S ROAD
IPSWICH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 56
Survey date: WEDNESDAY *16/09/20* *Survey Type: MANUAL*

10 **SR-03-C-03** **BLOCK OF FLATS & TERRACED** **STIRLING**
KERSEBONNY ROAD
STIRLING
CAMBUSBARRON
Edge of Town
Residential Zone
Total No of Dwellings: 82
Survey date: TUESDAY *01/09/20* *Survey Type: MANUAL*

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

12 **WA-03-C-01** **BLOCKS OF FLATS** **WATERFORD**
UPPER YELLOW ROAD
WATERFORD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 51
Survey date: TUESDAY *12/05/15* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.046	12	59	0.138	12	59	0.184
08:00 - 09:00	12	59	0.059	**12**	**59**	**0.173**	12	59	0.232
09:00 - 10:00	12	59	0.083	12	59	0.088	12	59	0.171
10:00 - 11:00	12	59	0.073	12	59	0.093	12	59	0.166
11:00 - 12:00	12	59	0.070	12	59	0.081	12	59	0.151
12:00 - 13:00	12	59	0.086	12	59	0.083	12	59	0.169
13:00 - 14:00	12	59	0.083	12	59	0.096	12	59	0.179
14:00 - 15:00	12	59	0.096	12	59	0.094	12	59	0.190
15:00 - 16:00	12	59	0.118	12	59	0.090	12	59	0.208
16:00 - 17:00	12	59	0.135	12	59	0.103	12	59	0.238
17:00 - 18:00	**12**	**59**	**0.173**	12	59	0.088	**12**	**59**	**0.261**
18:00 - 19:00	12	59	0.125	12	59	0.098	12	59	0.223
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.147			1.225			2.372

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

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

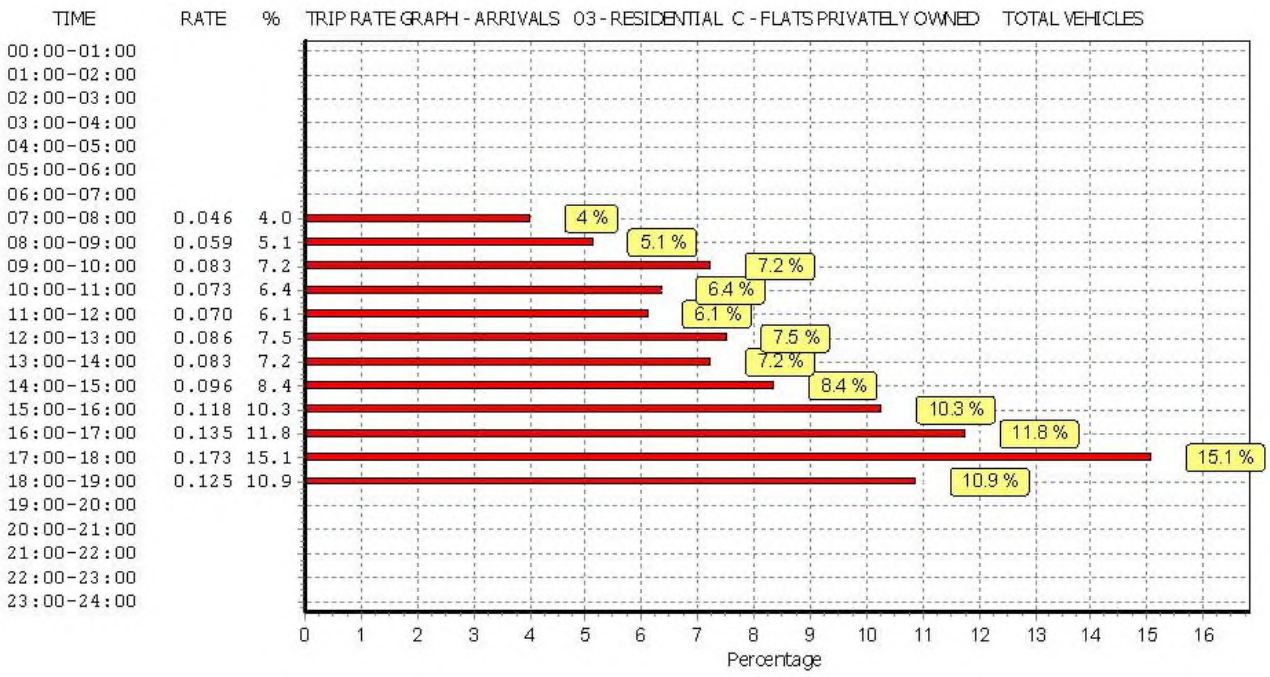
The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

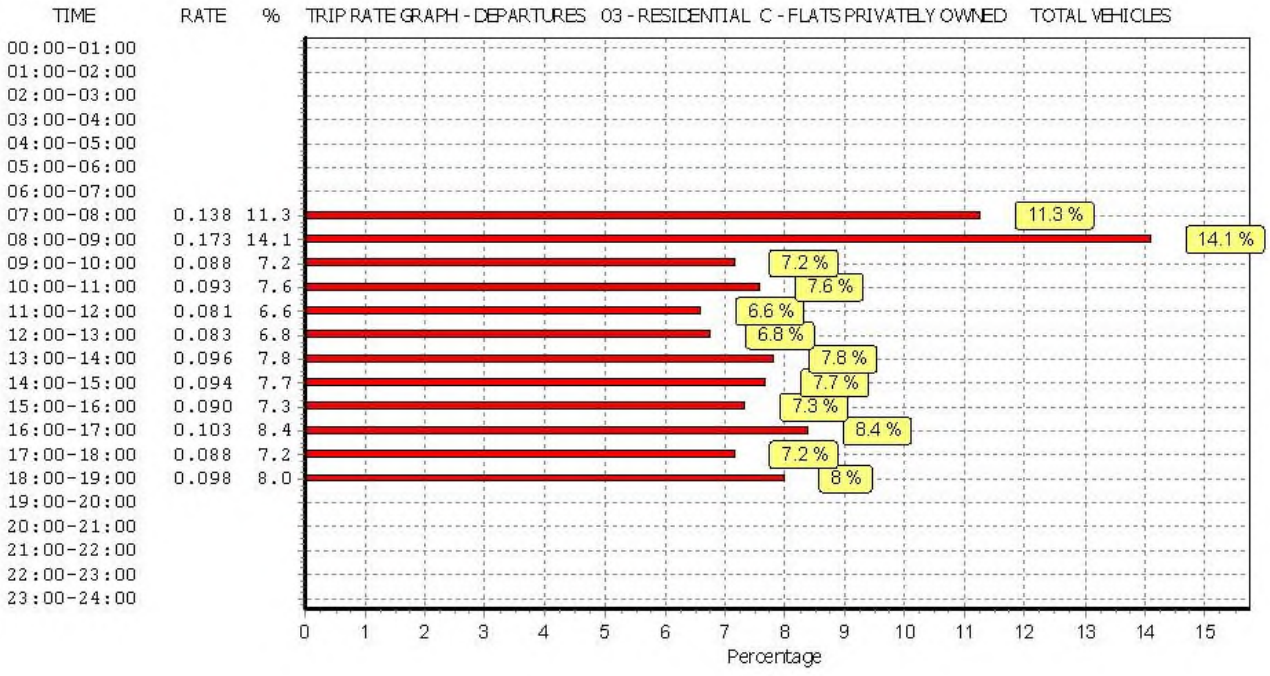
Parameter summary

Trip rate parameter range selected:	19 - 135 (units:)
Survey date date range:	01/01/15 - 15/10/21
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

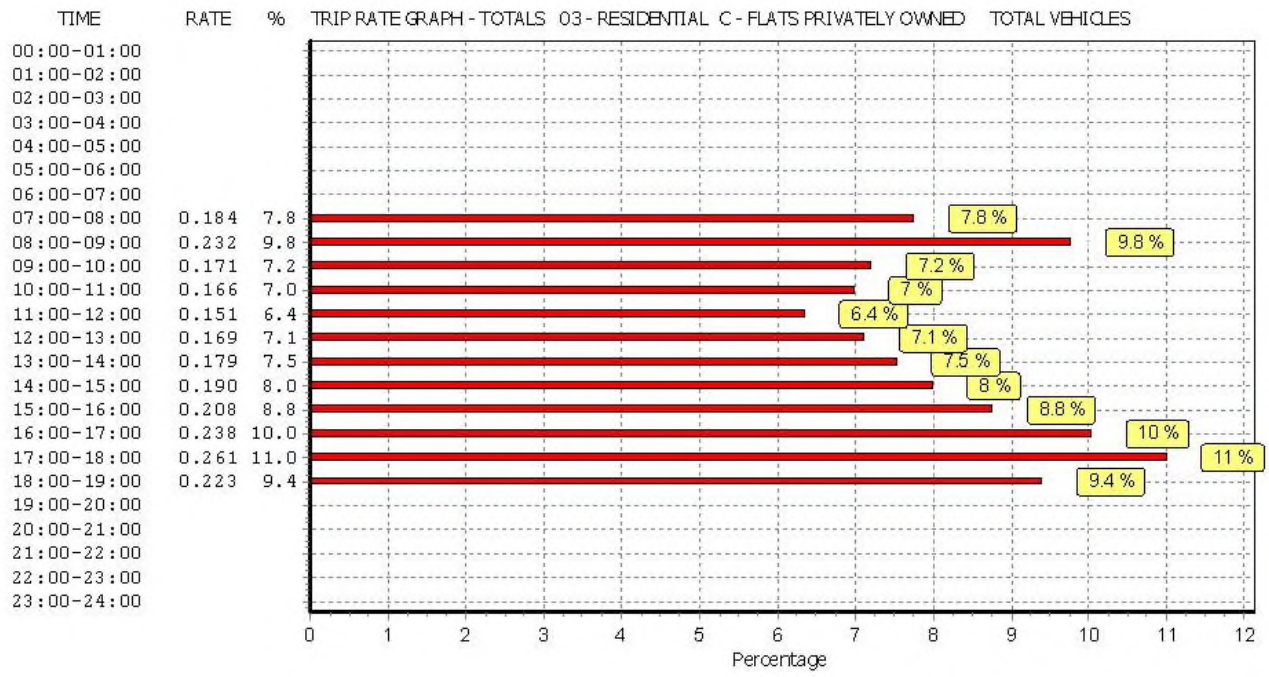
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

TAXIS

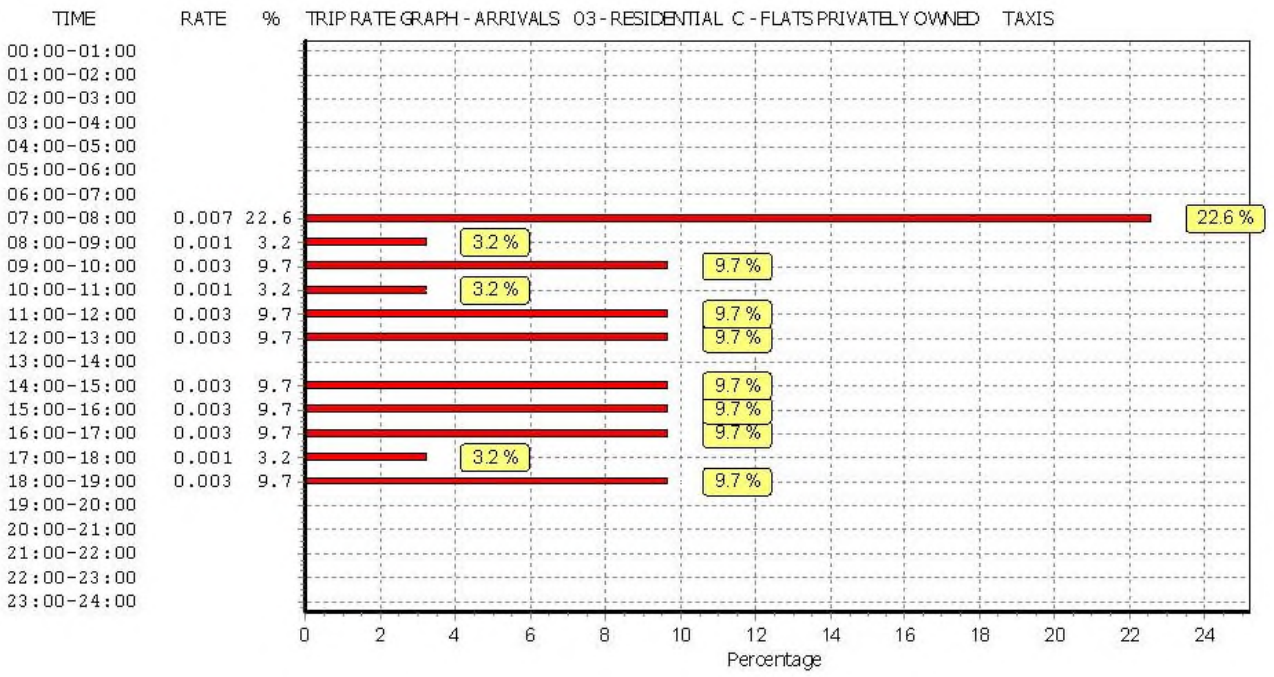
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

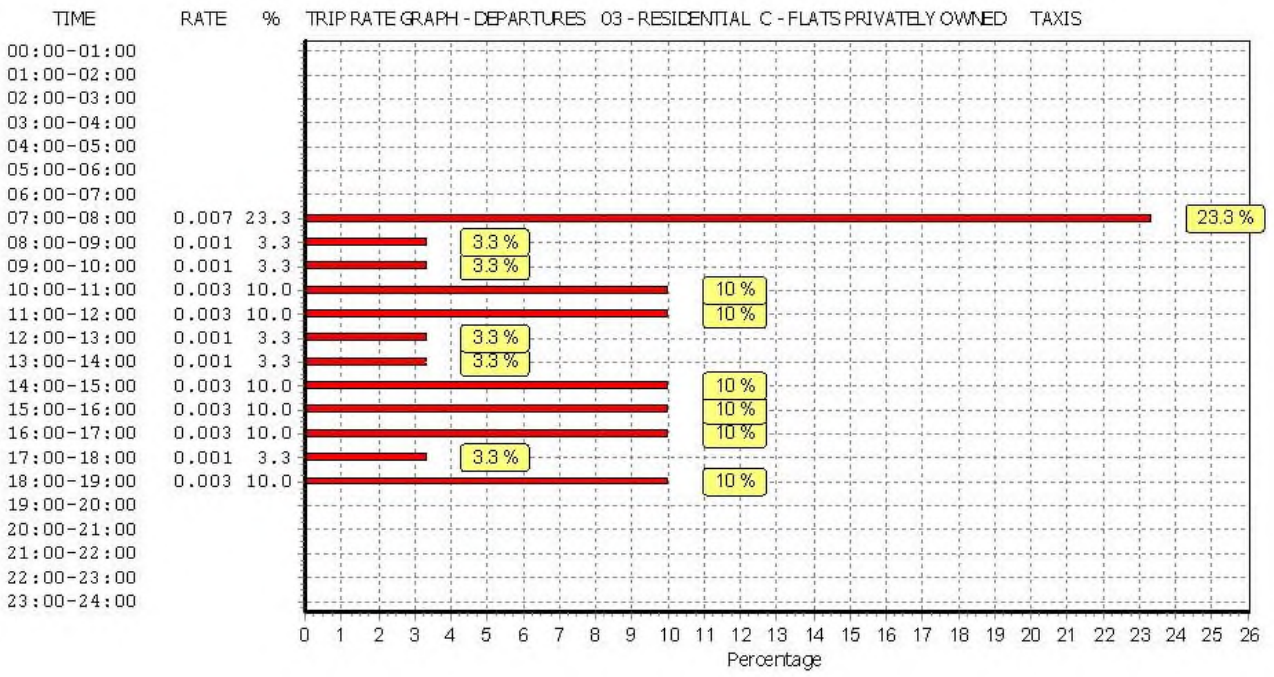
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	**12**	**59**	**0.007**	**12**	**59**	**0.007**	**12**	**59**	**0.014**
08:00 - 09:00	12	59	0.001	12	59	0.001	12	59	0.002
09:00 - 10:00	12	59	0.003	12	59	0.001	12	59	0.004
10:00 - 11:00	12	59	0.001	12	59	0.003	12	59	0.004
11:00 - 12:00	12	59	0.003	12	59	0.003	12	59	0.006
12:00 - 13:00	12	59	0.003	12	59	0.001	12	59	0.004
13:00 - 14:00	12	59	0.000	12	59	0.001	12	59	0.001
14:00 - 15:00	12	59	0.003	12	59	0.003	12	59	0.006
15:00 - 16:00	12	59	0.003	12	59	0.003	12	59	0.006
16:00 - 17:00	12	59	0.003	12	59	0.003	12	59	0.006
17:00 - 18:00	12	59	0.001	12	59	0.001	12	59	0.002
18:00 - 19:00	12	59	0.003	12	59	0.003	12	59	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.031			0.030			0.061

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

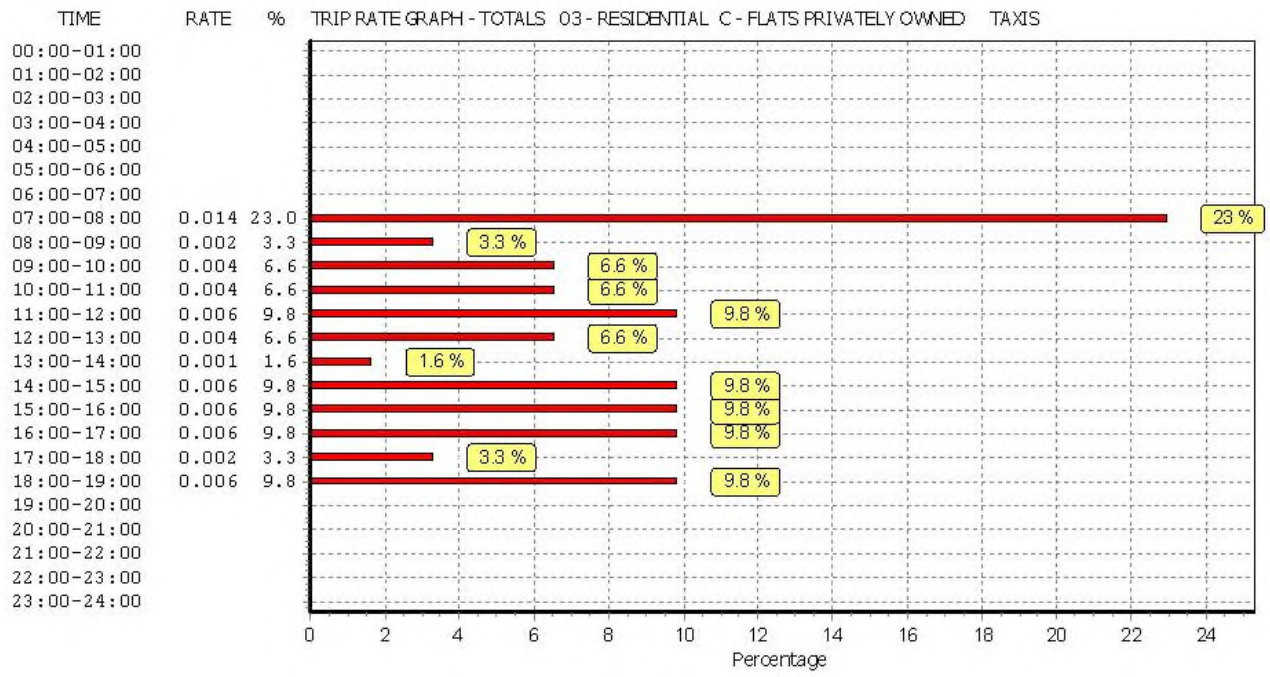
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

OGVS

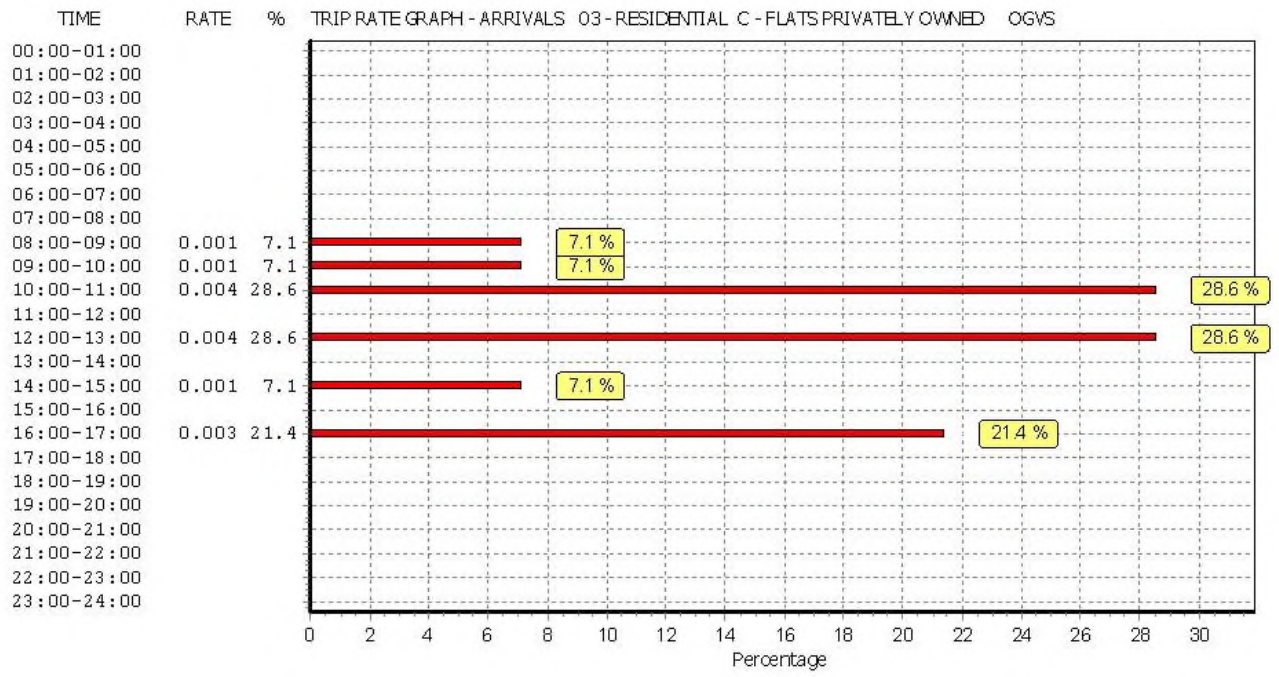
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

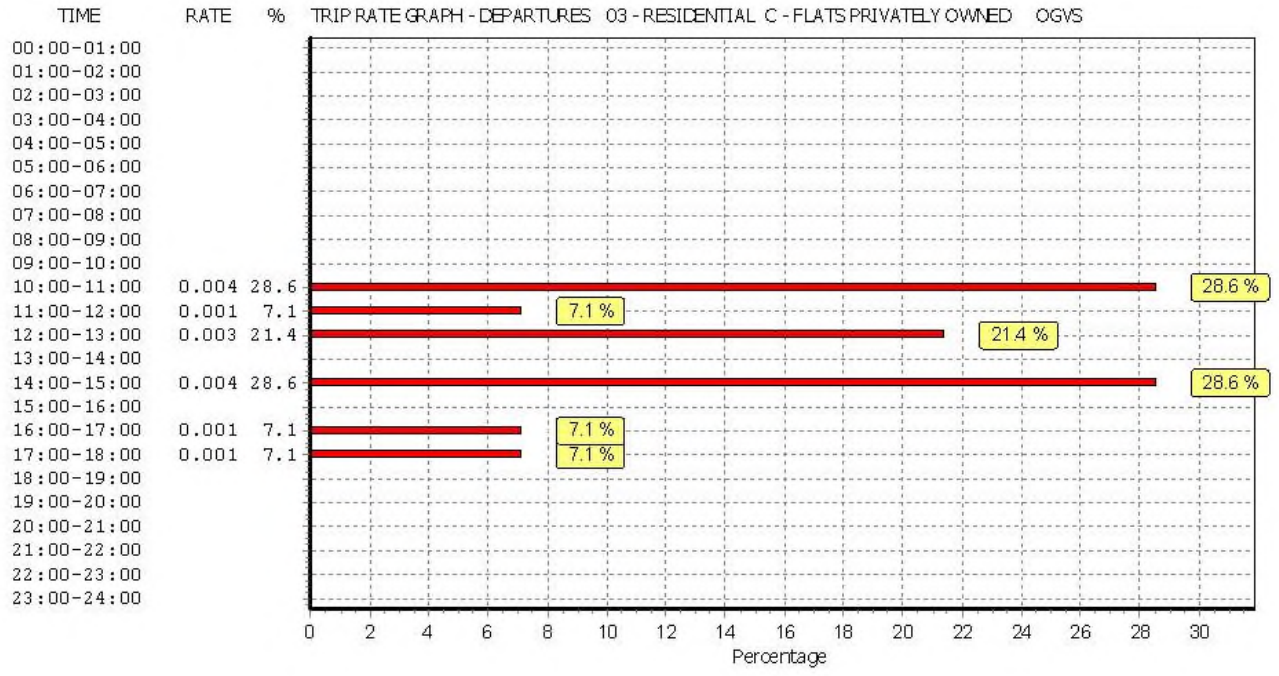
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.000	12	59	0.000	12	59	0.000
08:00 - 09:00	12	59	0.001	12	59	0.000	12	59	0.001
09:00 - 10:00	12	59	0.001	12	59	0.000	12	59	0.001
10:00 - 11:00	**12**	**59**	**0.004**	**12**	**59**	**0.004**	**12**	**59**	**0.008**
11:00 - 12:00	12	59	0.000	12	59	0.001	12	59	0.001
12:00 - 13:00	12	59	0.004	12	59	0.003	12	59	0.007
13:00 - 14:00	12	59	0.000	12	59	0.000	12	59	0.000
14:00 - 15:00	12	59	0.001	12	59	0.004	12	59	0.005
15:00 - 16:00	12	59	0.000	12	59	0.000	12	59	0.000
16:00 - 17:00	12	59	0.003	12	59	0.001	12	59	0.004
17:00 - 18:00	12	59	0.000	12	59	0.001	12	59	0.001
18:00 - 19:00	12	59	0.000	12	59	0.000	12	59	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.014			0.028

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

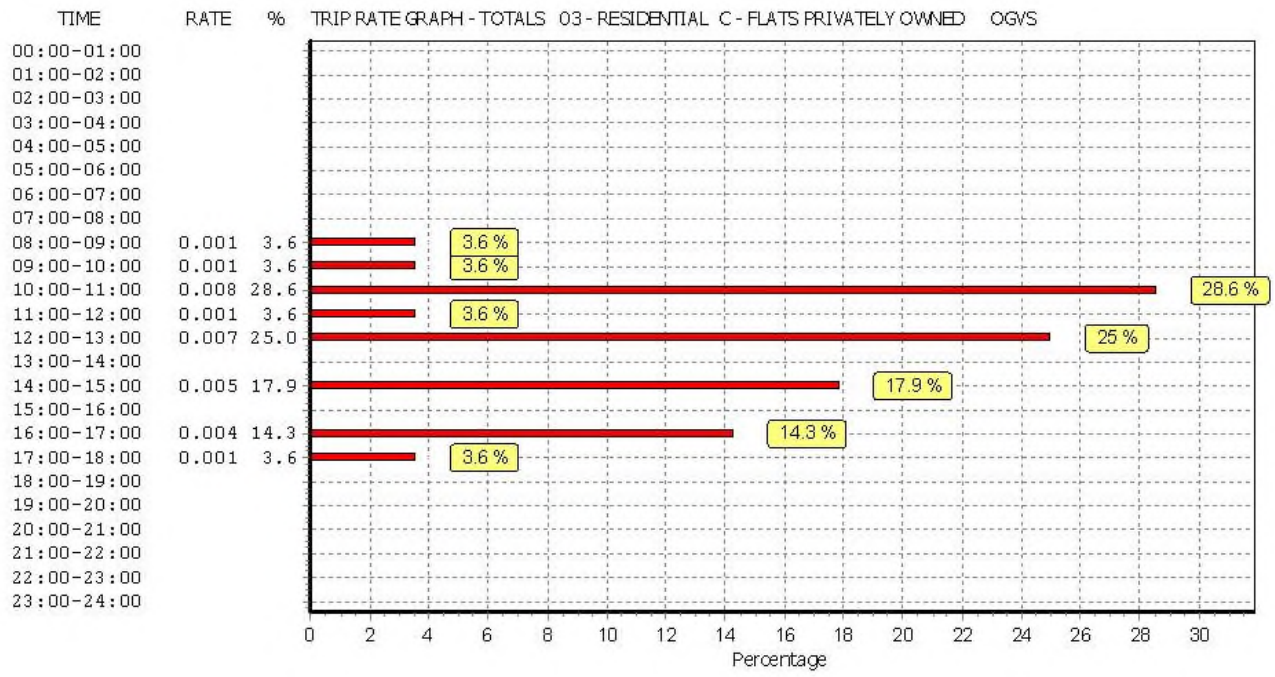
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

PSVS

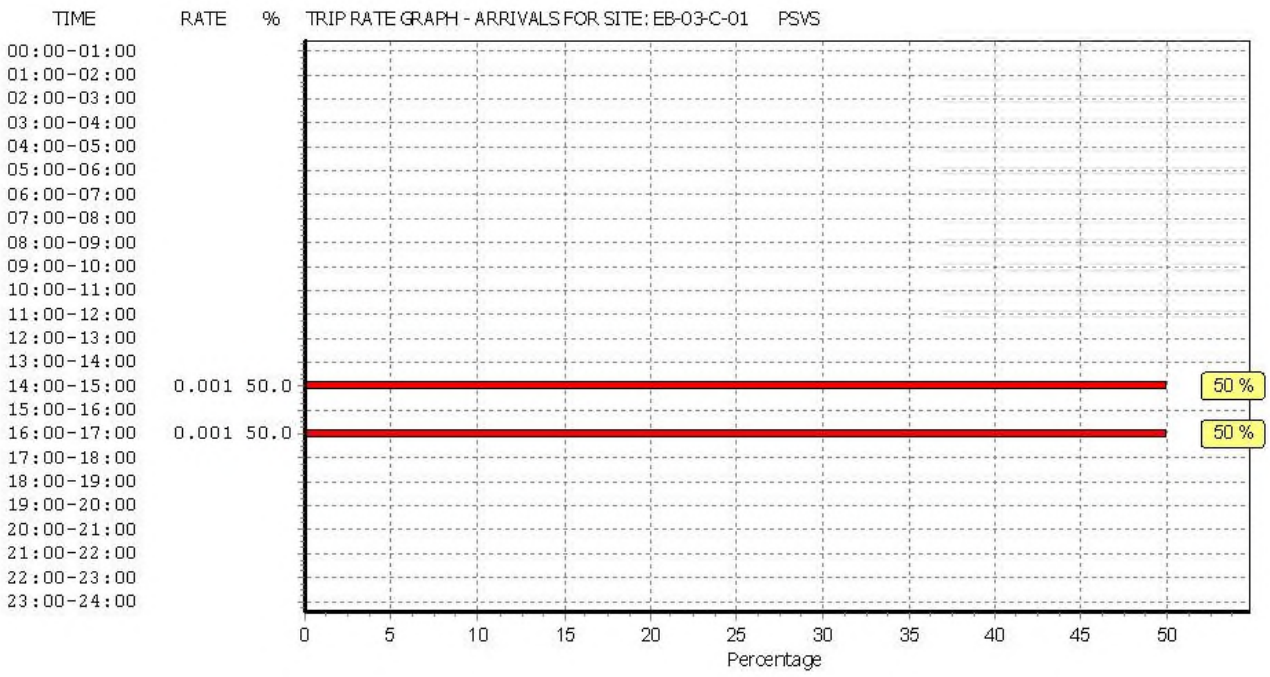
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

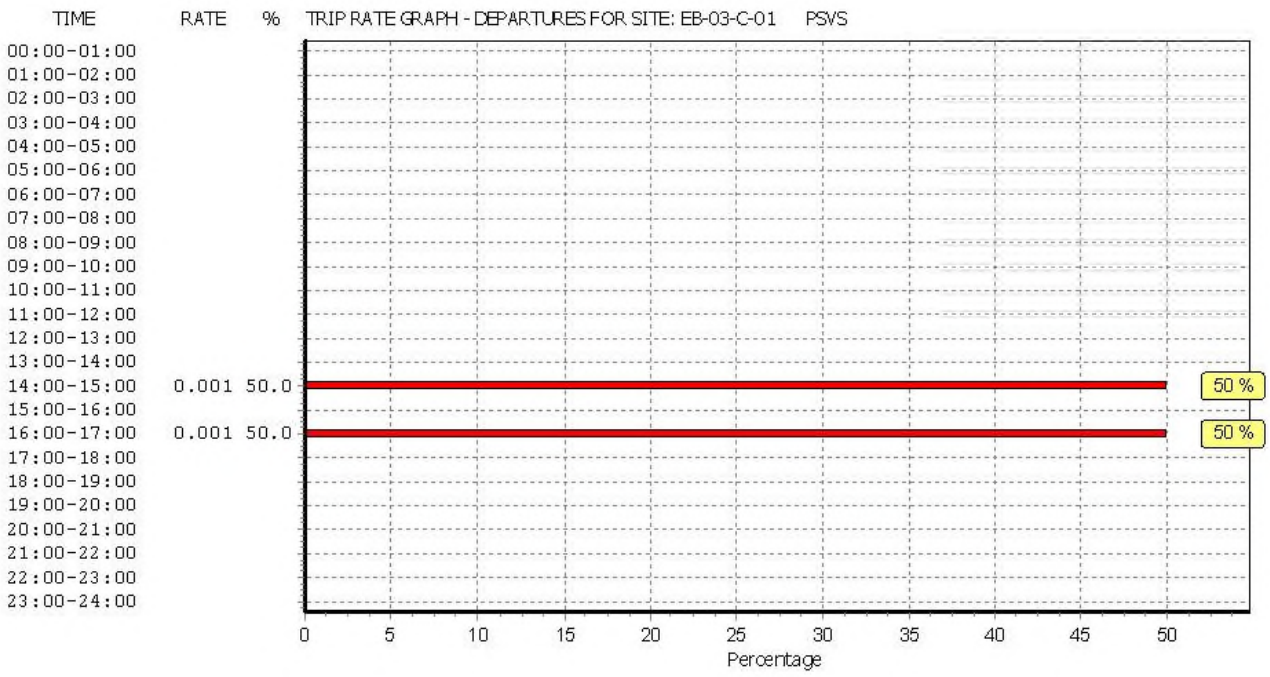
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.000	12	59	0.000	12	59	0.000
08:00 - 09:00	12	59	0.000	12	59	0.000	12	59	0.000
09:00 - 10:00	12	59	0.000	12	59	0.000	12	59	0.000
10:00 - 11:00	12	59	0.000	12	59	0.000	12	59	0.000
11:00 - 12:00	12	59	0.000	12	59	0.000	12	59	0.000
12:00 - 13:00	12	59	0.000	12	59	0.000	12	59	0.000
13:00 - 14:00	12	59	0.000	12	59	0.000	12	59	0.000
14:00 - 15:00	**12**	**59**	**0.001**	**12**	**59**	**0.001**	**12**	**59**	**0.002**
15:00 - 16:00	12	59	0.000	12	59	0.000	12	59	0.000
16:00 - 17:00	12	59	0.001	12	59	0.001	12	59	0.002
17:00 - 18:00	12	59	0.000	12	59	0.000	12	59	0.000
18:00 - 19:00	12	59	0.000	12	59	0.000	12	59	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

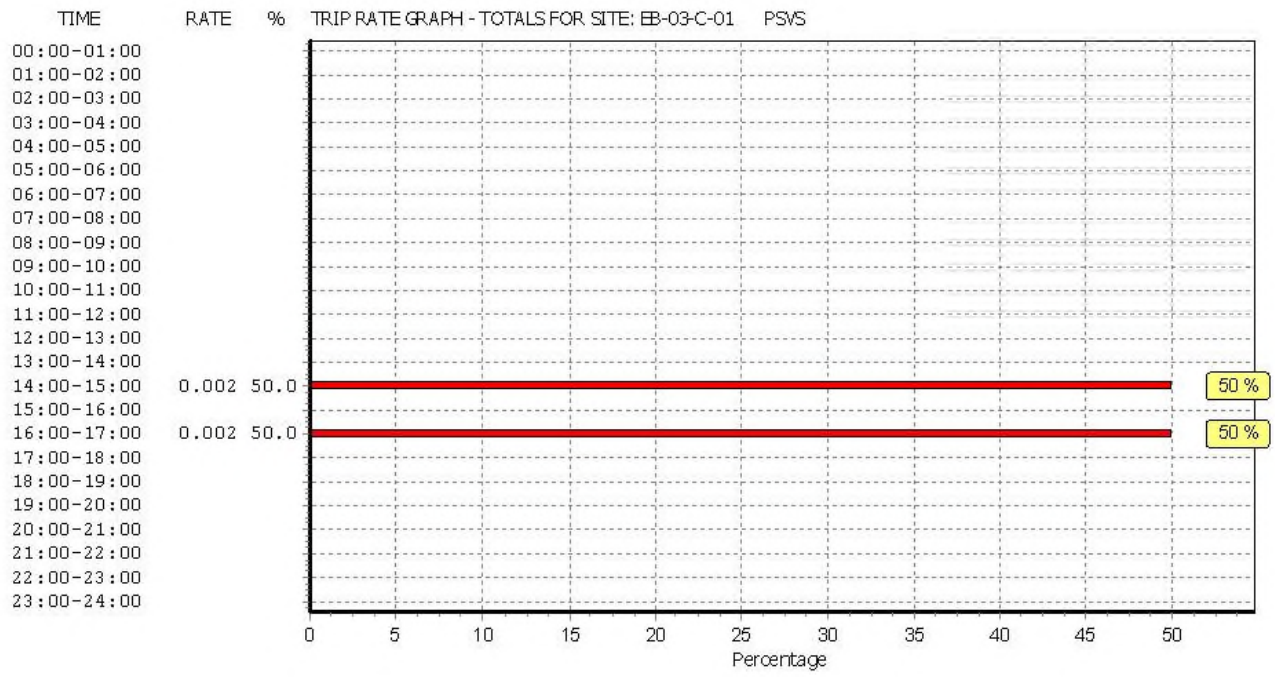
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRICS 7.10.3 180923 B21.52 Database right of TRICS Consortium Limited, 2024. All rights reserved **Monday 02/10/23 Page 22**

DBFL Ormond House Dublin Licence No: 638801

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

CYCLISTS

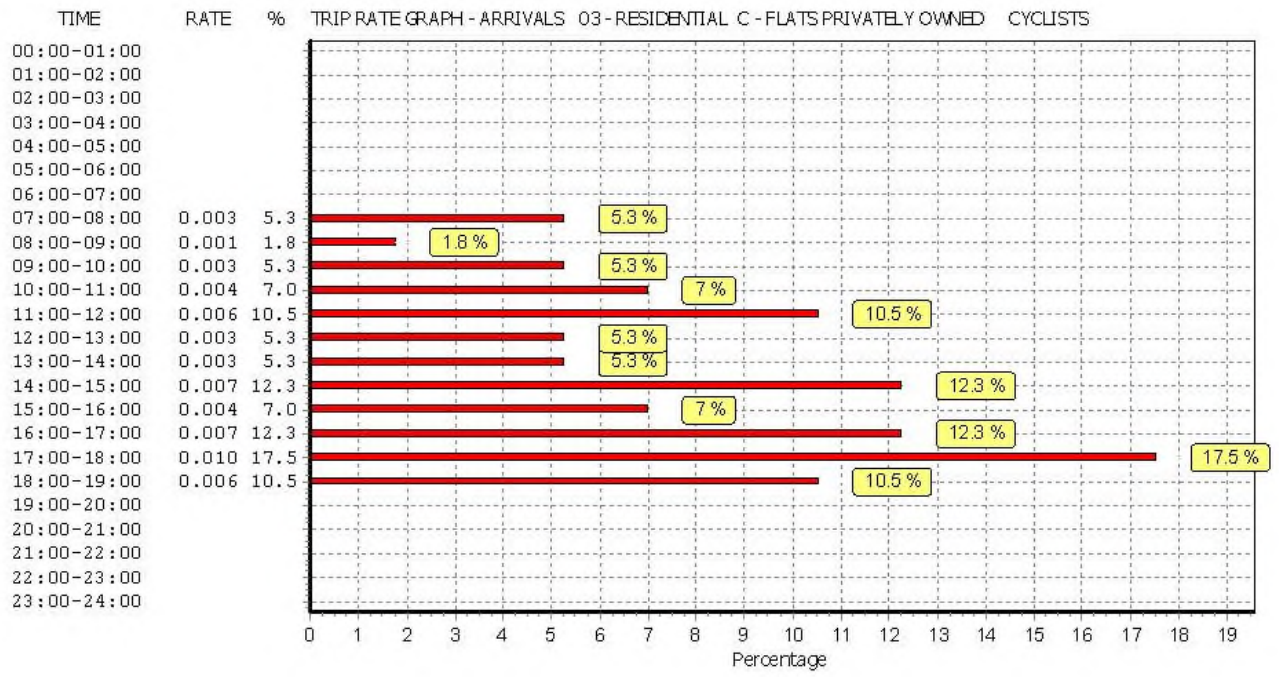
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

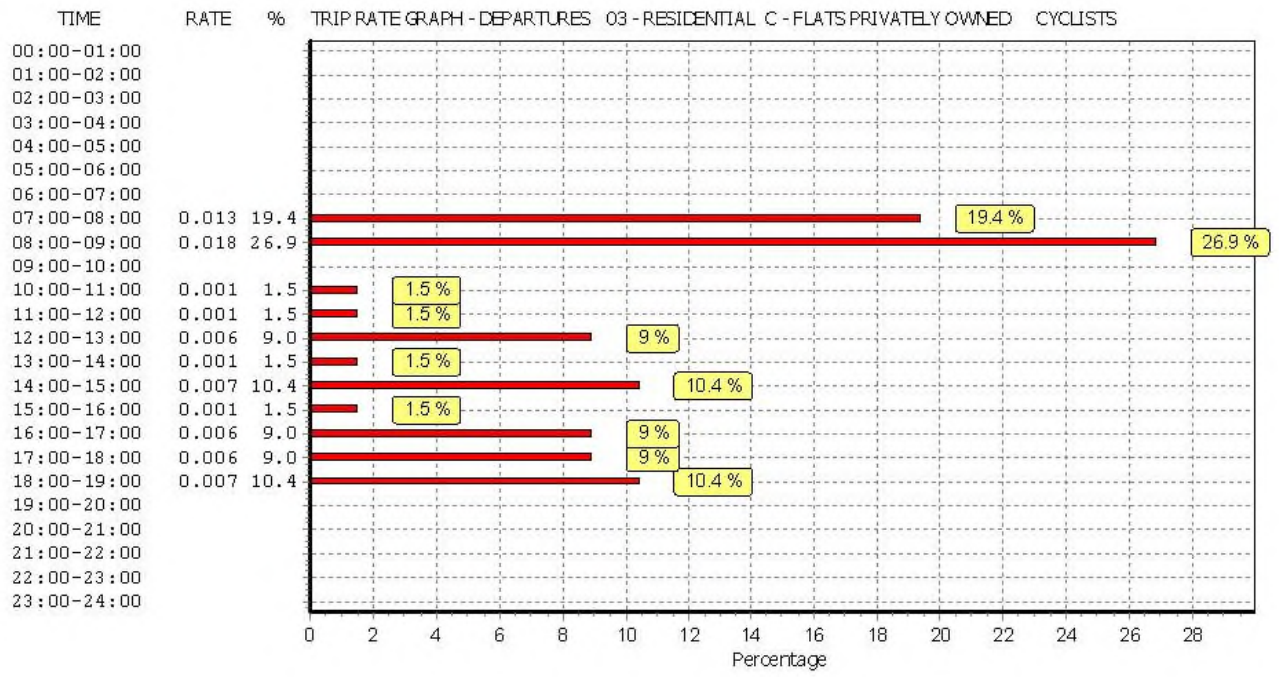
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.003	12	59	0.013	12	59	0.016
08:00 - 09:00	12	59	0.001	**12**	**59**	**0.018**	**12**	**59**	**0.019**
09:00 - 10:00	12	59	0.003	12	59	0.000	12	59	0.003
10:00 - 11:00	12	59	0.004	12	59	0.001	12	59	0.005
11:00 - 12:00	12	59	0.006	12	59	0.001	12	59	0.007
12:00 - 13:00	12	59	0.003	12	59	0.006	12	59	0.009
13:00 - 14:00	12	59	0.003	12	59	0.001	12	59	0.004
14:00 - 15:00	12	59	0.007	12	59	0.007	12	59	0.014
15:00 - 16:00	12	59	0.004	12	59	0.001	12	59	0.005
16:00 - 17:00	12	59	0.007	12	59	0.006	12	59	0.013
17:00 - 18:00	**12**	**59**	**0.010**	12	59	0.006	12	59	0.016
18:00 - 19:00	12	59	0.006	12	59	0.007	12	59	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.057			0.067			0.124

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

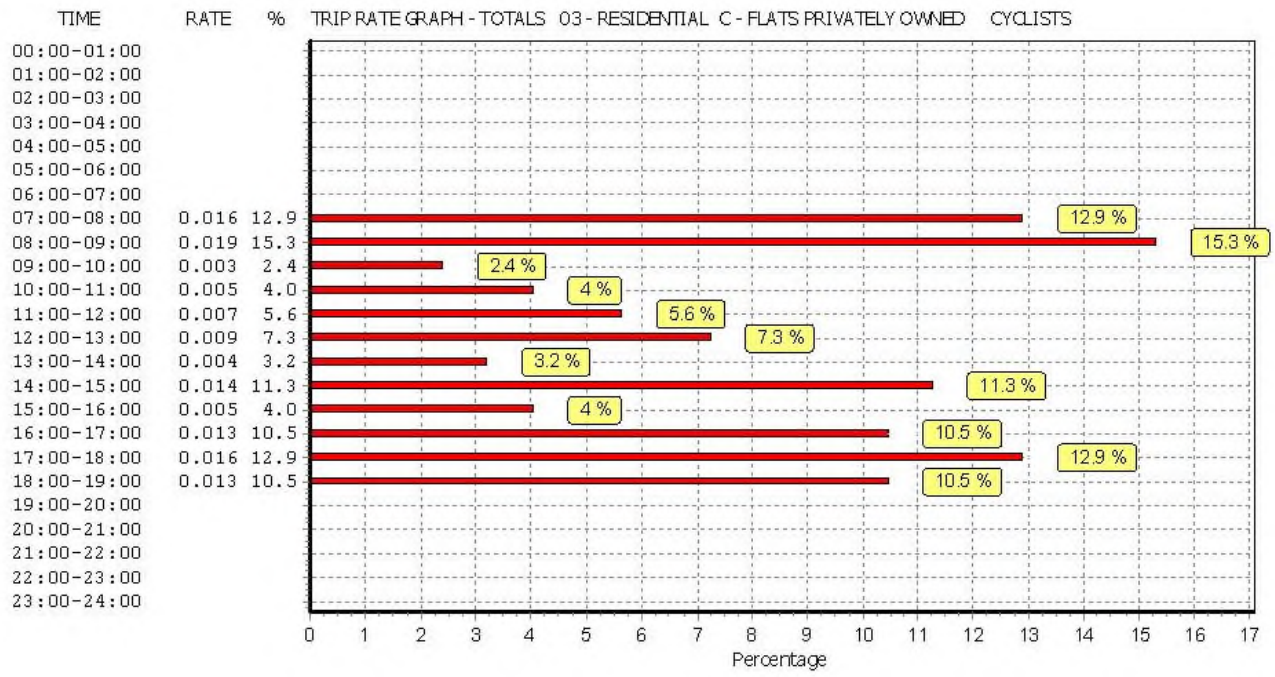
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

CARS

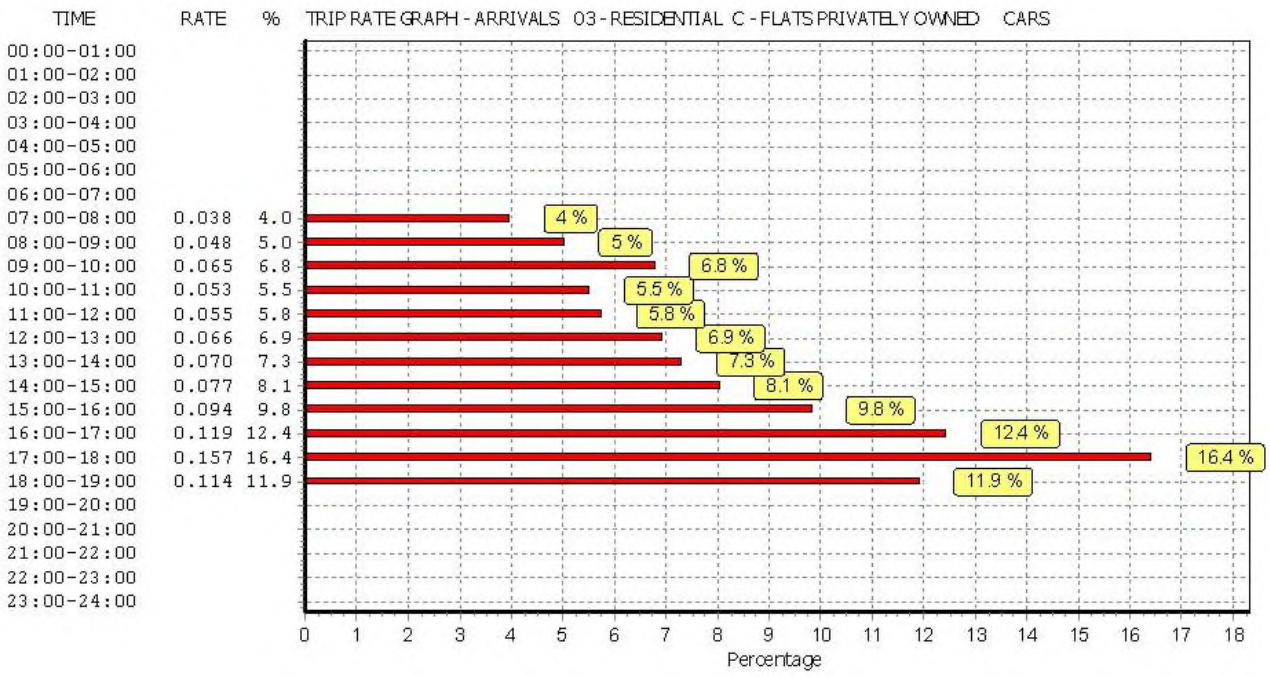
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

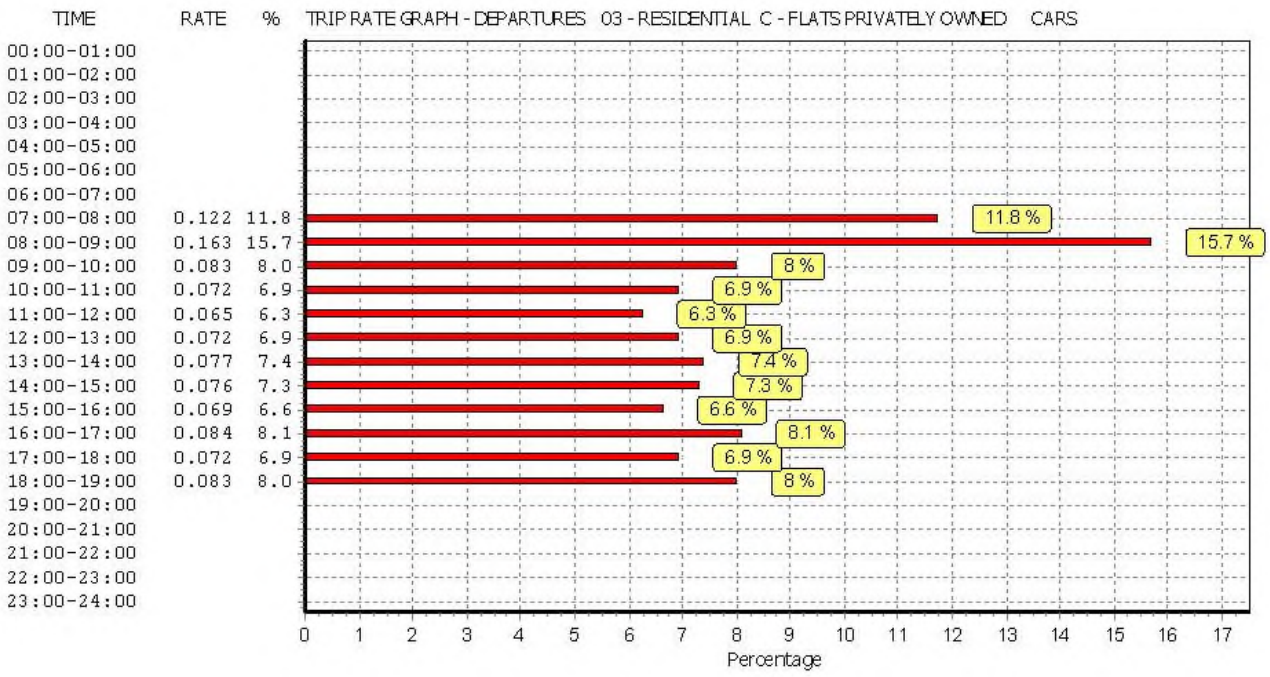
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.038	12	59	0.122	12	59	0.160
08:00 - 09:00	12	59	0.048	**12**	**59**	**0.163**	12	59	0.211
09:00 - 10:00	12	59	0.065	12	59	0.083	12	59	0.148
10:00 - 11:00	12	59	0.053	12	59	0.072	12	59	0.125
11:00 - 12:00	12	59	0.055	12	59	0.065	12	59	0.120
12:00 - 13:00	12	59	0.066	12	59	0.072	12	59	0.138
13:00 - 14:00	12	59	0.070	12	59	0.077	12	59	0.147
14:00 - 15:00	12	59	0.077	12	59	0.076	12	59	0.153
15:00 - 16:00	12	59	0.094	12	59	0.069	12	59	0.163
16:00 - 17:00	12	59	0.119	12	59	0.084	12	59	0.203
17:00 - 18:00	**12**	**59**	**0.157**	12	59	0.072	**12**	**59**	**0.229**
18:00 - 19:00	12	59	0.114	12	59	0.083	12	59	0.197
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.956			1.038			1.994

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

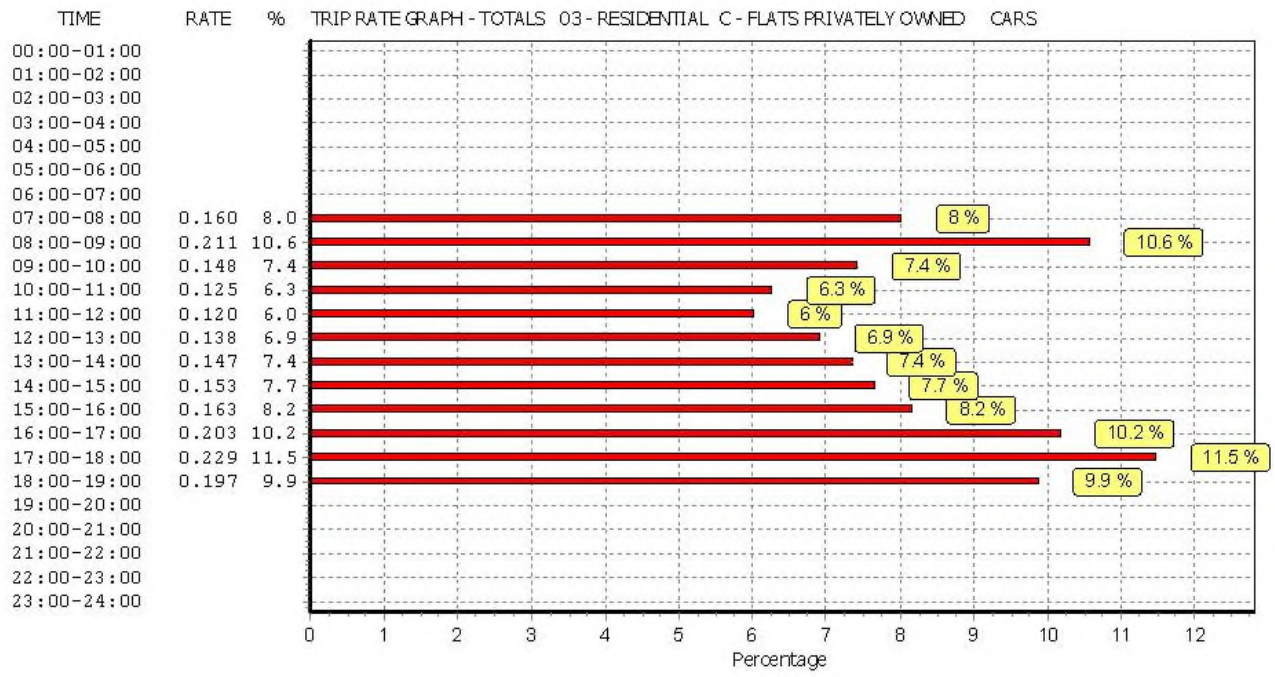
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

LGVS

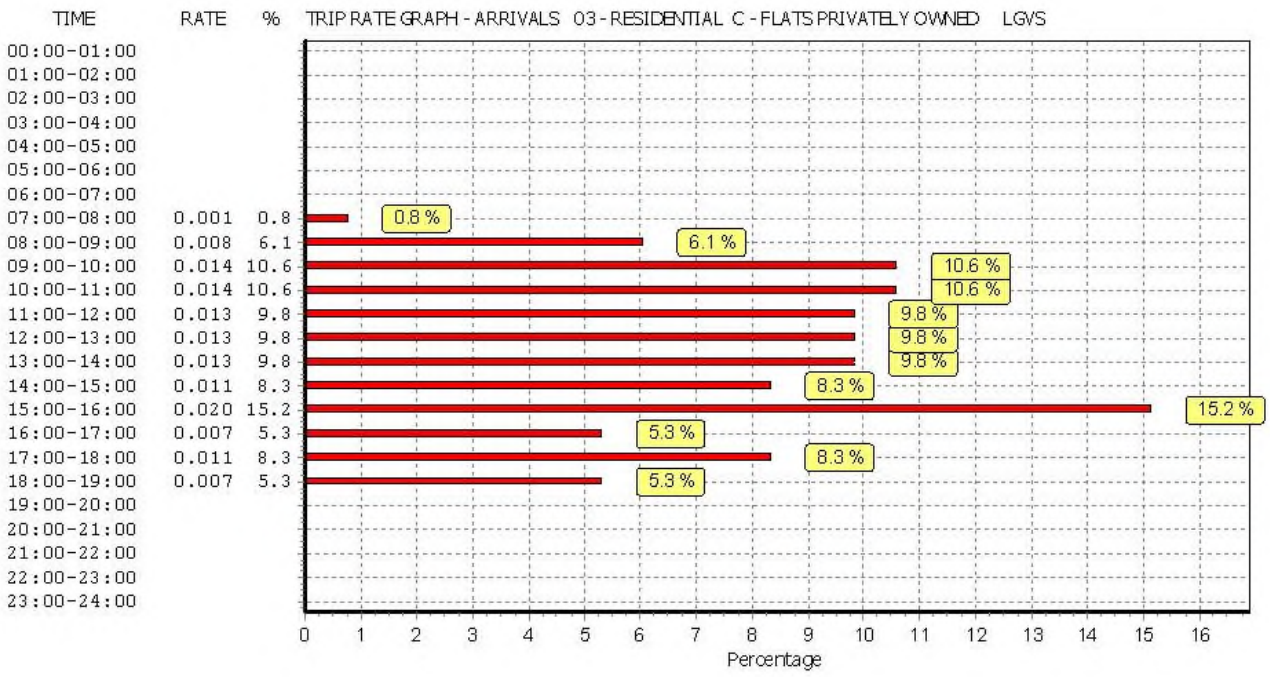
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

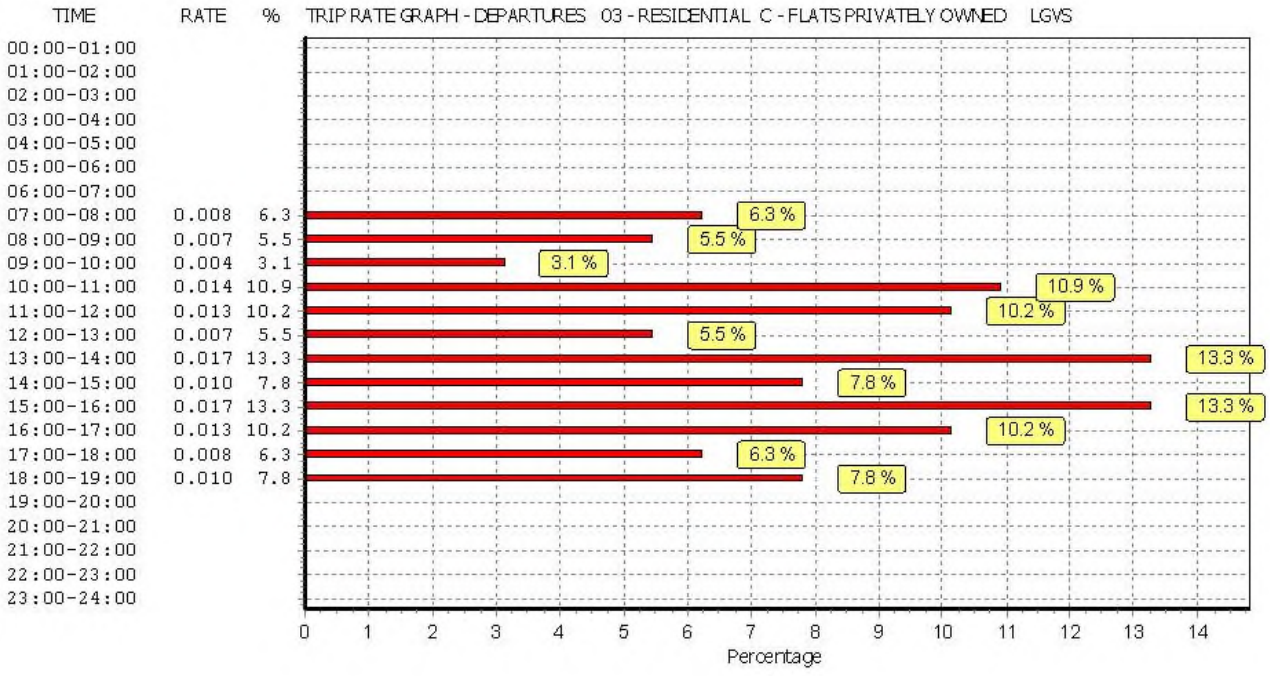
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.001	12	59	0.008	12	59	0.009
08:00 - 09:00	12	59	0.008	12	59	0.007	12	59	0.015
09:00 - 10:00	12	59	0.014	12	59	0.004	12	59	0.018
10:00 - 11:00	12	59	0.014	12	59	0.014	12	59	0.028
11:00 - 12:00	12	59	0.013	12	59	0.013	12	59	0.026
12:00 - 13:00	12	59	0.013	12	59	0.007	12	59	0.020
13:00 - 14:00	12	59	0.013	**12**	**59**	**0.017**	12	59	0.030
14:00 - 15:00	12	59	0.011	12	59	0.010	12	59	0.021
15:00 - 16:00	**12**	**59**	**0.020**	12	59	0.017	**12**	**59**	**0.037**
16:00 - 17:00	12	59	0.007	12	59	0.013	12	59	0.020
17:00 - 18:00	12	59	0.011	12	59	0.008	12	59	0.019
18:00 - 19:00	12	59	0.007	12	59	0.010	12	59	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.132			0.128			0.260

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

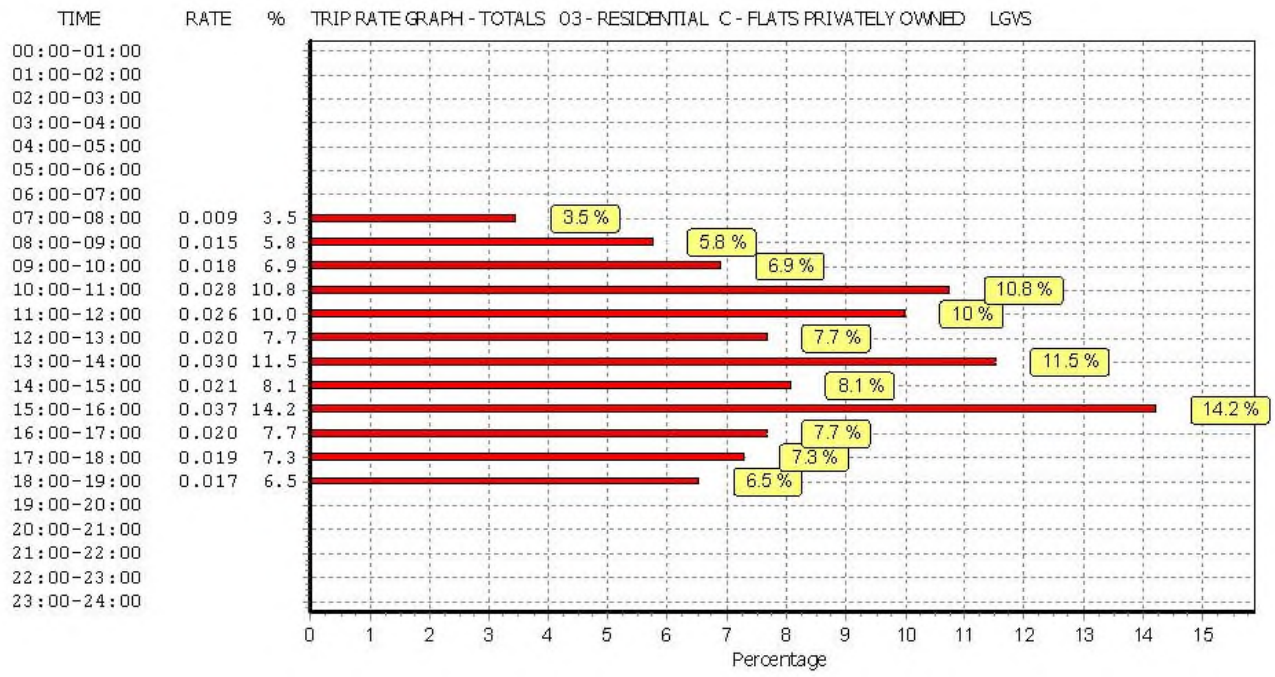
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

MOTOR CYCLES

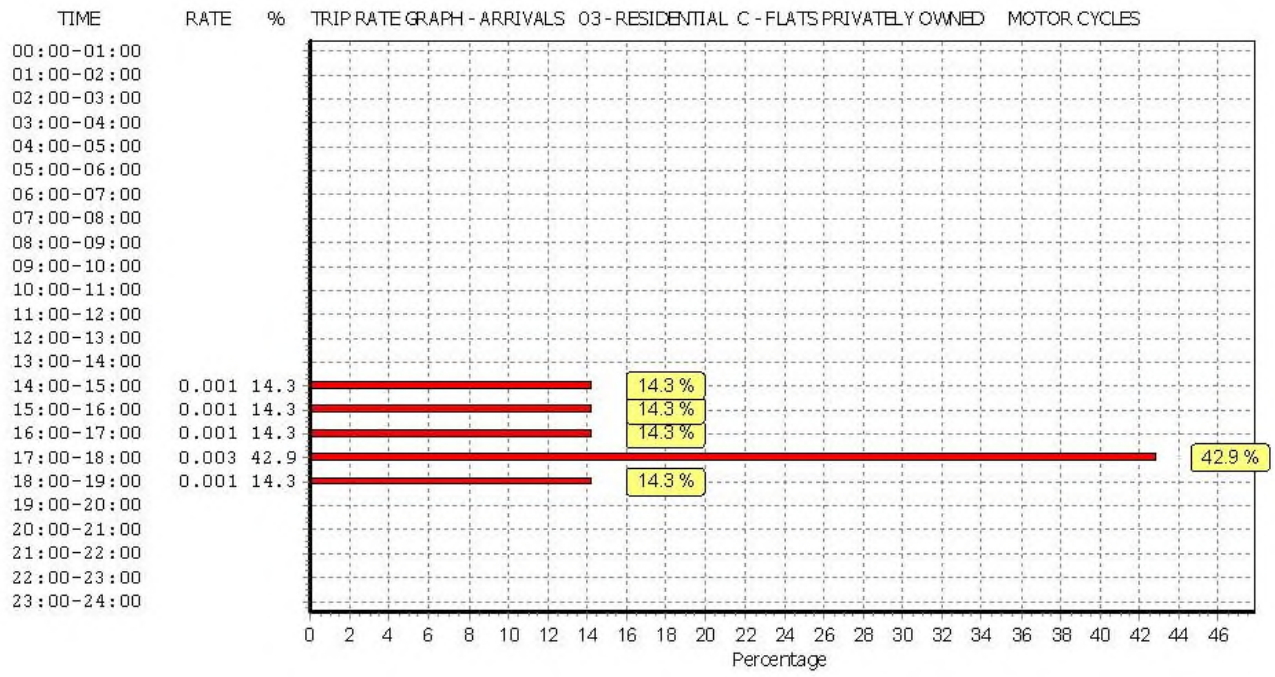
Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

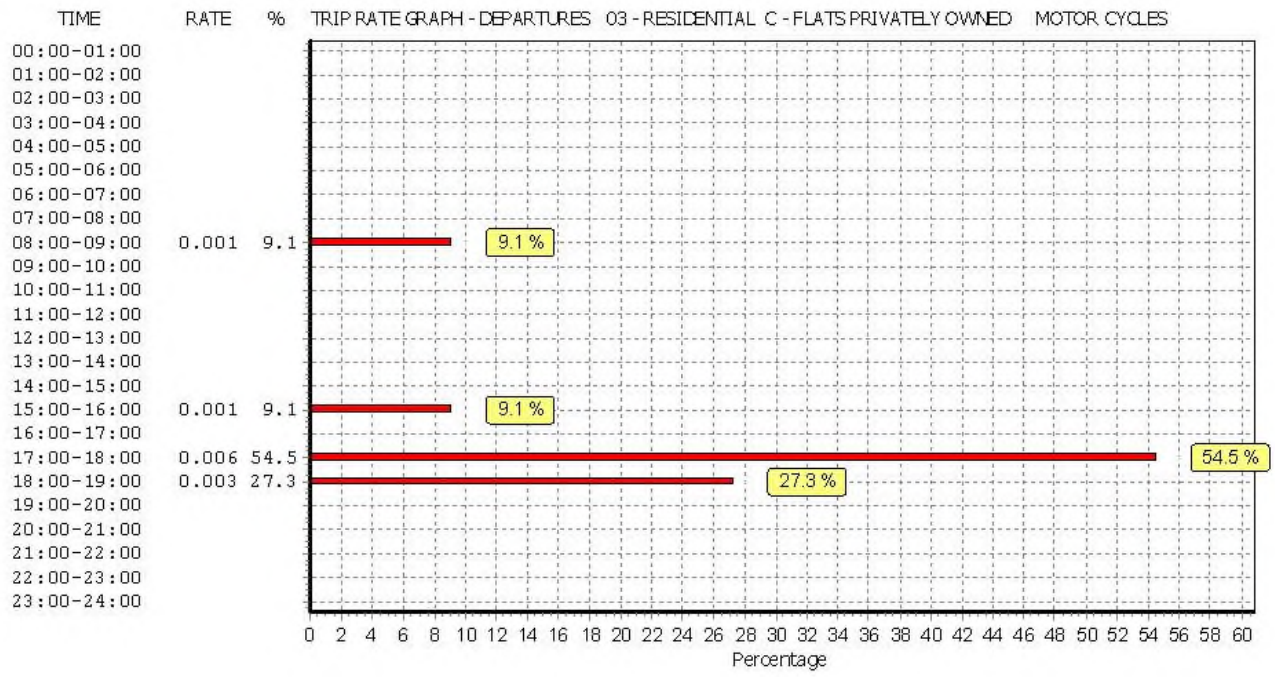
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	59	0.000	12	59	0.000	12	59	0.000
08:00 - 09:00	12	59	0.000	12	59	0.001	12	59	0.001
09:00 - 10:00	12	59	0.000	12	59	0.000	12	59	0.000
10:00 - 11:00	12	59	0.000	12	59	0.000	12	59	0.000
11:00 - 12:00	12	59	0.000	12	59	0.000	12	59	0.000
12:00 - 13:00	12	59	0.000	12	59	0.000	12	59	0.000
13:00 - 14:00	12	59	0.000	12	59	0.000	12	59	0.000
14:00 - 15:00	12	59	0.001	12	59	0.000	12	59	0.001
15:00 - 16:00	12	59	0.001	12	59	0.001	12	59	0.002
16:00 - 17:00	12	59	0.001	12	59	0.000	12	59	0.001
17:00 - 18:00	**12**	**59**	**0.003**	**12**	**59**	**0.006**	**12**	**59**	**0.009**
18:00 - 19:00	12	59	0.001	12	59	0.003	12	59	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.007			0.011			0.018

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

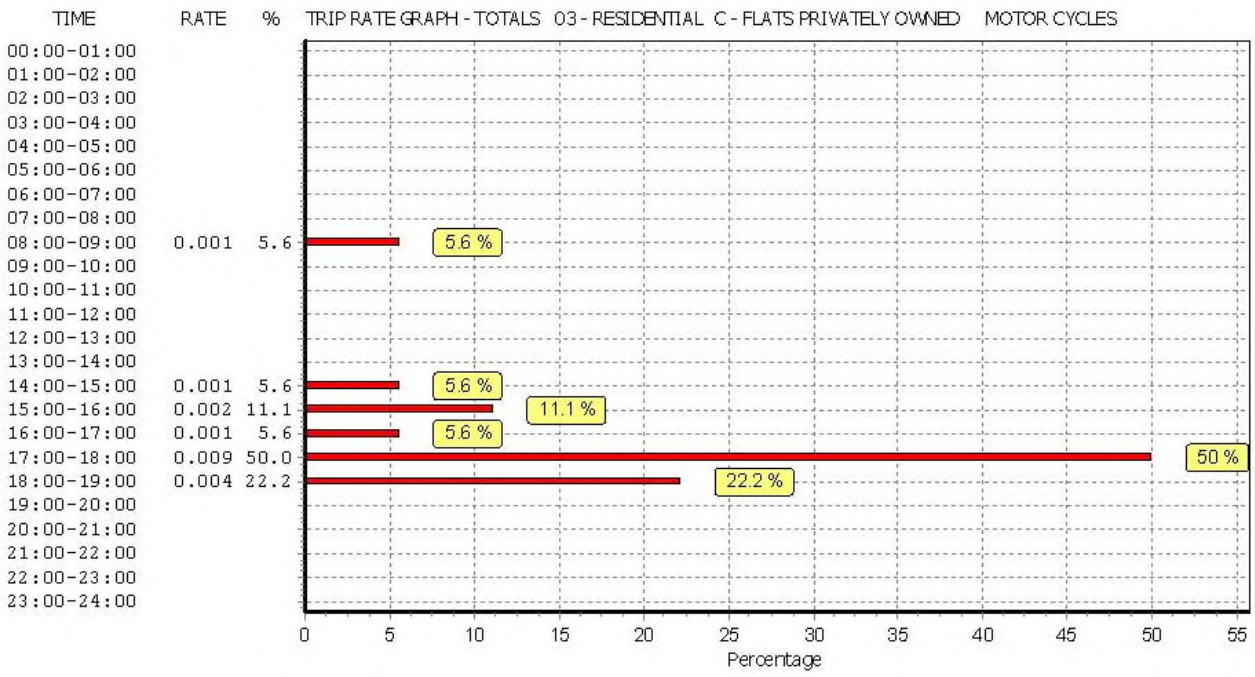
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Appendix C : PICADY Output Files

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
© Copyright TRL Limited, 2019

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: R104 Santry Avenue Site Access 1.j9
Path: G:\2023\p230146\calcs\picady
Report generation date: 27/02/2024 15:03:07

»DO MINIMUM SCENARIO - DM 2027, AM
»DO MINIMUM SCENARIO - DM 2027, PM
»DO MINIMUM SCENARIO - DM 2032, AM
»DO MINIMUM SCENARIO - DM 2032, PM
»DO MINIMUM SCENARIO - DM 2042, AM
»DO MINIMUM SCENARIO - DM 2042, PM
»DO SOMETHING SCENARIO - DS 2027, AM
»DO SOMETHING SCENARIO - DS 2027, PM
»DO SOMETHING SCENARIO - DS 2032, AM
»DO SOMETHING SCENARIO - DS 2032, PM
»DO SOMETHING SCENARIO - DS 2042, AM
»DO SOMETHING SCENARIO - DS 2042, PM

Summary of junction performance

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

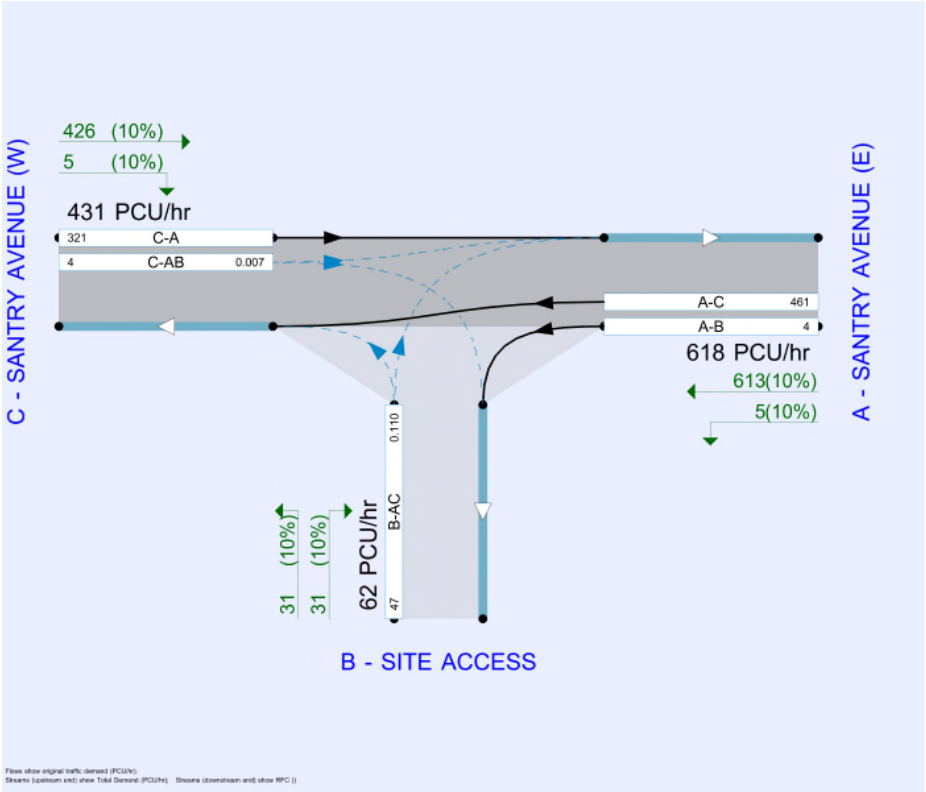
File summary

File Description

Title	SANTRY AVENUE LRD
Location	SANTRY, DUBLIN 9
Site number	
Date	27/02/2024
Version	
Status	
Identifier	RB
Client	Dwyer Nolan Ltd
Jobnumber	230146
Enumerator	HEADOFFICE\browner
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DM 2027	AM	ONE HOUR	07:30	09:00	15	✓
D2	DM 2027	PM	ONE HOUR	16:15	17:45	15	✓
D3	DS 2027	AM	ONE HOUR	07:30	09:00	15	✓
D4	DS 2027	PM	ONE HOUR	16:15	17:45	15	✓
D5	DM 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	DM 2032	PM	ONE HOUR	16:15	17:45	15	✓
D7	DS 2032	AM	ONE HOUR	07:30	09:00	15	✓
D8	DS 2032	PM	ONE HOUR	16:15	17:45	15	✓
D9	DM 2042	AM	ONE HOUR	07:30	09:00	15	✓
D10	DM 2042	PM	ONE HOUR	16:15	17:45	15	✓
D11	DS 2042	AM	ONE HOUR	07:30	09:00	15	✓
D12	DS 2042	PM	ONE HOUR	16:15	17:45	15	✓

DO MINIMUM SCENARIO - DM 2027, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DM 2027	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	756	100.000
B - SITE ACCESS		ONE HOUR	✓	14	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	418	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	38	718
	B - SITE ACCESS	7	0	7
	C - SANTRY AVENUE (W)	380	38	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.05	0.95
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	569	569
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	315	315
07:45-08:00	A - SANTRY AVENUE (E)	680	680
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	376	376
08:00-08:15	A - SANTRY AVENUE (E)	832	832
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	460	460
08:15-08:30	A - SANTRY AVENUE (E)	832	832
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	460	460
08:30-08:45	A - SANTRY AVENUE (E)	680	680
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	376	376
08:45-09:00	A - SANTRY AVENUE (E)	569	569
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	315	315

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	12.78	0.1	B	13	19
C-AB	0.10	9.94	0.1	A	35	52
C-A					349	523
A-B					35	52
A-C					659	988

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	402	0.026	10	0.0	0.0	10.101	B
C-AB	29	7	501	0.057	28	0.0	0.1	8.382	A
C-A	286	72			286				
A-B	29	7			29				
A-C	541	135			541				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	370	0.034	13	0.0	0.0	11.065	B
C-AB	34	9	475	0.072	34	0.1	0.1	8.977	A
C-A	342	85			342				
A-B	34	9			34				
A-C	645	161			645				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	325	0.047	15	0.0	0.1	12.773	B
C-AB	42	10	440	0.095	42	0.1	0.1	9.933	A
C-A	418	105			418				
A-B	42	10			42				
A-C	791	198			791				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	325	0.047	15	0.1	0.1	12.779	B
C-AB	42	10	440	0.095	42	0.1	0.1	9.939	A
C-A	418	105			418				
A-B	42	10			42				
A-C	791	198			791				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	370	0.034	13	0.1	0.0	11.072	B
C-AB	34	9	475	0.072	34	0.1	0.1	8.984	A
C-A	342	85			342				
A-B	34	9			34				
A-C	645	161			645				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	402	0.026	11	0.0	0.0	10.111	B
C-AB	29	7	501	0.057	29	0.1	0.1	8.393	A
C-A	286	72			286				
A-B	29	7			29				
A-C	541	135			541				

DO MINIMUM SCENARIO - DM 2027, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	DM 2027	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	618	100.000
B - SITE ACCESS		ONE HOUR	✓	62	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	431	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	5	613
	B - SITE ACCESS	31	0	31
	C - SANTRY AVENUE (W)	426	5	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.01	0.99
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	465	465
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	324	324
16:30-16:45	A - SANTRY AVENUE (E)	556	556
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	387	387
16:45-17:00	A - SANTRY AVENUE (E)	680	680
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	475	475
17:00-17:15	A - SANTRY AVENUE (E)	680	680
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	475	475
17:15-17:30	A - SANTRY AVENUE (E)	556	556
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	387	387
17:30-17:45	A - SANTRY AVENUE (E)	465	465
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	324	324

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.19	13.59	0.3	B	57	85
C-AB	0.01	8.44	0.0	A	5	7
C-A					391	586
A-B					5	7
A-C					562	844

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	425	0.110	46	0.0	0.1	10.437	B
C-AB	4	0.94	524	0.007	4	0.0	0.0	7.604	A
C-A	321	80			321				
A-B	4	0.94			4				
A-C	461	115			461				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	398	0.140	56	0.1	0.2	11.563	B
C-AB	4	1	504	0.009	4	0.0	0.0	7.934	A
C-A	383	96			383				
A-B	4	1			4				
A-C	551	138			551				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	360	0.190	68	0.2	0.3	13.565	B
C-AB	6	1	475	0.012	5	0.0	0.0	8.439	A
C-A	469	117			469				
A-B	6	1			6				
A-C	675	169			675				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	360	0.190	68	0.3	0.3	13.591	B
C-AB	6	1	475	0.012	6	0.0	0.0	8.439	A
C-A	469	117			469				
A-B	6	1			6				
A-C	675	169			675				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	398	0.140	56	0.3	0.2	11.597	B
C-AB	4	1	504	0.009	5	0.0	0.0	7.936	A
C-A	383	96			383				
A-B	4	1			4				
A-C	551	138			551				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	425	0.110	47	0.2	0.1	10.478	B
C-AB	4	0.94	524	0.007	4	0.0	0.0	7.608	A
C-A	321	80			321				
A-B	4	0.94			4				
A-C	461	115			461				

DO MINIMUM SCENARIO - DM 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	DM 2032	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	797	100.000
B - SITE ACCESS		ONE HOUR	✓	14	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	440	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	38	759
	B - SITE ACCESS	7	0	7
	C - SANTRY AVENUE (W)	402	38	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.05	0.95
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	600	600
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	331	331
07:45-08:00	A - SANTRY AVENUE (E)	716	716
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	396	396
08:00-08:15	A - SANTRY AVENUE (E)	878	878
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	484	484
08:15-08:30	A - SANTRY AVENUE (E)	878	878
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	484	484
08:30-08:45	A - SANTRY AVENUE (E)	716	716
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	396	396
08:45-09:00	A - SANTRY AVENUE (E)	600	600
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	331	331

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	13.36	0.1	B	13	19
C-AB	0.10	10.20	0.1	B	35	52
C-A					369	553
A-B					35	52
A-C					696	1045

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	393	0.027	10	0.0	0.0	10.334	B
C-AB	29	7	493	0.058	28	0.0	0.1	8.511	A
C-A	303	76			303				
A-B	29	7			29				
A-C	571	143			571				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	360	0.035	13	0.0	0.0	11.406	B
C-AB	34	9	467	0.073	34	0.1	0.1	9.154	A
C-A	361	90			361				
A-B	34	9			34				
A-C	682	171			682				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	312	0.049	15	0.0	0.1	13.355	B
C-AB	42	10	430	0.097	42	0.1	0.1	10.198	B
C-A	443	111			443				
A-B	42	10			42				
A-C	836	209			836				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	312	0.049	15	0.1	0.1	13.362	B
C-AB	42	10	430	0.097	42	0.1	0.1	10.204	B
C-A	443	111			443				
A-B	42	10			42				
A-C	836	209			836				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	360	0.035	13	0.1	0.0	11.417	B
C-AB	34	9	467	0.073	34	0.1	0.1	9.161	A
C-A	361	90			361				
A-B	34	9			34				
A-C	682	171			682				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	393	0.027	11	0.0	0.0	10.346	B
C-AB	29	7	493	0.058	29	0.1	0.1	8.522	A
C-A	303	76			303				
A-B	29	7			29				
A-C	571	143			571				

DO MINIMUM SCENARIO - DM 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	DM 2032	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	653	100.000
B - SITE ACCESS		ONE HOUR	✓	62	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	456	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	5	648
	B - SITE ACCESS	31	0	31
	C - SANTRY AVENUE (W)	451	5	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.01	0.99
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	492	492
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	343	343
16:30-16:45	A - SANTRY AVENUE (E)	587	587
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	410	410
16:45-17:00	A - SANTRY AVENUE (E)	719	719
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	502	502
17:00-17:15	A - SANTRY AVENUE (E)	719	719
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	502	502
17:15-17:30	A - SANTRY AVENUE (E)	587	587
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	410	410
17:30-17:45	A - SANTRY AVENUE (E)	492	492
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	343	343

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	14.18	0.3	B	57	85
C-AB	0.01	8.60	0.0	A	5	7
C-A					414	621
A-B					5	7
A-C					595	892

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	417	0.112	46	0.0	0.1	10.660	B
C-AB	4	0.94	518	0.007	4	0.0	0.0	7.695	A
C-A	340	85			340				
A-B	4	0.94			4				
A-C	488	122			488				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	388	0.144	56	0.1	0.2	11.897	B
C-AB	4	1	496	0.009	4	0.0	0.0	8.051	A
C-A	405	101			405				
A-B	4	1			4				
A-C	583	146			583				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	348	0.196	68	0.2	0.3	14.145	B
C-AB	6	1	466	0.012	5	0.0	0.0	8.602	A
C-A	497	124			497				
A-B	6	1			6				
A-C	713	178			713				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	348	0.196	68	0.3	0.3	14.178	B
C-AB	6	1	466	0.012	6	0.0	0.0	8.602	A
C-A	497	124			497				
A-B	6	1			6				
A-C	713	178			713				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	388	0.144	56	0.3	0.2	11.934	B
C-AB	4	1	496	0.009	5	0.0	0.0	8.053	A
C-A	405	101			405				
A-B	4	1			4				
A-C	583	146			583				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	417	0.112	47	0.2	0.1	10.701	B
C-AB	4	0.94	518	0.007	4	0.0	0.0	7.695	A
C-A	340	85			340				
A-B	4	0.94			4				
A-C	488	122			488				

DO MINIMUM SCENARIO - DM 2042, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	DM 2042	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	834	100.000
B - SITE ACCESS		ONE HOUR	✓	14	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	460	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	38	796
	B - SITE ACCESS	7	0	7
	C - SANTRY AVENUE (W)	422	38	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.05	0.95
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.92	0.08	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	628	628
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	346	346
07:45-08:00	A - SANTRY AVENUE (E)	750	750
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	414	414
08:00-08:15	A - SANTRY AVENUE (E)	918	918
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	506	506
08:15-08:30	A - SANTRY AVENUE (E)	918	918
	B - SITE ACCESS	15	15
	C - SANTRY AVENUE (W)	506	506
08:30-08:45	A - SANTRY AVENUE (E)	750	750
	B - SITE ACCESS	13	13
	C - SANTRY AVENUE (W)	414	414
08:45-09:00	A - SANTRY AVENUE (E)	628	628
	B - SITE ACCESS	11	11
	C - SANTRY AVENUE (W)	346	346

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	13.94	0.1	B	13	19
C-AB	0.10	10.46	0.1	B	35	52
C-A					387	581
A-B					35	52
A-C					730	1096

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	385	0.027	10	0.0	0.0	10.554	B
C-AB	29	7	487	0.059	28	0.0	0.1	8.627	A
C-A	318	79			318				
A-B	29	7			29				
A-C	599	150			599				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	350	0.036	13	0.0	0.0	11.735	B
C-AB	34	9	459	0.074	34	0.1	0.1	9.319	A
C-A	379	95			379				
A-B	34	9			34				
A-C	716	179			716				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	299	0.051	15	0.0	0.1	13.934	B
C-AB	42	10	421	0.100	42	0.1	0.1	10.449	B
C-A	465	116			465				
A-B	42	10			42				
A-C	876	219			876				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	299	0.051	15	0.1	0.1	13.942	B
C-AB	42	10	421	0.100	42	0.1	0.1	10.455	B
C-A	465	116			465				
A-B	42	10			42				
A-C	876	219			876				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	350	0.036	13	0.1	0.0	11.747	B
C-AB	34	9	459	0.074	34	0.1	0.1	9.328	A
C-A	379	95			379				
A-B	34	9			34				
A-C	716	179			716				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	385	0.027	11	0.0	0.0	10.565	B
C-AB	29	7	487	0.059	29	0.1	0.1	8.643	A
C-A	318	79			318				
A-B	29	7			29				
A-C	599	150			599				

DO MINIMUM SCENARIO - DM 2042, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	DM 2042	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	684	100.000
B - SITE ACCESS		ONE HOUR	✓	62	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	478	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	5	679
	B - SITE ACCESS	31	0	31
	C - SANTRY AVENUE (W)	473	5	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.01	0.99
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	515	515
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	360	360
16:30-16:45	A - SANTRY AVENUE (E)	615	615
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	430	430
16:45-17:00	A - SANTRY AVENUE (E)	753	753
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	526	526
17:00-17:15	A - SANTRY AVENUE (E)	753	753
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	526	526
17:15-17:30	A - SANTRY AVENUE (E)	615	615
	B - SITE ACCESS	56	56
	C - SANTRY AVENUE (W)	430	430
17:30-17:45	A - SANTRY AVENUE (E)	515	515
	B - SITE ACCESS	47	47
	C - SANTRY AVENUE (W)	360	360

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	14.75	0.3	B	57	85
C-AB	0.01	8.75	0.0	A	5	7
C-A					434	651
A-B					5	7
A-C					623	935

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	410	0.114	46	0.0	0.1	10.865	B
C-AB	4	0.94	513	0.007	4	0.0	0.0	7.777	A
C-A	356	89			356				
A-B	4	0.94			4				
A-C	511	128			511				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	380	0.147	56	0.1	0.2	12.209	B
C-AB	4	1	490	0.009	4	0.0	0.0	8.158	A
C-A	425	106			425				
A-B	4	1			4				
A-C	610	153			610				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	337	0.203	68	0.2	0.3	14.708	B
C-AB	6	1	458	0.012	5	0.0	0.0	8.752	A
C-A	521	130			521				
A-B	6	1			6				
A-C	748	187			748				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	337	0.203	68	0.3	0.3	14.746	B
C-AB	6	1	458	0.012	6	0.0	0.0	8.752	A
C-A	521	130			521				
A-B	6	1			6				
A-C	748	187			748				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	380	0.147	56	0.3	0.2	12.249	B
C-AB	4	1	490	0.009	5	0.0	0.0	8.159	A
C-A	425	106			425				
A-B	4	1			4				
A-C	610	153			610				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	410	0.114	47	0.2	0.1	10.911	B
C-AB	4	0.94	513	0.007	4	0.0	0.0	7.777	A
C-A	356	89			356				
A-B	4	0.94			4				
A-C	511	128			511				

DO SOMETHING SCENARIO - DS 2027, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DS 2027	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	763	100.000
B - SITE ACCESS		ONE HOUR	✓	34	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	422	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	42	721
	B - SITE ACCESS	17	0	17
	C - SANTRY AVENUE (W)	380	42	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.06	0.94
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.90	0.10	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	574	574
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	318	318
07:45-08:00	A - SANTRY AVENUE (E)	686	686
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	379	379
08:00-08:15	A - SANTRY AVENUE (E)	840	840
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	465	465
08:15-08:30	A - SANTRY AVENUE (E)	840	840
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	465	465
08:30-08:45	A - SANTRY AVENUE (E)	686	686
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	379	379
08:45-09:00	A - SANTRY AVENUE (E)	574	574
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	318	318

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	13.87	0.1	B	31	47
C-AB	0.11	10.09	0.1	B	39	58
C-A					349	523
A-B					39	58
A-C					662	992

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	401	0.064	25	0.0	0.1	10.545	B
C-AB	32	8	499	0.063	31	0.0	0.1	8.456	A
C-A	286	72			286				
A-B	32	8			32				
A-C	543	136			543				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	369	0.083	30	0.1	0.1	11.711	B
C-AB	38	9	474	0.080	38	0.1	0.1	9.081	A
C-A	342	85			342				
A-B	38	9			38				
A-C	648	162			648				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	323	0.116	37	0.1	0.1	13.851	B
C-AB	46	12	439	0.106	46	0.1	0.1	10.085	B
C-A	418	105			418				
A-B	46	12			46				
A-C	794	198			794				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	323	0.116	37	0.1	0.1	13.869	B
C-AB	46	12	439	0.106	46	0.1	0.1	10.091	B
C-A	418	105			418				
A-B	46	12			46				
A-C	794	198			794				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	368	0.083	31	0.1	0.1	11.731	B
C-AB	38	9	474	0.080	38	0.1	0.1	9.089	A
C-A	342	85			342				
A-B	38	9			38				
A-C	648	162			648				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	401	0.064	26	0.1	0.1	10.562	B
C-AB	32	8	499	0.063	32	0.1	0.1	8.469	A
C-A	286	72			286				
A-B	32	8			32				
A-C	543	136			543				

DO SOMETHING SCENARIO - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		1.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DS 2027	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	629	100.000
B - SITE ACCESS		ONE HOUR	✓	76	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	441	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	15	614
	B - SITE ACCESS	38	0	38
	C - SANTRY AVENUE (W)	426	15	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.02	0.98
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	474	474
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	332	332
16:30-16:45	A - SANTRY AVENUE (E)	565	565
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	396	396
16:45-17:00	A - SANTRY AVENUE (E)	693	693
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	486	486
17:00-17:15	A - SANTRY AVENUE (E)	693	693
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	486	486
17:15-17:30	A - SANTRY AVENUE (E)	565	565
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	396	396
17:30-17:45	A - SANTRY AVENUE (E)	474	474
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	332	332

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	14.56	0.3	B	70	105
C-AB	0.04	8.69	0.0	A	14	21
C-A					391	586
A-B					14	21
A-C					563	845

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	422	0.135	57	0.0	0.2	10.802	B
C-AB	11	3	523	0.022	11	0.0	0.0	7.745	A
C-A	321	80			321				
A-B	11	3			11				
A-C	462	116			462				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	395	0.173	68	0.2	0.2	12.115	B
C-AB	13	3	501	0.027	13	0.0	0.0	8.117	A
C-A	383	96			383				
A-B	13	3			13				
A-C	552	138			552				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	356	0.235	83	0.2	0.3	14.516	B
C-AB	17	4	472	0.035	16	0.0	0.0	8.694	A
C-A	469	117			469				
A-B	17	4			17				
A-C	676	169			676				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	356	0.235	84	0.3	0.3	14.562	B
C-AB	17	4	472	0.035	17	0.0	0.0	8.694	A
C-A	469	117			469				
A-B	17	4			17				
A-C	676	169			676				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	395	0.173	69	0.3	0.2	12.162	B
C-AB	13	3	501	0.027	14	0.0	0.0	8.120	A
C-A	383	96			383				
A-B	13	3			13				
A-C	552	138			552				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	422	0.135	57	0.2	0.2	10.857	B
C-AB	11	3	523	0.022	11	0.0	0.0	7.748	A
C-A	321	80			321				
A-B	11	3			11				
A-C	462	116			462				

DO SOMETHING SCENARIO - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	DS 2032	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	804	100.000
B - SITE ACCESS		ONE HOUR	✓	34	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	444	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	42	762
	B - SITE ACCESS	17	0	17
	C - SANTRY AVENUE (W)	402	42	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.05	0.95
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	605	605
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	334	334
07:45-08:00	A - SANTRY AVENUE (E)	723	723
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	399	399
08:00-08:15	A - SANTRY AVENUE (E)	885	885
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	489	489
08:15-08:30	A - SANTRY AVENUE (E)	885	885
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	489	489
08:30-08:45	A - SANTRY AVENUE (E)	723	723
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	399	399
08:45-09:00	A - SANTRY AVENUE (E)	605	605
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	334	334

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	14.56	0.2	B	31	47
C-AB	0.11	10.36	0.1	B	39	58
C-A					369	553
A-B					39	58
A-C					699	1049

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	392	0.065	25	0.0	0.1	10.790	B
C-AB	32	8	492	0.064	31	0.0	0.1	8.586	A
C-A	303	76			303				
A-B	32	8			32				
A-C	574	143			574				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	358	0.085	30	0.1	0.1	12.092	B
C-AB	38	9	465	0.081	38	0.1	0.1	9.258	A
C-A	361	90			361				
A-B	38	9			38				
A-C	685	171			685				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	309	0.121	37	0.1	0.1	14.538	B
C-AB	46	12	428	0.108	46	0.1	0.1	10.357	B
C-A	442	111			442				
A-B	46	12			46				
A-C	839	210			839				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	309	0.121	37	0.1	0.2	14.560	B
C-AB	46	12	428	0.108	46	0.1	0.1	10.363	B
C-A	442	111			442				
A-B	46	12			46				
A-C	839	210			839				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	358	0.085	31	0.1	0.1	12.117	B
C-AB	38	9	465	0.081	38	0.1	0.1	9.270	A
C-A	361	90			361				
A-B	38	9			38				
A-C	685	171			685				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	392	0.065	26	0.1	0.1	10.818	B
C-AB	32	8	492	0.064	32	0.1	0.1	8.600	A
C-A	303	76			303				
A-B	32	8			32				
A-C	574	143			574				

DO SOMETHING SCENARIO - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		1.07	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	DS 2032	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	664	100.000
B - SITE ACCESS		ONE HOUR	✓	76	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	466	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	15	649
	B - SITE ACCESS	38	0	38
	C - SANTRY AVENUE (W)	451	15	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.02	0.98
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	500	500
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	351	351
16:30-16:45	A - SANTRY AVENUE (E)	597	597
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	419	419
16:45-17:00	A - SANTRY AVENUE (E)	731	731
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	513	513
17:00-17:15	A - SANTRY AVENUE (E)	731	731
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	513	513
17:15-17:30	A - SANTRY AVENUE (E)	597	597
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	419	419
17:30-17:45	A - SANTRY AVENUE (E)	500	500
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	351	351

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	15.24	0.4	C	70	105
C-AB	0.04	8.87	0.0	A	14	21
C-A					414	621
A-B					14	21
A-C					596	893

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	415	0.138	57	0.0	0.2	11.040	B
C-AB	11	3	516	0.022	11	0.0	0.0	7.838	A
C-A	340	85			340				
A-B	11	3			11				
A-C	489	122			489				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	385	0.177	68	0.2	0.2	12.492	B
C-AB	13	3	494	0.027	13	0.0	0.0	8.240	A
C-A	405	101			405				
A-B	13	3			13				
A-C	583	146			583				

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	343	0.244	83	0.2	0.3	15.187	C
C-AB	17	4	463	0.036	16	0.0	0.0	8.867	A
C-A	497	124			497				
A-B	17	4			17				
A-C	715	179			715				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	343	0.244	84	0.3	0.4	15.238	C
C-AB	17	4	463	0.036	17	0.0	0.0	8.867	A
C-A	497	124			497				
A-B	17	4			17				
A-C	715	179			715				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	385	0.177	69	0.4	0.2	12.536	B
C-AB	13	3	494	0.027	14	0.0	0.0	8.241	A
C-A	405	101			405				
A-B	13	3			13				
A-C	583	146			583				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	415	0.138	57	0.2	0.2	11.100	B
C-AB	11	3	516	0.022	11	0.0	0.0	7.840	A
C-A	340	85			340				
A-B	11	3			11				
A-C	489	122			489				

DO SOMETHING SCENARIO - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		0.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	DS 2042	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	841	100.000
B - SITE ACCESS		ONE HOUR	✓	34	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	464	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	42	799
	B - SITE ACCESS	17	0	17
	C - SANTRY AVENUE (W)	422	42	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.05	0.95
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SANTRY AVENUE (E)	633	633
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	349	349
07:45-08:00	A - SANTRY AVENUE (E)	756	756
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	417	417
08:00-08:15	A - SANTRY AVENUE (E)	926	926
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	511	511
08:15-08:30	A - SANTRY AVENUE (E)	926	926
	B - SITE ACCESS	37	37
	C - SANTRY AVENUE (W)	511	511
08:30-08:45	A - SANTRY AVENUE (E)	756	756
	B - SITE ACCESS	31	31
	C - SANTRY AVENUE (W)	417	417
08:45-09:00	A - SANTRY AVENUE (E)	633	633
	B - SITE ACCESS	26	26
	C - SANTRY AVENUE (W)	349	349

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.13	15.25	0.2	C	31	47
C-AB	0.11	10.62	0.1	B	39	58
C-A					387	581
A-B					39	58
A-C					733	1100

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	384	0.067	25	0.0	0.1	11.031	B
C-AB	32	8	486	0.065	31	0.0	0.1	8.708	A
C-A	318	79			318				
A-B	32	8			32				
A-C	602	150			602				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	348	0.088	30	0.1	0.1	12.464	B
C-AB	38	9	458	0.083	38	0.1	0.1	9.427	A
C-A	379	95			379				
A-B	38	9			38				
A-C	718	180			718				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	297	0.126	37	0.1	0.2	15.227	C
C-AB	46	12	419	0.111	46	0.1	0.1	10.614	B
C-A	465	116			465				
A-B	46	12			46				
A-C	880	220			880				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	297	0.126	37	0.2	0.2	15.253	C
C-AB	46	12	419	0.111	46	0.1	0.1	10.622	B
C-A	465	116			465				
A-B	46	12			46				
A-C	880	220			880				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	348	0.088	31	0.2	0.1	12.491	B
C-AB	38	9	458	0.083	38	0.1	0.1	9.439	A
C-A	379	95			379				
A-B	38	9			38				
A-C	718	180			718				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	6	384	0.067	26	0.1	0.1	11.058	B
C-AB	32	8	486	0.065	32	0.1	0.1	8.723	A
C-A	318	79			318				
A-B	32	8			32				
A-C	602	150			602				

DO SOMETHING SCENARIO - DS 2042, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SANTRY AVENUE (ACCESS 1)	T-Junction	Two-way		1.07	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SANTRY AVENUE (E)		Major
B	SITE ACCESS		Minor
C	SANTRY AVENUE (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SANTRY AVENUE (W)	7.30			100.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.086	0.218	0.137	0.311
B-C	636	0.092	0.232	-	-
C-B	632	0.231	0.231	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:03:51 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	DS 2042	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SANTRY AVENUE (E)		ONE HOUR	✓	695	100.000
B - SITE ACCESS		ONE HOUR	✓	76	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0	15	680
	B - SITE ACCESS	38	0	38
	C - SANTRY AVENUE (W)	473	15	0

Proportions

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	0.00	0.02	0.98
	B - SITE ACCESS	0.50	0.00	0.50
	C - SANTRY AVENUE (W)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SANTRY AVENUE (W)	10	10	10

Average PCU Per Veh

		To		
		A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From	A - SANTRY AVENUE (E)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SANTRY AVENUE (W)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SANTRY AVENUE (E)	523	523
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	367	367
16:30-16:45	A - SANTRY AVENUE (E)	625	625
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	439	439
16:45-17:00	A - SANTRY AVENUE (E)	765	765
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	537	537
17:00-17:15	A - SANTRY AVENUE (E)	765	765
	B - SITE ACCESS	84	84
	C - SANTRY AVENUE (W)	537	537
17:15-17:30	A - SANTRY AVENUE (E)	625	625
	B - SITE ACCESS	68	68
	C - SANTRY AVENUE (W)	439	439
17:30-17:45	A - SANTRY AVENUE (E)	523	523
	B - SITE ACCESS	57	57
	C - SANTRY AVENUE (W)	367	367

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	15.90	0.4	C	70	105
C-AB	0.04	9.03	0.0	A	14	21
C-A					434	651
A-B					14	21
A-C					624	936

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	407	0.140	57	0.0	0.2	11.261	B
C-AB	11	3	511	0.022	11	0.0	0.0	7.920	A
C-A	356	89			356				
A-B	11	3			11				
A-C	512	128			512				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	376	0.181	68	0.2	0.2	12.829	B
C-AB	13	3	488	0.028	13	0.0	0.0	8.352	A
C-A	425	106			425				
A-B	13	3			13				
A-C	611	153			611				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	333	0.252	83	0.2	0.4	15.840	C
C-AB	17	4	455	0.036	16	0.0	0.0	9.026	A
C-A	521	130			521				
A-B	17	4			17				
A-C	749	187			749				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	333	0.252	84	0.4	0.4	15.900	C
C-AB	17	4	455	0.036	17	0.0	0.0	9.026	A
C-A	521	130			521				
A-B	17	4			17				
A-C	749	187			749				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	376	0.181	69	0.4	0.2	12.891	B
C-AB	13	3	488	0.028	14	0.0	0.0	8.353	A
C-A	425	106			425				
A-B	13	3			13				
A-C	611	153			611				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	407	0.140	57	0.2	0.2	11.325	B
C-AB	11	3	511	0.022	11	0.0	0.0	7.926	A
C-A	356	89			356				
A-B	11	3			11				
A-C	512	128			512				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
© Copyright TRL Limited, 2019

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: R132 Swords Road Site Access 2.j9
Path: G:\2023\p230146\calcs\picady
Report generation date: 27/02/2024 15:22:49

»DO MINIMUM SCENARIO - DM 2027, AM
»DO MINIMUM SCENARIO - DM 2027, PM
»DO MINIMUM SCENARIO - DM 2032, AM
»DO MINIMUM SCENARIO - DM 2032, PM
»DO MINIMUM SCENARIO - DM 2042, AM
»DO MINIMUM SCENARIO - DM 2042, PM
»DO SOMETHING SCENARIO - DS 2027, AM
»DO SOMETHING SCENARIO - DS 2027, PM
»DO SOMETHING SCENARIO - DS 2032, AM
»DO SOMETHING SCENARIO - DS 2032, PM
»DO SOMETHING SCENARIO - DS 2042, AM
»DO SOMETHING SCENARIO - DS 2042, PM

Summary of junction performance

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

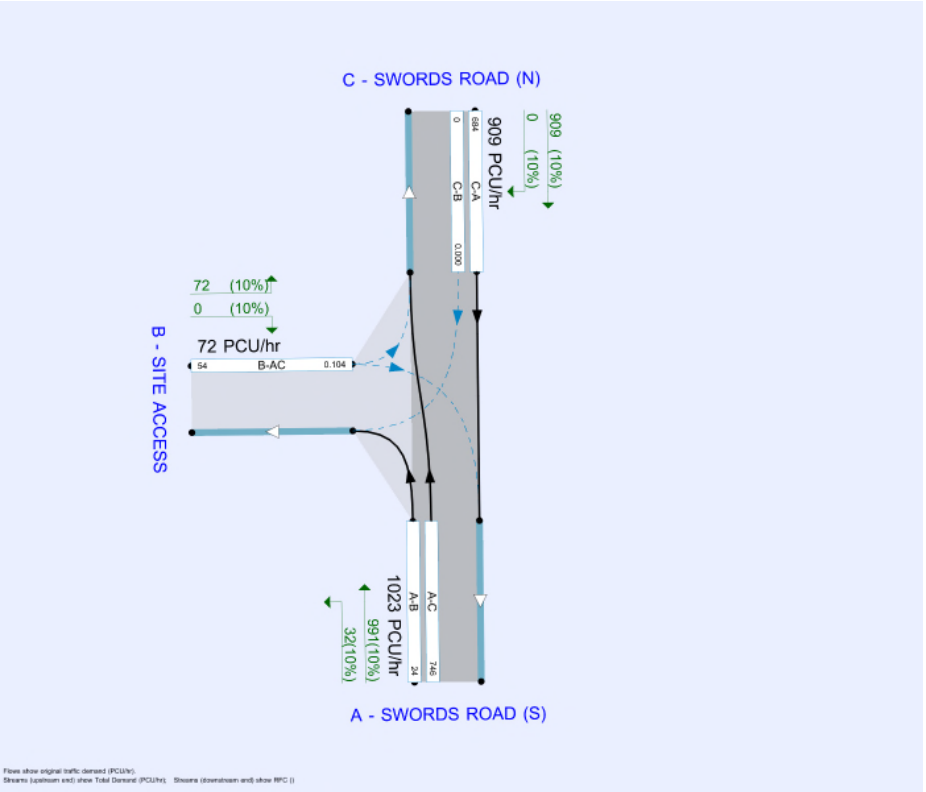
File Description

Title	SANTRY AVENUE LRD
Location	SANTRY, DUBLIN 9
Site number	
Date	27/02/2024
Version	
Status	
Identifier	RB
Client	Dwyer Nolan Ltd
Jobnumber	230146
Enumerator	HEADOFFICE\browner
Description	SWORDS ROAD ACCESS

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DM 2027	AM	ONE HOUR	07:30	09:00	15	✓
D2	DM 2027	PM	ONE HOUR	16:15	17:45	15	✓
D3	DS 2027	AM	ONE HOUR	07:30	09:00	15	✓
D4	DS 2027	PM	ONE HOUR	16:15	17:45	15	✓
D5	DM 2032	AM	ONE HOUR	07:30	09:00	15	✓
D6	DM 2032	PM	ONE HOUR	16:15	17:45	15	✓
D7	DS 2032	AM	ONE HOUR	07:30	09:00	15	✓
D8	DS 2032	PM	ONE HOUR	16:15	17:45	15	✓
D9	DM 2042	AM	ONE HOUR	07:30	09:00	15	✓
D10	DM 2042	PM	ONE HOUR	16:15	17:45	15	✓
D11	DS 2042	AM	ONE HOUR	07:30	09:00	15	✓
D12	DS 2042	PM	ONE HOUR	16:15	17:45	15	✓

DO MINIMUM SCENARIO - DM 2027, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DM 2027	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	661	100.000
B - SITE ACCESS		ONE HOUR	✓	58	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	908	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	41	620
	B - SITE ACCESS	0	0	58
	C - SWORDS ROAD (N)	908	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.06	0.94
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	498	498
	B - SITE ACCESS	44	44
	C - SWORDS ROAD (N)	684	684
07:45-08:00	A - SWORDS ROAD (S)	594	594
	B - SITE ACCESS	52	52
	C - SWORDS ROAD (N)	816	816
08:00-08:15	A - SWORDS ROAD (S)	728	728
	B - SITE ACCESS	64	64
	C - SWORDS ROAD (N)	1000	1000
08:15-08:30	A - SWORDS ROAD (S)	728	728
	B - SITE ACCESS	64	64
	C - SWORDS ROAD (N)	1000	1000
08:30-08:45	A - SWORDS ROAD (S)	594	594
	B - SITE ACCESS	52	52
	C - SWORDS ROAD (N)	816	816
08:45-09:00	A - SWORDS ROAD (S)	498	498
	B - SITE ACCESS	44	44
	C - SWORDS ROAD (N)	684	684

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	8.48	0.1	A	53	80
C-A					833	1250
C-B	0.00	0.00	0.0	A	0	0
A-B					38	56
A-C					569	853

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	564	0.077	43	0.0	0.1	7.598	A
C-A	684	171			684				
C-B	0	0	558	0.000	0	0.0	0.0	0.000	A
A-B	31	8			31				
A-C	467	117			467				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	550	0.095	52	0.1	0.1	7.949	A
C-A	816	204			816				
C-B	0	0	543	0.000	0	0.0	0.0	0.000	A
A-B	37	9			37				
A-C	557	139			557				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	531	0.120	64	0.1	0.1	8.473	A
C-A	1000	250			1000				
C-B	0	0	523	0.000	0	0.0	0.0	0.000	A
A-B	45	11			45				
A-C	683	171			683				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	531	0.120	64	0.1	0.1	8.478	A
C-A	1000	250			1000				
C-B	0	0	523	0.000	0	0.0	0.0	0.000	A
A-B	45	11			45				
A-C	683	171			683				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	550	0.095	52	0.1	0.1	7.956	A
C-A	816	204			816				
C-B	0	0	543	0.000	0	0.0	0.0	0.000	A
A-B	37	9			37				
A-C	557	139			557				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	564	0.077	44	0.1	0.1	7.613	A
C-A	684	171			684				
C-B	0	0	558	0.000	0	0.0	0.0	0.000	A
A-B	31	8			31				
A-C	467	117			467				

DO MINIMUM SCENARIO - DM 2027, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	DM 2027	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	912	100.000
B - SITE ACCESS		ONE HOUR	✓	63	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	822	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	23	889
	B - SITE ACCESS	0	0	63
	C - SWORDS ROAD (N)	822	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	687	687
	B - SITE ACCESS	47	47
	C - SWORDS ROAD (N)	619	619
16:30-16:45	A - SWORDS ROAD (S)	820	820
	B - SITE ACCESS	57	57
	C - SWORDS ROAD (N)	739	739
16:45-17:00	A - SWORDS ROAD (S)	1004	1004
	B - SITE ACCESS	69	69
	C - SWORDS ROAD (N)	905	905
17:00-17:15	A - SWORDS ROAD (S)	1004	1004
	B - SITE ACCESS	69	69
	C - SWORDS ROAD (N)	905	905
17:15-17:30	A - SWORDS ROAD (S)	820	820
	B - SITE ACCESS	57	57
	C - SWORDS ROAD (N)	739	739
17:30-17:45	A - SWORDS ROAD (S)	687	687
	B - SITE ACCESS	47	47
	C - SWORDS ROAD (N)	619	619

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	9.47	0.2	A	58	87
C-A					754	1131
C-B	0.00	0.00	0.0	A	0	0
A-B					21	32
A-C					816	1224

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	535	0.089	47	0.0	0.1	8.116	A
C-A	619	155			619				
C-B	0	0	530	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	669	167			669				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	515	0.110	57	0.1	0.1	8.637	A
C-A	739	185			739				
C-B	0	0	510	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	799	200			799				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	488	0.142	69	0.1	0.2	9.458	A
C-A	905	226			905				
C-B	0	0	482	0.000	0	0.0	0.0	0.000	A
A-B	25	6			25				
A-C	979	245			979				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	488	0.142	69	0.2	0.2	9.465	A
C-A	905	226			905				
C-B	0	0	482	0.000	0	0.0	0.0	0.000	A
A-B	25	6			25				
A-C	979	245			979				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	515	0.110	57	0.2	0.1	8.649	A
C-A	739	185			739				
C-B	0	0	510	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	799	200			799				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	535	0.089	48	0.1	0.1	8.134	A
C-A	619	155			619				
C-B	0	0	530	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	669	167			669				

DO MINIMUM SCENARIO - DM 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	DM 2032	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	693	100.000
B - SITE ACCESS		ONE HOUR	✓	62	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	961	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	42	651
	B - SITE ACCESS	0	0	62
	C - SWORDS ROAD (N)	961	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.06	0.94
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	522	522
	B - SITE ACCESS	47	47
	C - SWORDS ROAD (N)	723	723
07:45-08:00	A - SWORDS ROAD (S)	623	623
	B - SITE ACCESS	56	56
	C - SWORDS ROAD (N)	864	864
08:00-08:15	A - SWORDS ROAD (S)	763	763
	B - SITE ACCESS	68	68
	C - SWORDS ROAD (N)	1058	1058
08:15-08:30	A - SWORDS ROAD (S)	763	763
	B - SITE ACCESS	68	68
	C - SWORDS ROAD (N)	1058	1058
08:30-08:45	A - SWORDS ROAD (S)	623	623
	B - SITE ACCESS	56	56
	C - SWORDS ROAD (N)	864	864
08:45-09:00	A - SWORDS ROAD (S)	522	522
	B - SITE ACCESS	47	47
	C - SWORDS ROAD (N)	723	723

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.13	8.66	0.2	A	57	85
C-A					882	1323
C-B	0.00	0.00	0.0	A	0	0
A-B					39	58
A-C					597	896

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	561	0.083	46	0.0	0.1	7.694	A
C-A	723	181			723				
C-B	0	0	554	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	490	123			490				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	546	0.102	56	0.1	0.1	8.074	A
C-A	864	216			864				
C-B	0	0	539	0.000	0	0.0	0.0	0.000	A
A-B	38	9			38				
A-C	585	146			585				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	526	0.130	68	0.1	0.2	8.650	A
C-A	1058	265			1058				
C-B	0	0	518	0.000	0	0.0	0.0	0.000	A
A-B	46	12			46				
A-C	717	179			717				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	526	0.130	68	0.2	0.2	8.655	A
C-A	1058	265			1058				
C-B	0	0	518	0.000	0	0.0	0.0	0.000	A
A-B	46	12			46				
A-C	717	179			717				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	546	0.102	56	0.2	0.1	8.082	A
C-A	864	216			864				
C-B	0	0	539	0.000	0	0.0	0.0	0.000	A
A-B	38	9			38				
A-C	585	146			585				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	561	0.083	47	0.1	0.1	7.708	A
C-A	723	181			723				
C-B	0	0	554	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	490	123			490				

DO MINIMUM SCENARIO - DM 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	DM 2032	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	965	100.000
B - SITE ACCESS		ONE HOUR	✓	65	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	866	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	25	940
	B - SITE ACCESS	0	0	65
	C - SWORDS ROAD (N)	866	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	727	727
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	652	652
16:30-16:45	A - SWORDS ROAD (S)	868	868
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	779	779
16:45-17:00	A - SWORDS ROAD (S)	1062	1062
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	953	953
17:00-17:15	A - SWORDS ROAD (S)	1062	1062
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	953	953
17:15-17:30	A - SWORDS ROAD (S)	868	868
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	779	779
17:30-17:45	A - SWORDS ROAD (S)	727	727
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	652	652

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.15	9.71	0.2	A	60	89
C-A					795	1192
C-B	0.00	0.00	0.0	A	0	0
A-B					23	34
A-C					863	1294

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	529	0.093	48	0.0	0.1	8.238	A
C-A	652	163			652				
C-B	0	0	524	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	708	177			708				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	508	0.115	58	0.1	0.1	8.806	A
C-A	779	195			779				
C-B	0	0	503	0.000	0	0.0	0.0	0.000	A
A-B	22	6			22				
A-C	845	211			845				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	479	0.149	71	0.1	0.2	9.705	A
C-A	953	238			953				
C-B	0	0	474	0.000	0	0.0	0.0	0.000	A
A-B	28	7			28				
A-C	1035	259			1035				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	479	0.149	72	0.2	0.2	9.715	A
C-A	953	238			953				
C-B	0	0	474	0.000	0	0.0	0.0	0.000	A
A-B	28	7			28				
A-C	1035	259			1035				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	508	0.115	59	0.2	0.1	8.817	A
C-A	779	195			779				
C-B	0	0	503	0.000	0	0.0	0.0	0.000	A
A-B	22	6			22				
A-C	845	211			845				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	529	0.093	49	0.1	0.1	8.259	A
C-A	652	163			652				
C-B	0	0	524	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	708	177			708				

DO MINIMUM SCENARIO - DM 2042, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	DM 2042	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	721	100.000
B - SITE ACCESS		ONE HOUR	✓	65	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1007	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	43	678
	B - SITE ACCESS	0	0	65
	C - SWORDS ROAD (N)	1007	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.06	0.94
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	543	543
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	758	758
07:45-08:00	A - SWORDS ROAD (S)	648	648
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	905	905
08:00-08:15	A - SWORDS ROAD (S)	794	794
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	1109	1109
08:15-08:30	A - SWORDS ROAD (S)	794	794
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	1109	1109
08:30-08:45	A - SWORDS ROAD (S)	648	648
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	905	905
08:45-09:00	A - SWORDS ROAD (S)	543	543
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	758	758

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	8.81	0.2	A	60	89
C-A					924	1386
C-B	0.00	0.00	0.0	A	0	0
A-B					39	59
A-C					622	933

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	557	0.088	49	0.0	0.1	7.774	A
C-A	758	190			758				
C-B	0	0	551	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	510	128			510				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	542	0.108	58	0.1	0.1	8.181	A
C-A	905	226			905				
C-B	0	0	535	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	610	152			610				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	521	0.137	71	0.1	0.2	8.801	A
C-A	1109	277			1109				
C-B	0	0	514	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	746	187			746				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	521	0.137	72	0.2	0.2	8.806	A
C-A	1109	277			1109				
C-B	0	0	514	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	746	187			746				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	542	0.108	59	0.2	0.1	8.191	A
C-A	905	226			905				
C-B	0	0	535	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	610	152			610				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	557	0.088	49	0.1	0.1	7.791	A
C-A	758	190			758				
C-B	0	0	551	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	510	128			510				

DO MINIMUM SCENARIO - DM 2042, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	DO MINIMUM SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	DM 2042	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	1010	100.000
B - SITE ACCESS		ONE HOUR	✓	68	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	906	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	26	984
	B - SITE ACCESS	0	0	68
	C - SWORDS ROAD (N)	906	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	760	760
	B - SITE ACCESS	51	51
	C - SWORDS ROAD (N)	682	682
16:30-16:45	A - SWORDS ROAD (S)	908	908
	B - SITE ACCESS	61	61
	C - SWORDS ROAD (N)	814	814
16:45-17:00	A - SWORDS ROAD (S)	1112	1112
	B - SITE ACCESS	75	75
	C - SWORDS ROAD (N)	998	998
17:00-17:15	A - SWORDS ROAD (S)	1112	1112
	B - SITE ACCESS	75	75
	C - SWORDS ROAD (N)	998	998
17:15-17:30	A - SWORDS ROAD (S)	908	908
	B - SITE ACCESS	61	61
	C - SWORDS ROAD (N)	814	814
17:30-17:45	A - SWORDS ROAD (S)	760	760
	B - SITE ACCESS	51	51
	C - SWORDS ROAD (N)	682	682

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	9.98	0.2	A	62	94
C-A					831	1247
C-B	0.00	0.00	0.0	A	0	0
A-B					24	36
A-C					903	1354

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	524	0.098	51	0.0	0.1	8.363	A
C-A	682	171			682				
C-B	0	0	519	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	741	185			741				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	15	502	0.122	61	0.1	0.2	8.977	A
C-A	814	204			814				
C-B	0	0	497	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	885	221			885				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	472	0.159	75	0.2	0.2	9.965	A
C-A	998	249			998				
C-B	0	0	466	0.000	0	0.0	0.0	0.000	A
A-B	29	7			29				
A-C	1083	271			1083				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	472	0.159	75	0.2	0.2	9.975	A
C-A	998	249			998				
C-B	0	0	466	0.000	0	0.0	0.0	0.000	A
A-B	29	7			29				
A-C	1083	271			1083				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	15	502	0.122	61	0.2	0.2	8.993	A
C-A	814	204			814				
C-B	0	0	497	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	885	221			885				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	524	0.098	51	0.2	0.1	8.385	A
C-A	682	171			682				
C-B	0	0	519	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	741	185			741				

DO SOMETHING SCENARIO - DS 2027, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DS 2027	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	667	100.000
B - SITE ACCESS		ONE HOUR	✓	65	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	913	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	44	623
	B - SITE ACCESS	0	0	65
	C - SWORDS ROAD (N)	913	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.07	0.93
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	502	502
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	687	687
07:45-08:00	A - SWORDS ROAD (S)	600	600
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	821	821
08:00-08:15	A - SWORDS ROAD (S)	734	734
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	1005	1005
08:15-08:30	A - SWORDS ROAD (S)	734	734
	B - SITE ACCESS	72	72
	C - SWORDS ROAD (N)	1005	1005
08:30-08:45	A - SWORDS ROAD (S)	600	600
	B - SITE ACCESS	58	58
	C - SWORDS ROAD (N)	821	821
08:45-09:00	A - SWORDS ROAD (S)	502	502
	B - SITE ACCESS	49	49
	C - SWORDS ROAD (N)	687	687

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.13	8.63	0.2	A	60	89
C-A					838	1257
C-B	0.00	0.00	0.0	A	0	0
A-B					40	61
A-C					572	858

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	564	0.087	49	0.0	0.1	7.681	A
C-A	687	172			687				
C-B	0	0	557	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	469	117			469				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	550	0.106	58	0.1	0.1	8.058	A
C-A	821	205			821				
C-B	0	0	543	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	560	140			560				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	530	0.135	71	0.1	0.2	8.628	A
C-A	1005	251			1005				
C-B	0	0	522	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	686	171			686				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	530	0.135	72	0.2	0.2	8.633	A
C-A	1005	251			1005				
C-B	0	0	522	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	686	171			686				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	550	0.106	59	0.2	0.1	8.068	A
C-A	821	205			821				
C-B	0	0	543	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	560	140			560				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	12	564	0.087	49	0.1	0.1	7.697	A
C-A	687	172			687				
C-B	0	0	557	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	469	117			469				

DO SOMETHING SCENARIO - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DS 2027	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	926	100.000
B - SITE ACCESS		ONE HOUR	✓	67	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	825	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	30	896
	B - SITE ACCESS	0	0	67
	C - SWORDS ROAD (N)	825	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	697	697
	B - SITE ACCESS	50	50
	C - SWORDS ROAD (N)	621	621
16:30-16:45	A - SWORDS ROAD (S)	832	832
	B - SITE ACCESS	60	60
	C - SWORDS ROAD (N)	742	742
16:45-17:00	A - SWORDS ROAD (S)	1020	1020
	B - SITE ACCESS	74	74
	C - SWORDS ROAD (N)	908	908
17:00-17:15	A - SWORDS ROAD (S)	1020	1020
	B - SITE ACCESS	74	74
	C - SWORDS ROAD (N)	908	908
17:15-17:30	A - SWORDS ROAD (S)	832	832
	B - SITE ACCESS	60	60
	C - SWORDS ROAD (N)	742	742
17:30-17:45	A - SWORDS ROAD (S)	697	697
	B - SITE ACCESS	50	50
	C - SWORDS ROAD (N)	621	621

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.15	9.60	0.2	A	61	92
C-A					757	1136
C-B	0.00	0.00	0.0	A	0	0
A-B					28	41
A-C					822	1233

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	533	0.095	50	0.0	0.1	8.183	A
C-A	621	155			621				
C-B	0	0	528	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	675	169			675				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	15	514	0.117	60	0.1	0.1	8.731	A
C-A	742	185			742				
C-B	0	0	508	0.000	0	0.0	0.0	0.000	A
A-B	27	7			27				
A-C	805	201			805				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	486	0.152	74	0.1	0.2	9.594	A
C-A	908	227			908				
C-B	0	0	480	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	987	247			987				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	486	0.152	74	0.2	0.2	9.603	A
C-A	908	227			908				
C-B	0	0	480	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	987	247			987				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	15	514	0.117	60	0.2	0.1	8.742	A
C-A	742	185			742				
C-B	0	0	508	0.000	0	0.0	0.0	0.000	A
A-B	27	7			27				
A-C	805	201			805				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	533	0.095	51	0.1	0.1	8.203	A
C-A	621	155			621				
C-B	0	0	528	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	675	169			675				

DO SOMETHING SCENARIO - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	DS 2032	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	698	100.000
B - SITE ACCESS		ONE HOUR	✓	68	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	965	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	45	653
	B - SITE ACCESS	0	0	68
	C - SWORDS ROAD (N)	965	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.06	0.94
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	525	525
	B - SITE ACCESS	51	51
	C - SWORDS ROAD (N)	727	727
07:45-08:00	A - SWORDS ROAD (S)	627	627
	B - SITE ACCESS	61	61
	C - SWORDS ROAD (N)	868	868
08:00-08:15	A - SWORDS ROAD (S)	769	769
	B - SITE ACCESS	75	75
	C - SWORDS ROAD (N)	1062	1062
08:15-08:30	A - SWORDS ROAD (S)	769	769
	B - SITE ACCESS	75	75
	C - SWORDS ROAD (N)	1062	1062
08:30-08:45	A - SWORDS ROAD (S)	627	627
	B - SITE ACCESS	61	61
	C - SWORDS ROAD (N)	868	868
08:45-09:00	A - SWORDS ROAD (S)	525	525
	B - SITE ACCESS	51	51
	C - SWORDS ROAD (N)	727	727

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	8.79	0.2	A	62	94
C-A					886	1328
C-B	0.00	0.00	0.0	A	0	0
A-B					41	62
A-C					599	899

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	560	0.091	51	0.0	0.1	7.767	A
C-A	727	182			727				
C-B	0	0	554	0.000	0	0.0	0.0	0.000	A
A-B	34	8			34				
A-C	492	123			492				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	15	546	0.112	61	0.1	0.1	8.171	A
C-A	868	217			868				
C-B	0	0	538	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	587	147			587				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	525	0.143	75	0.1	0.2	8.783	A
C-A	1062	266			1062				
C-B	0	0	517	0.000	0	0.0	0.0	0.000	A
A-B	50	12			50				
A-C	719	180			719				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	525	0.143	75	0.2	0.2	8.792	A
C-A	1062	266			1062				
C-B	0	0	517	0.000	0	0.0	0.0	0.000	A
A-B	50	12			50				
A-C	719	180			719				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	15	546	0.112	61	0.2	0.1	8.180	A
C-A	868	217			868				
C-B	0	0	538	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	587	147			587				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	560	0.091	51	0.1	0.1	7.784	A
C-A	727	182			727				
C-B	0	0	554	0.000	0	0.0	0.0	0.000	A
A-B	34	8			34				
A-C	492	123			492				

DO SOMETHING SCENARIO - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	DS 2032	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	977	100.000
B - SITE ACCESS		ONE HOUR	✓	70	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	869	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	31	946
	B - SITE ACCESS	0	0	70
	C - SWORDS ROAD (N)	869	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	736	736
	B - SITE ACCESS	53	53
	C - SWORDS ROAD (N)	654	654
16:30-16:45	A - SWORDS ROAD (S)	878	878
	B - SITE ACCESS	63	63
	C - SWORDS ROAD (N)	781	781
16:45-17:00	A - SWORDS ROAD (S)	1076	1076
	B - SITE ACCESS	77	77
	C - SWORDS ROAD (N)	957	957
17:00-17:15	A - SWORDS ROAD (S)	1076	1076
	B - SITE ACCESS	77	77
	C - SWORDS ROAD (N)	957	957
17:15-17:30	A - SWORDS ROAD (S)	878	878
	B - SITE ACCESS	63	63
	C - SWORDS ROAD (N)	781	781
17:30-17:45	A - SWORDS ROAD (S)	736	736
	B - SITE ACCESS	53	53
	C - SWORDS ROAD (N)	654	654

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	9.88	0.2	A	64	96
C-A					797	1196
C-B	0.00	0.00	0.0	A	0	0
A-B					28	43
A-C					868	1302

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	13	528	0.100	52	0.0	0.1	8.318	A
C-A	654	164			654				
C-B	0	0	522	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	712	178			712				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	16	507	0.124	63	0.1	0.2	8.916	A
C-A	781	195			781				
C-B	0	0	501	0.000	0	0.0	0.0	0.000	A
A-B	28	7			28				
A-C	850	213			850				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	77	19	478	0.161	77	0.2	0.2	9.872	A
C-A	957	239			957				
C-B	0	0	472	0.000	0	0.0	0.0	0.000	A
A-B	34	9			34				
A-C	1042	260			1042				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	77	19	478	0.161	77	0.2	0.2	9.882	A
C-A	957	239			957				
C-B	0	0	472	0.000	0	0.0	0.0	0.000	A
A-B	34	9			34				
A-C	1042	260			1042				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	16	507	0.124	63	0.2	0.2	8.931	A
C-A	781	195			781				
C-B	0	0	501	0.000	0	0.0	0.0	0.000	A
A-B	28	7			28				
A-C	850	213			850				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	13	528	0.100	53	0.2	0.1	8.341	A
C-A	654	164			654				
C-B	0	0	522	0.000	0	0.0	0.0	0.000	A
A-B	23	6			23				
A-C	712	178			712				

DO SOMETHING SCENARIO - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	DS 2042	AM	ONE HOUR	07:30	09:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	727	100.000
B - SITE ACCESS		ONE HOUR	✓	71	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1012	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	46	681
	B - SITE ACCESS	0	0	71
	C - SWORDS ROAD (N)	1012	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.06	0.94
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - SWORDS ROAD (S)	547	547
	B - SITE ACCESS	53	53
	C - SWORDS ROAD (N)	762	762
07:45-08:00	A - SWORDS ROAD (S)	654	654
	B - SITE ACCESS	64	64
	C - SWORDS ROAD (N)	910	910
08:00-08:15	A - SWORDS ROAD (S)	800	800
	B - SITE ACCESS	78	78
	C - SWORDS ROAD (N)	1114	1114
08:15-08:30	A - SWORDS ROAD (S)	800	800
	B - SITE ACCESS	78	78
	C - SWORDS ROAD (N)	1114	1114
08:30-08:45	A - SWORDS ROAD (S)	654	654
	B - SITE ACCESS	64	64
	C - SWORDS ROAD (N)	910	910
08:45-09:00	A - SWORDS ROAD (S)	547	547
	B - SITE ACCESS	53	53
	C - SWORDS ROAD (N)	762	762

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.15	8.95	0.2	A	65	98
C-A					929	1393
C-B	0.00	0.00	0.0	A	0	0
A-B					42	63
A-C					625	937

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	13	557	0.096	53	0.0	0.1	7.849	A
C-A	762	190			762				
C-B	0	0	550	0.000	0	0.0	0.0	0.000	A
A-B	35	9			35				
A-C	513	128			513				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	542	0.118	64	0.1	0.1	8.283	A
C-A	910	227			910				
C-B	0	0	535	0.000	0	0.0	0.0	0.000	A
A-B	41	10			41				
A-C	612	153			612				

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	20	521	0.150	78	0.1	0.2	8.944	A
C-A	1114	279			1114				
C-B	0	0	513	0.000	0	0.0	0.0	0.000	A
A-B	51	13			51				
A-C	750	187			750				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	20	521	0.150	78	0.2	0.2	8.951	A
C-A	1114	279			1114				
C-B	0	0	513	0.000	0	0.0	0.0	0.000	A
A-B	51	13			51				
A-C	750	187			750				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	542	0.118	64	0.2	0.1	8.292	A
C-A	910	227			910				
C-B	0	0	535	0.000	0	0.0	0.0	0.000	A
A-B	41	10			41				
A-C	612	153			612				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	13	557	0.096	54	0.1	0.1	7.868	A
C-A	762	190			762				
C-B	0	0	550	0.000	0	0.0	0.0	0.000	A
A-B	35	9			35				
A-C	513	128			513				

DO SOMETHING SCENARIO - DS 2042, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO SOMETHING SCENARIO	✓	D3,D4,D7,D8,D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SWORDS ROAD ACCESS 2	T-Junction	Two-way		0.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SWORDS ROAD (S)		Major
B	SITE ACCESS		Minor
C	SWORDS ROAD (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SWORDS ROAD (N)	15.00			100.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - SITE ACCESS	One lane	2.75	45	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	501	0.056	0.140	0.088	0.201
B-C	636	0.059	0.150	-	-
C-B	632	0.149	0.149	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Generated on 27/02/2024 15:23:04 using Junctions 9 (9.5.2.1013)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	DS 2042	PM	ONE HOUR	16:15	17:45	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SWORDS ROAD (S)		ONE HOUR	✓	1023	100.000
B - SITE ACCESS		ONE HOUR	✓	72	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	909	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0	32	991
	B - SITE ACCESS	0	0	72
	C - SWORDS ROAD (N)	909	0	0

Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.97
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	10	10	10
	B - SITE ACCESS	10	10	10
	C - SWORDS ROAD (N)	10	10	10

Average PCU Per Veh

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	1.100	1.100	1.100
	B - SITE ACCESS	1.100	1.100	1.100
	C - SWORDS ROAD (N)	1.100	1.100	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:15-16:30	A - SWORDS ROAD (S)	770	770
	B - SITE ACCESS	54	54
	C - SWORDS ROAD (N)	684	684
16:30-16:45	A - SWORDS ROAD (S)	920	920
	B - SITE ACCESS	65	65
	C - SWORDS ROAD (N)	817	817
16:45-17:00	A - SWORDS ROAD (S)	1126	1126
	B - SITE ACCESS	79	79
	C - SWORDS ROAD (N)	1001	1001
17:00-17:15	A - SWORDS ROAD (S)	1126	1126
	B - SITE ACCESS	79	79
	C - SWORDS ROAD (N)	1001	1001
17:15-17:30	A - SWORDS ROAD (S)	920	920
	B - SITE ACCESS	65	65
	C - SWORDS ROAD (N)	817	817
17:30-17:45	A - SWORDS ROAD (S)	770	770
	B - SITE ACCESS	54	54
	C - SWORDS ROAD (N)	684	684

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	10.13	0.2	B	66	99
C-A					834	1251
C-B	0.00	0.00	0.0	A	0	0
A-B					29	44
A-C					909	1364

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	523	0.104	54	0.0	0.1	8.436	A
C-A	684	171			684				
C-B	0	0	517	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	746	187			746				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	501	0.129	65	0.1	0.2	9.078	A
C-A	817	204			817				
C-B	0	0	495	0.000	0	0.0	0.0	0.000	A
A-B	29	7			29				
A-C	891	223			891				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	470	0.169	79	0.2	0.2	10.115	B
C-A	1001	250			1001				
C-B	0	0	464	0.000	0	0.0	0.0	0.000	A
A-B	35	9			35				
A-C	1091	273			1091				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	470	0.169	79	0.2	0.2	10.127	B
C-A	1001	250			1001				
C-B	0	0	464	0.000	0	0.0	0.0	0.000	A
A-B	35	9			35				
A-C	1091	273			1091				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	501	0.129	65	0.2	0.2	9.094	A
C-A	817	204			817				
C-B	0	0	495	0.000	0	0.0	0.0	0.000	A
A-B	29	7			29				
A-C	891	223			891				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	523	0.104	54	0.2	0.1	8.458	A
C-A	684	171			684				
C-B	0	0	517	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	746	187			746				

DBFL CONSULTING ENGINEERS

Registered Office
Ormond House
Upper Ormond Quay
Dublin 7 Ireland D07 W704

+ 353 1 400 4000
info@dbfl.ie
www.dbfl.ie

Cork Office
14 South Mall
Cork T12 CT91

+ 353 21 202 4538
info@dbfl.ie
www.dbfl.ie

Waterford Office
Suite 8b The Atrium
Maritana Gate, Canada St
Waterford X91 W028

+ 353 51 309 500
info@dbfl.ie
www.dbfl.ie