

Project

**Proposed Mixed Use Development,  
Santry Avenue, Dublin 9**

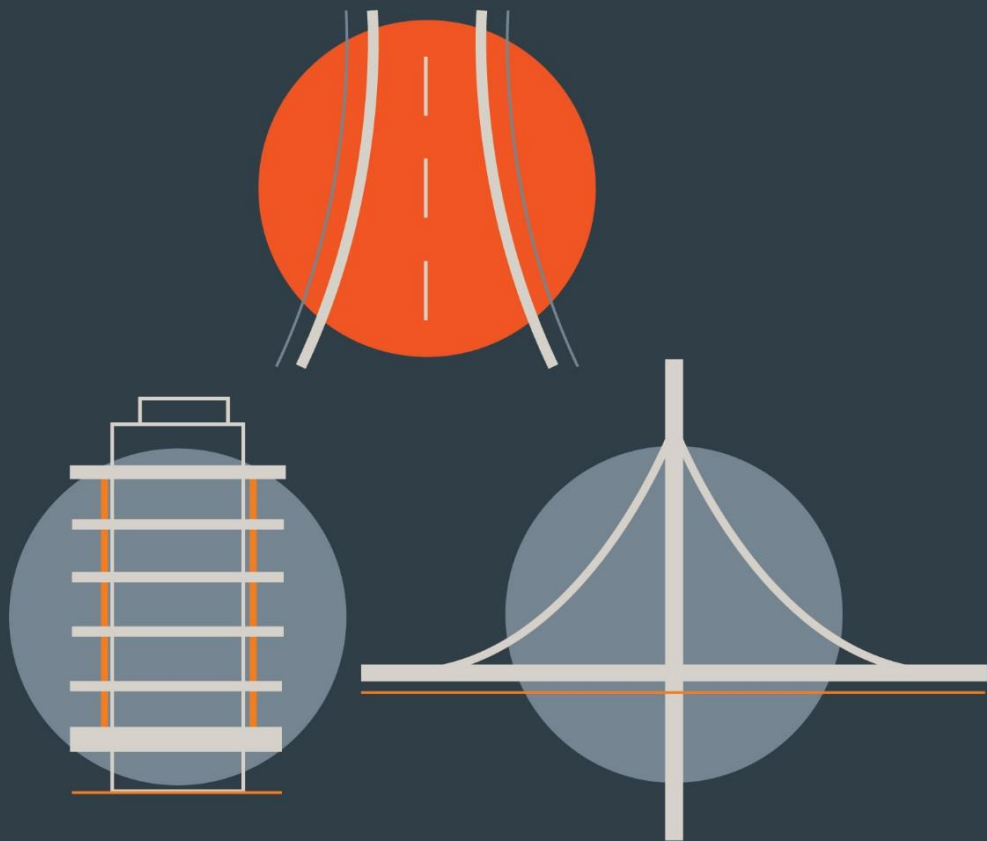
Report Title

**Traffic and Transport Assessment (TTA)**

Client

**Dwyer Nolan Ltd.**

TRANSPORTATION



**DBFL** CONSULTING ENGINEERS

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND

- 1.1.1 DBFL Consulting Engineers (DBFL) have been commissioned to prepare the necessary traffic and transport related assessments in support of a planning application for a mixed Use development on Santry Avenue, Dublin 9.
- 1.1.2 Dwyer Nolan Developments Ltd. intend to apply to An Bord Pleanála for permission for a strategic housing development, 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 & 2737/19).
- 1.1.3 The proposed development provides for 350 no. apartments, comprised of 113 no. 1 bed, 218 no. 2 bed, & 19 no. 3 bed dwellings, in 4 no. seven to fourteen storey buildings, over basement level, with 5 no. retail / commercial units and a community use unit located at ground floor level facing onto Santry Avenue and Swords Road. A one storey residential amenity unit, facing onto Santry Avenue, is also provided for between Blocks A & D.
- 1.1.4 The development consists of the following:
- Demolition of the existing building on site i.e. the existing Chadwicks Builders Merchants (c. 4,196.8m<sup>2</sup>).
  - Construction of 350 no. 1, 2, & 3 bed apartments, retail / commercial and community uses in 4 no. buildings that are subdivided into Blocks A-G as follows:
    - Block A is a 7 to 14 storey block consisting of 59 no. apartments comprised of 26 no. 1 bed & 33 no. 2 bed dwellings, with 2 no. commercial/retail units located on the ground floor (c. 132.4m<sup>2</sup> & 173m<sup>2</sup> respectively). Adjoining same is Block B, which is a 7 storey block consisting of 38 no. apartments comprised of 6 no. 1 bed, 20 no. 2 bed, & 12 no. 3 bed dwellings, with 2 no. commercial/retail units located on the ground floor (c. 162.3m<sup>2</sup> & 130.4m<sup>2</sup>

respectively). Refuse storage areas are also provided for at ground floor level.

- Block C is a 7 storey block consisting of 55 no. apartments comprised of 13 no. 1 bed & 42 no. 2 bed dwellings. Refuse storage areas are provided for at ground floor level. Adjoining same is Block D which is a 7 to 10 storey block consisting of 51 no. apartments comprised of 25 no. 1 bed, 19 no. 2 bed, & 7 no. 3 bed dwellings, with 1 no. commercial unit / café located on the ground floor (c. 163.3m<sup>2</sup>). A refuse storage area is also provided for at ground floor level.
  - Block E is a 7 to 10 storey block consisting of 58 no. apartments comprised of 10 no. 1 bed & 48 no. 2 bed dwellings, with 1 no. community use unit located on the ground floor (c. 188.1m<sup>2</sup>). 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 55 no. apartments comprised of 13 no. 1 bed & 42 no. 2 bed dwellings. A refuse storage area & bicycle storage area are also provided for at ground floor level.
  - 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.
- Construction of a 1 storey residential amenity unit (c. 187.9m<sup>2</sup>) located between Blocks A & D.
  - Construction of basement level car parking (c.5,470.8m<sup>2</sup>) accommodating 173 no. car parking spaces & 719 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. 36 no. car parking spaces & 58 no. bicycle parking spaces are also provided for within the site at surface level.
  - Public open space of c. 1,915m<sup>2</sup> is provided for between Blocks C, D, E, & F. Communal open space of c. 3,122m<sup>2</sup> provided for 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. 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.

- 1.1.5 The purpose of this Traffic and Transport Assessment (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 the proposed residential development.

## 1.2 SCOPE

- 1.2.1 The purpose of this Transport Statement is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of any transport impact generated as a result of the proposed mixed-use development. The scope of the assessment covers transport and related sustainability issues including means of vehicular access, pedestrian, cyclist and local public transport connections.

## 1.3 METHODOLOGY

- 1.3.1 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) Transport Infrastructure Ireland (TII);
- '*Traffic Management Guidelines*' Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- '*Guidelines for Traffic Impact Assessments*' The Institution of Highways and Transportation; and
- '*Dublin City Council Development Plan 2016-2022*'.

- 1.3.2 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.
- **Background Review:** A background review of previous planning permissions on the subject site was undertaken.
- **Development Framework:** A review of Development Frameworks and supporting Transport focused studies was undertaken.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of vehicle trips generated by the proposed residential 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 Impact:** The predicted impact of additional vehicle movements as generated by the proposed development across the local road network for the adopted design years has been quantified.
- **Network Analysis:** Detailed computer simulations have been undertaken to assess the operational performance of key junctions in the post development 2022, 2027 and 2037 development scenarios.

## 1.4 STAGE 1 SHD PLANNING OPINIONS

1.4.1 During the initial stage of the subject SHD planning application a number of observations and recommendations have been raised by both the local planning authority (Transportation Planning Department of Dublin City Council) and the ABP Stage 1 case officers. The items raised have been incorporated into this updated assessment and / or influenced an amendment to the scheme design. A summary of each of the observations raised (in regard to Traffic and Transport) and DBFL responses are outlined in Chapter 9 of this report.

## 1.5 REPORT STRUCTURE

- 1.5.1 Following introduction, **Section 2** of this report describes the existing conditions at the proposed development location and surrounding area, whilst **Section 3** provides the relevant transportation policies that influence the design and appraisal of the subject development proposals.
- 1.5.2 A summary of the proposed development itself is highlighted within **Section 4**.
- 1.5.3 **Section 5** outlines the parking provision proposed as part of the development proposals and the parking management strategy.
- 1.5.4 **Section 6** outlines the trip generation and distribution exercises carried out and the adopted methodology for applying growth factors to establish a baseline for the design year scenarios.
- 1.5.5 The potential traffic impact of the proposals assessed for the 2022 Opening Year, 2027 Interim Design and the 2037 Horizon Year are summarised within **Section 7**.
- 1.5.6 The bespoke initiatives proposed to promote sustainable travel to and from the proposed residential development are outlined in **Section 8**.
- 1.5.7 An outline of DBFL responses to a range of DCC Transportation observations and ABP Opinion at Stage 2 are outlined in **Section 9**.
- 1.5.8 The main conclusions and recommendations derived from the analysis are summarised in **Section 10**.

## 2.0 RECEIVING ENVIRONMENT

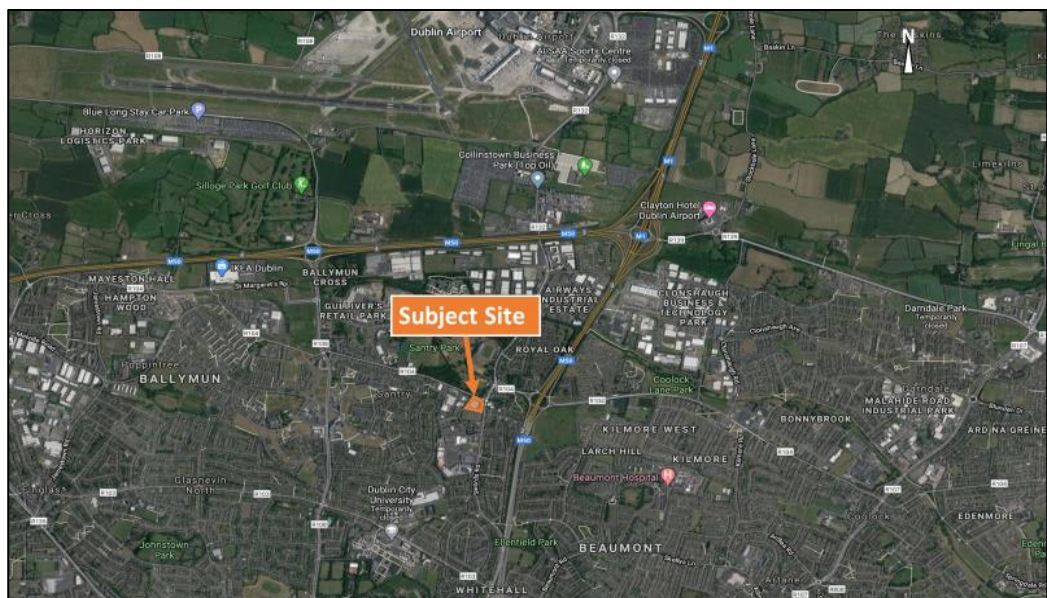
### 2.1 LAND USE

2.1.1 The subject site is currently being used as a builders merchants (Chadwicks) comprising 4196.8 m<sup>2</sup> of existing buildings and stores. 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”. The site has an approximate area of 1.49 hectares. The existing structures (4196.8 m<sup>2</sup>) on the site will be demolished as part of the planning proposals.

### 2.2 LOCATION

2.2.1 The subject site fronts onto the R104 Santry Avenue and is located along the western side of the R132 Swords Road in Santry approximately 6.5km north of Dublin City Centre.

2.2.2 The general location of the subject site in relation to the surrounding road network is illustrated in **Figure 2.1** below whilst **Figure 2.2** shows the extent of the subject development plot. The site is bounded by the R132 Swords Road on its eastern boundary, the Santry Avenue along its northern boundary and predominantly industrial/ commercial developments along its western boundary. The previously approved mixed use development (Ref. 2713/17) is located to the south



**Figure 2.1: General Location of Site (Source: Google Map)**





**Figure 2.2: Subject Site Indicative Boundary** (Source: Google Map)

## 2.3 EXISTING TRANSPORTATION INFRASTRUCTURE

### *Road Network*

- 2.3.1 The subject site is adjacent to the 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.
- 2.3.2 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.
- 2.3.3 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.
- 2.3.4 **Figure 2.3** illustrates the key road network in the vicinity of the subject site.



**Figure 2.3: Key Road Network**

### ***Pedestrian Environment***

- 2.3.5 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.
- 2.3.6 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. **Figures 2.4 to 2.7** illustrate pedestrians' facilities in vicinity of the site.





**Figure 2.4: Pedestrian Facilities on Swords Road**



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



**Figure 2.6: Pedestrian Facilities at Santry Avenue**



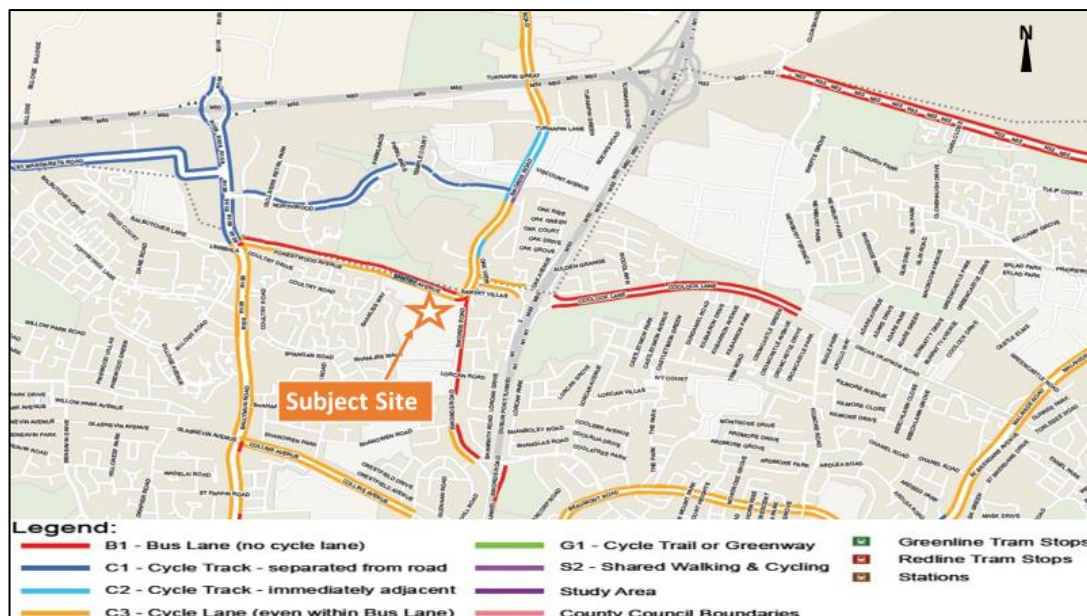
**Figure 2.7: Exiting Pedestrian Facilities within context of the Subject site**

### **Cycle Environment**

2.3.7 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.



2.3.8 Currently cycle facilities are not provided along R104 Santry Avenue. There are a variety of other cycle facilities available on the routes leading to the subject site area as illustrated in **Figure 2.8** (extract from GDA Cycle Network Plan)



**Figure 2.8: Existing Cycle Facilities** (Source: Sheet E3 GDA Cycle Network Plan)

### **Public Transport - Bus**

2.3.9 The subject site benefits from excellent public transport accessibility levels. Dublin Bus operates route numbers 16, 33, 41, 41a, 41b and 41c along the R132 Swords Road corridor, travelling in both directions providing links to Dublin City Centre and Ballinteer to the south and Swords to the north. Further, Dublin Bus Route 27b operates along the R132 Road corridor (to the north east of the subject site) providing links to/from Dublin City Centre and Harristown. The Go-Ahead Ireland bus Route 17a operates along R104 Santry Avenue providing links to/from Blanchardstown and Kilbarrack.

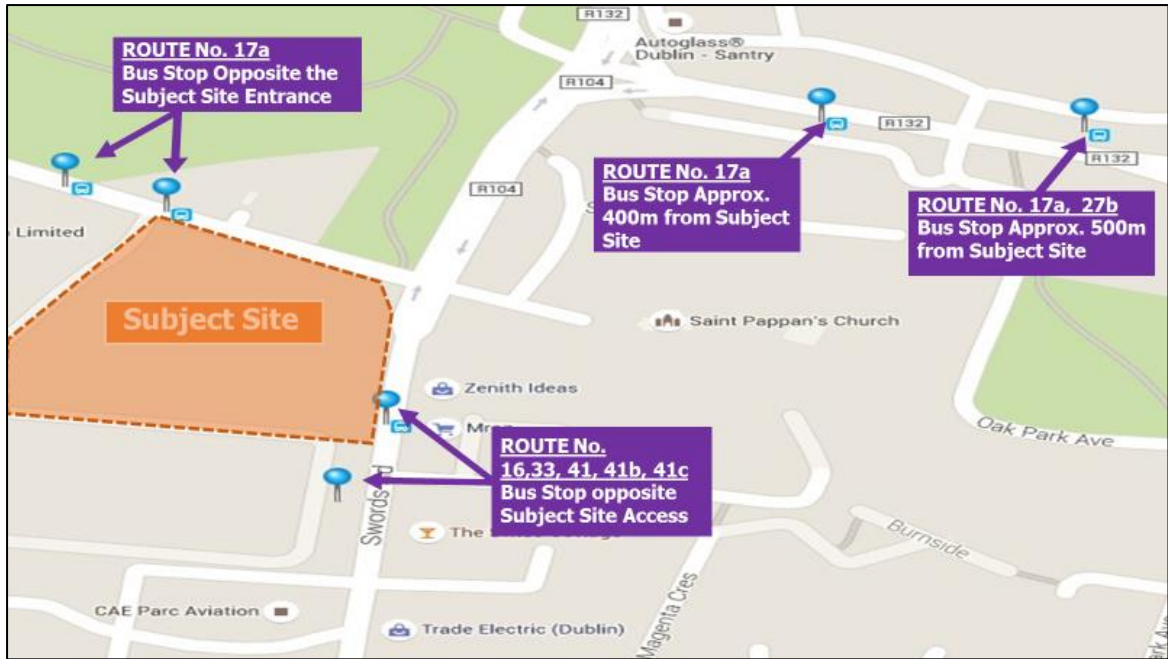
2.3.10 All of the above routes are highly accessible with the closest interchange opportunities being within approximately 5m (Routes 17a, 16, 33, 41a, 41b, 41c) of the subject site whilst route numbers 27b are accessible being within 500m of the subject development site as detailed further in **Figure 2.9** below.

2.3.11 These Dublin Bus and Go-Ahead Ireland operated bus services operate on a daily basis and offer frequent schedules as summarised in **Table 2.1** below. Detailed route maps for each of the bus services and the various destinations that they serve along their routes are shown in Figures A1 to A7 as contained within **Appendix A**.

Route No.	Company	Route	Mon – Fri	Sat	Sun
16	Dublin Bus	Dublin Airport – Ballinteer	87	81	63
		Ballinteer – Dublin Airport	88	83	65
17a	Go-Ahead Ireland	Blanchardstown Centre – Kilbarrack	57	52	42
		Kilbarrack – Blanchardstown Centre	57	52	42
27b	Dublin Bus	Eden Quay – Harristown	53	51	31
		Harristown – Eden Quay	53	51	32
33	Dublin Bus	Lower Abbey St – Balbriggan	21	14	12
		Balbriggan – Lower Abbey St	21	14	12
41	Dublin Bus	Lower Abbey St – Swords Manor	50	44	29
		Swords Manor – Lower Abbey St	57	43	27
41a/b	Dublin Bus	Lower Abbey St – Rolestown	5	4	3
		Rolestown – Lower Abbey St	4	4	2
41c	Dublin Bus	Lower Abbey St – Swords Manor	45	41	28
		Swords Manor – Lower Abbey St	51	39	27

**Table 2.1: Bus Routes Serving the Site – Number of Services per day**

2.3.12 **Figure 2.9** below provides details of the above-named bus routes with the closest interchange opportunities available to the subject site highlighted.



**Figure 2.9: Existing Dublin Bus Routes and Local Interchanges** (Source: [www.dublinbus.ie](http://www.dublinbus.ie))

2.3.13 **Figure 2.10** illustrates bus services opportunities in the area and the frequency available for each route on a neutral weekday as extracted from the BusConnects documentation.



**Figure 2.10: Existing Bus Route Frequencies** (Source: [www.busconnect.ie](http://www.busconnect.ie))



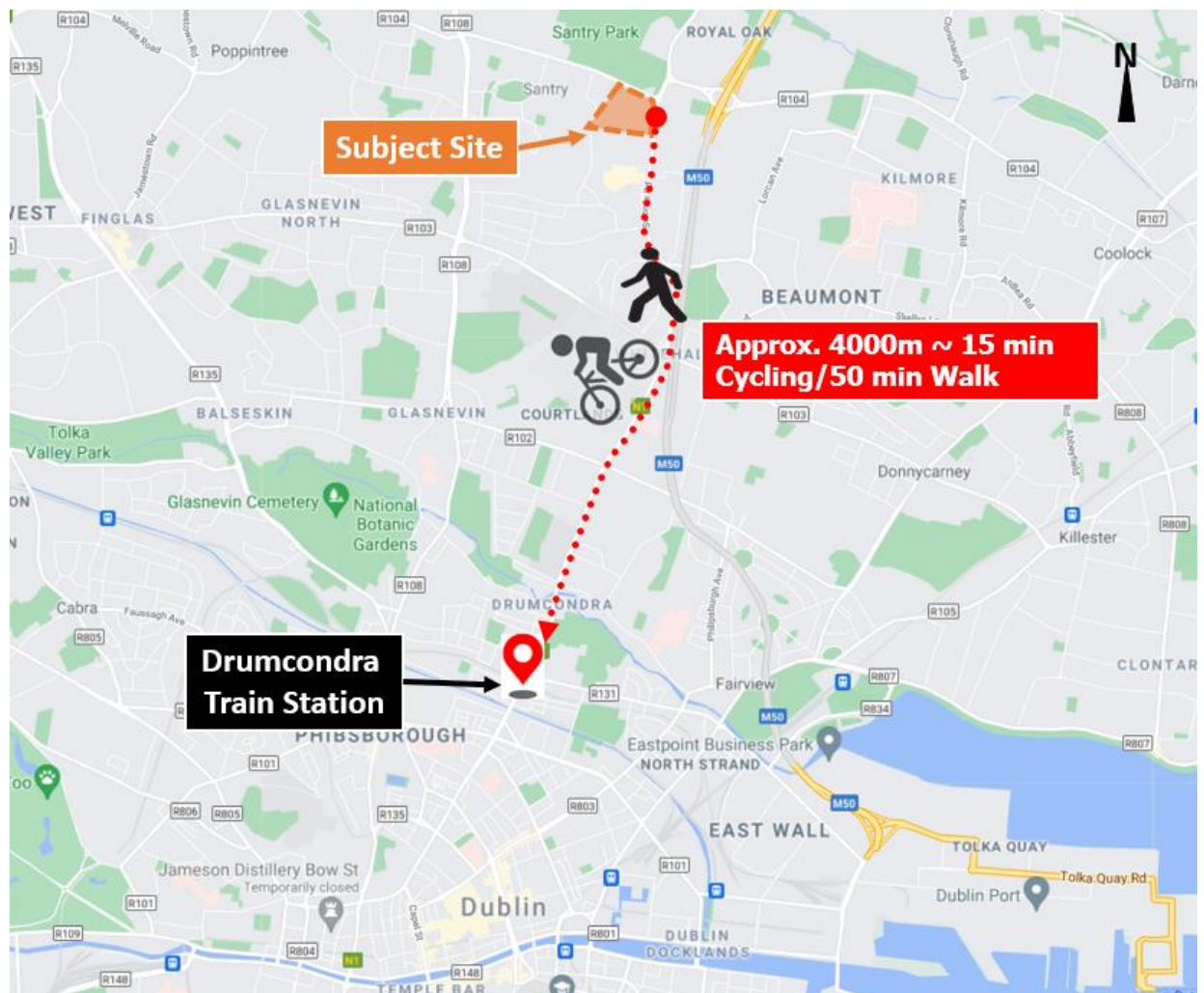
### **Public Transport – Heavy Rail**

2.3.14 The subject development site is located approximately 4km walking (15 cycling) distance to the north of Drumcondra Railway Station. The station is located approximately 1.5km north of Dublin city centre and serves the following routes;

- Dublin Connolly-Sligo,
- Dublin-Maynooth, Longford and M3 Parkway
- Grand Canal Dock and Dublin Heuston – Portlaoise

2.3.15 The is operation Monday to Sunday from 07:00hrs -23:30hrs and it is highly accessible.

2.3.16 **Figure 2.11** below illustrates rail interchange opportunities.

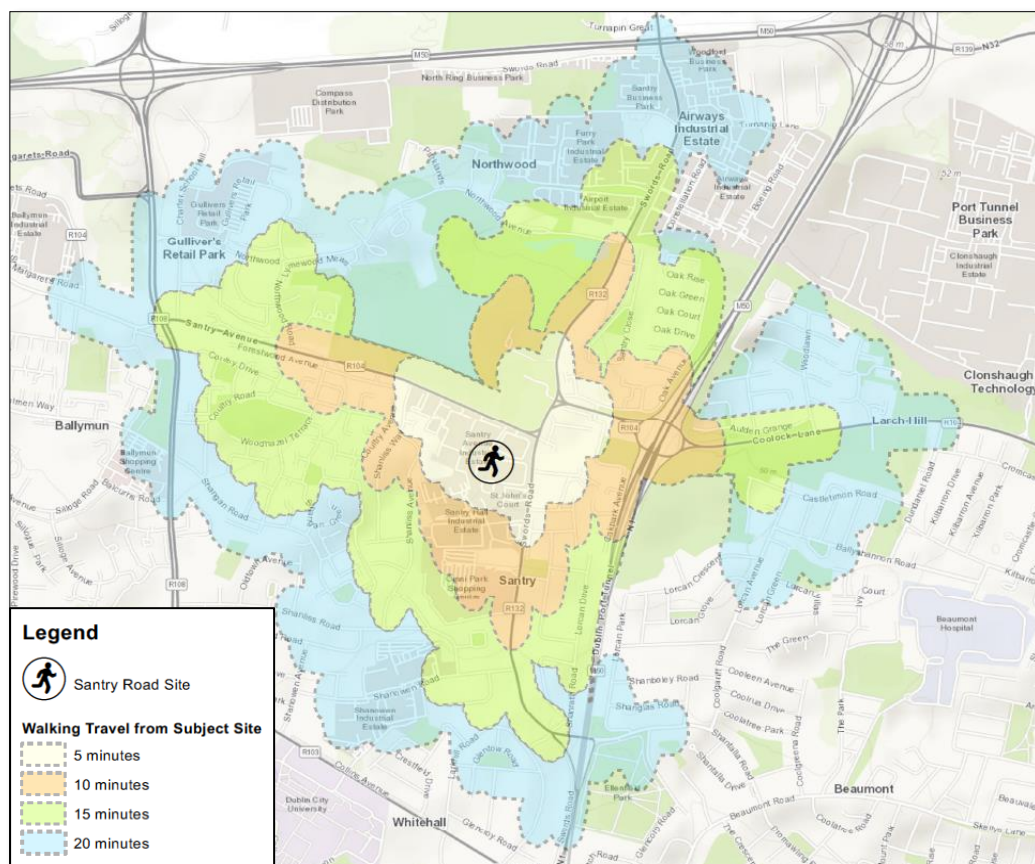


**Figure 2.11: Nearest Train Station**

## 2.4 SITE ACCESSIBILITY

2.4.1 The site's location within the urban fabric of Dublin City means that it avails of a vast and dense network of walkable streets, catered by adequate footpaths and pedestrian crossings. The previous section outlines the surrounding pedestrian environment relative to the subject site. **Figure 2.12** illustrates walking travel time catchment areas from the subject site.

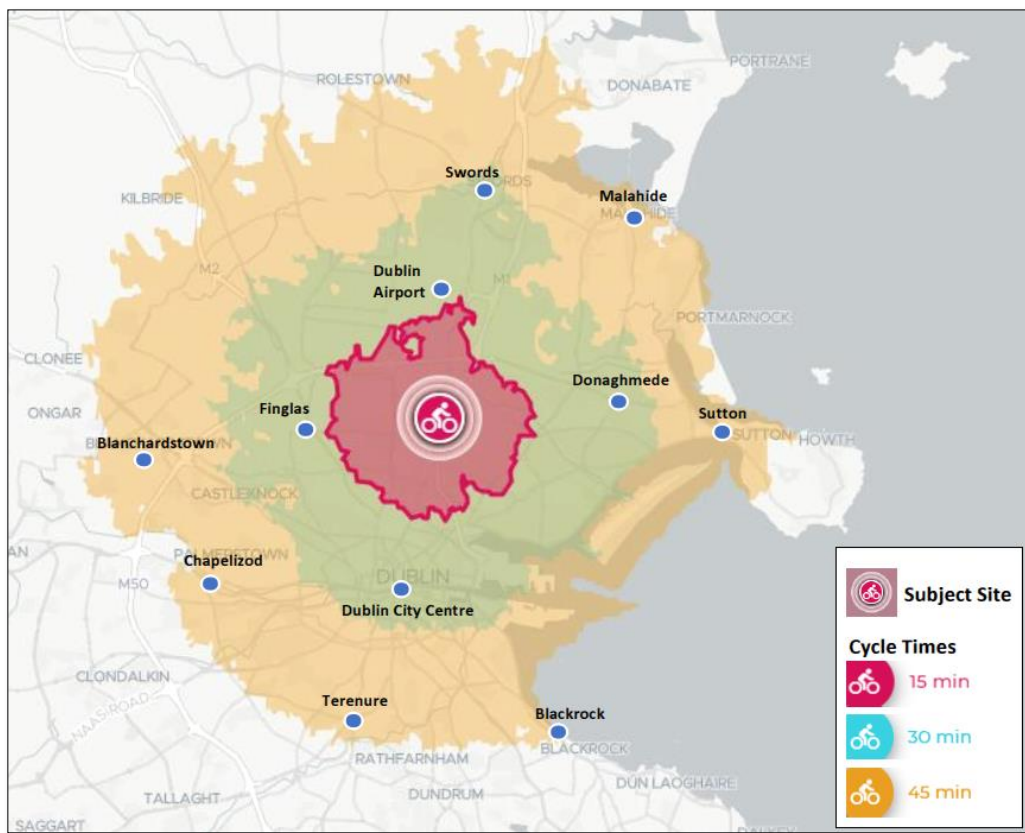
2.4.2 As seen in **Figure 2.12** pedestrians from the site greatly benefit from footpaths along the R132 Swords Road and R104 Santry Road corridors, as well as routes through Santry Park. In relation to permeability, pedestrians experience severance from the M50 & N1 road corridors and poor connections and linkages between established low-density residential areas sandwiched between Santry and Ballymun. Nevertheless, within the 10-minute walking time catchment, pedestrians from the site are able to reach Santry Shopping Centre and cross over the M50 & N1 corridor to access Kilmore. Within the 20-minute walking time catchment, pedestrians are able to access Ballymun centre, industrial estates in Northwood and just stops short of Dublin City University.



**Figure 2.12: Pedestrian Accessibility (Walking Time from Site)**

2.4.3 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 2.13** illustrates cycle travel time catchment areas reachable from the subject site.

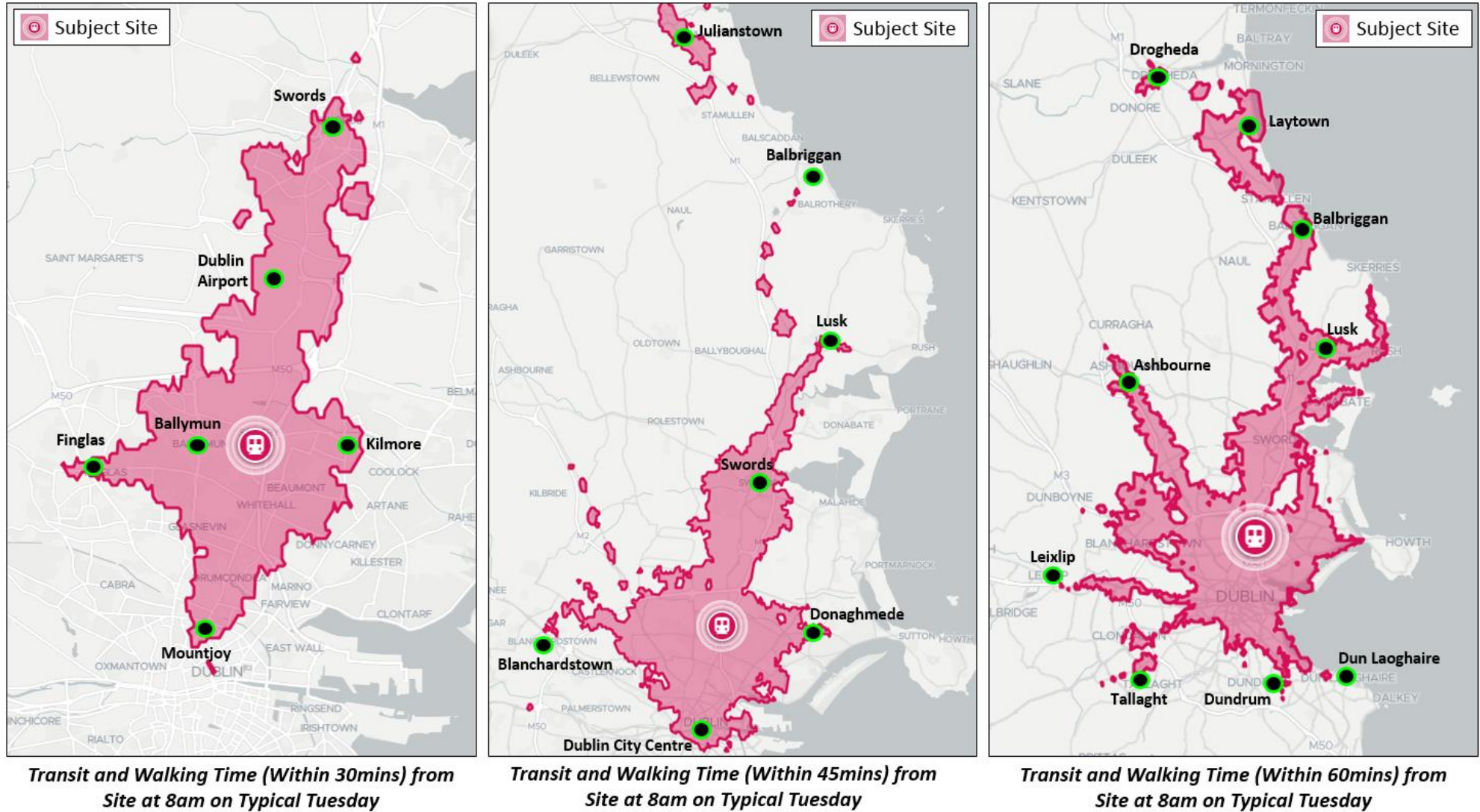
2.4.4 As seen in **Figure 2.13** cyclists from the site can travel to Finglas, Dublin Airport, Swords, Donaghmede and most of Dublin City Centre within 30-minutes. Within a 45-minutes cycle time catchment, cyclists from the subject site can travel as far as Blanchardstown, Chapelizod, Terenure, Blackrock, Malahide and just short of Howth.



**Figure 2.13: Bicycle Accessibility (Cycle Time from Site)** (Source: [www.app.traveltimeplatform.com](http://www.app.traveltimeplatform.com))

2.4.5 Regarding public transport accessibility, the subject site benefits from an excellent range of bus services in close proximity to the site as outlined in the previous section. **Figure 2.14** 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 2.14**.





**Figure 2.14: Public Transport Accessibility (Public Transit and Walking Time from Site)** (Source: [www.app.traveltimeplatform.com](http://www.app.traveltimeplatform.com))

## 2.5 PROPOSED TRANSPORT INFRASTRUCTURE

### *Cycle Network Proposals*

- 2.5.1 In December 2013 the NTA published the report entitled *Greater Dublin Area Cycle Network Plan*. The report summarises the findings of a comprehensive body of work detailing a proposed Cycle Network incorporating Urban, Inter-urban and Green route networks covering the six county council areas that together form the defined Greater Dublin Area (GDA).
- 2.5.2 The subject site lies within the “Dublin North Central Sector” as outlined within the Greater Dublin Area Cycle Network Plan (2013). The 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”.
- 2.5.3 In the vicinity of the subject site the following route addition is proposed in addition to those indicated on **Figure 2.15**:
- **Primary Radial Route 2A:** “Swords via Drumcondra, Whitehall and Santry”, runs directly adjacent to the proposed development site.
  - **Secondary Orbital Route NO5:** “from Donaghmede to Ballymun on Kilbarrack Road, Tonlegee Road, Oscar Traynor Road, Coolock Lane and Santry Avenue”; and
  - **Santry River Greenway:** “from the back of Northside Shopping Centre to Northwood at Santry via a series of public parks and open spaces” with minor greenway links from Santry Avenue and Swords Road through Santry Demesne as located to the north of the subject site.
- 2.5.4 The implementation of the above cycle infrastructure schemes by the local authority will be subject to further design, public consultation, approval, and importantly availability of funding and resources.



**Figure 2.15: GDA Cycle Network Plan Proposals** (extract from Sheet N3 GDA Cycle Network Plan)

**Public Transport Proposals – Dublin Bus Connects**

2.5.5 BusConnects is an initiative launched by the National Transport Authority with the aim of overhauling the bus system in the Dublin Region. This initiative includes review of bus services, the definition of a core bus network which comprises radial, orbital and regional core bus corridors. It also includes enhancements to ticketing and fare systems as well as transition to a new low emission vehicle fleet.

2.5.6 This initiative in the short-term proposes to implement a redesign of the existing bus network. The fundamental changes to the network expected would be as follows:

- Increasing the overall amount of bus services. Providing new and frequent orbital services connecting more outer parts of the city together;
- Simplifying the bus services on the key radial into “spines” where all buses will operate under a common letter system and buses will run very frequently and be more evenly spaced;
- Increasing the number of routes where buses will come every 15 minutes or less all day;
- The frequent network would become a web-shaped grid, with many interchange opportunities to reach more destination. Everywhere that two frequent routes cross, a fast interchange is possible; and

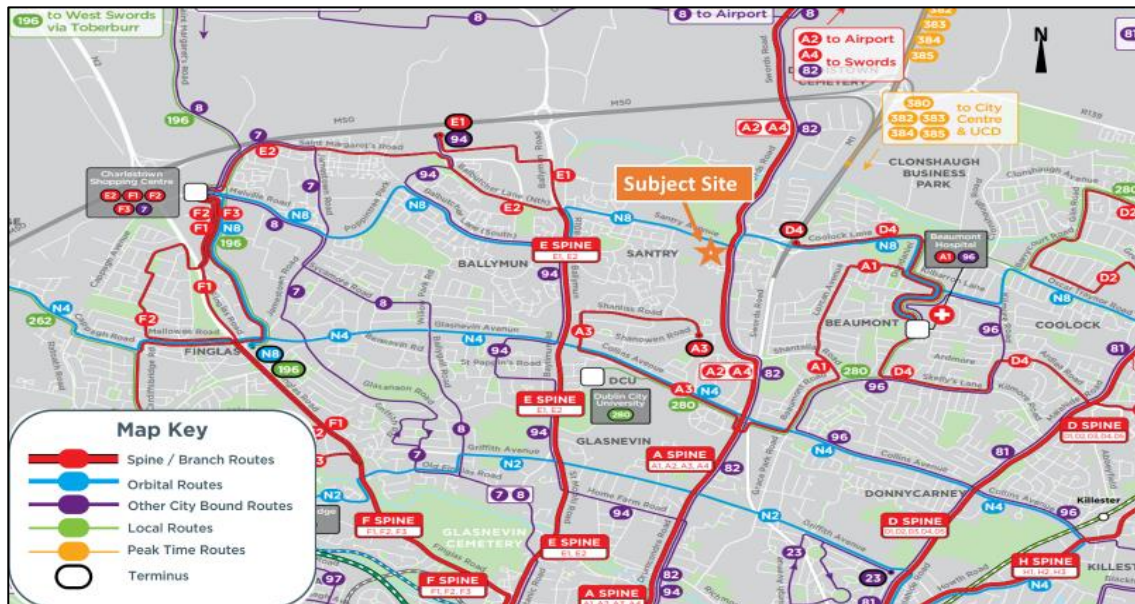


- Additional service would be provided at peak hours to limit overcrowding.

2.5.7 The proposed development site is also ideally located to benefit from the enhanced accessibility levels that will be delivered by the BusConnects. The subject site will be directly serviced by the following BusConnects proposed routes;

- **Route A2/A4:** will run adjacent to the subject site along the Swords Road and will serve the site with frequency of every 12 minutes in peak period. **A2** will connect the subject site to Airport, City Centre, Ballinteer and Dundrum whereas **A4** connect the site to Swords, City Centre and Nutgrove.
- **Route 82:** will run adjacent to the subject site along the Swords Road and will serve Glen Ellan Road, River Valley and City Centre with a frequency of every 15 minutes.
- **Route N8:** will run along Santry Avenue just opposite the site entrance, with a proposed frequency of 10 minutes. The route provides a connection to **Spine Route E** located within approximately 1.2km west of the site and the future Metrolink stop on Ballymun Road. It also connects the site to Finglas, Santry, Coolock and Donaghmede.

2.5.8 **Figure 2.16** illustrates bus services opportunities in the area and the frequency available for each route on a neutral weekday from the BusConnect redesign.



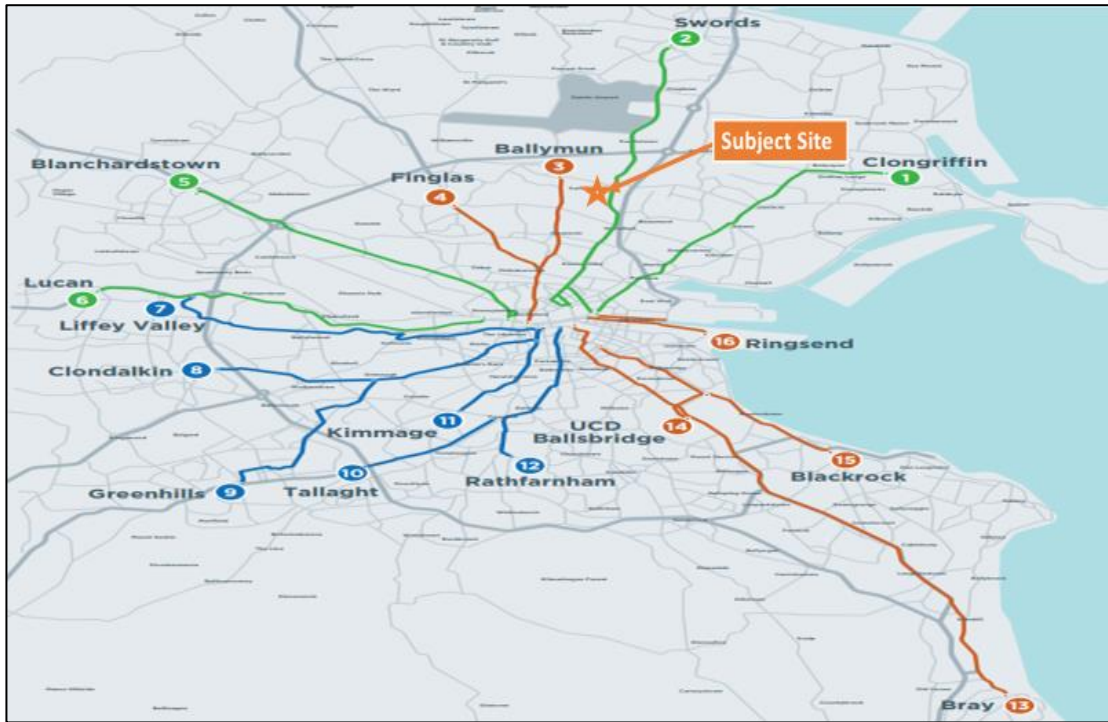
**Figure 2.16: Proposed Bus Network** (Source: [www.busconnect.ie](http://www.busconnect.ie))

2.5.9 The Bus Network Redesign is the first step in a series of transformative changes to Dublin's bus network over the coming years. However, the next steps in this

initiative is the improved infrastructural and operation of the proposed Bus network which includes:

- Building a network of “next generation” bus corridors on the busiest bus lines to make bus journeys faster, predictable and reliable;
- Developing a state-of-the-art ticketing system using credit and debit cards or mobile phones to link with payment accounts and making payment much more convenient;
- Implementing a cashless payment system to vastly speed up passenger boarding times;
- A simpler fare structure, allowing seamless movement between different bus services without financial penalty;
- New bus stops with better signage and information and increasing the provision of additional bus shelters; and
- Transitioning to a new bus fleet using low-emission vehicle technologies.

2.5.10 **Figures 2.17** and **2.18** illustrates the bus radial and orbital infrastructural corridors to be implemented as part of the BusConnect initiative. In relation to the subject site, the proposed development lies immediately adjacent to radial Core Bus Corridor (CBC) of Swords to the City Centre (C Spine) where bus journey time is anticipated to be 40 minutes along the entire route once constructed. Further the Ballymun City Centre Core Bus Corridor (E Spine) is also located within approximately 1.2km west of the subject site.



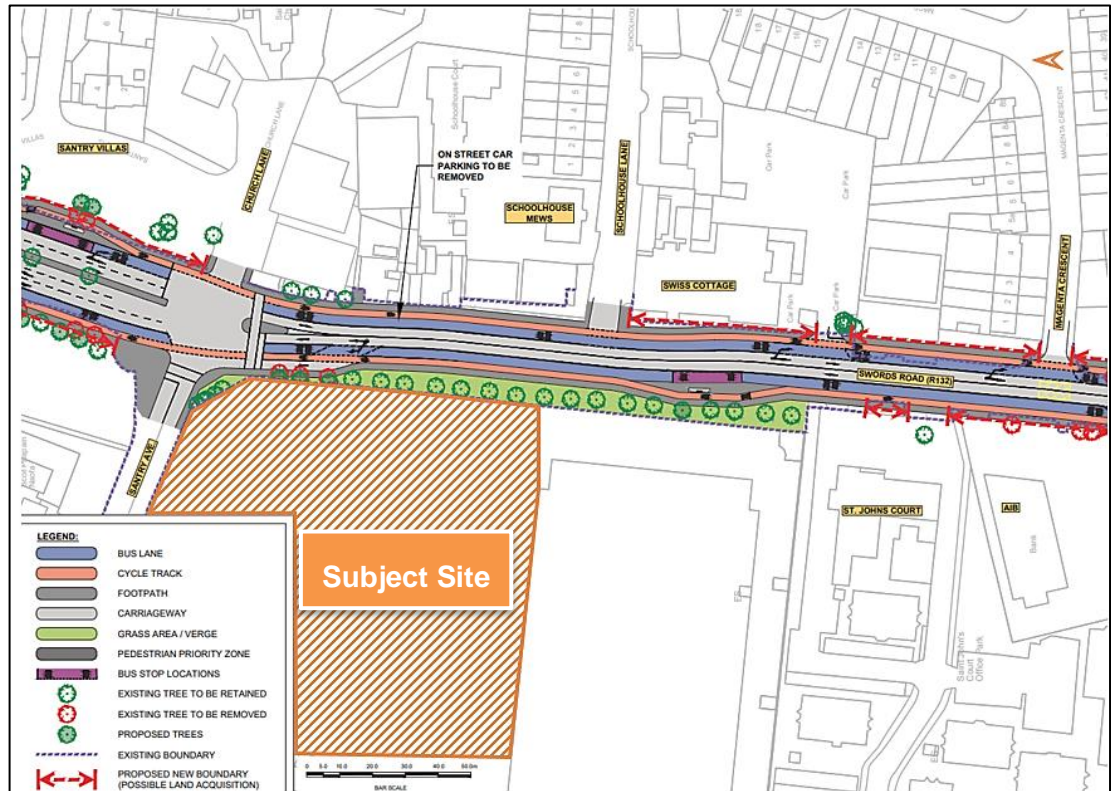
**Figure 2.17: BusConnects Radial Bus Corridor**



**Figure 2.18: BusConnects Orbital Bus Corridor**

2.5.11 As noted, the development site is located directly adjacent to the Swords to City Centre corridor, as shown in **Figure 2.17** above. In order to accommodate proposals along the Swords Road in the vicinity of the development, the NTA have established that localised road widening is necessary.

2.5.12 **Figure 2.19** below an extract of Map 19 Emerging Preferred Route of Bus Connects Swords-City Centre Corridor illustrates that the site does not cause any hindrance to the proposed corridor. 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 being delivered by the neighbouring permitted scheme (Ref. 2713/17)).



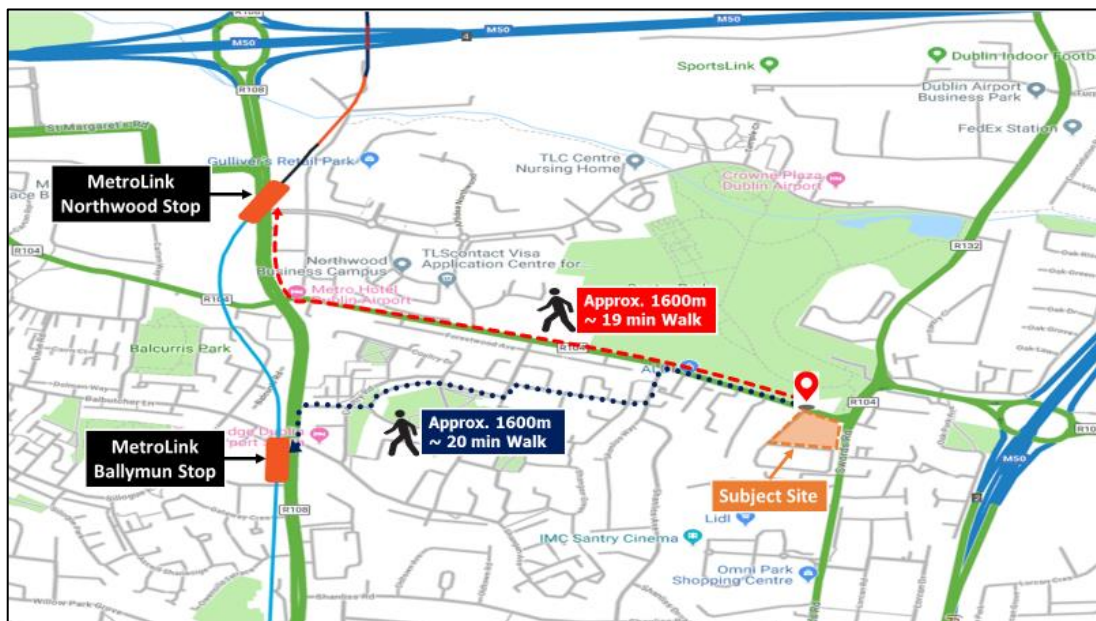
**Figure 2.19: Swords-City Centre Corridor, Extracted from Map 19 Emerging Preferred Route (Source: www.busconnects.com)**

2.5.13 The subject site will benefit from enhanced levels of accessibility and mobility offered by NTA Bus Connects proposals. Bus Connects will also offer improved cycle and walking facilities surrounding the site in addition to the efficient and high frequency bus service and connectivity.



### ***MetroLink***

- 2.5.14 The MetroLink project is an urban high capacity rail service connecting Swords, Dublin Airport, City Centre and Charlemont with a journey time of approximately 20 mins (between O’Connell St and Dublin Airport) and offering a frequency of up to 30 trains per hour per direction.
- 2.5.15 The proposed route for the MetroLink near the site is indicated in **Figure 2.20** with the closest interchanges Northwood and Ballymun both located within approximately 1.6km from to the entrance of the subject site.

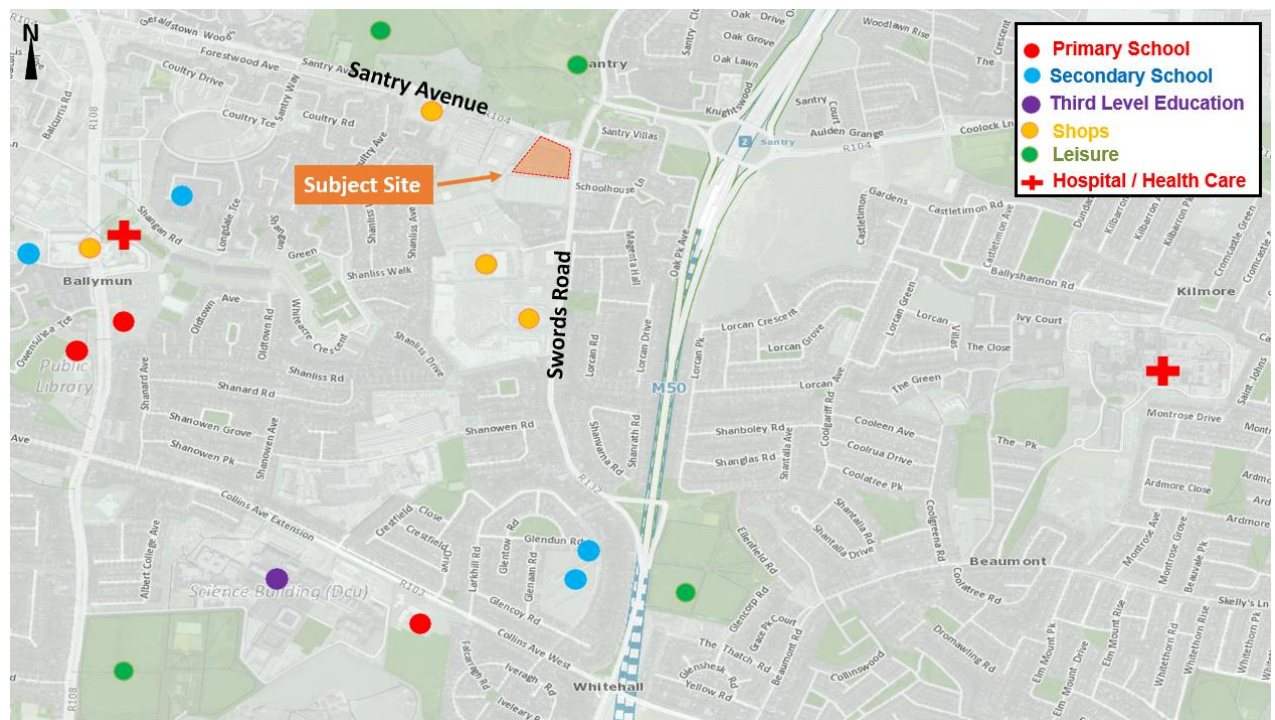


**Figure 2.20: Proposed MetroLink Stops near the subject site**



## 2.6 LOCAL AMENITIES

2.6.1 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 Par, 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 2.21** below shows indicatively the subject site's location in relation to the aforementioned local amenities.



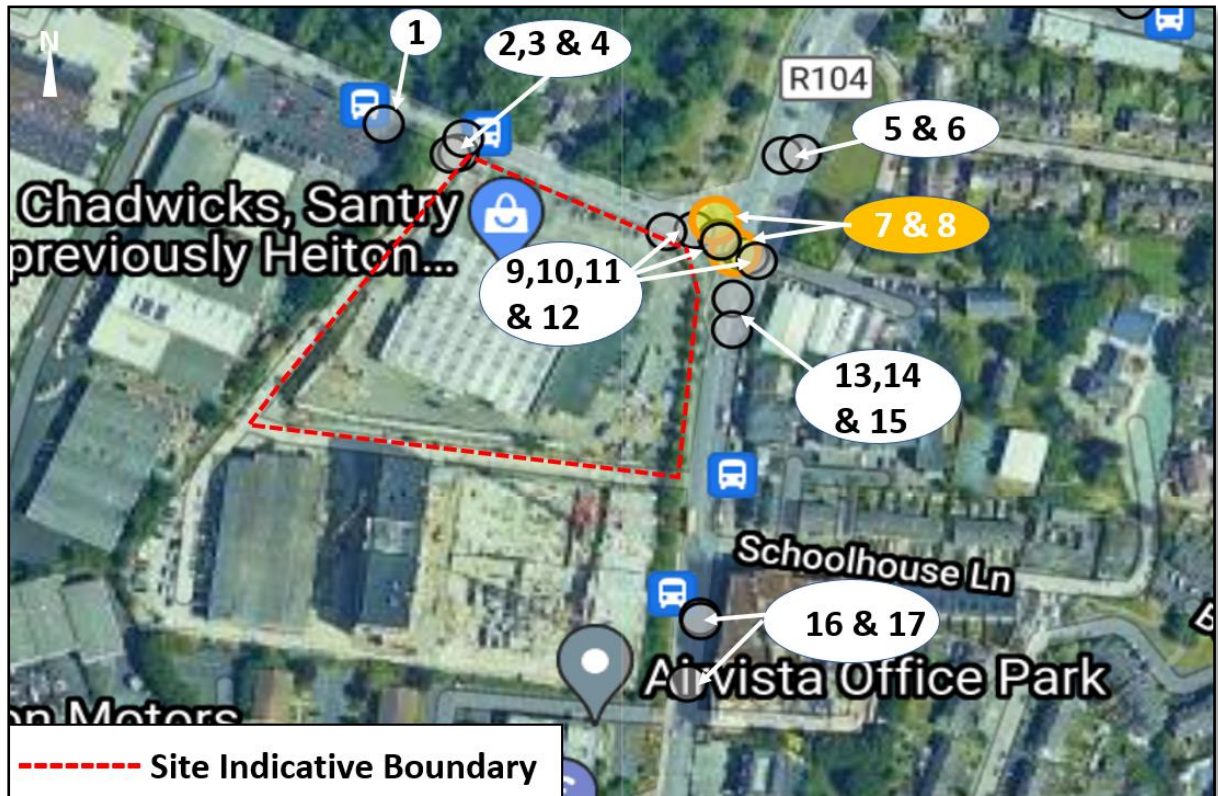
**Figure 2.21: Subject Site Local Amenities**

## 2.7 ROAD SAFETY RECORDS

- 2.7.1 With the objective of ascertaining the road safety record of the immediate routes leading to/from the subject site, the collision statistics as detailed on the Road Safety Authority’s (RSA) website ([www.rsa.ie](http://www.rsa.ie)) have been examined. The RSA website includes basic information relating to reported collisions over the most recent ten-year period, from 2006 to 2016 inclusive.
- 2.7.2 The RSA database records details where collision events have been officially recorded such as the when the Garda being present to formally record details of the incident.
- 2.7.3 In reference to Figure 2.22 and Table 2.2 overleaf, incident number 9 resulted in a serious casualty involving a car and pedestrian whilst the remaining all incidents resulted in minor casualties involving car with two involving bicycle and one involving Goods Vehicle.

Ref	Severity	Year	Vehicle	Circumstances	Day	Time	Casualty
1	Minor	2009	Car	Pedestrian	Saturday	1000-1600	1
2	Minor	2013	Goods Vehicle	Pedestrian	Wednesday	1000-1600	1
3	Minor	2009	Car	Pedestrian	Friday	1600-1900	1
4	Minor	2009	Car	Pedestrian	Tuesday	1600-1900	1
5	Minor	2012	Bicycle	Pedestrian	Thursday	1600-1900	1
6	Minor	2008	Car	Angle, right turn	Saturday	1000-1600	1
7	Serious	2006	Car	Head-on Conflict	Wednesday	1600-1900	1
8	Serious	2016	Car	Pedestrian	Tuesday	1600-1900	1
9	Minor	2006	Car	Rear end, right turn	Saturday	1600-1900	1
10	Minor	2009	Car	Pedestrian	Friday	1900-2300	1
11	Minor	2013	Car	other	Monday	2300-0300	1
12	Minor	2015	Bicycle	other	Tuesday	0700-1000	1
13	Minor	2012	undefined	Other	Thursday	1900-2300	1
14	Minor	2014	Car	Head-on conflict	Sunday	1600-1900	1
15	Minor	2015	Car	Rear end, straight	Thursday	1900-2300	1
16	Minor	2007	Car	Head on right turn	Sunday	1600-1900	1
17	Minor	2013	Car	Pedestrian	Saturday	1000-1600	1

**Table 2.2: Collision Records -** (source [www.rsa.ie](http://www.rsa.ie))



**Figure 2.22: RSA Collision Map** - (source [www.rsa.ie](http://www.rsa.ie))

2.7.4 The review of the RSA data available reveals that there are no apparent trends in collisions which have occurred in the vicinity of the subject site during the most recent 11-year period (2006-2016).

## 3.0 POLICY FRAMEWORK

### 3.1 DEVELOPMENT POLICY

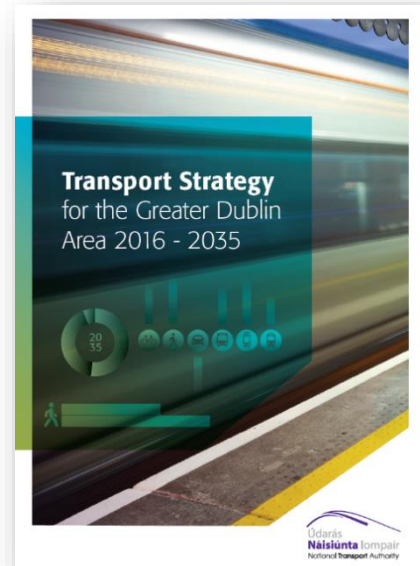
#### *Transport Strategy for the Greater Dublin Area 2016-2035*

3.1.1 The Transport Strategy for the Greater Dublin Area 2016-2035 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 2035.

3.1.2 This document will influence transport planning across the region until 2035 and replaces 'A Platform for Change – An Integrated Transportation Strategy for the Greater Dublin Area 2000 to 2016'. It thereby underpins all transportation strategies, traffic management schemes and development plans prepared by Dublin City Council during this timeframe.

3.1.3 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.

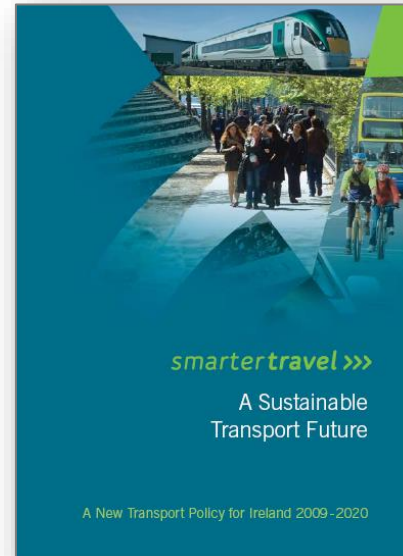
3.1.4 In addition to guiding the development of specific Strategy measures, the NTA encourages that the "transport user hierarchy should guide engineers, planners and urban designers on the order in which the needs of transport users should be considered in designing new developments or traffic schemes in the Greater Dublin Area."





### ***Smarter Travel – A Sustainable Transport Future***

3.1.5 *Smarter Travel* was published in 2009 by the Department of Transport which represents the national policy documentation outlining a broad vision for the future and establishes objectives and targets for transport. The document examines past trends in population and economic growth and transport concluding that these trends are unsustainable into the future.



3.1.6 In order to address the unsustainable nature of current travel behaviour, *Smarter Travel* sets down a number of key goals and targets for 2020 - including:

- Total vehicle km travelled by car will not significantly increase;
- Work-related commuting by car will be reduced from 65% to 45%;
- 10% of all trips will be by cycling;
- The efficiency of the transport system will be significantly improved.

3.1.7 The document recognises that these are ambitious targets, and outlines a suite of 49 actions required to achieve these targets – summarised under the following four main headings:

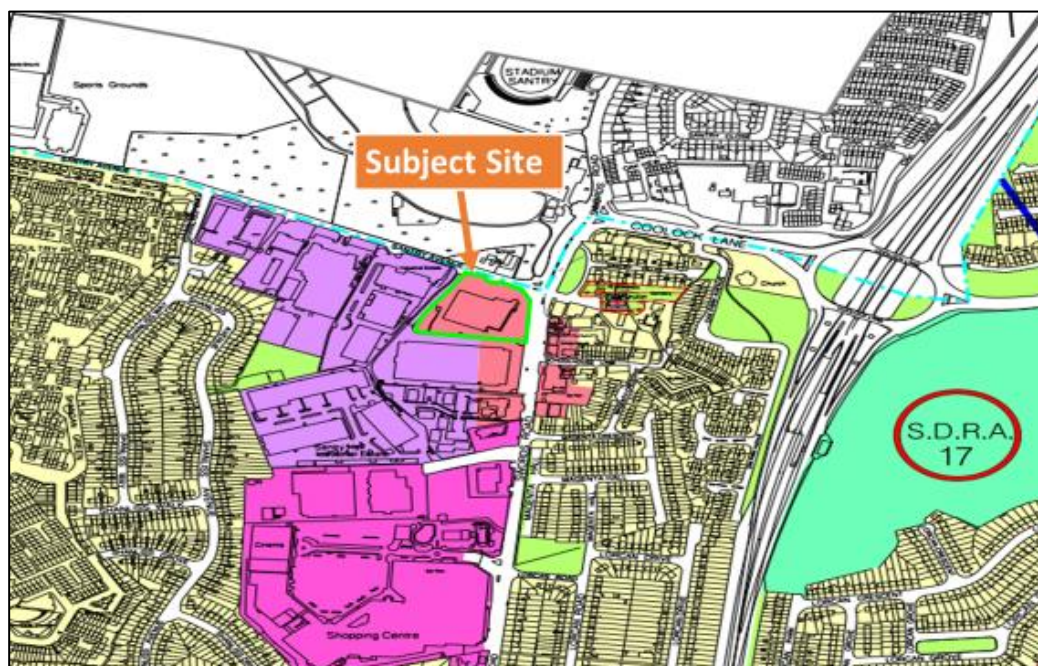
- Actions aimed at reducing distances travelled by car and the use of fiscal measures to discourage use of the car;
- Actions aimed at ensuring that alternatives to the car are more widely available;
- Actions aimed at improving fuel efficiency of motorised travel; and
- Actions aimed at strengthening institutional arrangements to deliver the targets.

### **Dublin City Council Development Plan 2016-2022**

- 3.1.8 The Dublin City Development Plan sets out a new approach to meet the needs and aspirations of citizens of Dublin and the country, not only for the 6-year life of the plan, but for the long term. This approach is based on the principles of sustainability and resilience on the social, economic and environmental fronts.
- 3.1.9 The Development Plan's Strategic Approach in response to the challenges facing the economy of the city and its role as the national and regional economic engine are as follows:
- Developing enterprise, particularly the services sector which is the critical sector for the city;
  - Developing academic medical centres providing excellence in research, care and teaching in the medical and health sectors;
  - Promoting the development of the three innovation corridors identified in the Economic Development Action Plan for the Dublin City Region;
  - Improving the general attractiveness of a city for people and investors as a key part of maintaining competitiveness and creating a vibrant place that attracts and retains creative people within the city; and
  - Providing appropriate office and commercial spaces as the workplaces for the new knowledge and services economy and enables the city to compete as an attractive location internationally.
- 3.1.10 The Dublin City Council Development Plan 2016-2022 states that it is the policy of Dublin City Council:
- *"To promote and enhance the city's competitiveness and address deficits, to improve the business environment so that existing jobs are supported and employment generated and be creative and practical in its responses to present economic challenges."*
  - *"To recognise the crucial need for the planning and sustainable development system to be agile and responsive in the face of challenging and rapidly changing circumstances."*
  - *"Dublin City Council will promote sustainable development by balancing complex sets of economic, environmental or social goals in planning decisions."*
- 3.1.11 The Dublin City Council Development Plan 2016-2022 states the following objectives:

- *"To examine the need and opportunity for new development and financing models that will allow desirable developments to go ahead in the short-term while ensuring that the optimum development of the site will be achieved in stages."*
- *"To examine how key economic generators could have greater spin-off benefits for their surrounding areas and to actively promote their development."*

3.1.12 According to the Dublin City Council Development Plan 2016 - 2022, the proposed mixed-use development site is 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". **Figure 3.1** below illustrates location of the proposed development in context of the Development Plan Land use zoning objectives.



**Figure 3.1: Dublin City Development Plan-Land Use Zoning** (Extract of Mapset B)

3.1.13 A range of multimodal policies and objectives are outlined in the development plan to achieve these targets and includes the following;

- **MT7:** *To improve the city's environment for walking and cycling through the implementation of improvements to thoroughfares and junctions and also through the development of new and safe routes, including the provision of foot and cycle bridges. Routes within the network will be planned in*

*conjunction with Green Infrastructure Objectives and on foot of (inter alia) the NTA's Cycle Network Plan for the Greater Dublin Area, and the National Cycle Manual having regard to policy GI5 and objective GIO18."*

- **"MT8:** *To work with, and actively promote, initiatives by relevant agencies and stakeholders such as An Taisce's 'Green Schools' initiative and the NTAs Smarter Travel Unit, to promote active travel in schools and communities, recognising the health and social benefits of walking and cycling as well as the environmental benefits."*
- **"MT9:** *To promote Bike and Ride at public transport hubs by providing secure, dry, bike parking facilities."*
- **"MT10:** *To provide 30kph speed limits and traffic calmed areas at appropriate locations throughout the city and subject to stakeholder consultation."*
- **"MT11:** *To continue to promote improved permeability for both cyclists and pedestrians in existing urban areas in line with the National Transport Authority's document "Permeability – a best practice guide". Also, to carry out a permeability and accessibility study of appropriate areas in the vicinity of all Luas, Rail and BRT routes and stations, in cooperation with Transport Infrastructure Ireland and the National Transport Authority."*
- **"MT12:** *To 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 and accessible to all.*
- **"MT13:** *To promote best practice mobility management and travel planning to balance car use to capacity and provide for necessary mobility via sustainable transport modes.*



## 3.2 DEVELOPMENT STANDARDS

### *Car Parking*

- 3.2.1 Reference has been made to Table 16.1 of the Dublin City Development Plan (2016-2022) which outlines the 'Zone 3' car parking standards of Dublin City planning authority. This provides guidance for residential developments stating the following "maximum" car parking provision requirements:
- 3.2.2 Reference also has been made to Chapter 4 of *Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities*, as published by the DHPLG in December 2020.
- 3.2.3 Accordingly, the opportunity is available to provide a reduced quantum of residential car parking (i.e. below the DCC standards) for the proposed development. For developments located within an "Accessible Urban Location" the DHPLG design standards state in reference to local authority development management requirements that;
- "the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances."***
- 3.2.4 In addition, the DCC Parking Standards also require the following provisions;
- 5% of the total car parking provision will be allocated as mobility impaired parking;
  - 10% of the total car parking provision will be allocated as electric vehicle charging stations; and
  - Motorcycle parking spaces will be provided at a quantum of 4% of the total car parking provision.

3.2.5 The car parking standards from both standards are detailed in **Table 3.1** below

Unit Type	DCC Standard	DHPLG Guidelines
Residential	1.5 space / unit	<i>"minimised, substantially reduced or wholly eliminated"</i>
Visitor	None Detailed	<i>"it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, <b>visitor parking spaces...</b>"</i>

**Table 3.1: Car Parking Standards**

***Bicycle Parking***

3.2.6 In order to determine an appropriate level of cycle parking provision for the proposed mixed-use development, reference is made to both (i) the DCC requirements, and (ii) the DHPLG guidelines. The cycle parking standards from both standards are detailed in **Table 3.2** below.

Land Use	DCC Standards		DHPLG Guidelines	
	Short Term	Long Term	Short Term	Long Term
Residential Apartments	Decided on a case by case	1 / unit	1 / 2 units	1 / bed

**Table 3.2: Cycle Parking Standards**

## 4.0 CHARACTERISTICS OF PROPOSAL

### 4.1 NEIGHBORING PERMITTED PLANNING APPLICATIONS

#### *Mixed Use Development - Planning Ref: 2713/17*

4.1.1 The neighbouring site located immediately to the south has been granted planning permission in April 2018 by Dublin City Council. Planning permission was granted for the partial demolition (c.7,781 sq.m GFA) of an existing 8 Bay warehouse (c.9,539 sq.m GFA), and the construction of mixed-use development consisting of 137no. apartment units, retail/commercial space (502 m<sup>2</sup> GFA), Offices (8,717 m<sup>2</sup> GFA) and Crèche (33 1 m<sup>2</sup> GFA). **Table 4.1** below summarizes the development schedule.

Block	Level	Description	No. of Units	GFA (sqm)
<b>A</b> (5 Story Mixed Use)	Ground	Retail/Commercial	3	c.502
	Ground-4	Residential	48	c.5,430
<b>B</b> (5 Story Residential)	Ground-4	Residential	47	c.5,233
<b>C</b> (5 Storey Mixed Use)	Ground	Office	2	c.373
	Ground	Creche	1	c.331
	Ground-4	Residential	42	c.4679
<b>D</b> (4 Storey Mixed Use)	Ground-3	Commercial Office use	-	c.6,733
<b>E</b> (4 Storey Mixed Use)	Ground-3	Commercial Office use	-	c.1,802

**Table 4.1 Permitted Development Schedule**

4.1.2 The development proposals also included all ancillary and associated site development works including a new Left In/Left Out vehicular via Swords Road at the northeast corner of the site, and environmental improvements along the Swords Road frontage as well as upgrading of the existing vehicular and pedestrian access via Santry Avenue. The proposals also included provision of a total 273 no. car parking spaces of which 122 no. proposed to be provided in the basement and 151 no. on surface with a total of 200 no. cycle parking spaces.

***Mixed Use Development -Planning Ref 2737/19***

4.1.3 In October 2019, Dublin City Council granted planning permission for a mixed use scheme which would replace the previously permitted 2713/17 proposal. The new permitted scheduled;

- 2017 no. apartment units (Blocks A, B, C);
- 11,933m<sup>2</sup> office space (Block D and E);
- 3 no. retail/commercial units (682 m<sup>2</sup>);
- 1 no. creche (161m<sup>2</sup>); and
- 318 car parking spaces and 381 bicycle parking spaces.

4.1.4 The site access arrangements for the new permitted scheme very much mirrored that granted previously for 2713/17 scheme with the vehicle access provided via Santry Avenue and Swords Road (Left In / Left Out arrangement).

***SANTRY PLACE (Phase 1B) - Proposed Modifications (DCC Planning Ref 2543/21) of Permitted Mixed Used Development (Ref 2737/19)***

4.1.5 This proposed modification of the permitted on-site development (Pl. Ref. 2737/19 & 2713/17) considers the demolition of the remainder of an existing 8-bay warehouse (1,758m<sup>2</sup>) and the construction of 3 no. 7-10 storey buildings (Blocks D, E & F) accommodating residential, commercial and office uses. The proposed Block D (7 storeys) is a residential building accommodating 48 no. apartments (i.e. 30 no. 1 beds & 18 no. 2 beds) on first to sixth floor, over ground floor commercial use, residential amenity space, & bike and bin stores. Blocks E and F are 7 and 10 storeys respectively, accommodating ground floor commercial use with office space overhead.

***Mixed Use Development -Planning Ref. ABP 303358-19***

4.1.6 In March 2019 An Bord Pleanála granted permission for SHD scheme on lands at Swiss Cottage Public House as located on Swords Road to the southeast of the subject Chadwicks development site. As detailed in chapter 5, this third party scheme will deliver;

- 120 BTR Apartments
- 167 m<sup>2</sup> Retail
- 88 m<sup>2</sup> Café, and

- 156 m<sup>2</sup> Restaurant

### ***Omni Shopping Centre***

4.1.7 There are a number of committed developments within Omni Shopping Centre with proposals of slight changes / additions. The following proposals have been incorporated into this assessment.

- Ambasaid Limited & MKN Investments Limited (Pl. 2876/21)
- JD Sports Fashion Plc (2075/21)
- Ambasaid Limited & MKN Investments Limited (3811/20)
- MKN Investments Limited (3767/18)

## **4.2 CURRENT SHD APPLICATION PROPOSALS**

### ***Development Schedule***

4.2.1 The subject 2021 proposals seek planning permission to demolish the existing Chadwicks premises and construct 350 no. residential Apartment units across 4 no. blocks (i.e. A/B, C/D, E/F & G) with a total of 209 car parking spaces and 777 cycle parking spaces. In addition to the residential element of the development, 5 no. small commercial units and community amenity are also proposed to be provided on ground floor levels.

4.2.2 The development schedule of the proposed residential development comprises of the following:

- 5 no. retail/commercial spaces with total GFA of 797.4m<sup>2</sup> – (2 no. units in Block A, 2 no. units in Block B and 1 no. unit in Block D)
- 350 no. apartments (113 no. 1-bed, 218 no. 2-bed and 19 no. 3-bed);
- Ancillary resident facilities such as communal open space, roof terraces, resident lounges, concierge, meeting rooms, laundry etc.
- 2 no. vehicular access points i) On Santry Avenue and ii) off Swords Road as permitted under the adjoining development at Santry Place;
- A total of 209 no. car parking spaces (173 no. within basement and 36 no. on surface including 4 GoCar spaces)
- A total of 777 no. bicycle spaces comprising of 719 no. long term (719 spaces within basement) and 58 no. short term on surface level.

- 4.2.3 The development will also comprise the closure of the site's existing vehicle access on Santry Avenue and the demolition of Chadwicks building and construction of associated infrastructure including landscaped shared surface courtyard, footpaths, and associated services as referred to in the various Architectural and Engineering drawings that accompany the application.

## 4.3 SITE ACCESS ARRANGEMENTS

### *Pedestrian & Cyclists*

- 4.3.1 The proposed development site will be highly accessible to pedestrians and cyclists from Santry Avenue and Swords Road. Pedestrians and cyclists will be given priority within the external site layout to ensure desire lines within the site are accommodated providing a good level of service and ensures the risk of vehicle/pedestrian conflict with vehicles is minimised.

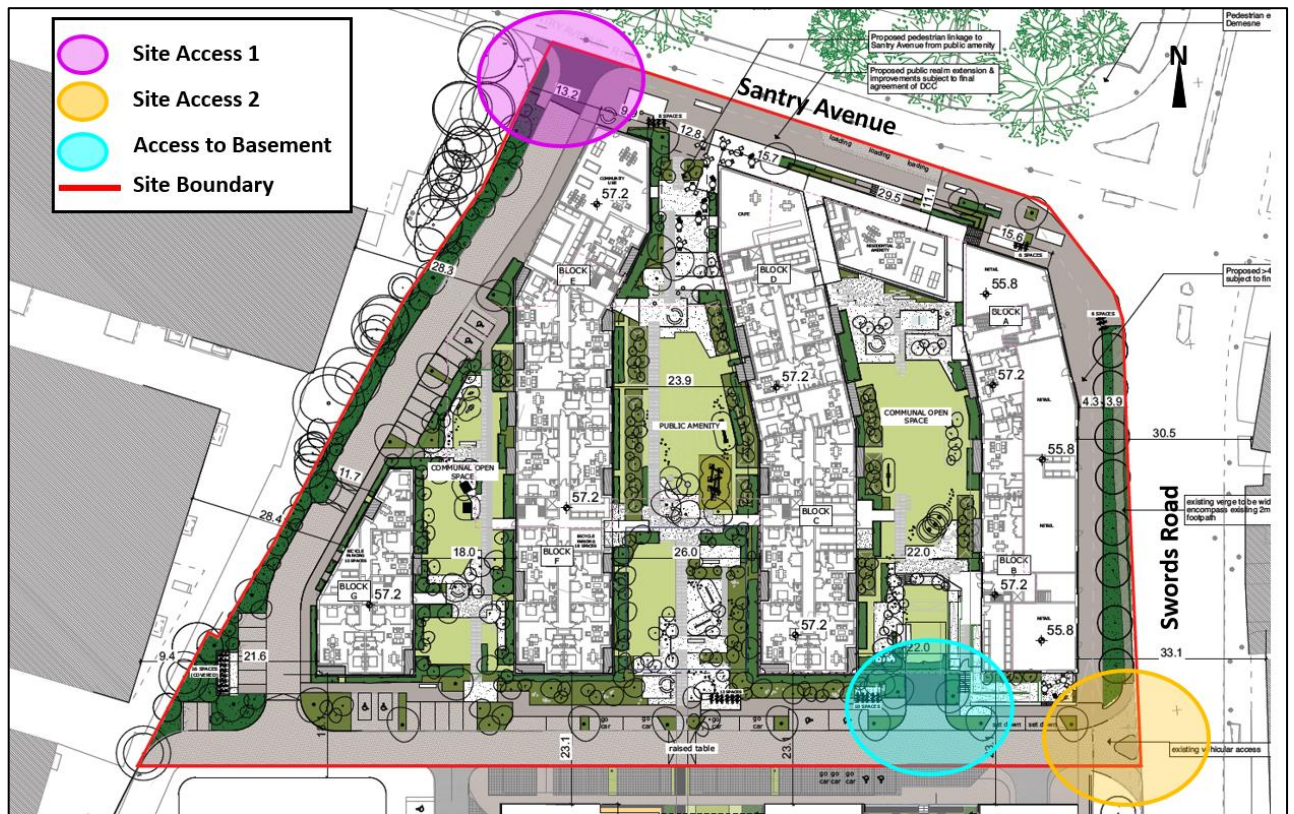
### *Public Transport*

- 4.3.2 The subject site is also highly accessible by public transport with Dublin Bus and Go-Ahead bus operate several routes including 16, 33, 27b, 41, 41a, 41b and 41c along the R132 Swords Road corridor providing links to Swords northbound and Dublin City Centre and Ballinteer to the south. Also, Go-Ahead operates 17a along R104 Santry Avenue providing links to/from Blanchardstown and Kilbarrack. All of the above routes are highly accessible with the closest interchange opportunities being within approximately 5m except 27b which is within 500m. The site also has excellent links to the Railway Line, with the closest stop (Drumcondra Train station) being located approximately 4km from the subject site.

### *Vehicle Access*

- 4.3.3 The proposed development will be accessed by vehicles via the R104 Santry Avenue as located in the Site's north western corner as well as Swords Road to the southeast of the site as being accommodated by the neighbouring permitted scheme proposals 2737/19. **Figure 4.1** overleaf illustrates site layout and locations of the site accesses.





**Figure 4.1: Proposed Site Layout and Access Arrangement**

#### 4.4 PARKING PROVISION

##### *Bicycle Parking*

4.4.1 In reference to Table 4.2 below the development is required to provide total 350 no. cycle spaces (1 space/unit in accordance with the DCC Development standards. Whereas, the DHPLG guidelines requirement is to provide a total 781 no. cycle parking spaces for the proposed development. The development proposes to provide a total of **777 no. cycle parking spaces** with **719 no.** long term stay (719 within basement) and a further **58** proposed as short term stay on surface level.

Standard/Proposed	Type	Residential	Total
DCC Standards	Short	-	350
	Long	350	
DHPLG Standards	Short	175	781
	Long	605	
Proposed	Short	58	777
	Long	719	

**Table 4.2: Cycle parking requirement and proposed provision**

### **Motorcycle Parking**

4.4.2 The development plan requires the provision of motorcycle parking spaces at a minimum rate of 4 or more per 100 car parking spaces. Accordingly, a total of 9 no. motorcycle parking spaces are required as part of the subject proposals. The subject scheme proposals accommodate **9 no.** motorcycle spaces. This quantum of provision accords with the DCC Development Plan requirements.

### **Car Parking**

4.4.3 Car parking provision for the development is proposed in reference to guidance from the Department of Housing, Planning and Local Government 'Sustainable Urban Housing: Design Standards for New Apartments – December 2020'. This document highlights that the default policy for new apartment dwellings located within close proximity to public transport (Accessible Urban Locations), is for car parking provision to be '**minimised, substantially reduced or wholly eliminated**' in certain circumstances.

4.4.4 It is an objective for this development to reduce the need for residents to travel by car and instead to avail of more sustainable modes of travel in line with current and future travel requirements as set out in recent policy documents within Ireland. It is noted that the concept for car parking reduction in apartments is relatively new in Ireland, and therefore, proposals to implement a more sustainable approach for car parking may take time.

4.4.1 The development in light with the standards and guidelines mentioned in **section 3.2** of this report, proposes a **total of 209** no. on-site dedicated car parking spaces to be provided, of which 173 no. spaces will be provided within the basement car parking and 36 no. residential and set down/visitors spaces also incorporating 6no. mobility impaired and 3 no. car share (GoCar) spaces will be provided at surface level. One car share space can represent the potential requirement for 10-14 car parking spaces. With one space within the proposed development of this size could meet the mobility needs of 20-25% of the residents based on research extracted from Table 7.1 in 'A Good Practice Guide for Planners and Developers - Achieving low car housing: the role of car share clubs' (Yorkshire and Humber Assembly, Nov 2004).

4.4.2 The parking proposals include the following;

- 17 no. visitor parking spaces (8%)

- 4 no. GoCar parking spaces
- 5 no. Set Down/Loading Bays
- 11 no. dedicated mobility impaired parking spaces (5%)
- 21 no. Electric Vehicle and charging point spaces (10%)
- 194 no resident’s car parking spaces
- 9 no. motorbike spaces (4%)

4.4.3 The implementation of the proposed mitigation strategy and associated management and promotional interventions mean that car parking provision of total **209 parking spaces (0.6/unit)** is considered appropriate for the subject development particularly considering the sites (i) excellent public transport accessibility characteristics by bus services (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 and (v) the emerging car ownership trends across Dublin.

4.4.4 **Table 4.3** below outlines car parking requirement and proposed provision.

No. of Units	DCC Standard	DCC Max. Requirement	DHPLG Requirement	Proposed
350 Apts.	1.5 space / unit	525	Minimised, substantially reduced or wholly eliminated	209
<b>350</b>		<b>525</b>		<b>209</b>

**Table 4.3: Residential Car parking requirement and proposed provision**

## 4.5 SERVICING ARRANGEMENTS

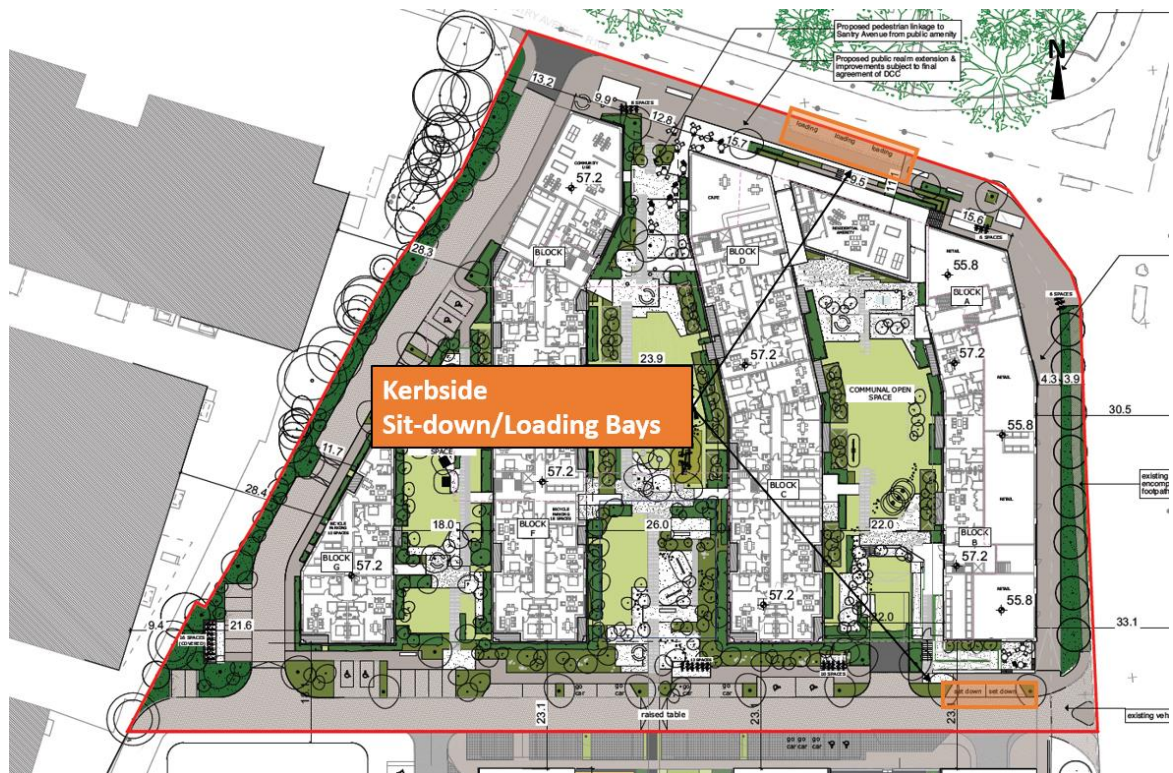
### *Residential Element*

4.5.1 Service requirements such as waste collection activities are to be accommodated entirely within the proposed development with no such collections being undertaken on the external roads such as Santry Avenue and Swords Rd.



### Retail / Commercial Element

4.5.2 A kerbside indented set down area for services / deliveries is to be provided and located on Santry Avenue in the general area of the sites existing Chadwicks access / exit. This proposed facility on Santry Avenue is located in close proximity to the redevelopments 5 number ground floor retail / commercial units that front onto the public road network. The absence of such a facility will likely result in these activities occurring within the road carriageway and / or seeking to mount the footpath which could result in the creation of a traffic hazard.



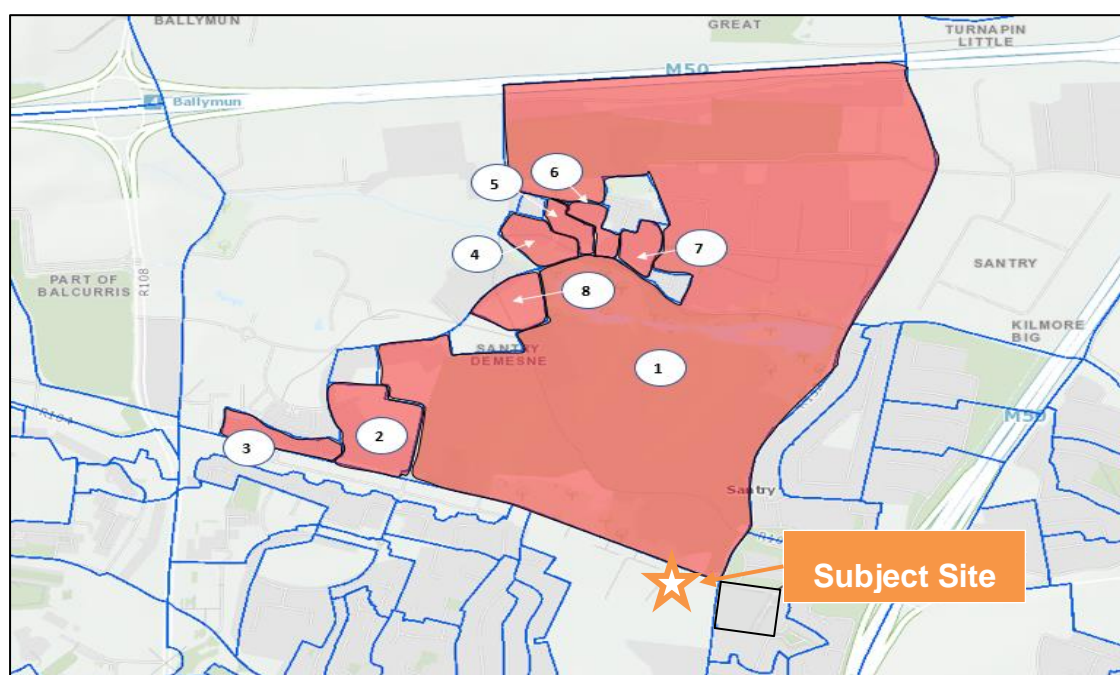
**Figure 4.2: Proposed Kerbside Parking Bays**

## 5.0 PARKING STRATEGY

### 5.1 CAR PARKING DEMAND ASSESMENT

#### *CAR OWNERSHIP & USAGE*

5.1.1 In order to determine an appropriate parking provision for the subject development the current demand for car parking within the surrounding area of the proposed development site was researched using the 2016 CSO data and in particular the level of current car ownership. The CSO small area map has been reviewed. The residential properties within the immediate vicinity of the proposed development site are well established housing units and therefore were not reflective of the type of development proposed in terms of undertaking a comparison in travel patterns. Therefore, the search included for areas that were close to the site that contained apartment blocks similar to that of the proposed development. A total of 8 small areas were assessed, as detailed in the map in **Figure 5.1**.



**Figure 5.1: 2016 CSO Small Areas containing apartments close to proposed site**

5.1.2 A total of 949 units were included in this assessment. The CSO data for households who do not own a car in each of these areas is presented in **Table 5.1** below.



Small Area	No. Apts	No. Houses	No. Households with No Car	% of Households with No Car	Equivalent Rate of Parking Required (Space/Unit)
1	149	7	34	21.7%	0.78
2	82	0	41	50%	0.5
3	94	8	42	41.2%	0.59
4	110	0	21	19.1%	0.81
5	102	0	33	32.4%	0.67
6	99	0	13	13.1%	0.87
7	104	0	24	23.1%	0.77
8	194	0	35	18%	0.82

**Table 5.1: 2016 CSO Car Ownership Data**

5.1.3 **Table 5.1** highlights that the level of households that do not own a car within each small area varies between a low 13% in Area 6 up to a high 50% in Area 2. The level of car parking required within these locations (where car parking is not restrained) would be, on average, 0.73 spaces per unit. It is noted that these apartments are typically based on past development standards that adhered to the 1 car space per unit for apartment blocks and also based on a different commercial model with parking spaces designated to units as part of the sale/rental agreement.

5.1.4 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 2016 CSO data was again reviewed for the modal split for people travelling to Work, School or College. This was assessed for the same 8 small areas as previously discussed. The results of this assessment are detailed in **Table 5.2** overleaf.

Small Area	No. Commuters	% Households with No Car	No. Commuters that Drive	% Commuters that Drive
1	327	21.7%	162	50%
2	164	50%	31	19%
3	152	41.2%	54	36%
4	199	19.1%	94	47%
5	183	32.4%	54	30%
6	161	13.1%	80	50%
7	166	23.1%	73	44%
8	377	18%	171	45%

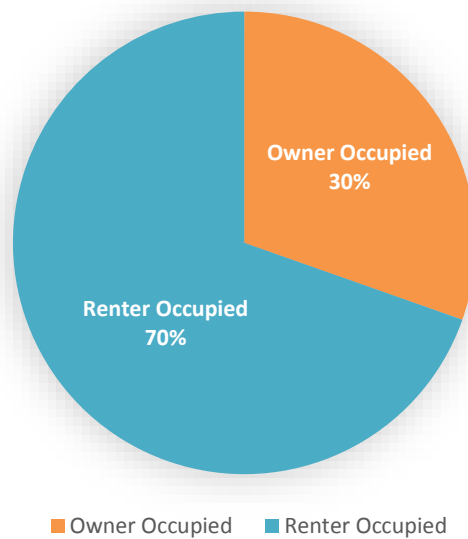
**Table 5.2: 2016 CSO Data - Percentage of Commuters that use their Vehicle.**

5.1.5 **Table 5.2** outlines that although car ownership within these locations is at an average 73%, the percentage of commuters that use their vehicle to drive to work, college or school is lower at an average of 40% over all areas assessed. This highlights that although commuters may own vehicles within these areas, a high proportion of them avail of other, more sustainable, modes of travel for commuting purposes. It is also noted that the majority of areas reviewed for this assessment are located along internal road networks and away from the main road carriageways where public transport routes and stops are situated. The proposed development, however, is located adjacent to the Swords Road and is situated in close proximity to excellent and improving public transport routes and stops.

***AGE DEMOGRAPHIC SURROUNDING DEVELOPMENT SITE***

5.1.6 Considering the type of development proposed, it was considered useful to establish the general age demographic for properties within the area surrounding the proposed development site. The CSO 2016 small areas highlighted in **Figure 5.1** was used for this assessment.

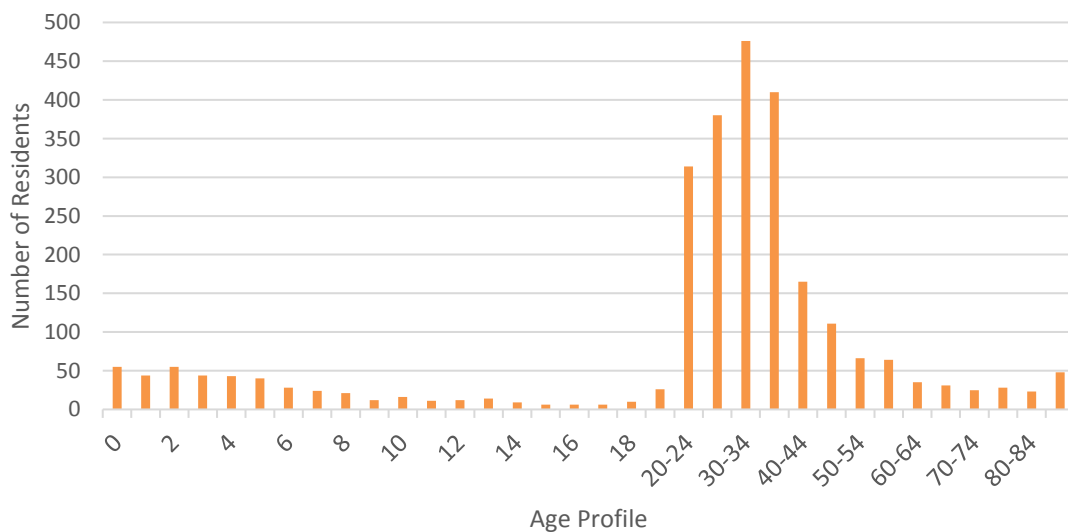
5.1.7 **Figure 5.2** shows that the majority of residents, 70%, within the surrounding areas in Santry are renting their accommodation with 30% of residents who own their property.



**Figure 5.2: CSO 2016 Type of Accommodation in Santry**

5.1.8 This indicates that there is a demand for rental accommodation within the area. From recent research undertaken regarding age demographics and rental accommodation, it showed that the age demographic of 25 - 35 years has the highest demand for renting their accommodation rather than buying.

5.1.9 The overall age profile for the 8 locations close to the proposed development site were assessed and are outlined in the graph in Figure 5.3. The results show that there is a young age demographic within Santry with the highest number of residents between the 25 – 39 age profile within this area.



**Figure 5.3: CSO 2016 Age Profile for Santry Area from the Small Area Sites**

- 5.1.10 The level of car ownership amongst this demographic is decreasing with many unprepared to commit to the additional cost of retaining a designated car parking space when viable alternative modes of travel are available.

### ***SITE ACCESSIBILITY***

- 5.1.11 As detailed in previous section, the proposed development greatly benefits from a vast and dense network of walkable streets, catered by adequate footpaths and pedestrian crossings. The site is also very accessible by bicycle within a network of cyclable streets and dedicated cycle facilities in the vicinity of the site. In addition to the site's accessibility by existing public transport (bus and links to Drumcondra Train station which is with 4km), the development site is located directly adjacent to the proposed NTA BusConnects 'Swords to City Centre corridor'
- 5.1.12 The BusConnect proposals include 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 being delivered by the neighbouring permitted scheme (Ref. 2713/17)). Therefore, the subject site will benefit from enhanced levels of accessibility and mobility offered by NTA Bus Connects proposals. Bus Connects will also offer improved cycle and walking facilities surrounding the site in addition to the efficient and high frequency bus service and connectivity.
- 5.1.13 The proposed development site will be also highly accessible by the proposed the Metrolink with the closest interchanges Northwood and Ballymun both located within approximately 1.6km from to the entrance of the subject site.

## **5.2 CAR PARKING PROVISION**

### ***OVERALL CAR PARKING QUANTUM***

- 5.2.1 The proposed development in light with the standards and guidelines mentioned in **section 3.2** of this report, proposes a **total of 209** no. (0.6/unit) on-site dedicated car parking spaces to be provided, of which 173 no. spaces will be provided within the basement car parking and 36 no. residential and set down/visitors spaces also incorporating 6 no. mobility impaired and 3 no. car share (GoCar) spaces will be provided at surface level
- 5.2.2 The parking proposals include i) Disabled Parking, ii) EV Parking, iii) Car Share, iv) Visitor Parking;

### ***DISABLED PARKING***

- 5.2.3 The DCC Development Plan states that for residential developments, "At least 5% of the total number of spaces should be designated car-parking spaces, with a minimum provision of at least one such space"
- 5.2.4 The development proposals include provision of **18 no.** disabled parking spaces with 12no no. spaces in basement and 6 no. spaces on surface level and is in accordance with the DCC development management standards.

### ***EV CAR PARKING***

- 5.2.5 The development proposals include of **21 no.** car parking spaces equipped with vehicle charging point to be provided within basement which is compliant with the standards. Should the demand for EV parking spaces increase beyond supply, additional EV charging facilities can be easily retrofitted.

### ***CAR SHARE VEHICLES***

- 5.2.6 The subject scheme proposes to include **4 no.** car club spaces at a surface level. Managed by a specialised private operator (i.e. **GoCar**) all residents will have the option to become members of the car share service. On becoming members, residents can then book cars online or via the app for as little as an hour, then unlock with their phone or GoCar. The keys are in the car, with fuel, insurance and city parking all included. The benefits of such car sharing services include:-
- the reduction of the number of cars on the road and therefore traffic congestion, noise and air pollution;
  - minimised demand for car parking and frees up land traditionally used for private parking spaces;
  - increased use of public transport, walking and cycling as the need for car ownership is reduced; and
- 5.2.7 Car sharing allows those who cannot afford a car the opportunity to drive, thereby encouraging social inclusivity.

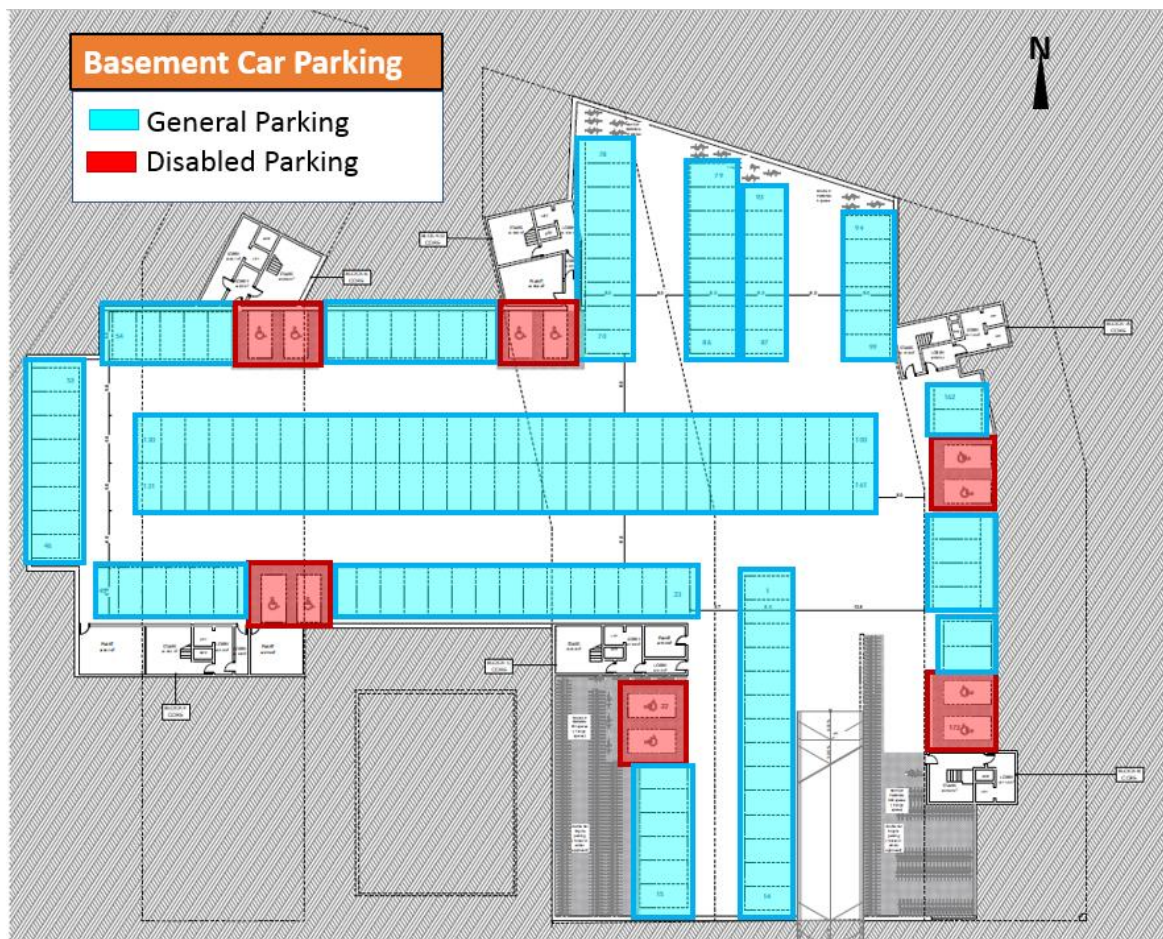
### ***VISITOR CAR PARKING***

- 5.2.8 The subject development scheme proposes to include for **17 no.** dedicated visitor car parking spaces at a surface level.

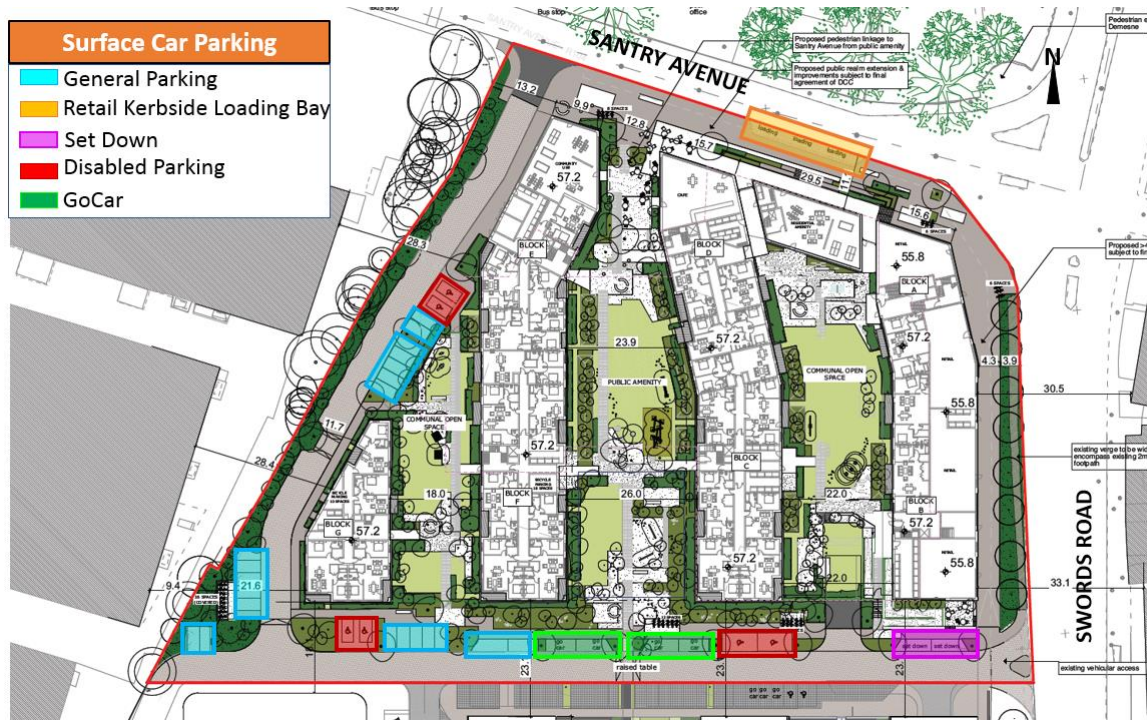


5.2.9 The implementation of the proposed mitigation strategy and associated management and promotional interventions mean that car parking provision of total **209 parking spaces (0.6/unit)** is considered appropriate for the subject development particularly considering the sites (i) excellent public transport accessibility characteristics by bus services (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 and (v) the emerging car ownership trends across Dublin.

5.2.10 **Figure 5.4** and **Figure 5.5** below illustrate the layout of car parking within basement and on surface level respectively.



**Figure 5.4: Basement Car Parking Lauout**



**Figure 5.5: Surface Car Parking Layout**

### 5.3 CAR PARKING MANAGEMENT STRATEGY

- 5.3.1 It is intended that the proposed development will be, in relative terms, be 'car-lite' when compared to DCC development management standards. The business plan for the development recognizes that this restriction (0.6 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.
- 5.3.2 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 for residents and visitors.
- 5.3.3 Nevertheless, all residents of the proposed residential apartment scheme will have the opportunity to apply to the on-site management company for both a;
- 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 short period of time.
- 5.3.4 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.
- 5.3.5 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.
- 5.3.6 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.
- 5.3.7 Due to the potential demand from neighbouring developments and the adjoining Core Bus Corridor (e.g. informal Park & Ride abuse) it is considered a necessity that access to on-site car parking 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.
- 5.3.8 Taking the above factors into account, including:
- The low levels of car ownership based on location and
  - The requirement for car parking to be 'minimised, substantially reduced or wholly eliminated' as set out in the DHPLG guidelines (December 2020) for new apartments.
- 5.3.9 It is therefore considered that the proposed provision of 209 no. car park spaces, for the subject development including 3 no. car share bays assigned to the 350 no. apartments is appropriate.



## 5.4 BICYCLE PARKING PROVISION

- 5.4.1 Increasing cycle parking is an alternative measure when reducing car parking spaces. A total of **777 no.** bicycle parking spaces are proposed for this development with a total of 350 no. residential units.
- 5.4.2 The 777 no. cycle provision includes;
- 719 no. 'long term' spaces are located in the basement
  - 58 no. 'short term' visitor parking located at surface level.
- 5.4.3 The cycle provision also includes 9 no. Cargo parking spaces within basement. It is noted that the provision of cycle parking proposed within the development exceeds DCC standards and exceed the full DHPLG guideline for long term bicycle parking and is therefore considered adequate to accommodate residents' requirements and support / encourage modal shift away from private cars to a more sustainable travel by cycle.

## 5.5 MOTORCYCLE PARKING PROVISION

- 5.5.1 The development proposes a total of **9 no.** motorcycle parking spaces to be provided within basement. This quantum of provision accords with the DCC Development Plan requirements.
- 5.5.2 **Figure 5.6** and **Figure 5.7** overleaf illustrate the layout of bicycle parking within basement and on surface level respectively.



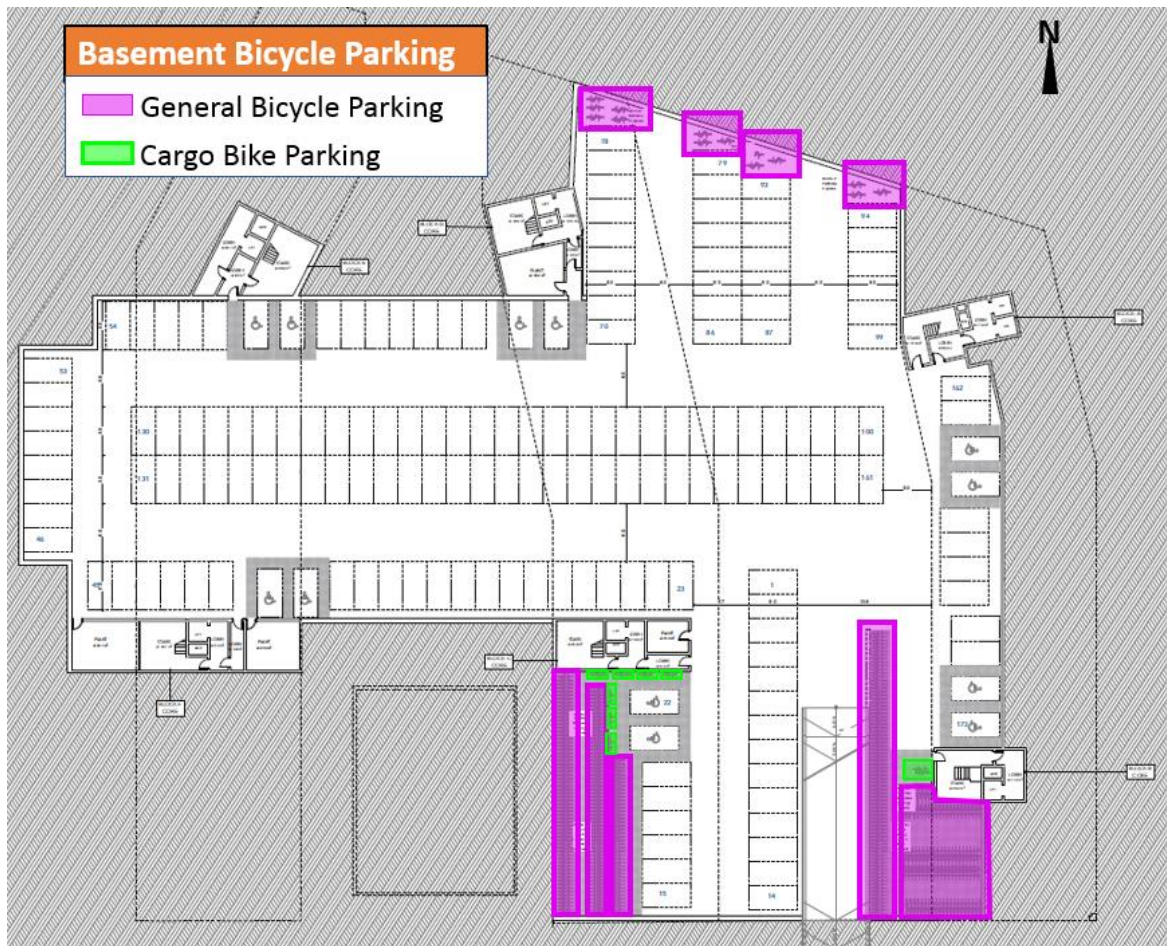


Figure 5.6: Basement Bicycle Parking Locations

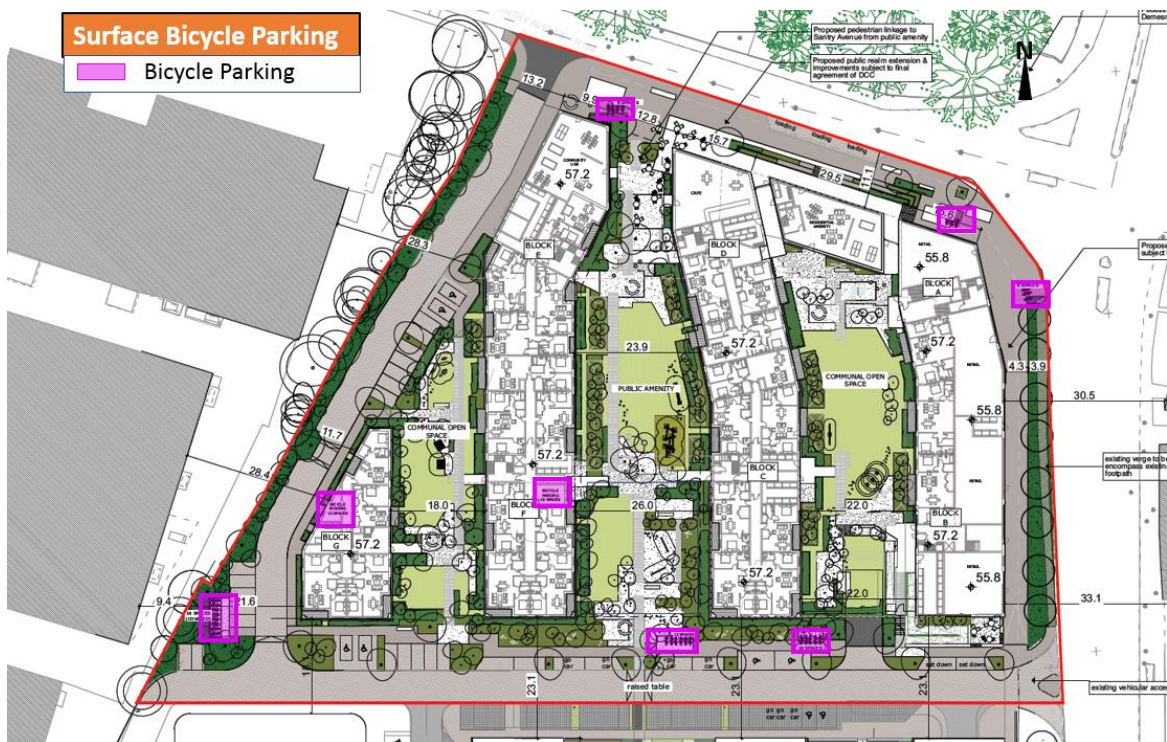


Figure 5.7: Surface Bicycle Parking Locations



## 6.0 TRIP GENERATION AND DISTRIBUTION

### 6.1 BASELINE TRAFFIC CONDITIONS

6.1.1 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 06<sup>th</sup> February 2020 was used for the purpose of this assessment.

6.1.2 The aforementioned traffic surveys (weekday classified junction turning counts) were conducted by IDASO between 07:00 AM to 10:30 AM and from 16:00 to 19:00 PM. The surveys undertaken included Junction Turning Counts (JTC). JTCs were carried out at two junctions within close proximity to the proposed development site. The following two locations were included within the survey (Figure 6.1):

- **Junction 1** – Swords Road / Santry Avenue
- **Junction 2** – Swords Road/Schoolhouse Lane



**Figure 6.1: Traffic Survey locations**

6.1.3 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

incorporating these local junctions was created by DBFL. Base traffic flows and the Flow Diagrams for all scenarios are illustrated within **Appendix B**

## 6.2 TRAFFIC GROWTH

6.2.1 An Opening Year of 2022 has been assumed for this assessment. In accordance with TII (NRA) Guidance, Future Design years (+5 and +15 years) of 2027 and 2037 have also been adopted.

6.2.2 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.

6.2.3 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.

Region	Name	Low Sensitivity Growth Rates				Central Growth Rates				High Sensitivity Growth Rates			
		2016-2030		2030-2040		2016-2030		2030-2040		2016-2030		2030-2040	
		LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1	Dublin	1.0146	1.0280	1.0034	1.0116	1.0162	1.0295	1.0051	1.0136	1.0191	1.0328	1.0087	1.0172

**Table 6.1: National Traffic Growth Forecasts: Annual Growth Factors**

(Extract from Table 6.1 PAG)

6.2.4 Applying the annual factors (central growth) as outlined in Table 5.1 above for the adopted Opening Year of 2022 and Future Horizon Years of 2022 (+5 years) and 2037 (+15 years), the following growth rates have been adopted to establish corresponding 2022, 2027 and 2037 baseline network flows: -

- 2020 to 2022 – 1.0326 (or 3%);
- 2020 to 2027 – 1.1191 (or 12%); and
- 2020 to 2037 – 1.2036 (or 20%).

6.2.5 Traffic flow diagrams for the 2022, 2027 and 2037 flows are illustrated in **Appendix B** of this report.

### 6.3 TRAFFIC GENERATION - EXISTING CHADWICKS BUILDING MERCHANTS

- 6.3.1 To estimate the potential level of vehicle trips that could be generated by the existing building merchants (4196.8 sqm) on site, reference has been made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development.
- 6.3.2 TRICS data is primarily UK based, although a number of Irish sites have recently been included. DBFL considers that TRICS will provide a reasonable indication of traffic generation from the proposed development. TRICS takes into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others. **Table 6.2** and **Table 6.3** below indicates the TRICS derived trip rates and associated vehicle traffic generation for the existing Chadwicks Building on the subject site.

Land Use	Quantity/GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Building Merchants	Per 100 sqm	0.391	0.276	0.667	0.230	0.253	0.483

**Table 6.2: Existing Chadwicks Building Vehicle Trip Rates**

Land Use	Quantity/GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Building Merchants	4196.8 sqm	16	12	28	10	11	20

**Table 6.3: Sites Existing (Chadwicks) Vehicle Trips**



## **6.4 TRAFFIC GENERATION – COMMITTED DEVELOPMENT**

### ***SANTRY PLACE- Mixed Used Development (Ref 2737/19)***

- 6.4.1 The Santry Place committed mixed-use development immediately south of the proposed residential development considers the implementation 207 apartment units, office spaces, retail units and creche. **Table 6.4** below summarises the AM and PM peak hour weekday traffic that is predicted to be generated for the proposed development based on the above trip rates.
- 6.4.2 The trip generation exercise detailed in the scheme planning documentation reveals that the committed development has the potential to generate total 176 two-way vehicle trips during AM peak hour and 177 two-way vehicle trips during PM peak hour periods. These traffic movements will utilise the same site access junctions as the proposes development on the Chadwicks site.

Land Use	Quantity/GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
		Arr	Dep	Total	Arr	Dep	Total
<b>Apartments</b>	<b>207</b>	10	45	55	39	10	48
<b>Office</b>	<b>11933</b>	85	8	93	4	70	74
<b>Retail</b>	<b>682</b>	12	10	22	24	25	50
<b>Creche</b>	<b>161</b>	4	2	6	2	3	5
<b>Total</b>		<b>111</b>	<b>65</b>	<b>176</b>	<b>70</b>	<b>108</b>	<b>177</b>

**Table 6.4: Predicted Reduced Traffic Generation (Vehicles)**

### ***SANTRY PLACE (Phase 1B) - Proposed 2021 Modification (DCC Planning Ref 2543/21) of Permitted Mixed Used Development (Ref 2737/19 & 2713/17)***

- 6.4.3 This proposed modification of the permitted on-site development (Pl. Ref. 2737/19 & 2713/17) considers the demolition of the remainder of an existing 8-bay warehouse (1,758m<sup>2</sup>) and the construction of 3 no. 7-10 storey buildings (Blocks D, E & F) accommodating residential, commercial and office uses. The proposed Block D (7 storeys) is a residential building accommodating 48 no. apartments (i.e. 30 no. 1 beds & 18 no. 2 beds) on first to sixth floor, over ground floor commercial use, residential amenity space, & bike and bin stores. Blocks E and F are 7 and 10 storeys respectively, accommodating ground floor commercial use with office space overhead.

6.4.4 The proposed development also provides for communal open space (392m<sup>2</sup>), 67 no. surface car parking spaces (including 1 no. car share / GoCar), 41 no. undercroft parking spaces, 212 no. bicycle parking spaces consisting of internal and external spaces, and all associated site development works, on a site area of 0.65ha.

6.4.1 The Traffic and Transportation section within Engineering Services Report (dated March 2021) outlines the nett difference in predicted traffic generation as a result of the proposed amendments. The analysis reveals that the proposed amendments will result in a very slight increase in the number of vehicles generated on-site. A total of only 18 more two-way vehicle trips are predicted in the AM and PM peak hour periods (or one additional vehicle every 3 minutes 20 seconds in total).

6.4.2 **Table 6.5** below illustrates comparison of vehicle trips for the permitted (Blocks E&D) and the proposed amendments (Blocks D, E & F).

Development	Land Use	Period	Trip Rates <sup>A</sup>		Vehicle Trips		
			Inbound	Outbound	Inbound	Outbound	Two-Way
<b>Permitted (Block E &amp; D)</b>	<b>Office</b> (11,691m <sup>2</sup> )	AM	0.715	0.067	84	8	<b>92</b>
		PM	0.036	0.586	4	69	<b>73</b>
	<b>Residential</b> (0 Units)	AM	-	-	0	0	<b>0</b>
		PM	-	-	0	0	<b>0</b>
	<b>Subtotal</b>	<b>AM</b>	-	-	84	8	<b>92</b>
		<b>PM</b>	-	-	4	69	<b>73</b>
<b>Proposed Amendment (Blocks D, E &amp; F)</b>	<b>Office</b> (12,629.8m <sup>2</sup> )	AM	0.715	0.067	90	8	98
		PM	0.036	0.586	6	74	80
	<b>Residential</b> (48 Units)	AM	0.047	0.218	2	10	12
		PM	0.186	0.046	9	2	11
	<b>Subtotal</b>	<b>AM</b>			92	18	<b>110</b>
		<b>PM</b>			15	76	<b>91</b>
<b>Net Difference</b>		<b>AM</b>	-	-	+8	+10	<b>+18</b>
		<b>PM</b>	-	-	+11	+7	<b>+18</b>

Notes : A – The above vehicle trip rates have been extrapolated from the permitted schemes Transport Statement Report (Pl. Ref. 2737/190)

**Table 6.5: Comparison of Permitted and Proposed Vehicle Trips**

**Swiss Cottages Mixed Use Development (Ref. ABP 303358-19)**

6.4.3 The Swiss Cottages committed development is located on Swords Road East of the proposed residential development. In order to establish the potential quantum of traffic generated by the Swiss Cottage committed development, reference has been made to the corresponding TTA report (December 2019) that was submitted with the application. **Table 6.6** and **Table 6.7** below indicates the TRICS derived trip rates and associated vehicle traffic generation for the Swiss Cottages committed development.

Floor	Land Use	Units	AM Peak Hour (08:00-09:00)		PM Peak Hour (17:15-18:15)	
			Arr	Dep	Arr	Dep
Ground	Retail	per 100sqm	6.577	6.184	7.78	8.088
	Café	per 100sqm	0	0	2.897	2.016
	Restaurant	per 100sqm	0	0	3.718	1.804
Ground to 4th	Apartments	per dwelling	0.048	0.176	0.155	0.067

**Table 6.6: Swiss Cottage Development Vehicle Trip Rates**

Floor	Land Use	Units /GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:15-18:15)		
			Arr	Dep	2-Way	Arr	Dep	2-Way
Ground	Retail	167	11	10	21	13	14	27
	Café	88	0	0	0	3	2	5
	Restaurant	156	0	0	0	6	3	9
Ground-Fourth	Apartments	120	6	21	27	19	8	27
<b>Total Vehicle Trips</b>			<b>17</b>	<b>31</b>	<b>46</b>	<b>40</b>	<b>27</b>	<b>67</b>
<b>Total Vehicle Trips (with Discount Factor)</b>			<b>12</b>	<b>27</b>	<b>40</b>	<b>31</b>	<b>18</b>	<b>49</b>

**Table 6.7: Swiss Cottage Development Vehicle Trip Generation**

**OMNI SHOPPING CENTRE**

6.4.4 There are a number of committed developments within Omni Shopping Centre with proposals of slight changes in the exiting developments and some only with change of use. Below are the committed developments with the predicted vehicle trip generation.

*A) Ambasaid Limited & MKN Investments Limited (Pl. 2876/21)*

6.4.5 The proposed development will consist of the change of use from existing retail (unit49/50) and amusement use (units 50A/76/91/92 & 92A) to restaurant use on the ground floor (units 49/50/50A/76) and change of use on the 1sr floor (units 91, 92 & 92A) to office use. Removal of the existing brick and render façade (including timber shopfronts) to be replaced with a new stone and glazed façade (to match the existing adjoining building 95) with associated minor site works at Omni Park Shopping Centre.

6.4.6 **Table 6.8** below indicates the TRICS derived trip rates and associated vehicle traffic generation for the existing use and proposed use of the development.

Development	Land Use	Period	Trip Rates		Vehicle Trips		
			Inbound	Outbound	Inbound	Outbound	Two-Way
Existing Use	Amusement A (387m <sup>2</sup> )	AM	0.691	0.44	3	2	0
		PM	1.101	1.07	4	4	8
	Amusement (Ground Floor) (393 m <sup>2</sup> )	AM	0.691	0.44	3	2	4
		PM	1.101	1.07	4	4	9
	Subtotal	AM	-	-	5	3	9
		PM	-	-	9	8	17
Proposed Change of Use (Ref.2876/21)	Office (387m <sup>2</sup> )	AM	0.414	0.077	2	0	2
		PM	0.046	0.383	0	1	2
	Restaurant (Ground Floor) (393 m <sup>2</sup> )	AM	0.274	0.206	1	1	2
		PM	1.738	0.97	7	4	11
	Subtotal	AM			3	1	4
		PM			7	5	12
Net Difference	AM			-3	-2	-5	
	PM			-2	-3	-5	

**Table 6.8: Comparison of Existing and Proposed (Vehicle Trips)**

*B) JD Sports Fashion Plc (2075/21)*

6.4.7 The development will consist of external and internal works, including the following: a) external works comprising of the development of new signage, including illuminated built up lettering; b) internal works, including the removal of existing shop signage, the installation of internally illuminated fascia return panels, the installation of internal security roller shutters, and the installation/development of a new mezzanine retail floor ( c. 230 sqm) increasing the size of the retail unit from c. 523 sqm to c. 753 sqm). The development also includes all associated site works and services above and below ground.

6.4.8 **Table 6.9** below indicates the TRICS derived trip rates and associated vehicle traffic generation for the existing use and proposed changes.

Development	Land Use	Period	Trip Rates		Vehicle Trips		
			Inbound	Outbound	Inbound	Outbound	Two-Way
Existing Use	Retail A (523m <sup>2</sup> )	AM	0.317	0.103	2	1	2
		PM	1.059	1.25	6	7	12
	Total	AM	-	-	2	1	2
		PM	-	-	6	7	12
Proposed Changes (Ref.2075/21)	Retail with 230sqm new mezzanine (753m <sup>2</sup> )	AM	0.317	0.103	2	1	3
		PM	1.059	1.25	8	9	17
	Total	AM			2	1	3
		PM			8	9	17
Net Difference		AM	-	-	1	0	1
		PM	-	-	2	3	5

**Table 6.9: Comparison of Existing and Proposed JD Sports (Vehicle Trips)**

*C) Ambasaid Limited & MKN Investments Limited (3811/20)*

6.4.9 Planning permission for development on the island site known as Building 126 (formerly known as units 122A & B Plan Reg Ref 3767/18) to east of Omni Park Shopping Centre, Swords Road, Santry, Dublin 9. The proposed new development will consist of a 3 storey multi-tenant commercial building c. 1992 sqm with full banking and financial service uses on ground level in unit 126-1 circa 390 sqm to include cashiers, self-service devices, offices, event space, external ATM and ancillary accommodation and unit 126-2 circa 109 sqm of retail use; associated illuminated corporate signage at corner entrances indicated on elevations, first floor office accommodation circa 558 sqm, second floor of media-associated use



circa 558 sqm; 11 car parking spaces with bicycle stands, plant room and waste storage facility, including associated modifications to internal road and footpath layouts.

6.4.10 **Table 6.10** below indicates the TRICS derived trip rates and associated vehicle traffic generation for proposed development.

Development	Land Use	Period	Trip Rates		Vehicle Trips		
			Inbound	Outbound	Inbound	Outbound	Two-Way
Proposed Multi-Tenant Commercial Building (Ref.3811/20)	Office (GF) (390m <sup>2</sup> )	AM	0.414	0.077	2	0	2
		PM	0.046	0.383	0	1	2
	Office (1st floor) (558m <sup>2</sup> )	AM	0.41	0.08	2	0	3
		PM	0.05	0.38	0	2	2
	Media associated use (2nd floor) (558m <sup>2</sup> )	AM	0.414	0.077	2	0	3
		PM	0.046	0.383	0	2	2
	Retail (GF) (109m <sup>2</sup> )	AM	0.691	0.44	3	2	4
		PM	1.101	1.07	4	4	9
	Total	AM	-	-	7	2	9
		PM	-	-	7	6	13

**Table 6.10: Permitted Building 126 Development Vehicle Trips**

*D) MKN Investments Limited (3767/18)*

6.4.11 The proposed development will consist of the erection of new units 122A (300 sqm) and 122B (300 sqm) for use as cafe, restaurant and retail food service with external deck area on vacant site and a change of use of existing unit 122 (150 sqm) from motor accessories area and car wash to cafe restaurant, retail food service use, together with ancillary rear service loading area, 18 no carparking spaces to forecourt, with elevational changes including corporate illuminated signage and other ancillary associated works.

6.4.12 **Table 6.11** overleaf indicates the TRICS derived trip rates and associated vehicle traffic generation for proposed development.

Development	Land Use	Period	Trip Rates		Vehicle Trips		
			Inbound	Outbound	Inbound	Outbound	Two-Way
Proposed Development (Ref.3767/18)	Unit 122 - Existing use (Motor Accessories area-car wash) (150m <sup>2</sup> )	AM	0.33	0.25	0.5	0.4	1
		PM	0.5	0.80	1	1	2
	Unit 122 - Proposed use (Café/restaurant) (150m <sup>2</sup> )	AM	0.41	0.08	1	0.1	1
		PM	0.05	0.38	0.1	1	1
	Unit 122A & 122B - Restaurant, Café retail food services (600m <sup>2</sup> )	AM	0.414	0.077	2	0.5	3
		PM	0.046	0.383	0.3	2	3
	Total	AM	-	-	3	0.2	3
		PM	-	-	-0.4	2	1

**Table 6.11: Permitted MKD Development Vehicle Trips**

## 6.5 TRAFFIC GENERATION – PROPOSED DEVELOPMENT

6.5.1 TRICS generated trip rates for the proposed apartment development during the weekday morning and evening peak hour periods are outline in **Table 6.12**. 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.

6.5.2 The proposed residential development will be implemented in three different phases i) Phase 1: Blocks A & B, ii) Phase 2: Blocks C, D & Amenity Building and iii) Phase 3: Blocks D, F & G. For the purpose of this assessment, it is assumed that Phase 1 will be completed and occupied in 2022 and Phase 2 & 3 will be completed and occupied in 2027+ years as listed below.

- 2022 Opening Year = 97 Residential Units (Blocks A & B)
- 2027+ Years – Full Development = 350 Residential Units + Amenity Building

6.5.3 A summary of the adopted trip rates and forecast traffic generation of the proposed development is provided in **Table 6.12** overleaf.

Period	AM Peak (08:00-09:00)			PM Peak (17:00 - 18:00)		
Vehicle Movement	Arr	Dep	Total	Arr	Dep	Total
<b>Original Trip Rates</b>	0.056	0.205	0.261	0.187	0.086	0.273
<b>Adjusted Trip Rates</b>	0.034	0.125	0.159	0.114	0.052	0.166

**Table 6.12: Proposed Residential Development Vehicle Trip Rates (Per Unit)**

6.5.4 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 6.13** and **Table 6.14** below. The tables below outline the potential peak hour vehicle trips for the horizon years, that have been calculated based on the proposed development schedule.

Land Use	Quantity/GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Apartments	Phase 1: 97 units	3	12	15	11	5	16
<b>Total</b>		<b>3</b>	<b>12</b>	<b>15</b>	<b>11</b>	<b>5</b>	<b>16</b>

**Table 6.13: Predicted Vehicle Trip Generation (2022 Opening Year)**

Land Use	Quantity/GFA	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
		Arr	Dep	Total	Arr	Dep	Total
Apartments	350	12	44	56	40	18	58
<b>Total</b>		<b>12</b>	<b>43</b>	<b>55</b>	<b>39</b>	<b>18</b>	<b>57</b>

**Table 6.14: Predicted Vehicle Trip Generation (2027+ Years)**

6.5.5 The trip generation exercise reveals that the proposed development within 2027+ Years has the potential to generate total 55 two-way vehicle trips during AM peak hour and 57 two-way vehicle trips during PM peak hour period.

## 6.6 TRIP DISTRIBUTION & ASSIGNMENT

6.6.1 Both the committed and 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 the **Tables 6.15** and **6.16** below.

AM PEAK (08:00-09:00)			PM PEAK (17:00-18:00)		
IN	OUT	Total	IN	OUT	Total
9	32	41	29	13	43

**Table 6.15: Predicted Traffic Entry/ Exit Via Santry Avenue Access (Vehicles)**

AM PEAK (08:00-09:00)			PM PEAK (17:00-18:00)		
IN	OUT	Total	IN	OUT	Total
3	11	14	10	4	14

**Table 6.16: Predicted Traffic Entry/ Exit Via Swords Road Access (Vehicles)**



## 7.0 NETWORK IMPACT ANALYSIS

### 7.1 ASSESSMENT SCOPE

- 7.1.1 Two different traffic scenarios have been assessed within this TTA, namely (a) the 'Base' (Do Nothing) traffic characteristics and (b) the 'Post Development' (Do Something) traffic characteristics.
- 7.1.2 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).
- 7.1.3 In summary the following network scenarios are considered.

#### *Do Nothing*

- A1 – 2022 Base Flows + Committed Development
- A2 – 2027 Base Flows + Committed Development
- A3 – 2037 Base Flows + Committed Development

#### *Do Something*

- B1 – 2022 Do Nothing (A1) + Proposed Development Flows
- B2 – 2027 Do Nothing (A2) + Proposed Development Flows
- B3 – 2037 Do Nothing (A2) + Proposed Development Flows

#### **Assessment Periods**

- 7.1.4 The weekday AM and PM peak hour flows have been identified in traffic survey as occurring between 08:00-09:00 and 16:00-17:00 respectively. These peak hour periods form the basis of the network assessments.

#### **Network Vehicle Flows**

- 7.1.5 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 8 – 2022 Do Nothing (A1)
- Figure 10 – 2027 Do Nothing (A2)
- Figure 12 – 2037 Do Nothing (A3)
- Figure 9 – 2022 Do Something (B1)
- Figure 11 – 2027 Do Something (B2)
- Figure 3 – 2037 Do Something (B3)

## 7.2 NETWORK IMPACT

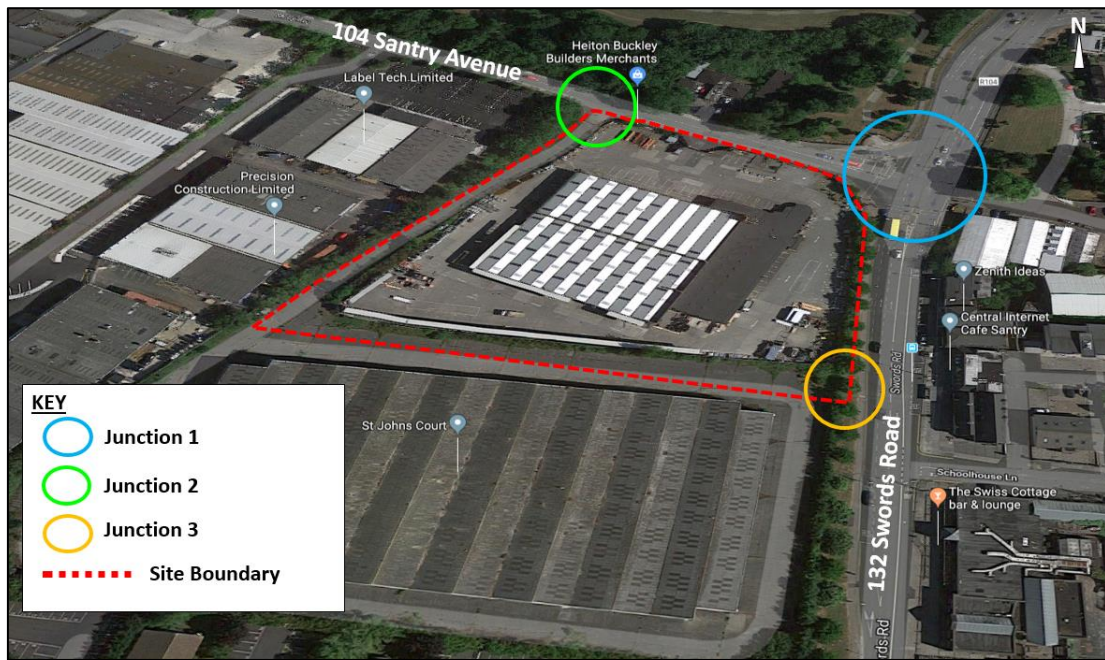
7.2.1 The Institute of Highways and Transportation document 'Guidelines for Traffic Impact Assessments' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. 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).

7.2.2 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:

- 2022 Opening Year (Do Nothing & Do Something);
- 2027 Future Design Year Scenario (Do Nothing & Do Something); and
- 2037 Future Design Year Scenario (Do Nothing & Do Something).

7.2.3 **Table 6.1** details the percentage impact of the relevant key junctions (illustrated in **Figure 7.1**) for the 2022, 2027 and 2037 design years are the following:

- **Junction 1** – Swords Road / Santry Avenue
- **Junction 2** – Site Access 1 / Santry Avenue
- **Junction 3** – Site Access 2 / Swords Road



**Figure 7.1: Junctions included in Analysis**

Ref	Junction	Period	Opening Year 2022	Design Year 2027	Design Year 2037
1	Swords Road / Santry Avenue	AM Peak	0.2%	0.8%	0.7%
		PM Peak	0.3%	0.9%	0.8%
2	Site Access 1/Santry Avenue	AM Peak	1%	3.5%	3.3%
		PM Peak	1.1%	3.5%	3.3%
3	Site Access 2/Swords Road	AM Peak	0.5%	1.1%	1%
		PM Peak	0.3%	0.9%	0.9%

**Table 7.1: Network Impact Assessment**

7.2.4 In **Table 7.2** and **Table 7.3** below, the predicted impact has been categorised for the 2022 Opening Year, 2027 Interim Year and 2037 Future Design Year. The additional vehicle and percentage impacts are illustrated in **Figure 7.2** overleaf.

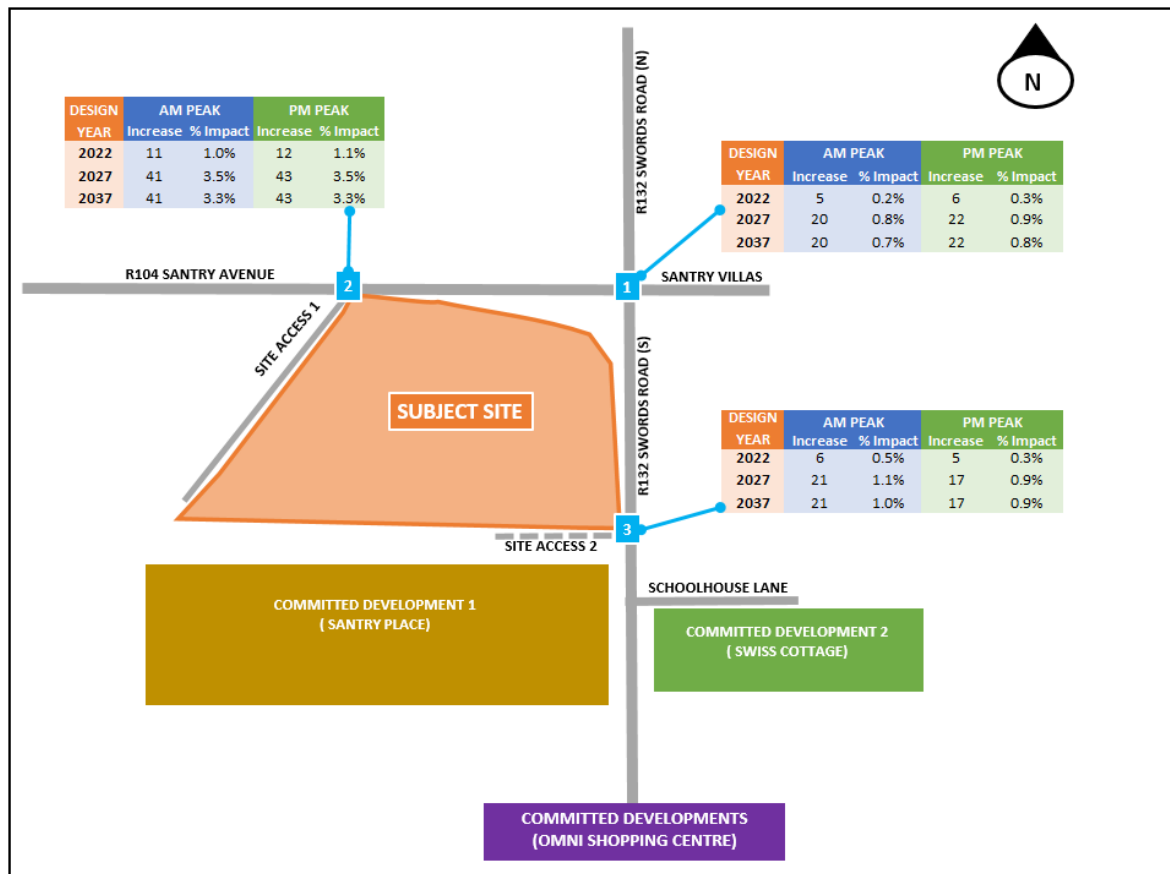
Junction - Nature of Impact (Additional Vehicular Traffic on key Junctions)		Year	Impact Scale	Impact Level
1	Swords Road / Santry Avenue	2022	0.2%	Insignificant
		2027	0.8%	Insignificant
		2037	0.7%	Insignificant
2	Site Access 1/Santry Avenue	2022	1.0%	Insignificant
		2027	3.5%	Insignificant
		2037	3.3%	Insignificant
3	Site Access 2/Swords Road	2022	0.5%	Insignificant
		2027	1.1%	Insignificant
		2037	1.0%	Insignificant

**Table 7.2: Network Impact Categorization AM Peak Hour**

Junction - Nature of Impact (Additional Vehicular Traffic on key Junctions)		Year	Impact Scale	Impact Level
1	Swords Road / Santry Avenue	2022	0.3%	Insignificant
		2027	0.9%	Insignificant
		2037	0.8%	Insignificant
2	Site Access/Santry Avenue	2022	1.1%	Insignificant
		2027	3.5%	Insignificant
		2037	3.3%	Insignificant
3	Site Access/Swords Road	2022	0.3%	Insignificant
		2027	0.9%	Insignificant
		2037	0.9%	Insignificant

**Table 7.3: Network Impact Categorization PM Peak Hour**





**Figure 7.2: Additional Vehicle and Percentage Impact**

7.2.5 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 9.0 PICADY respectively.

## 7.3 NETWORK ANALYSIS

### *Introduction*

- 7.3.1 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.
- 7.3.2 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.
- 7.3.3 A 90-minute weekday AM and PM period has been simulated, from 07:45 to 9:15 and 16:45 to 18:15. Traffic flows were entered using an Origin-Destination table for the peak hours.
- 7.3.4 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:
- 2022 Opening Year
  - 2027 Future Design Year (Opening Year +5 years)
  - 2037 Future Design Year (Opening Year +15 years)
- 7.3.5 As introduced previously, the following junction has been considered for further analysis: -
- **Junction 2** – Site Access 1/Santry Avenue
  - **Junction 3** – Site Access 2/Swords Road

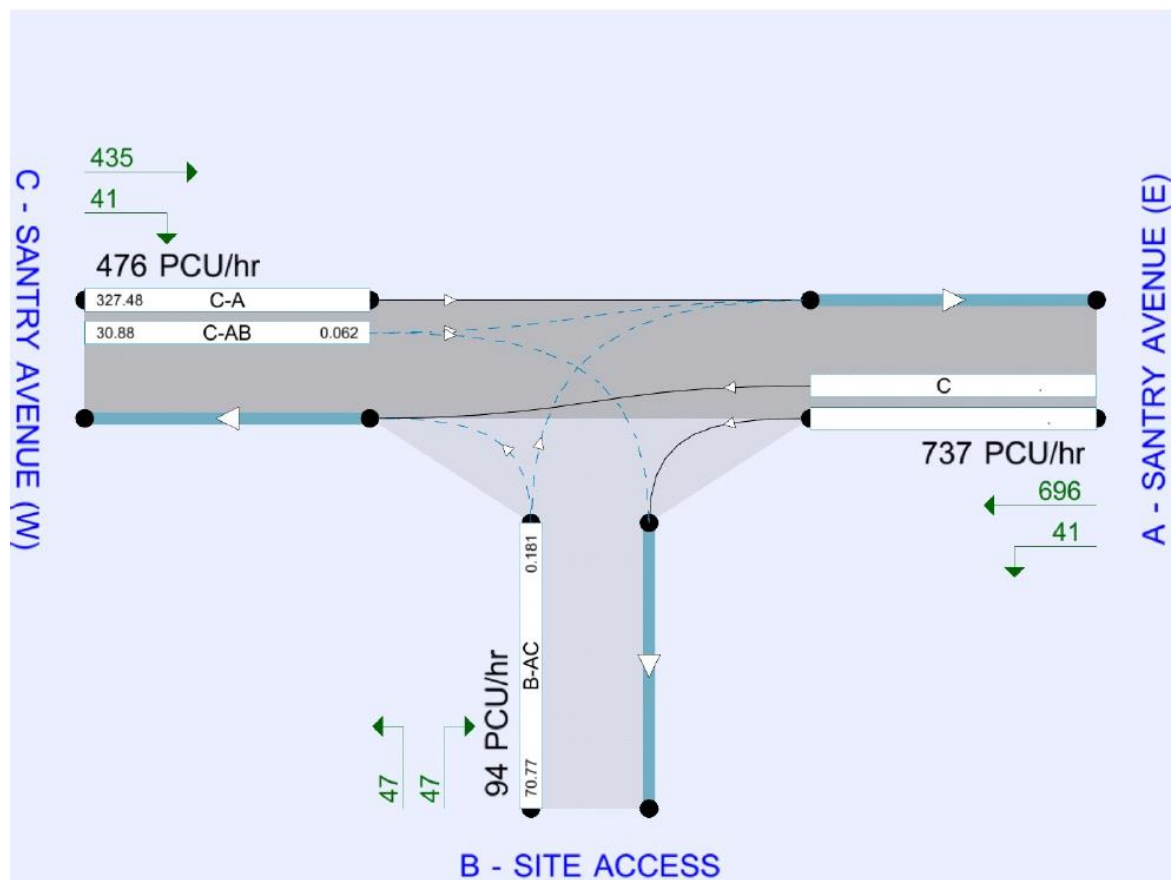


**Figure 7.3: Junctions Included Detailed Analysis**

### 7.4 SITE ACCESS 1 (JUNCTION 2: Site Access / Santry Avenue)

7.4.1 The results of the operational assessment of this three-arm priority controlled junction during the weekday morning and evening peaks are summarised in Tables 7.4 to 7.9 below. The arms were labelled as follows within the PICADY model:

- Arm A: Santry Avenue (East)
- Arm B: Site Access
- Arm C: Santry Avenue (West)



**Figure 7.4: Site Access 1 Junction Diagram**

**2022 AM Peak**

7.4.2 The PICADY results (Table 7.4) indicate that the Site Access / Santry Avenue junction will operate within capacity for the 2022 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.16 and a corresponding queue of 0.2 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2022 “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 0.26 and a corresponding queue of 0.4 vehicles being recorded. A copy of the PICADY output files can be found in **Appendix D**.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.16	0.2	13.59
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	9.45
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.26	0.4	15.56
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	0.1	9.57

**Table 7.4: 2022 PICADY Results (AM Peak)**

**2022 PM Peak**

7.4.3 The PICADY results (Table 7.5) indicate that the Site Access / Santry Avenue junction will operate within capacity for the 2022 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.26 and a corresponding queue of 0.4 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2022 “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 0.30 and a corresponding queue of 0.5 vehicles being recorded.

7.4.4 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.04. A copy of the PICADY output files can be found in **Appendix D**.



Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
<b>Do Nothing (A1)</b>	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.26	0.4	15.55
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	9.46
<b>Do Something (B1)</b>	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.30	0.5	16.49
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	9.53

**Table 7.5: 2022 PICADY Results (PM Peak)**

***2027 AM Peak***

7.4.5 The PICADY results (Table 7.6) indicate that the Site Access / Santry Avenue junction will operate within capacity for the 2027 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.17 and a corresponding queue of 0.2 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2027 “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 0.28 and a corresponding queue of 0.4 vehicles being recorded.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
<b>Do Nothing (A1)</b>	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.17	0.2	14.48
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	9.75
<b>Do Something (B1)</b>	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.28	0.4	16.74
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	0.1	9.88

**Table 7.6: 2027 PICADY Results (AM Peak)**

**2027 PM Peak**

- 7.4.6 The PICADY results (Table 7.7) indicate that the Site Access / Santry Avenue junction will operate within capacity for the 2027 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.27 and a corresponding queue of 0.4 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2027 “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 0.32 and a corresponding queue of 0.5 vehicles being recorded.
- 7.4.7 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.05. A copy of the PICADY output files can be found in **Appendix D**.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.27	0.4	16.33
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.06	0.1	9.36
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.32	0.5	17.82
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	9.85

**Table 7.7: 2027 PICADY Results (PM Peak)**

**2037 AM Peak**

- 7.4.8 The PICADY results (Table 7.8) indicate that the Site Access / Santry Avenue junction will operate within capacity for the 2037 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.18 and a corresponding queue of 0.2 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2037 “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 0.29 and a corresponding queue of 0.4 vehicles being recorded.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.18	0.2	15.47
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.11	0.1	10.06
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.29	0.4	18.08
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.12	0.1	10.20

**Table 7.8: 2037 PICADY Results (AM Peak)**

**2037 PM Peak**

7.4.9 The PICADY results (Table 7.9) indicate that the Site Access / Santry Road junction will operate within capacity for the 2037 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.29 and a corresponding queue of 0.4 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2037 “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 0.34 and a corresponding queue of 0.5 vehicles being recorded.

7.4.10 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.04. A copy of the PICADY output files can be found in Appendix D.

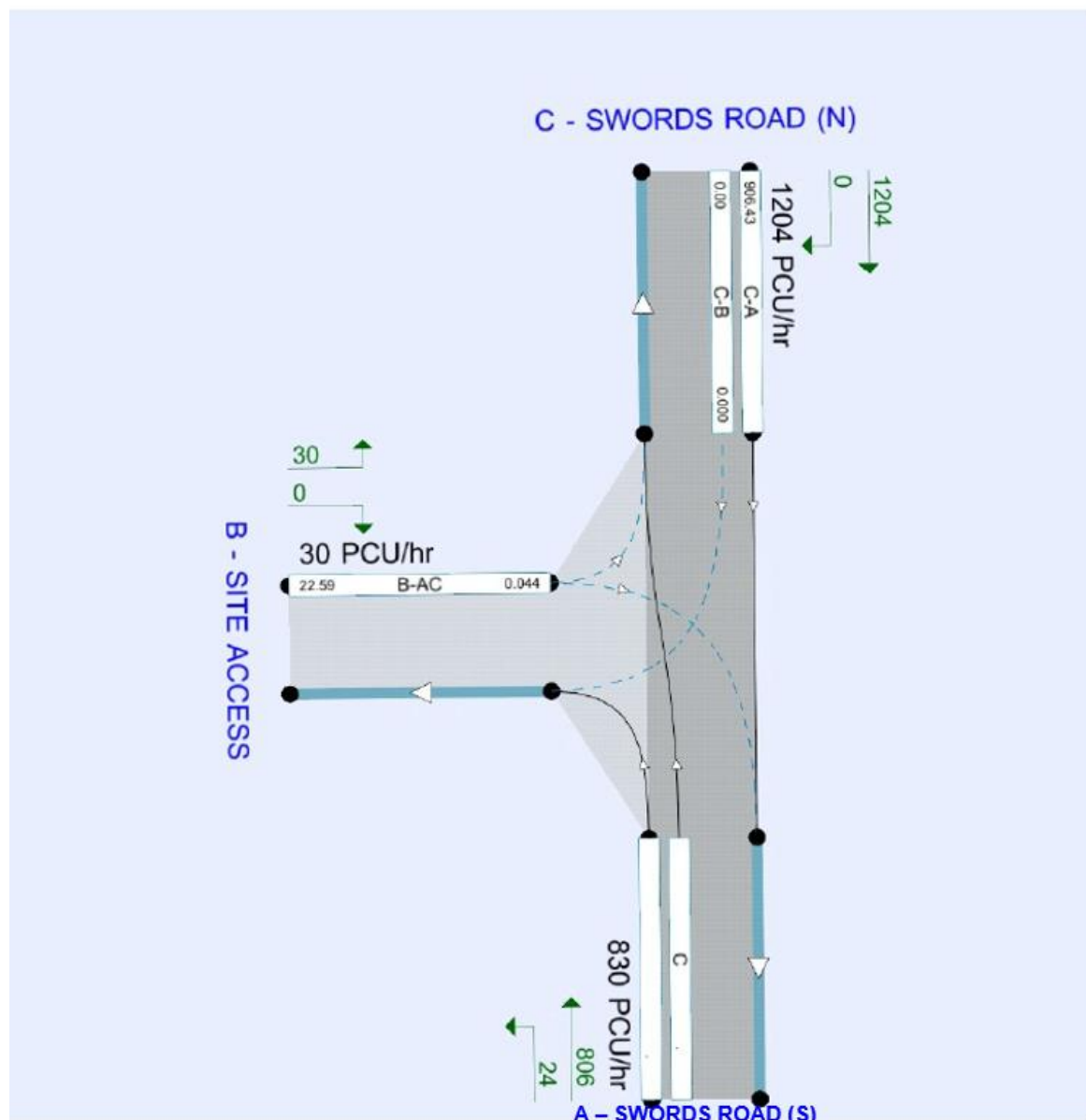
Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.29	0.4	17.69
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.07	0.1	9.68
Do Something (B1)	B-AC -Site Access to Santry Ave.(E) & Santry Ave.(W)	0.34	0.5	19.38
	C-AB – Santry Ave. (W) to Site Access & Santry Ave.(E)	0.10	0.1	10.18

**Table 7.9: 2037 PICADY Results (PM Peak)**

## 7.5 SITE ACCESS 2 (JUNCTION 3: Site Access /Swords Road)

7.5.1 The results of the operational assessment of this three-arm priority controlled junction during the weekday morning and evening peaks are summarised in Tables 7.10 to 7.15 below. The arms were labelled as follows within the PICADY model:

- Arm A: Swords Road (S)
- Arm B: Site Access
- Arm C: Swords Road (N)



**Figure 7.5: Access 2 Junction Diagram**

### 2022 AM Peak

7.5.2 The PICADY results (Table 7.10) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2022 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.03 and a corresponding queue of 0.0 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2022 “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 0.06 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	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Swords Road (N)	0.03	0.0	7.69
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.06	0.1	7.88
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.10: 2022 PICADY Results (AM Peak)**

### 2022 PM Peak

7.5.3 The PICADY results (Table 7.11) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2022 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.06 and a corresponding queue of 0.1 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2022 “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 0.07 and a corresponding queue of 0.1 vehicles being recorded.

7.5.4 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.01. A copy of the PICADY output files can be found in **Appendix D**.



Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Swords Road (N)	0.06	0.1	7.99
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.07	0.1	8.09
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.11: 2022 PICADY Results (PM Peak)**

***2027 AM Peak***

7.5.5 The PICADY results (Table 7.12) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2027 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.03 and a corresponding queue of 0.0 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2027 “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 0.06 and a corresponding queue of 0.1 vehicles being recorded.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Swords Road (N)	0.03	0.0	7.82
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.06	0.1	8.01
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.12: 2027 PICADY Results (AM Peak)**

**2027 PM Peak**

- 7.5.6 The PICADY results (Table 7.13) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2027 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.06 and a corresponding queue of 0.1 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2027 “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 0.07 and a corresponding queue of 0.1 vehicles being recorded.
- 7.5.7 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.01. A copy of the PICADY output files can be found in **Appendix D**.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
Do Nothing (A1)	B-AC -Site Access to Swords Road (N)	0.06	0.1	8.14
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
Do Something (B1)	B-AC -Site Access to Swords Road (N)	0.07	0.1	8.24
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.13: 2027 PICADY Results (PM Peak)**

**2037 AM Peak**

- 7.5.8 The PICADY results (Table 7.14) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2037 “Do Nothing” AM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.03 and a corresponding queue of 0.0 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2037 “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 0.06 and a corresponding queue of 0.1 vehicles being recorded.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
<b>Do Nothing (A1)</b>	B-AC -Site Access to Swords Road (N)	0.03	0.0	7.95
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
<b>Do Something (B1)</b>	B-AC -Site Access to Swords Road (N)	0.06	0.1	8.15
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.14: 2037 PICADY Results (AM Peak)**

**2037 PM Peak**

7.5.9 The PICADY results (Table 7.15) indicate that the Site Access / Swords Rd junction will operate within capacity for the 2037 “Do Nothing” PM peak hour with a maximum Ratio of Flow to Capacity (RFC) value of 0.06 and a corresponding queue of 0.1 vehicles recorded. With the inclusion of the proposed development and the committed development, the 2037 “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 0.07 and a corresponding queue of 0.1 vehicles being recorded.

7.5.10 This “Do Something” result is comparable to the “Do Nothing” scenario with the maximum RFC increasing by only 0.01. A copy of the PICADY output files can be found in Appendix D.

Scenario	Arm	RFC	Queue (veh)	Delay (veh.min/seg)
<b>Do Nothing (A1)</b>	B-AC -Site Access to Swords Road (N)	0.06	0.1	8.29
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0
<b>Do Something (B1)</b>	B-AC -Site Access to Swords Road (N)	0.07	0.1	8.40
	C-B – Sword Road (N) to Site Access	0.0	0.0	0.0

**Table 7.15: 2037 PICADY Results (PM Peak)**

## 8.0 INITIATIVES TO PROMOTE SUSTAINABLE TRAVEL

### 8.1 OVERVIEW

8.1.1 A package of integrated mitigation measures has been identified to off-set the additional local demand that the proposed Santry Avenue mixed use development could potentially generate as a result of the forecast increase in vehicle movements by residents, commuters and visitors. The strategy includes specific measures for both the construction and operational stages of the proposed development.

### 8.2 CONSTRUCTION STAGE

8.2.1 The Construction Environmental Management Plan (which is a standalone report and will be included in the planning documentation) and the associated Construction Traffic Management Plan (CTMP) in addition to the application's accompanying Construction and Waste Management Plan will incorporate a range of integrated control measures and associated management initiatives with the objective of mitigating the impact of the proposed development's on-site construction activities.

8.2.2 The CTMP will be prepared prior to the commencement of construction work on site. This plan will be prepared in consultation with DCC and submitted for approval in order to agree on traffic management and monitoring measures (in advance of works commencing) some of which are outlined below:

- All works on site will be undertaken during hours of the day in accordance with DCC requirements.
- During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads.
- The surrounding road network will be signed to define the access and egress routes for the development including dedicated 'haul' routes to/from the development site.
- The traffic generated by the construction phase of the development will be strictly controlled in order to minimise the impact of this traffic on the surrounding road network and local properties. All HGV trips could

potentially be restricted from traveling to / from the development during the local road network's peak hours.

- All road works will be adequately signposted and enclosed to ensure the safety of all road users and construction personnel.
- All employees and visitors' vehicle parking demands will be accommodated either on-site or at a predetermined off-site location. On-street parking of construction vehicles and construction personnel vehicles will be prohibited.
- A programme of street cleaning across the local street and identified 'haul' routes' will be implemented.
- A Construction Mobility Management Plan will be developed by the appointed contractor to encourage all construction personnel to utilise the vast range of sustainable travel options available when travelling to/from the subject Santry Avenue site.

### 8.3 OPERATIONAL STAGE

8.3.1 With the objective of mitigating the potential impact of the proposed Murphystown Way development as predicted in Section 6 and 7 of this report during its operational stage, and with the objective of promoting sustainable travel for all residents, workers, and visitors to the development; the following initiatives have been identified and subsequently form an integral part of the subject development proposals.

- Strategic Employment Centres – The location of the subject development on the Swords-City Centre corridor provides the unique ability for many of Dublin's strategic employment zones to achieve many of their sustainability obligations particularly in regard to accessibility and sustainable modes of travel. Beyond the obvious ease of access to Dublin City Centre provided by bus services, the proposed development benefits from being conveniently located to gain access to a number of strategic employment areas. Accordingly, a specific focus of the development's mobility strategy will be encouraging the uptake of sustainable travel options for the development's residents' 'commuter' trips to / from the local employment centres:



- Omni Shopping Centre is within approximate 500m of the subject site.
  - Santry Business Park
  - Airways Industrial Estate approximately 1km northeast of the subject site can be conveniently accessed by walking and cycling from the proposed development.
  - Collinstown Business Park approximately 2km north of the subject site can be conveniently accessed by walking (25 minutes) and cycling (6 minutes) from the proposed development.
  - Gulliver Retail Park approximately 1.6km northwest of the subject site can be conveniently accessed by walking (19 minutes) and cycling (7 minutes) from the proposed development.
  - Clonsaugh Business & Technology Park – Easily accessible by Walking (29 minute walking) and by bicycle (10 minute cycle).
- Management – A Mobility Management (MMP) is to be rolled out with the aim of guiding the delivery and management of a range of coordinated initiatives by the scheme promotor. The MMP ultimately seeks to encourage sustainable travel practices for all journeys to and from the proposed development site. It is proposed that specific MMP's related to residential land use will be developed under the framework of a 'parent' MMP for the entire site. The associated MMPs will be developed in partnership with DCC to specifically consider the opportunities of shaping all journeys and promoting sustainable transport habits at the proposed mixed use development.
  - Management – A Car Park Management Strategy. The availability of parking spaces is a key determinant of mode choice and car usage. With the objective of minimizing travel by car and encouraging the use of sustainable modes instead, it is proposed to limit the car parking provision and promote a 'car-lite' scheme. This is considered an appropriate approach considering the site's excellent accessibility characteristics (e.g. walking, cycling, bus and train opportunities) to places of work, education and essential services. This 'car lite' approach will help to reduce car dependency in Dublin, reduce traffic congestion

and pollution levels, improve the quality of the environment and help tackle climate change in addition to encouraging sustainable travel.

- Service – The development will provide of 4 no. dedicated car share parking bays for GoCar vehicles on the surface level. The aim will be to reduce the need to own a private motor car thereby contributing to reducing the overall number of vehicle trips generated by the proposed development.
- Facilities - In addition to facilitating and encouraging bicycle use, increasing the number of cycle parking provision on-site is considered best practice in situations such as when reducing car parking spaces. A total of 777 no. cycle spaces with 719 no. within basement and 58 short term / visitor spaces on surface level. The cycle parking provision also includes 9 no. Cargo Bike parking spaces. Bike sharing schemes could be implemented within the vicinity of the Santry Avenue development which could further encourage sustainable modes of travel and reduce the number of short car journeys around Santry.
- Infrastructure (by others) – Planning infrastructure investment that will further enhance the sites sustainable accessibility credentials include;
  - The proposed GDA cycling network plan will also encourage a greater uptake in walking and cycling amongst residents, staff and visitors and
  - BusConnects aims to deliver Swords-Dublin City Centre corridor which is adjacent the subject site. The BusConnects Routes A2/A4, 82, N8 in will run adjacent to the subject development site, which will have a frequency of every 10-15 minutes. Spine Route E also will run approximately 1.2 km west of the site and is accessible by walking or the N8 route.
  - Metrolink which is proposed urban high capacity rail service connecting Swords, Dublin Airport, City Centre and Charlemont. The proposed Metrolink route's Northwood and Ballymun interchanges are located within approximately 1.6km west of the subject site

## 9.0 STAGE 2 SHD APPLICATION – PLANNING AUTHORITY OPINIONS

### 9.1 OVERVIEW

9.1.1 This section provides responses to the items raised by the DCC Transportation Department during Stage 1 of this SHD application. The items raised were in Notice of Pre-Application Consultation Opinion and are discussed in detail in the following sections.

### 9.2 DUBLIN CITY COUNCIL TRANSPORTATION OBSERVATIONS

9.2.1 Within the Transportation Planning Divisions pre-application consultation note the officers raise a number of key queries including the following;

#### ***DCC Observation 1***

*"There are approximately 40 no. surface perpendicular car parking spaces proposed along the central spine access road between the proposed development and the permitted development to the south. Consideration should be given to removing some of these spaces and replacing them with parallel spaces."*

9.2.2 In response to the above query the number of perpendicular car parking spaces along the central east-west street has been reduced.

#### ***DCC Observation 2***

*"the car parking spaces that are located at the junction with the Swords Road, directly opposite the basement car parking of the permitted development, are too close to this junction/access and would be hazardous to road users. These should be removed and/or relocated. A Stage 1 Road Safety Audit should also be provided."*

9.2.3 The two subject spaces have been reassigned to set-down / pick-up only spaces which will reduce the times / duration that a vehicle is located within these specific bays. As per the above requested these abys and the entire development have been subject to an independent Stage 1 Road Safety Audit which is reported in a separate dedicated report which accompanies the application.

### ***DCC Observation 3***

*"There are concerns that the access road would become a 'rat run' for users from Santry Avenue through to the Swords Road. The pedestrian link/green spine that runs through the public open spaces of both developments and creates a permeable route to Santry Park highlights the need to provide a safer, traffic-calmed route and to ensure pedestrian priority along this route."*

9.2.4 Whilst the layout of the site access junction on Swords Rd (permitting only left-in and left-out vehicle movements) will actively minimise the potential for rat-running from Santry Avenue to Swords Road the following two new design measures have been integrated into the scheme proposals to further reduce the occurrence of any rat-running through the site;

- The length of the internal vehicle through route has been increased by relocating the internal north-south street further westwards (to the west of Block G) and parallel with the site's western boundary. This increase in length will reduce the potential time savings that a vehicle driver could have benefited from when compared to the previous Stage 1 preplanning layout.
- Additional traffic calming measures have been introduced along the internal north-south street to reduce internal vehicle speeds and subsequently increase the time it will take to travel through the site.

### ***DCC Observation 4***

*Detail of the pedestrian link are required. Provision should be made to facilitate a pedestrian and cycling link through this area. Clarity around the design of this crossing is required; if it is proposed to provide a raised table, or if a signalised pedestrian crossing etc would be provided.*

9.2.5 The internal north-south green corridor has been designed to accommodate pedestrians only (e.g. cyclists will have to walk their bicycles) as there is no onwards bicycle connections on Santry Avenue. It is envisioned north-south cyclists along Swords Road will be facilitated by the NTA's emerging BusConnects proposals along the adjoining corridor.

9.2.6 In reference to the scheme architects ***Site Layout – Taking in Charge Map*** (D1809.P04) the internal streets and footpaths including the subject north-south pedestrian connection is to remain within private ownership. The raised flat top flat

at the intersection of the internal east-west street and the subject north-south pedestrian link is intended to operate as a 'courtesy' crossing facility. Nevertheless, should the local roads authority believe a formal crossing (e.g. zebra crossing or similar) would be beneficial at this crossing we would invite the implementation of a specific planning condition to address same.

#### ***DCC Observation 5***

*"155 no. car parking spaces are proposed at basement level with 60no. surface spaces. This equates to 0.6 spaces per unit. It is unclear if car parking is to be provided for the commercial element of the development and it is noted in the cover letter that a ratio of 0.4 spaces per unit is proposed, therefore the assumption is made that the 60 no. spaces are for the commercial element. Clarity around this is required."*

- 9.2.7 DBFL can confirm that the reference in the covering letter to a ratio of 0.4 spaces per unit is incorrect. In reference to the Parking Strategy detailed in Chapter 5 of this report it can be confirmed that the modest element on non-residential land uses (797.4 m<sup>2</sup>) proposed will **NOT** be assigned any of the on-site car parking spaces. Accordingly, all on-site car parking bays, with the exception of the 4 No Car Share (GoCar) being made available to the proposed residential uses equating to a ratio of approximately 0.6 spaces per unit.

#### ***DCC Observation 6***

*"While a reduced quantum of car parking provision may be acceptable to this division, a proactive travel planning approach is required. A car parking strategy and management plan should be submitted and should outline the rationale for the under provision of car parking spaces and should be informed by an analysis of Census data in relation to the car ownership levels by apartment occupiers in this electoral area and mode split. The strategy should also indicate how car parking will be assigned and managed in the long term and should clearly demonstrate a commitment by the Management Company to continual management of car parking within the development. Parking spaces cannot be assigned to individual apartment units; spaces should instead be allocated and/or leased to residents on the basis of availability and need, by means of a permit/lottery system, in order to optimise the use of parking spaces."*

- 9.2.8 The Parking Strategy detailed in Chapter 5 of this report addresses each of the requirements raised within the above observation.



### ***DCC Observation 7***

*"Alongside the Car Parking Management Strategy, a Mobility Management/Travel Plan should be prepared and submitted for the proposed development. The travel plan should address the mobility requirements of future residents and should promote the use of public transport, cycling and walking."*

9.2.9 A Mobility Management Plan has been compiled for the scheme proposals and is detailed in a separate dedicated report which accompanies the subject SHD planning application.

### ***DCC Observation 8***

*"The car parking strategy should also address how the car parking will be managed in the context of the proposed commercial/retail uses."*

9.2.10 See response to DCC Observation 5 above for clarification.

### ***DCC Observation 9***

*"It appears that 352no. bicycle parking spaces will be provided for the residential units which is in line with the Development Plan standards but falls short of the Apartment Guidelines 2018 standards. If the applicant is proposing a reduced quantum of car parking based on the Apartment Guidelines provision, it cannot use the Development Plan standards in relation to bicycle parking standards. While it is noted that the quantum proposed in accordance with the Apartment Guidelines may be considered excessive in some instances, the applicant should seek to provide a balance between the two guidance documents."*

9.2.11 In direct response to the above observation DBFL can confirm that the scheme proposals have been revisited in regard to Bicycle parking with the level of provision updated in the current updated redevelopment proposals. In reference to Section 4.4 and 5.4 of this report the updated design now accommodates a total of 795 bicycle parking spaces which complies fully with the New Apartment Guidelines (Dec 2020) recommendations of 781 spaces.

### ***DCC Observation 10***

*"Details of the types of bicycle parking to be provided should be indicated e.g. Sheffield stands, two tier racks etc."*

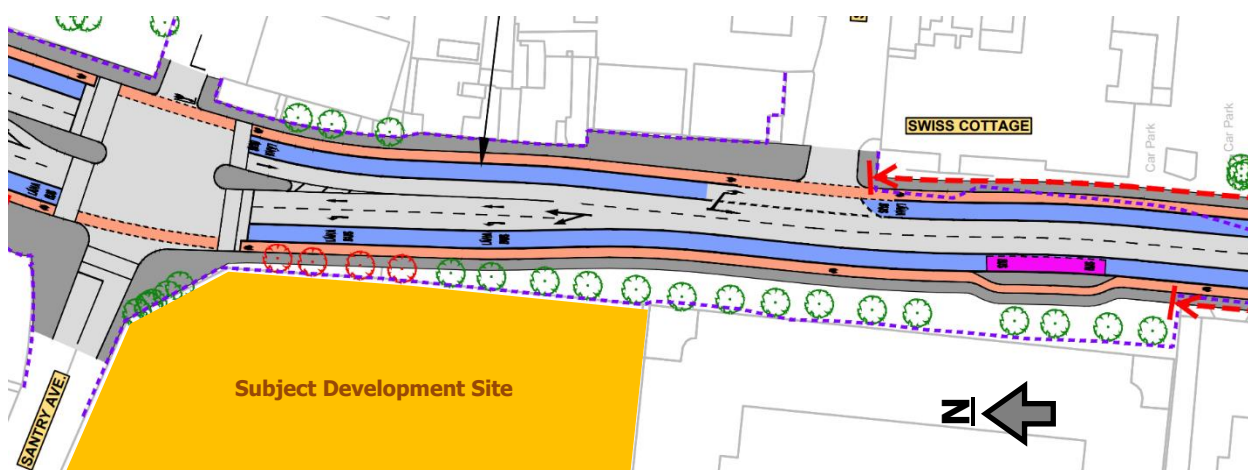
9.2.12 DBFL can confirm that the architects Davey-Smith and landscape architects have specified the following bike parking facilities;

- Surface located bicycle parking – Standard 'Sheffield' stands such as the *Stainless Steel Sheffield Cycle Stand - Sub-Surface* by Pittman as per details available at <https://www.pittman.ie/stainless-steel-sheffield-cycle-stand-sub-surface.html>
- Basement located two tier bicycle parking - *Velo-Up Regular Two-Tier Bike Rack* system by Pittman as per details in Appendix E of this report and at <https://www.pittman.ie/velo-up-regular-two-tier-bike-rack.html>
- Basement located cargo bike parking – Either standard 'Sheffield' stands or *Trombone Bicycle Stand 50mm* by Pittman as per details available at <https://www.pittman.ie/trombone-bicycle-stand-50mm.html>

### **DCC Observation 11**

*"Applicant should ensure that the latest Bus Connects proposals (March 2020) are not impinged upon by the development. This division can facilitate engagement with the NTA in relation to this prior to the submission of an application if required. Any drawings submitted should also overlay the Bus Connects proposal with the development in the interests of clarity."*

9.2.13 In reference to NTA's latest Bus Connects proposals (November 2020 - <https://busconnects.ie/media/2177/02-swords-to-city-centre-preferred-route-121120-fa-web.pdf> ) as reproduced in Figure 9.1 below it can be established that the NTA are not proposing to encroach into or require any part of the subject Chadwick's site to implement the proposed Swords to City Centre Core Bus Corridor 2 infrastructure works (reference Map 18 and Map 19 of NTA).



**Figure 9.1 : Extract of Map 19 – NTA CBC No. 2 proposals along site frontage**

9.2.14 The NTA's CBC proposals have been transferred onto the subject residential scheme layout as presented in the accompanying drawing 200060-DBFL-TR-SP-

DR-C-1001. This exercise demonstrates that when the CBC infrastructure works are implemented the proposed residential development will not impinge upon the CBC works and likewise the CBC works will impinge into the subject SHD scheme. Accordingly, in the submitted SHD scheme drawings it has been demonstrated that the design integrates appropriately with both (i) the existing external roads layout (as demonstrated in DBFL drawing 200060-DBFL-RD-ST-DR-C-1001) prior to CBC works being implemented, and (ii) following the implementation of the NTA's CBC infrastructure enhancements (as demonstrated in DBFL drawing 200060-DBFL-TR-SP-DR-C-1001).

### ***DCC Observation 12***

*"The applicant should clarify which areas are proposed to be in taken in charge by DCC"*

9.2.15 In reference to the scheme architects ***Site Layout – Taking in Charge Map*** (D1809.P04) drawing all internal streets and footpaths within the development are to remain within private ownership.

## **9.3 AN BORD PLEANALA TRANSPORTATION OBSERVATIONS**

9.3.1 A total of ten key observations were raised by ABP officers during the Stage 1 preplanning stage with the following (No. 9) considering the topic of traffic and transportation.

*A detailed Construction Traffic Management Plan should be prepared, and a revised Traffic and Transport Assessment should be submitted which sets out the cumulative impact of both the committed development and the proposed development on each of the two proposed access points.*

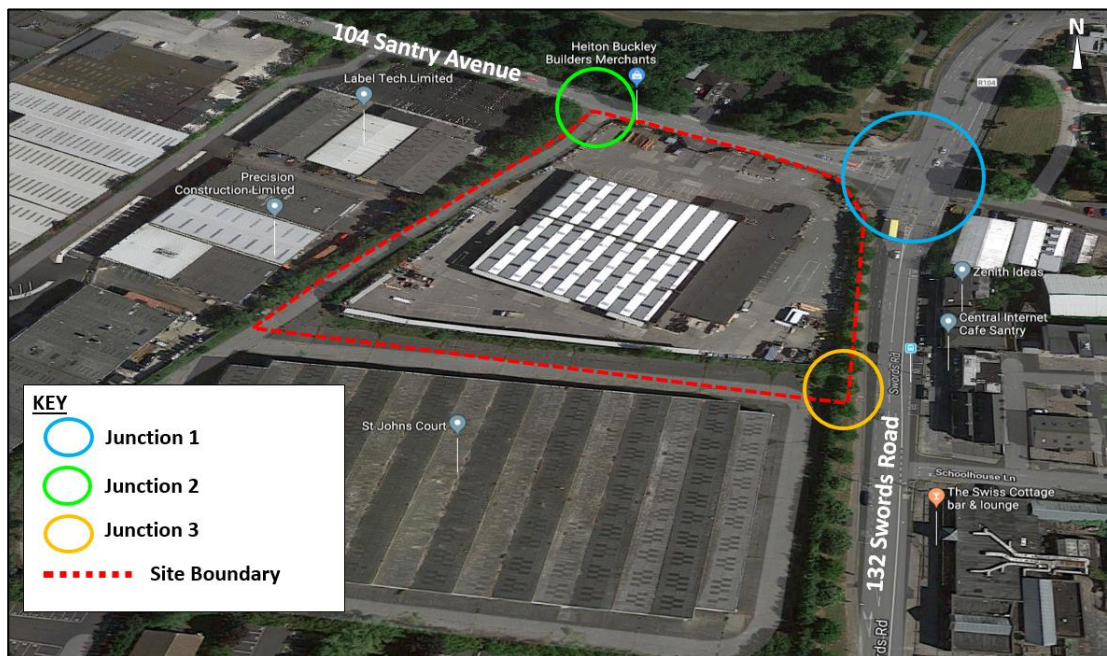
9.3.2 In response to the above request a Construction Traffic Management Plan has been compiled and forms part of the planning documentation submitted to the planning authorities.

9.3.3 DBFL have revisited and updated the Traffic and Transport Assessment further to the above observation. As detailed in Chapter 7, the network impact analysis includes the predicted traffic generated by the subject proposed redevelopment and the following committed / emerging developments;

- Santry Place mixed use development (DCC Planning Ref 2737/19) as located immediately to the south of the subject development and as accessed via the same two site access junctions on Santry Avenue and Swords Road corridors.
- Santry Place mixed use development (DCC Planning Ref 2543/21) being amendment to the previously permitted DCC Planning Ref 2737/19
- Swiss Cottage residential redevelopment scheme on Swords Road (Ref. ABP 303358-19) and
- Various redevelopment proposals in Omni Shopping Centre including Planning Ref. 2876/21, 2075/21, 3811/20 and 3767/18.

9.3.4 The cumulative impact of the proposed development and the committed developments on the following three junctions (illustrated in **Figure 9.1**) are outlined in **Table 9.1** and illustrated in **Figure 9.2**.

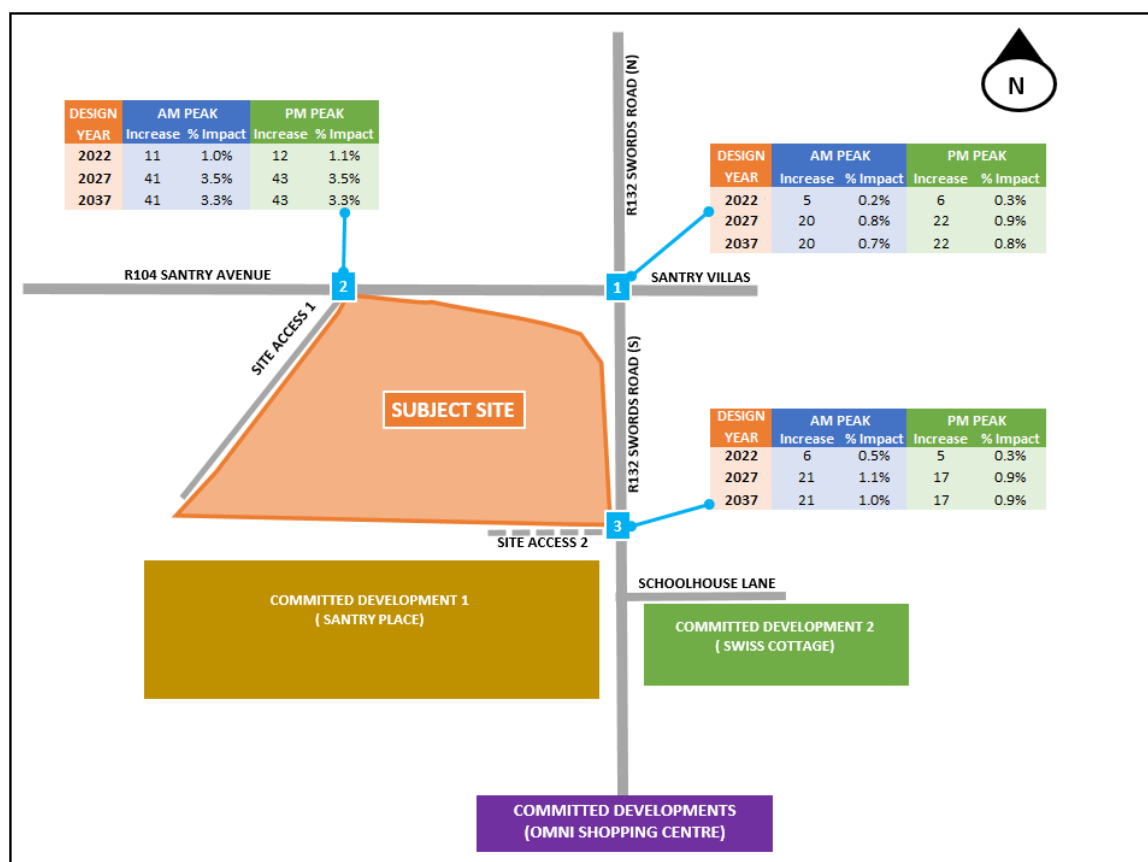
- **Junction 1** – Swords Road / Santry Avenue
- **Junction 2** – Site Access 1 / Santry Avenue
- **Junction 3** – Site Access 2 / Swords Road



**Figure 9.1: Junctions included in Analysis**

Ref	Junction	Period	Opening Year 2022	Design Year 2027	Design Year 2037
1	Swords Road / Santry Avenue	AM Peak	0.2%	0.8%	0.7%
		PM Peak	0.3%	0.9%	0.8%
2	Site Access 1/Santry Avenue	AM Peak	1%	3.5%	3.3%
		PM Peak	1.1%	3.5%	3.3%
3	Site Access 2/Swords Road	AM Peak	0.5%	1.1%	1%
		PM Peak	0.3%	0.9%	0.9%

**Table 9.1: Network Cumulative Impact**



**Figure 9.2: Network Cumulative Impact**

9.3.5 The cumulative impact predicted for all three junctions within all design years is considered to be insignificant and well below the 5% threshold for necessitating further more detailed operational analysis. However, for the purpose of robust analysis PICADY based assessments have been undertaken for both proposed priority-controlled site access junction's (i.e. Santry Avenue and Swords Road). The assessment established that both of these site access junctions will continue



to operate within acceptable operational parameters and with reserve capacity being recorded in all future design year peak hour scenarios.

## 10.0 SUMMARY AND CONCLUSION

### 10.1 OVERVIEW

- 10.1.1 DBFL Consulting Engineers have been commissioned by to compile a Traffic and Transport Assessment (TTA) for a residential dominated development on a brownfield site located along Santry Avenue, Dublin 9.
- 10.1.2 The proposals seek permission for the demolition of the existing on-site Chadwicks buildings, closure of the Chadwicks sites existing vehicle access on Santry Avenue and associated works; and the provision of 350 no. residential apartments (and residential amenity space), 5 no. small commercial / retail units (797.4m<sup>2</sup>) at ground floor level, and associated site development and landscaped works.
- 10.1.3 The purpose of this TTA was 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 the proposed residential development.
- 10.1.4 The analysis of the existing receiving environment has found the subject development site is located in a highly accessible areas in Dublin. Its unique characteristics include the following;
- The existing on-site premises (Chadwicks Builders Providers) already generates a number of vehicle trips through out the day which have been quantified as being in the region of 28 and 20 two-way vehicle movements during the weekdays AM and PM peak hour periods.
  - The site is ideally located to benefit from the existing and emerging Cycle Network Plan proposals envisioned by both DCC and the NTA.
  - A comprehensive range of high frequency bus services, operated by Dublin Bus and Go-Ahead along both Swords Rd 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 proposals. The site is located adjoining Radial Spine (A Spine bus services) of the BusConnects and

Core Bus Corridors (no. 2 Swords to/from City Centre) proposals. 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 public transport services which in turn may lead to an increase in the frequency of these services which further enhances their attractiveness.
- In reference to both DCC and the DHLPG guidelines an appropriate amount of on-site car parking (0.6 spaces per unit) is being provided as part of the scheme proposals in respect of the site accessibility credentials. This quantum of parking will ensure that no overspill of car parking onto the external local network will arise.
- The overall quantum of bicycle parking proposed (777 No.) on-site as part of the development proposals is higher the minimum requirements outlined within DCC development management standards (350 no.) and equates favourable with the New Apartment Guidelines requirements (781 No.).
- It is predicted that the proposed development will generate criteria 56 and 58 two-way vehicle trips during the weekday AM and PM Peak hour periods respectively. This equates to an additional 28 and 38 two-way vehicle trips per peak hour (over that currently generated by the existing on-site activities (Chadwick's Builders Providers).
- The assessment has considered the accumulative impact arising from the development on neighbouring key sites (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 predicted scale of impact at these three

junctions is found to be in the region of only 0.7% to 3.3% in the 2037 Design Year. The scale of impact during the peak hour periods at the Santry Ave / Swords Rd Junction is considered to be negligible when compared to that already generated by the existing Chadwicks operations.

- 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.
- An independent Road Safety Audit (reported in a separate dedicated report but included the planning documentation submitted with the SHD planning application) has been undertaken with appropriate mitigation measures identified to ensure that any road safety issues arising from the scheme are addressed fully in an appropriate manner.

## 10.2 CONCLUSION

- 10.2.1 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 (approximately only 1 additional trip every two minutes on average during both peak hour periods) and the information and network analysis summarised in the above report which demonstrate that the proposed site access junction on Santry Avenue is predicted to be operating within capacity in each future design year scenario.
- 10.2.2 It is concluded that the proposals represent a sustainable and practical approach to development on the subject lands and there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed residential development.
- 10.2.3 As part of the identified mitigation strategy a mobility management plan (MMP) has also been provided for the development with the objective of promoting sustainable travel practices for all residents and visitors at the proposed residential development.

## **APPENDICES**



## **APPENDIX A**

### Public Transport Bus Routes

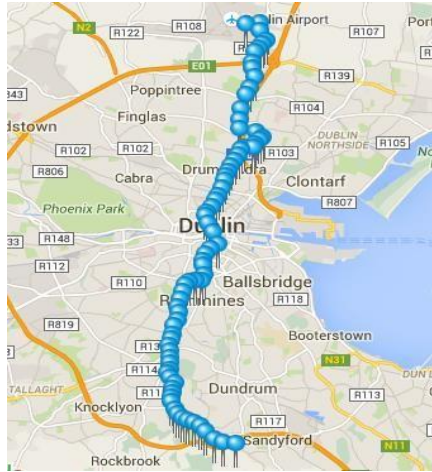


Figure A1 Dublin Bus Route 16/16c

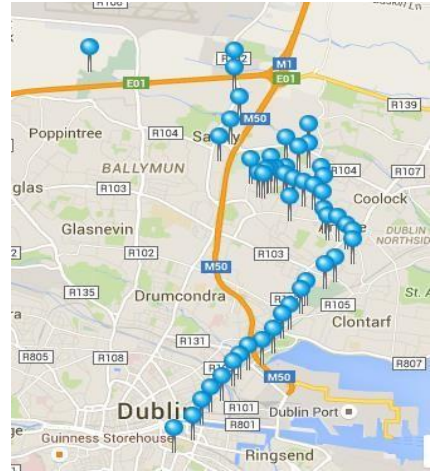


Figure A2 Dublin Bus Route 27b



Figure A3 Dublin Bus Route 33

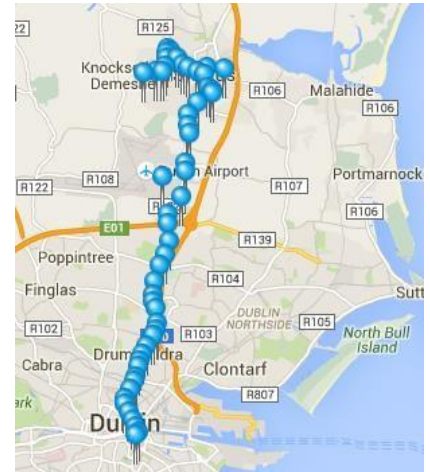


Figure A4 Dublin Bus Route 41



Figure A5 Dublin Bus Route 41a/b

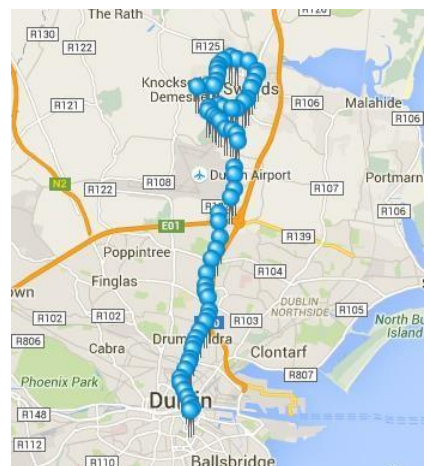
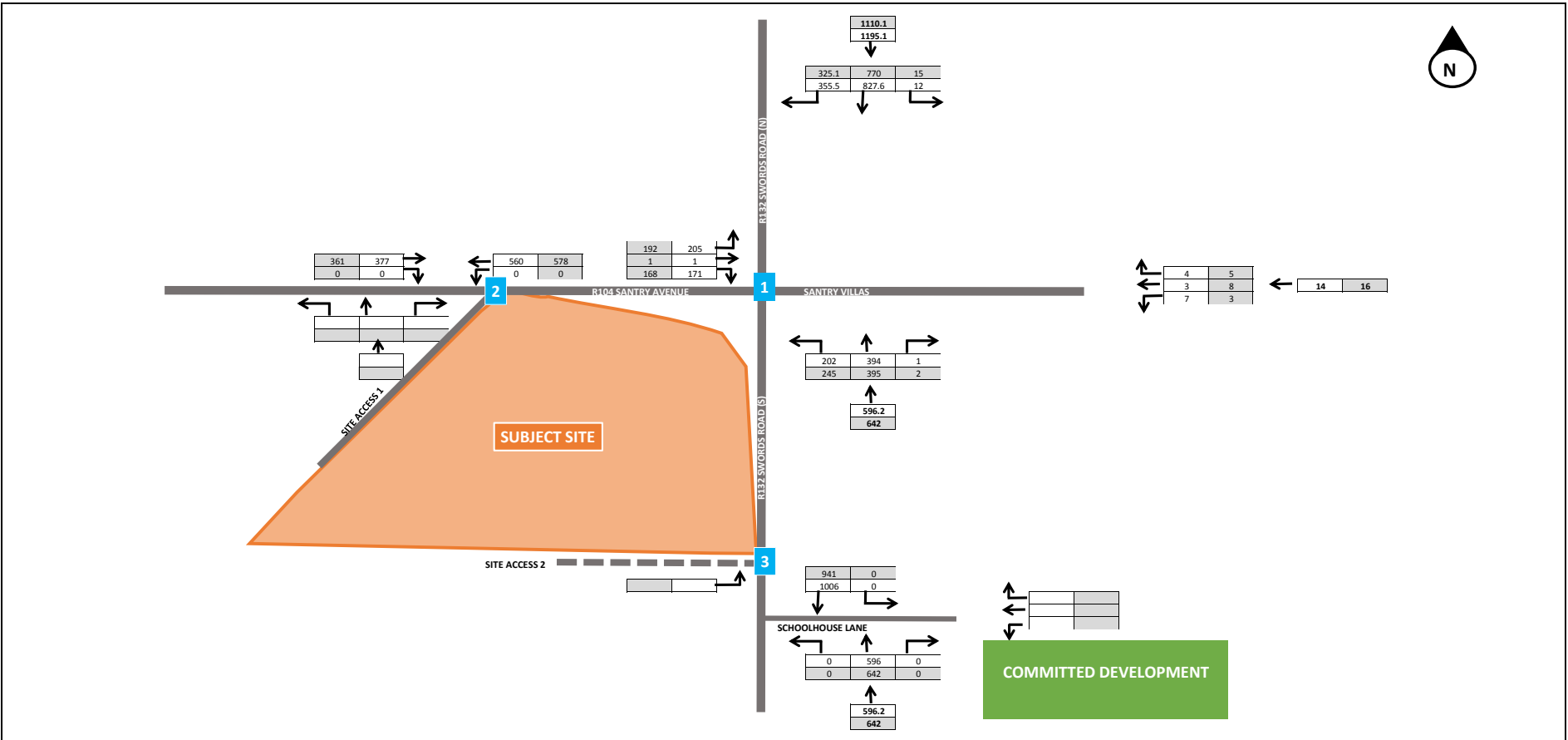


Figure A6 Dublin Bus Route 41c

## **APPENDIX B**

### Network Flow Diagrams



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email: info@dbfl.ie  
website: www.dbfl.ie

**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Base Flow 2020

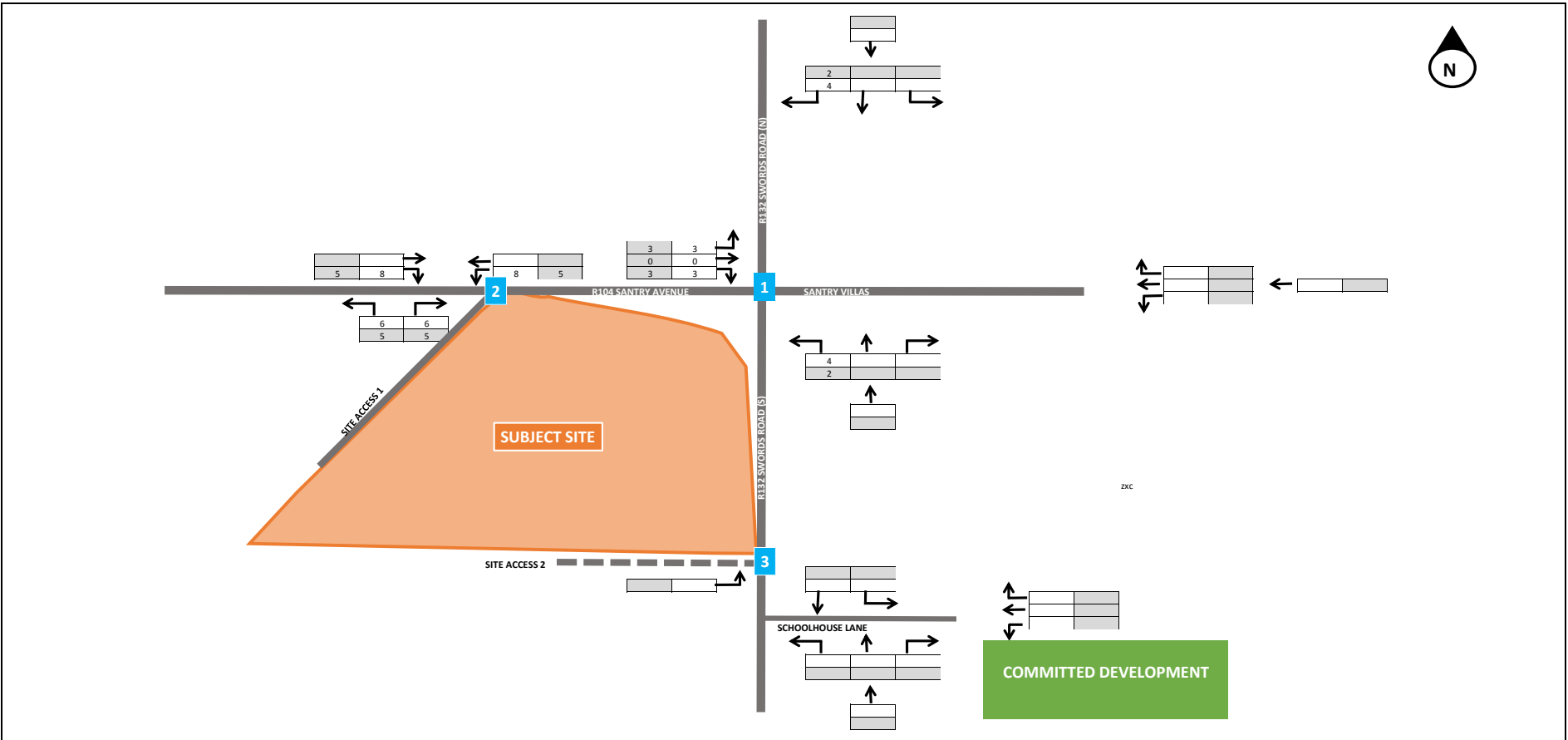
**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b>	<b>Ckd:</b>	<b>Date:</b>
SAS	TJ	06/07/2020

**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b>	<b>Rev:</b>
1	-



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**Project :**  
Proposed Residential Development at  
Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles  
Existing Chadwicks Building Trips

**Key:**

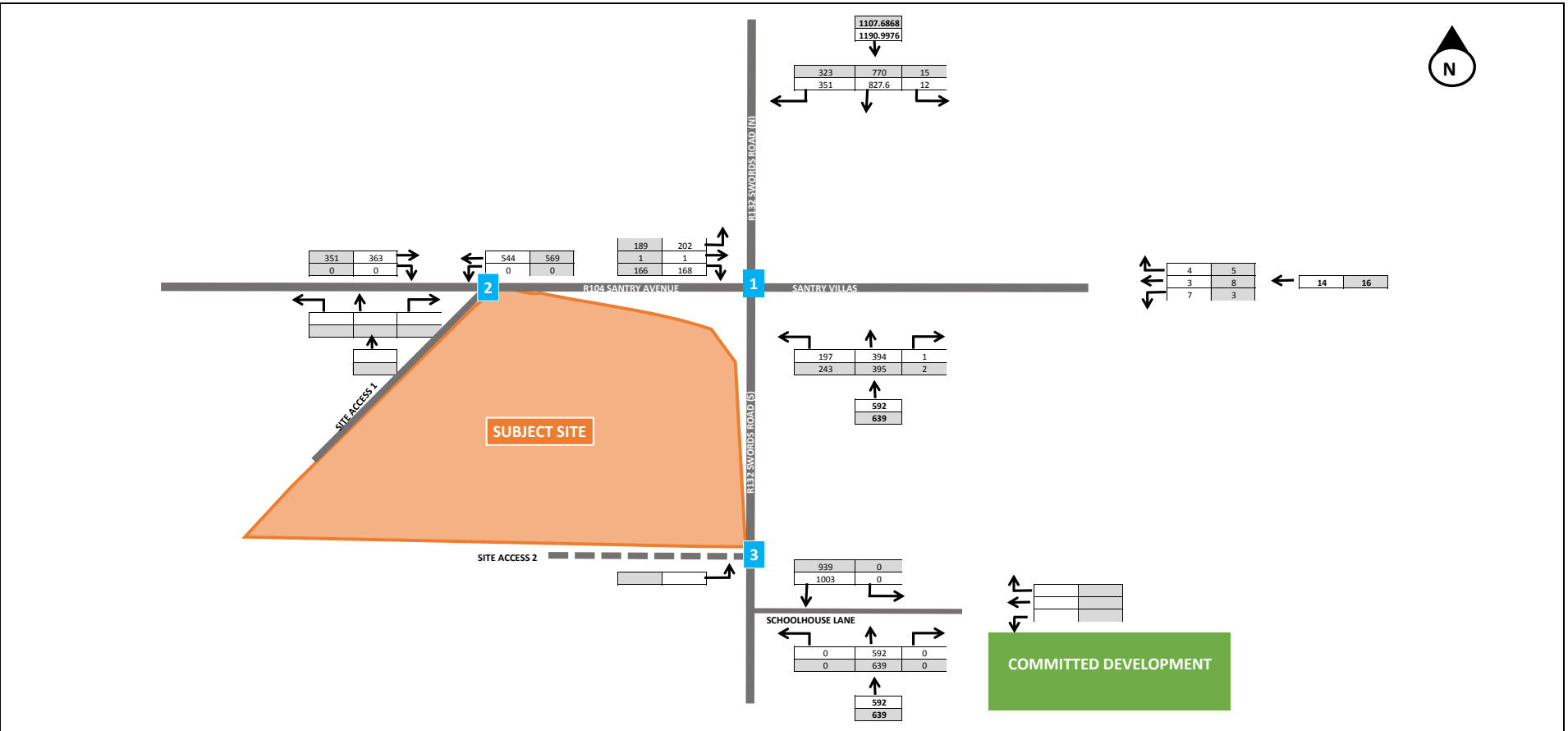
	AM Peak Hour (08:00 to 09:00)
	PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 1.1	<b>Rev:</b> -
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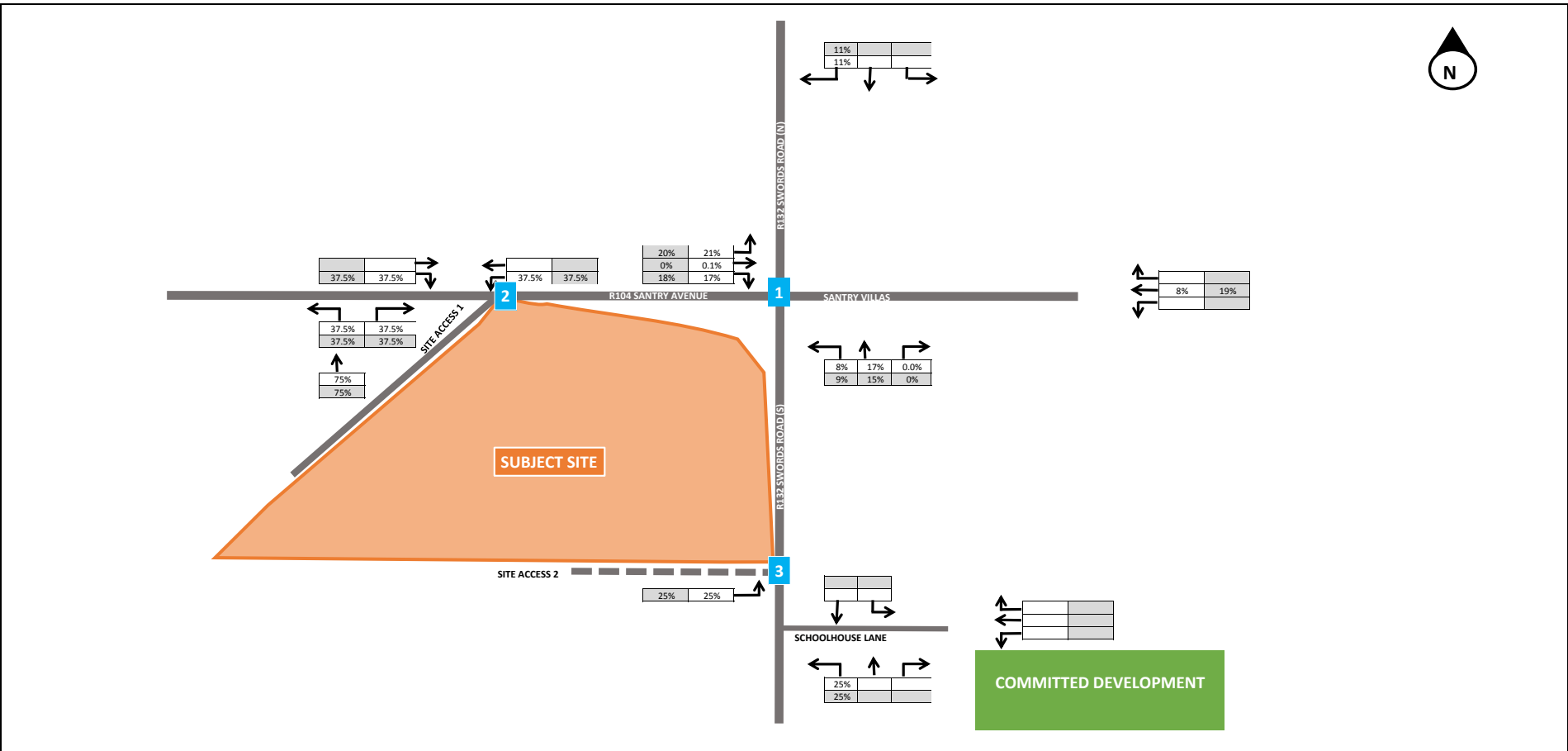
**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9


**DRG. Title :**  
Network Traffic Flows - Vehicles Adjusted Base Flow 2020

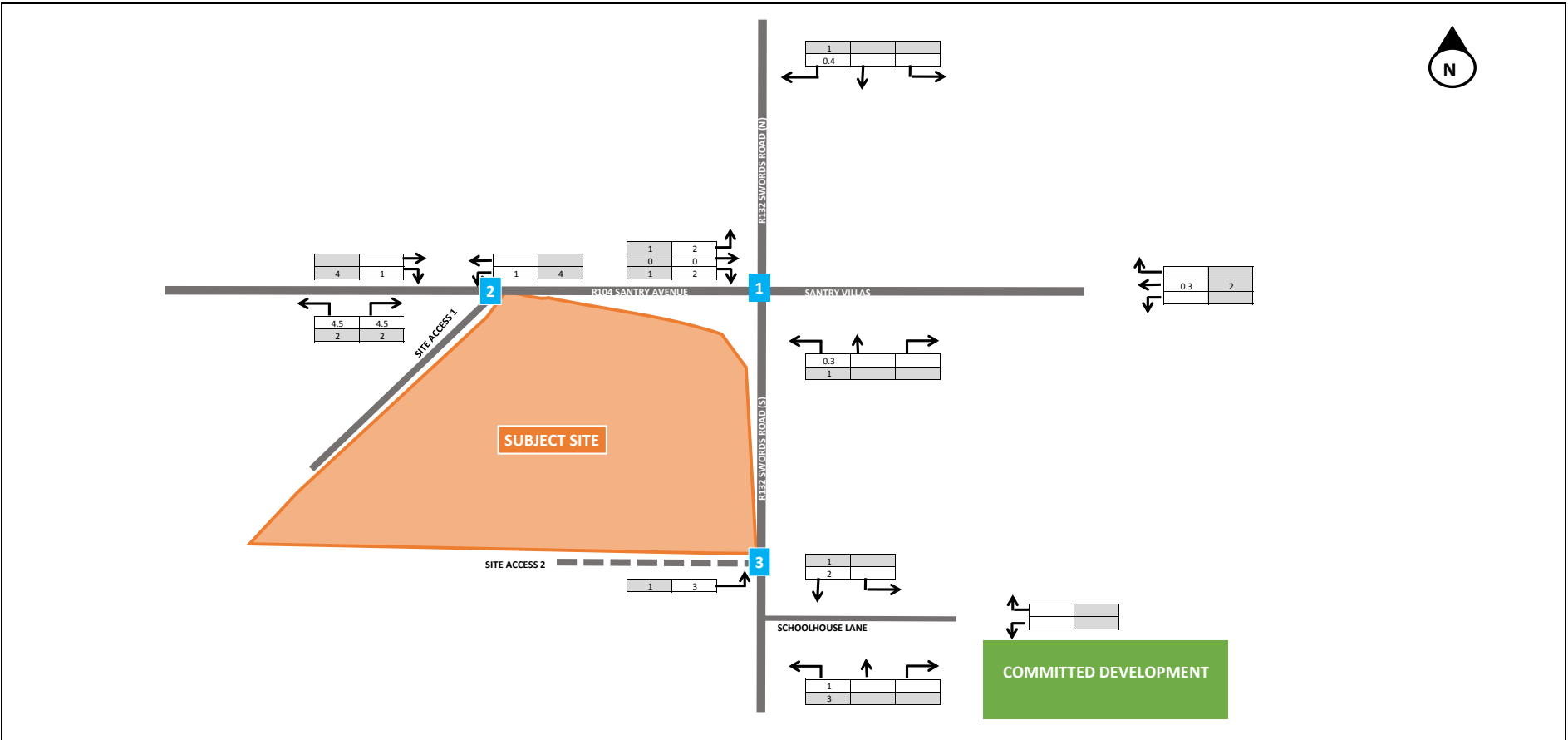
**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
<b>Ref:</b> p200060\calcs\excel\Traffic\Traffic Model01		
<b>Figure:</b> 1a		<b>Rev:</b> -



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	AM Peak Hour (08:00 to 09:00)							
	PM Peak Hour (17:00 to 18:00)							
<p><b>DRG. Title :</b> Network Traffic Flows - Vehicles Trip Distribution</p>						<p><b>Ref:</b> p200060\calcs\excel\Traffic\ Traffic Model01</p>		
				<p><b>Figure:</b> 3</p>	<p><b>Rev:</b> -</p>			



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**Project :**  
Proposed Residential Development at  
Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles  
Proposed Development Trips-Phase 1

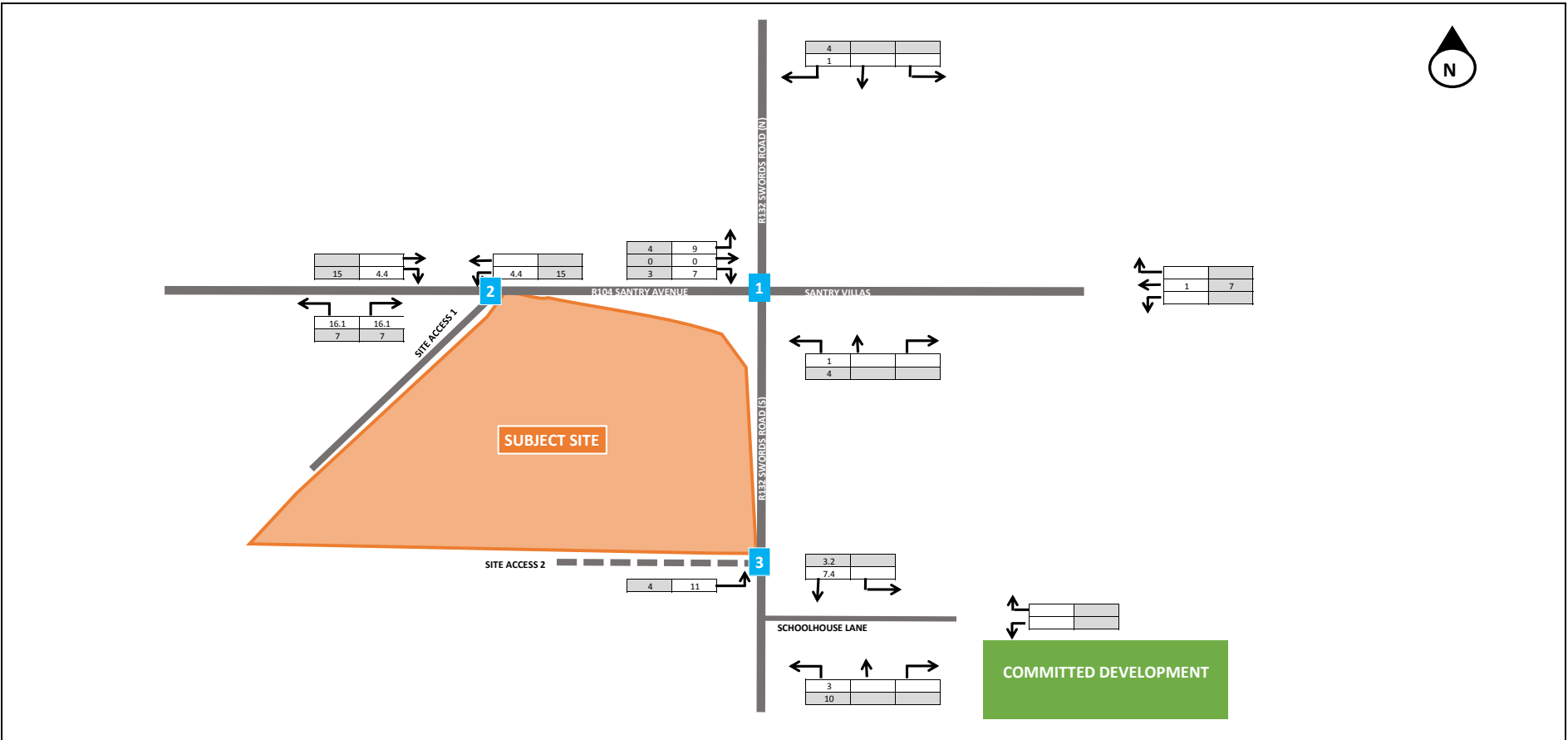
**Key:**

	AM Peak Hour (08:00 to 09:00)
	PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 7	<b>Rev:</b> -
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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Proposed Development Trips- Phase 2

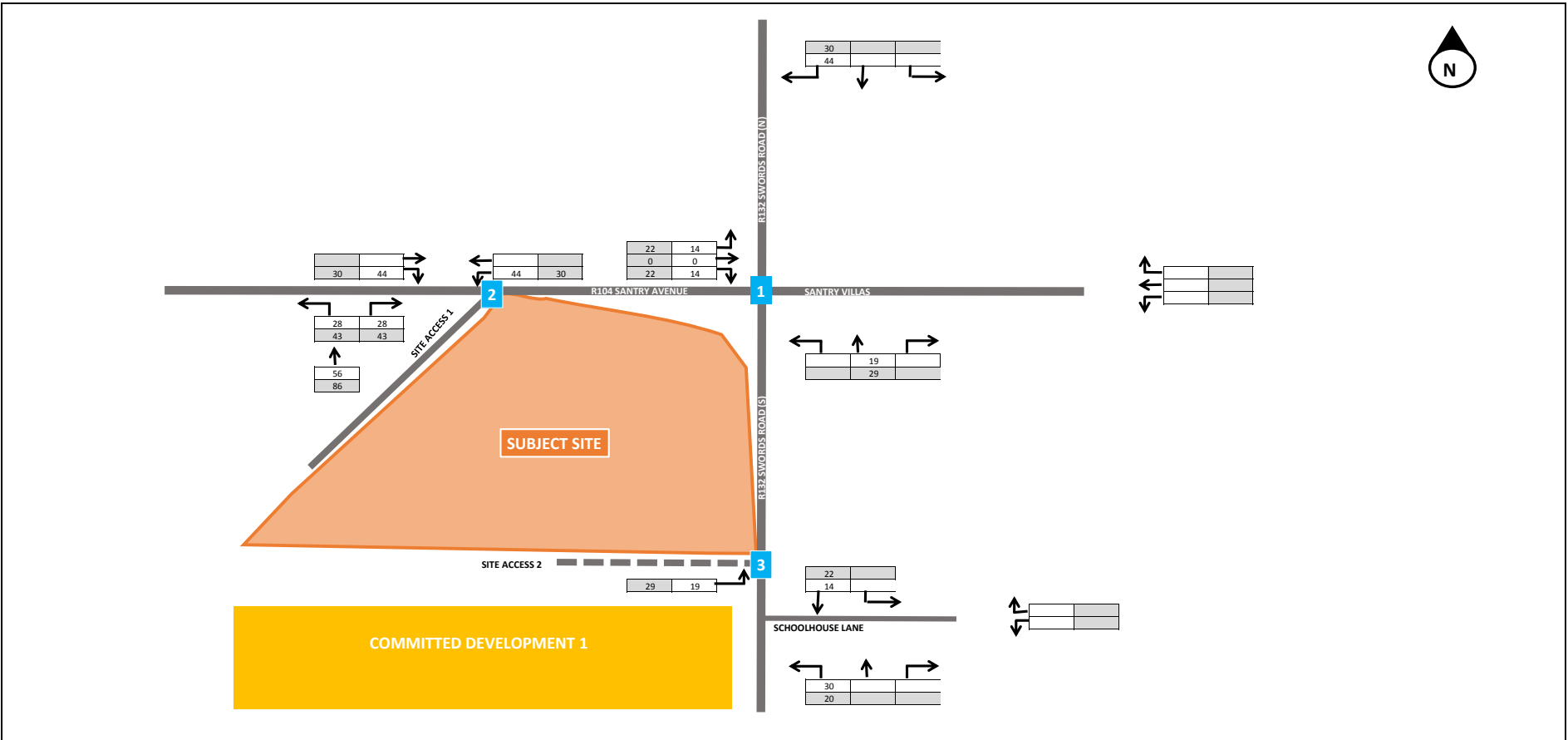
**Key:**

AM Peak Hour (08:00 to 09:00)
PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 7	<b>Rev:</b> -
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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Committed Development Trips (Santry Place)

**Key:**

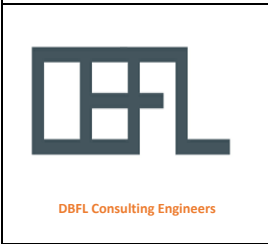
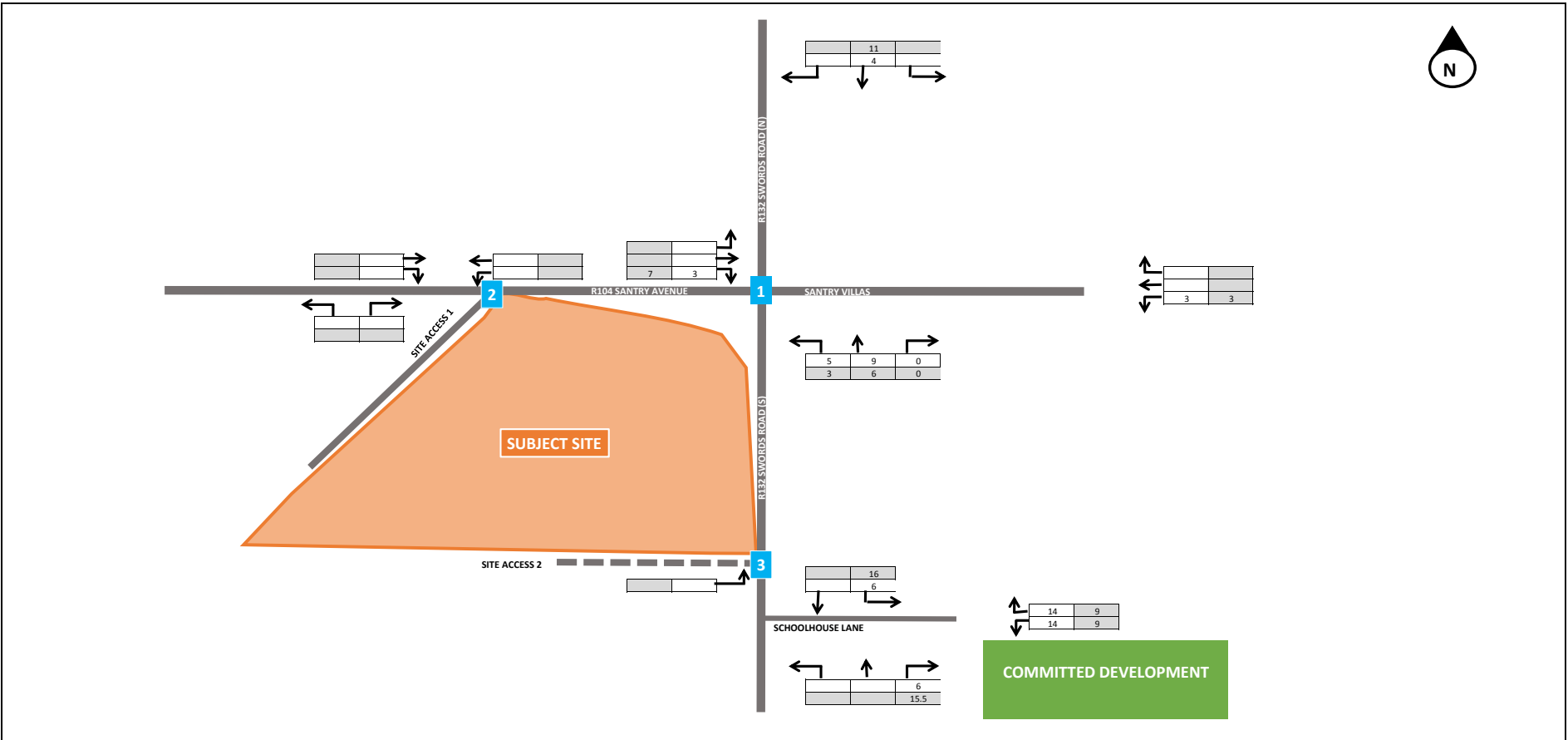
Light Grey Box	AM Peak Hour (08:00 to 09:00)
Dark Grey Box	PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 5	<b>Rev:</b> -
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**Project :**  
Proposed Residential Development at  
Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles  
Committed Development Trips  
(Swiss Cottages)

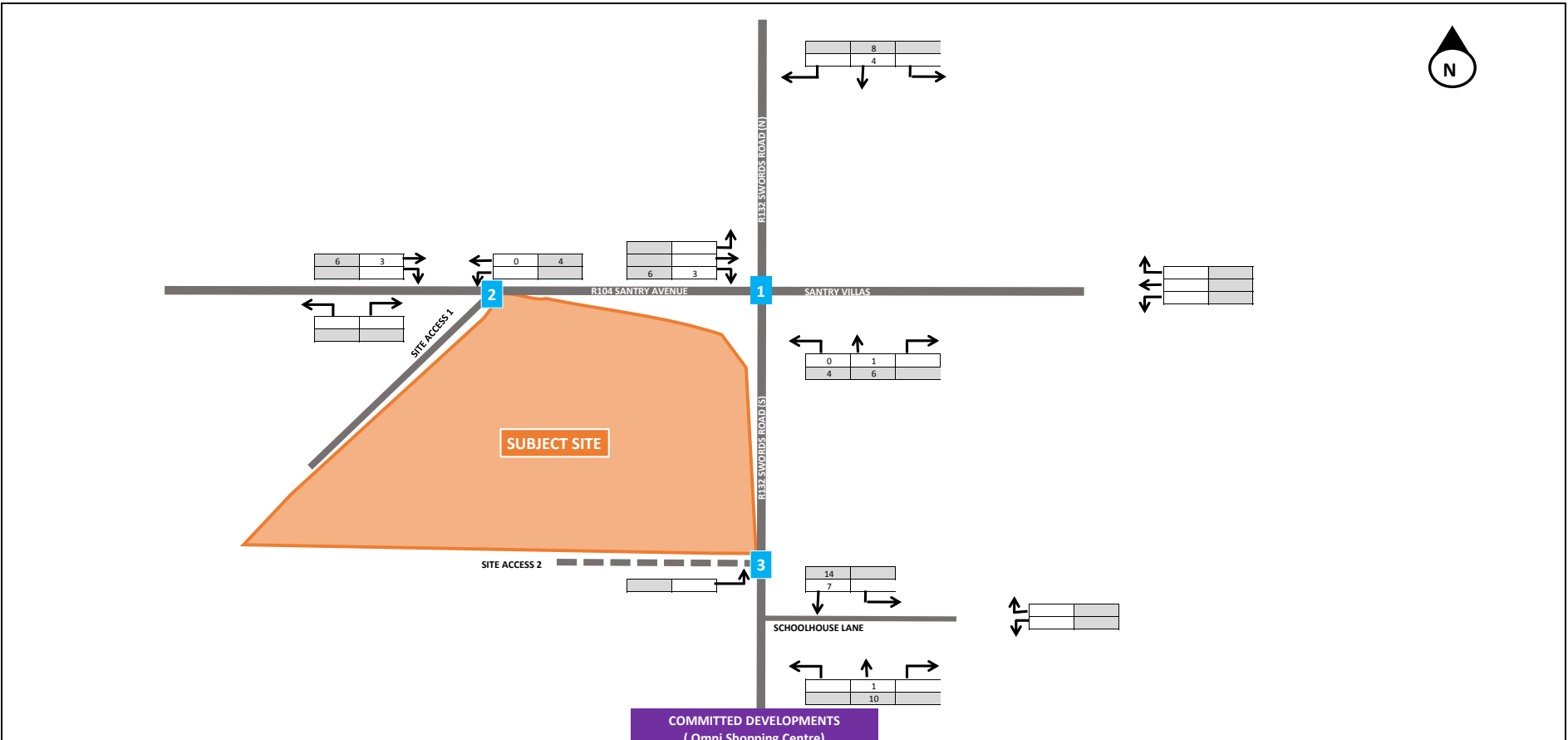
**Key:**

	AM Peak Hour (08:00 to 09:00)
	PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 6	<b>Rev:</b> -
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**Project :**  
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Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles  
Committed Development Trips  
(Omni Shopping Centre)

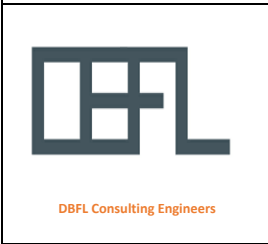
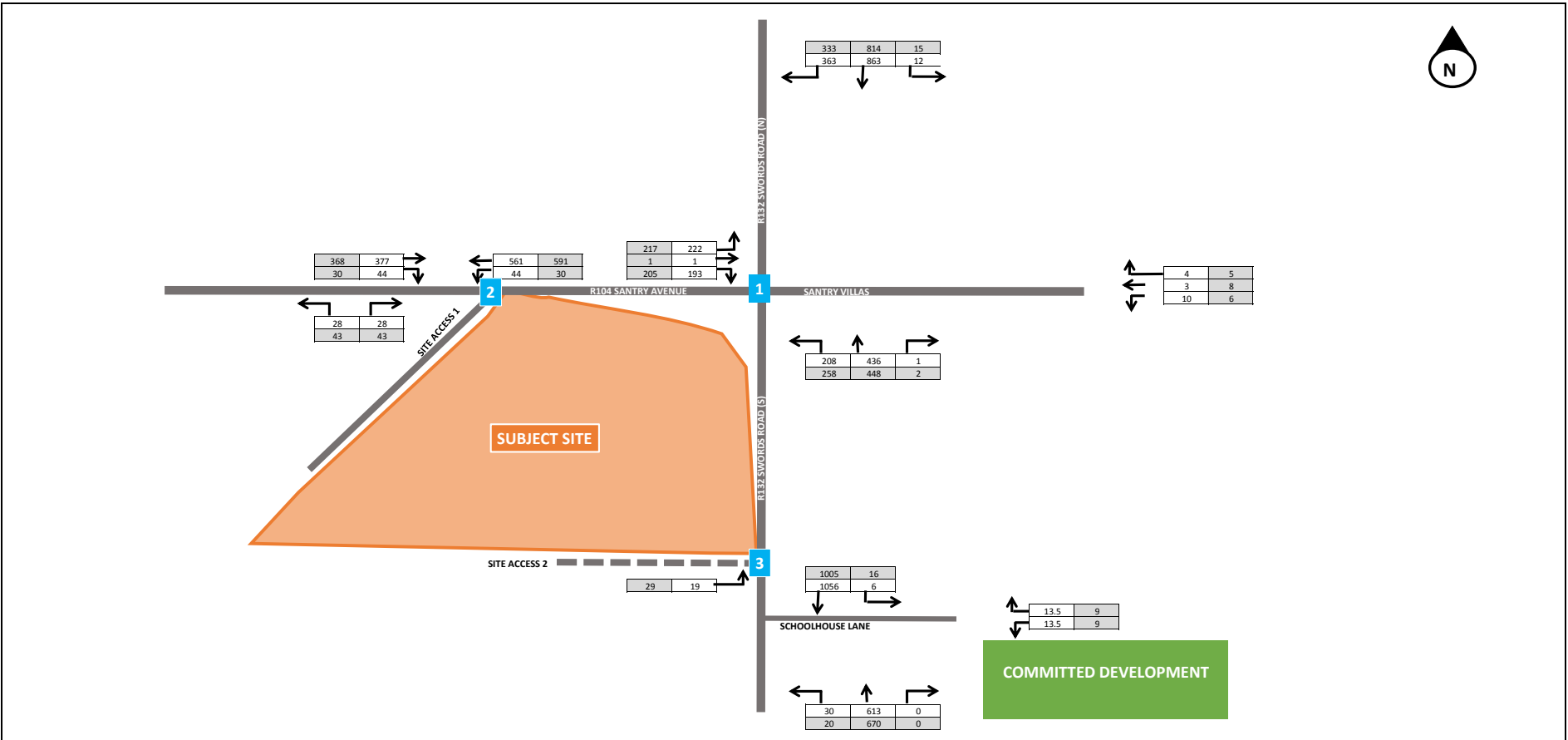
**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 6	<b>Rev:</b> -
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 website: www.dbfl.ie

**Project :**  
 Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
 Network Traffic Flows - Vehicles Do Nothing 2022

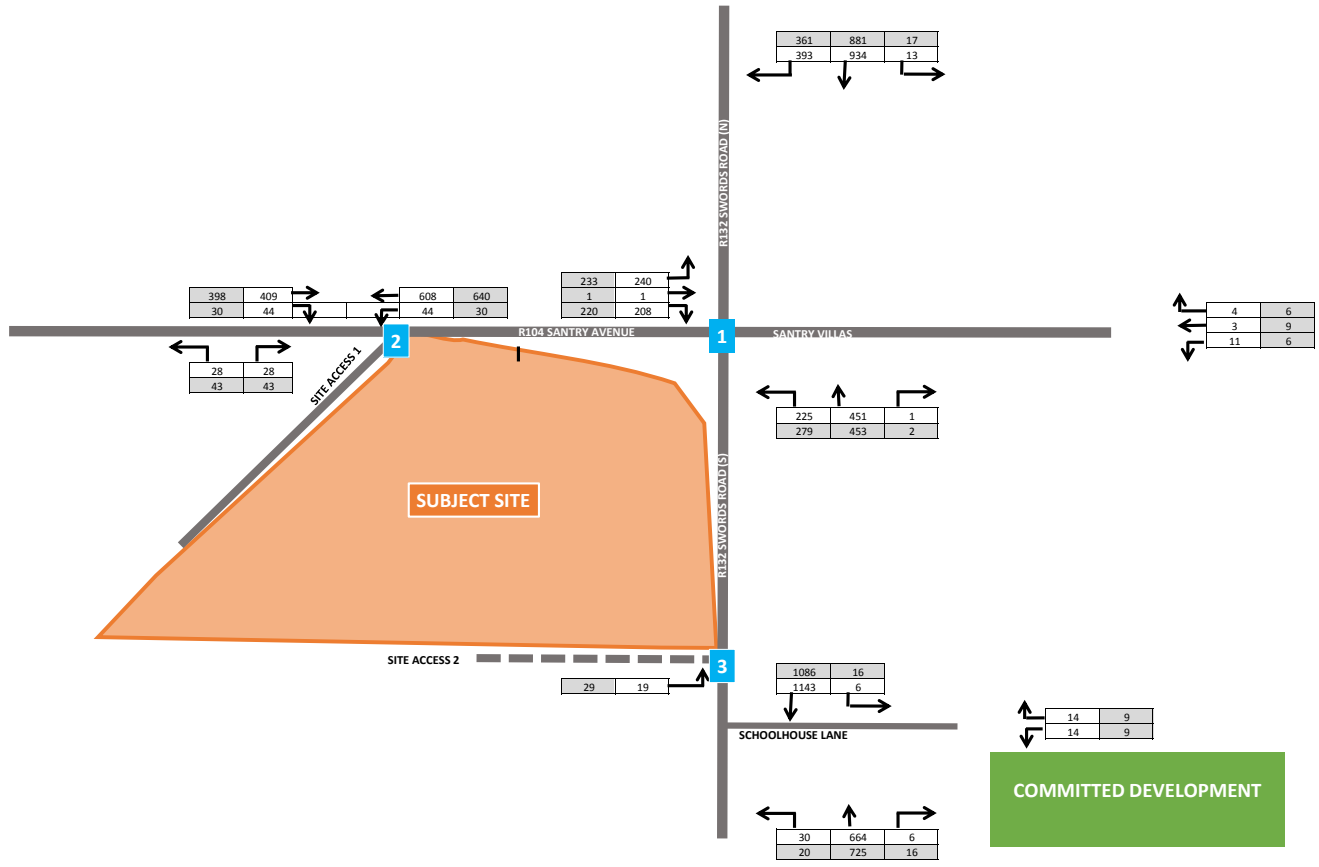
**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (17:00 to 18:00)

**Growth Rate: 1.0327**

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
<b>Ref:</b> p200060\calcs\excel\Traffic\ Traffic Model01		

<b>Figure:</b> 8	<b>Rev:</b> -
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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Do Nothing 2027

**Key:**

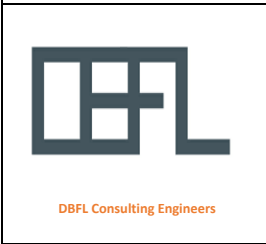
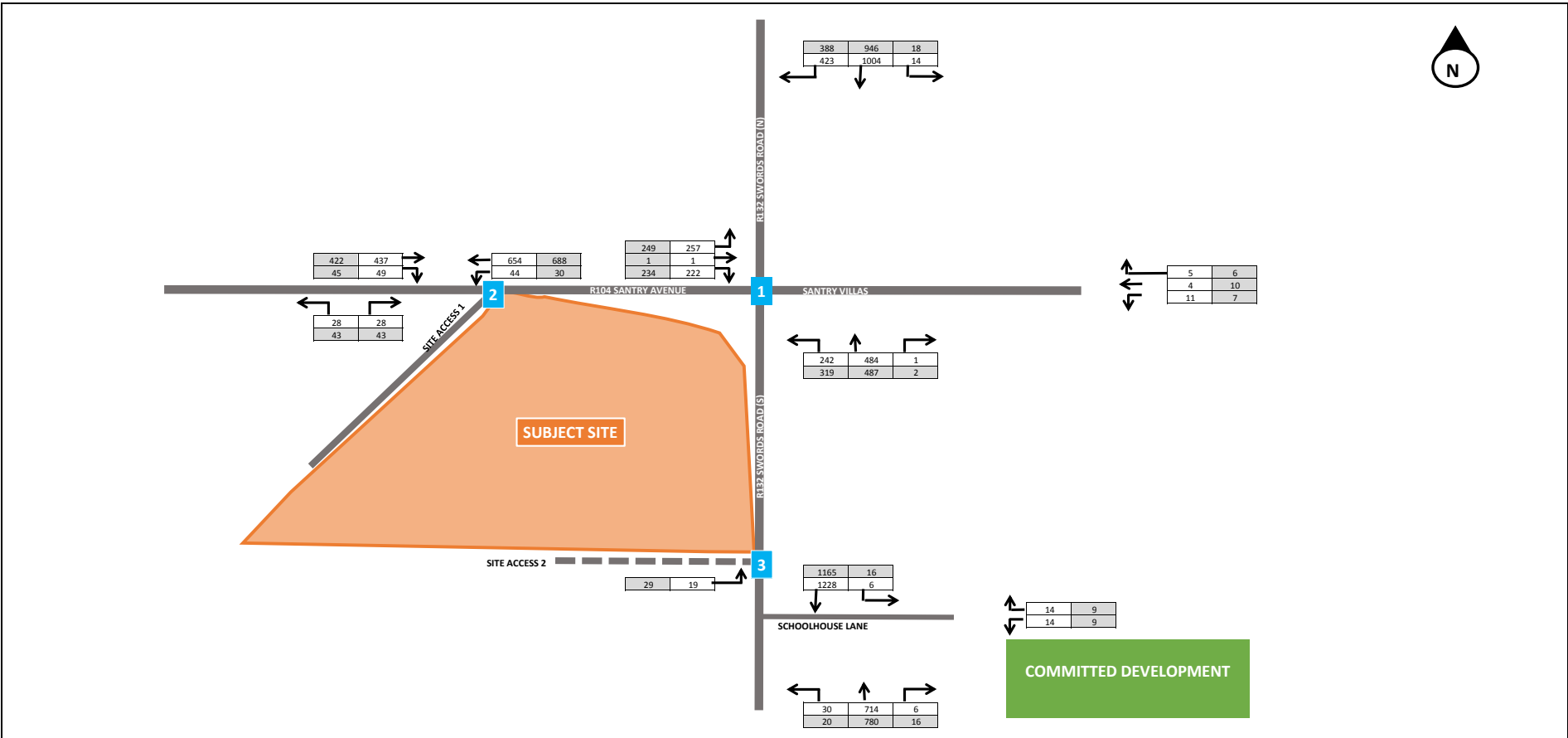
Light Grey	AM Peak Hour (08:00 to 09:00)
Dark Grey	PM Peak Hour (16:00 to 18:00)

**Growth Rate: 1.1191**

**Dwn:** SAS    **Ckd:** TJ    **Date:** 06/07/2020

**Ref:**  
p200060\calcs\excel\Traffic\Traffic Model01

**Figure:** 10    **Rev:** -



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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

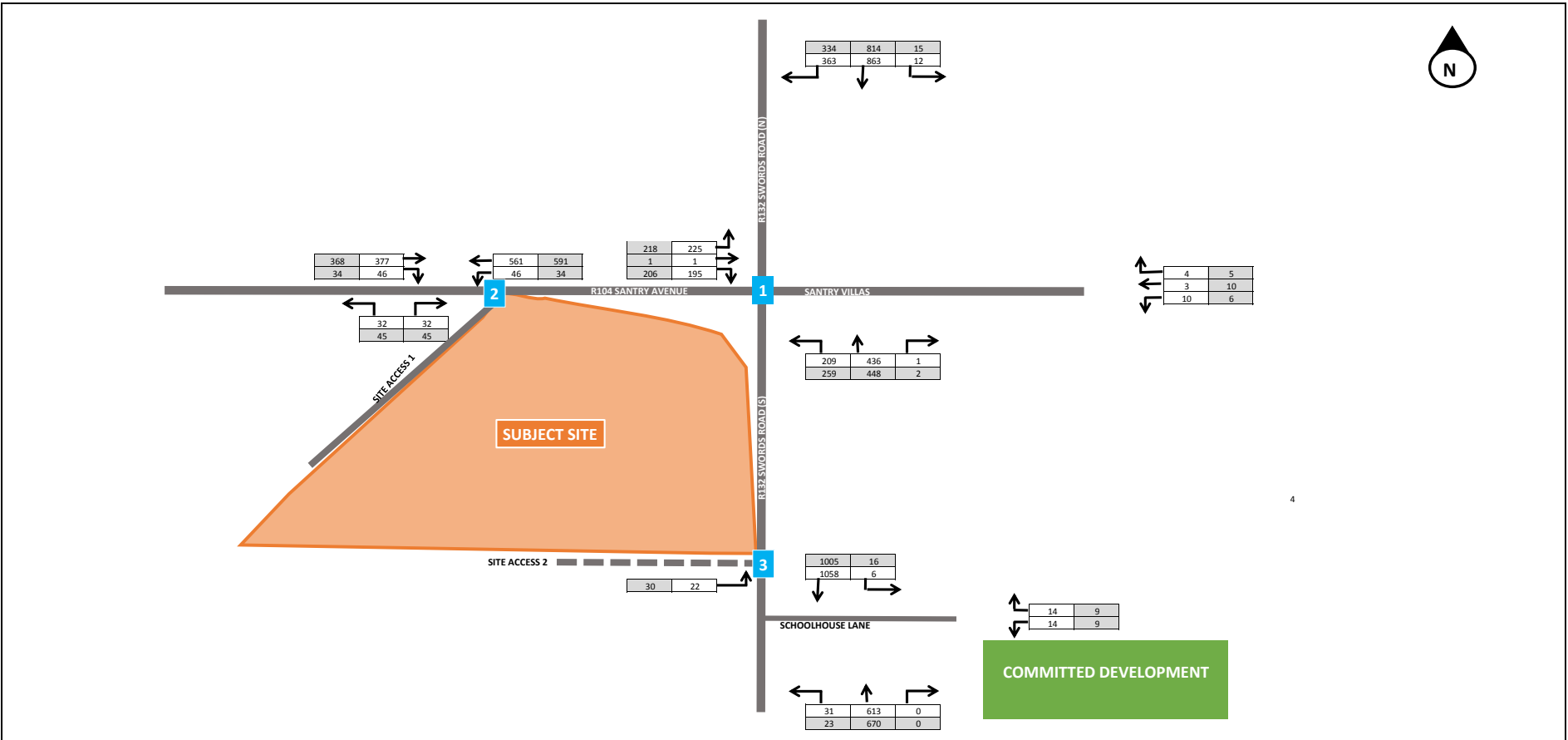

**DRG. Title :**  
Network Traffic Flows - Vehicles Do Nothing 2037

**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (16:00 to 18:00)

**Growth Rate: 1.204**

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
<b>Ref:</b> p200060\calcs\excel\Traffic\ Traffic Model01		
<b>Figure:</b> <b>12</b>	<b>Rev:</b> -	

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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Do Something 2022

**Key:**

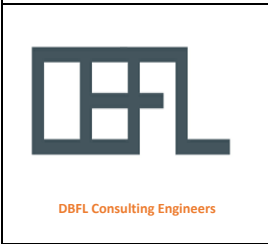
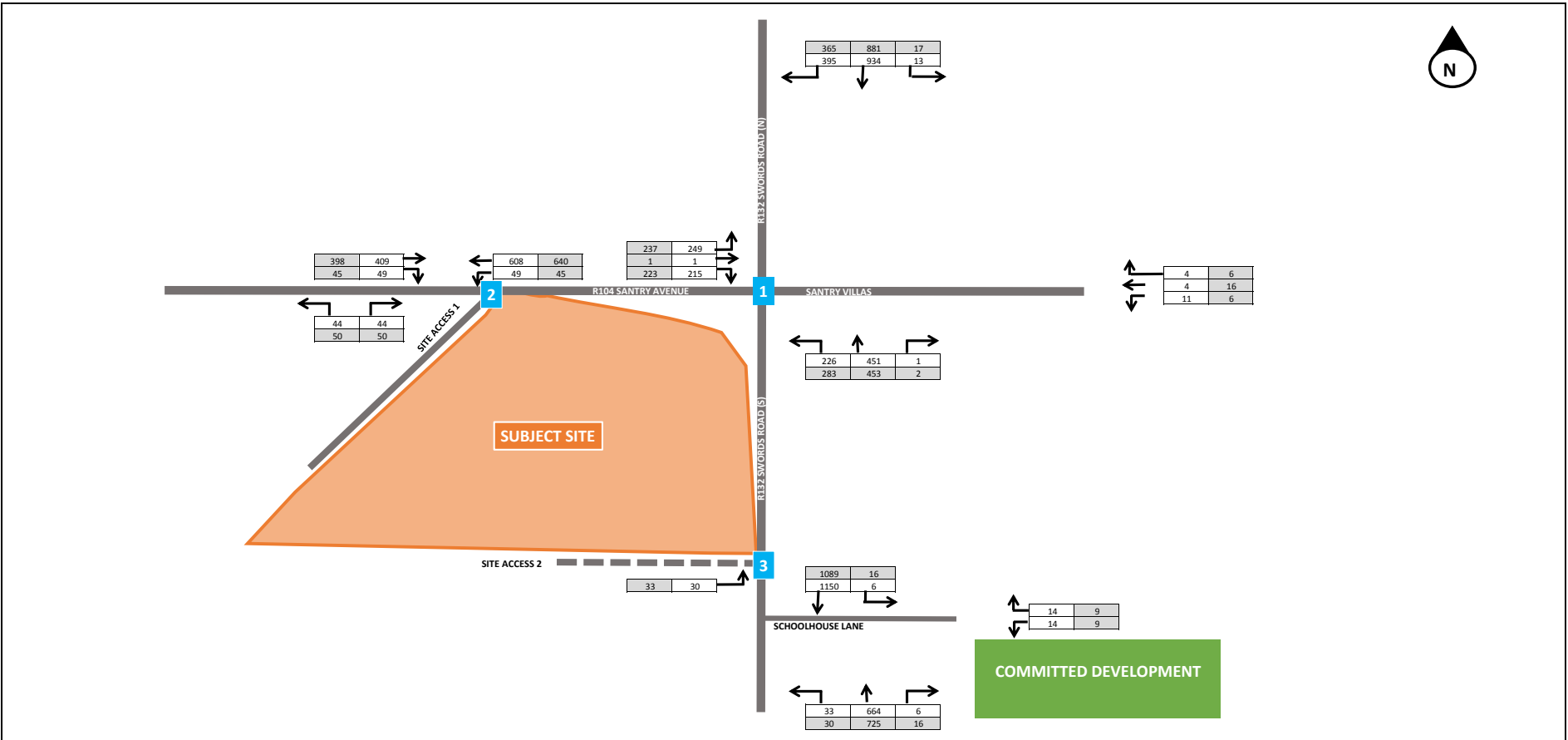
- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (16:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 9	<b>Rev:</b> -
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website: www.dbfl.ie

**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

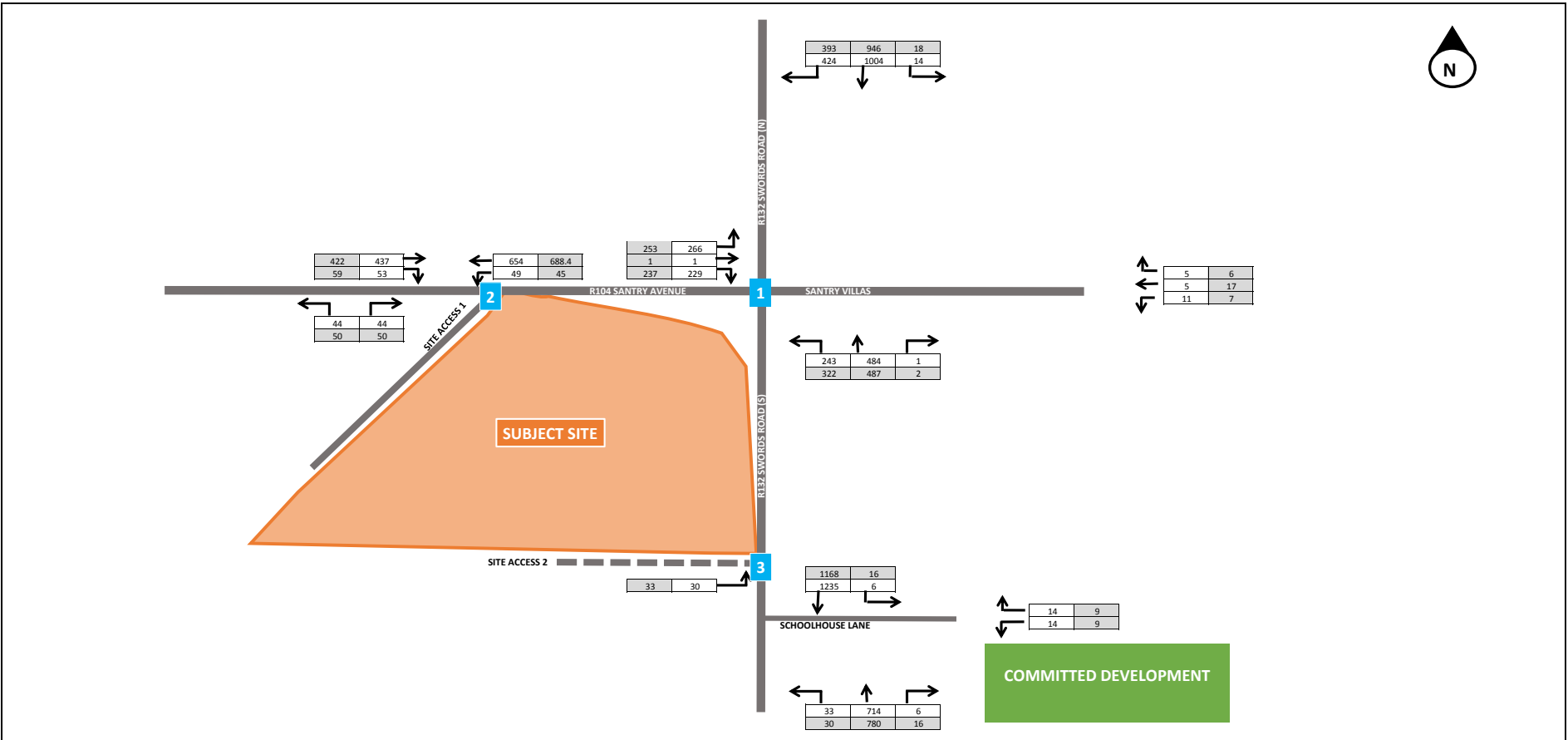
**DRG. Title :**  
Network Traffic Flows - Vehicles Do Something 2027

**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (16:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
<b>Ref:</b> p200060\calcs\excel\Traffic\ Traffic Model01		

<b>Figure:</b> <b>11</b>	<b>Rev:</b> -
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**Project :**  
Proposed Residential Development at Santry Avenue, Santry, Dublin 9

**DRG. Title :**  
Network Traffic Flows - Vehicles Do Something 2037

**Key:**

- AM Peak Hour (08:00 to 09:00)
- PM Peak Hour (16:00 to 18:00)

<b>Dwn:</b> SAS	<b>Ckd:</b> TJ	<b>Date:</b> 06/07/2020
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**Ref:**  
p200060\calcs\excel\Traffic\ Traffic Model01

<b>Figure:</b> 13	<b>Rev:</b> -
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**NETWORK IMPACT**

**Junction 1**

PERIOD	YEAR	DN	DS	Difference	Percentage Impact
AM	2022	2317	2323	5	0.2%
	2027	2486	2505	20	0.8%
	2037	2669	2689	20	0.7%

PERIOD	YEAR	DN	DS	Difference	Impact
PM	2022	2314	2320	6	0.3%
	2027	2468	2490	22	0.9%
	2037	2666	2688	22	0.8%

**Junction 2**

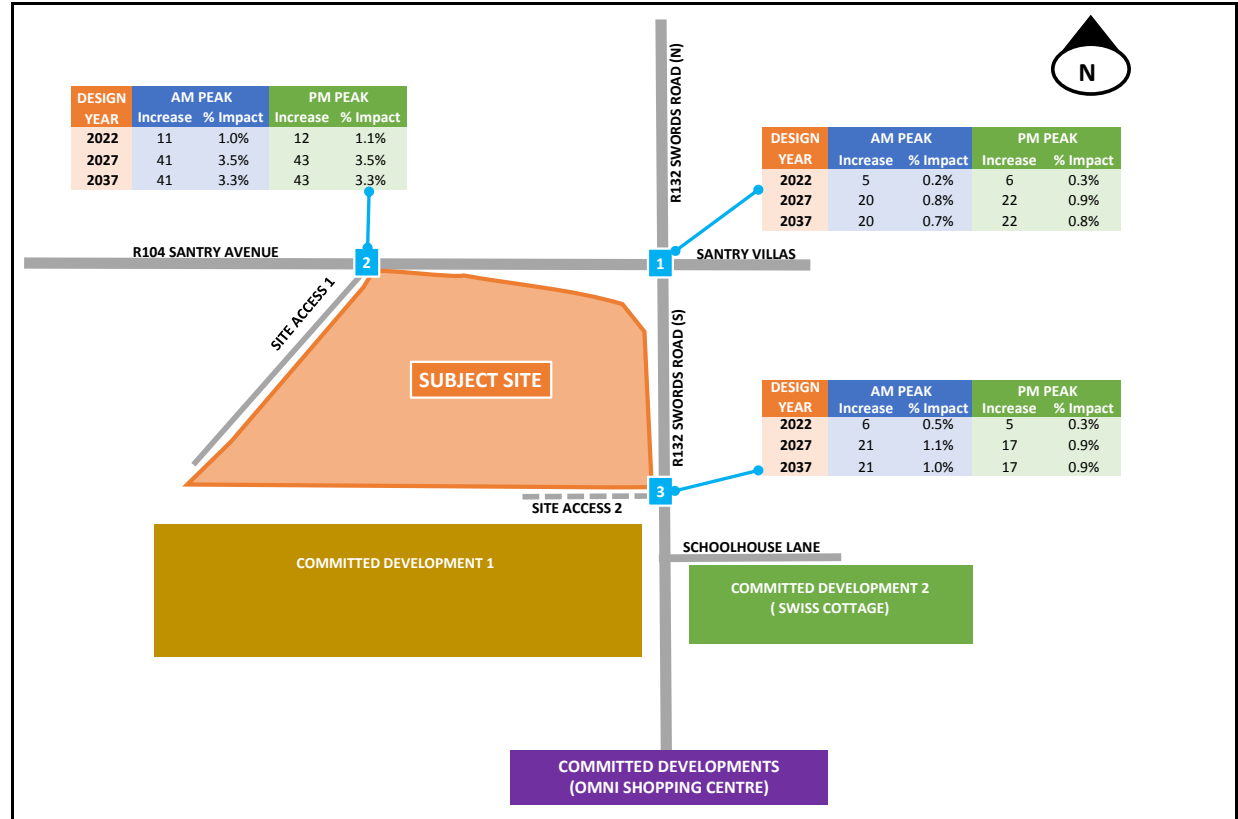
PERIOD	YEAR	DN	DS	Difference	Percentage Impact
AM	2022	1083	1095	11	1.0%
	2027	1162	1203	41	3.5%
	2037	1240	1281	41	3.3%

PERIOD	YEAR	DN	DS	Difference	Impact
PM	2022	1105	1117	12	1.1%
	2027	1184	1227	43	3.5%
	2037	1271	1314	43	3.3%

**Junction 3**

PERIOD	YEAR	DN	DS	Difference	Percentage Impact
AM	2022	1738	1744	6	0.5%
	2027	1875	1897	21	1.1%
	2037	2010	2031	21	1.0%

PERIOD	YEAR	DN	DS	Difference	Impact
PM	2022	1749	1753	5	0.3%
	2027	1885	1902	17	0.9%
	2037	2018	2036	17	0.9%



## **APPENDIX C**

TRICS Outputs

Calculation Reference: AUDIT-638801-200522-0544

## TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	2 days
09	NORTH	
	CB CUMBRIA	3 days
10	WALES	
	CO CONWY	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	SA SOUTH AYRSHIRE	1 days
	SR STIRLING	2 days
12	CONNAUGHT	
	GA GALWAY	1 days
13	MUNSTER	
	WA WATERFORD	1 days
14	LEINSTER	
	LU LOUTH	3 days
15	GREATER DUBLIN	
	DL DUBLIN	6 days
16	ULSTER (REPUBLIC OF IRELAND)	
	MG MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	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: 9 to 184 (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: 01/01/12 to 25/09/19

*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	5 days
Tuesday	12 days
Wednesday	7 days
Thursday	5 days
Friday	3 days

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

Selected survey types:

Manual count	32 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 undertaken using machines.*

Selected Locations:

Town Centre	1
Edge of Town Centre	11
Suburban Area (PPS6 Out of Centre)	15
Edge of Town	3
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:

Development Zone	2
Residential Zone	18
Built-Up Zone	5
No Sub Category	7

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

## Secondary Filtering selection:

Use Class:

C3 32 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*



Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	7 days
15,001 to 20,000	4 days
20,001 to 25,000	5 days
25,001 to 50,000	10 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	4 days
50,001 to 75,000	8 days
75,001 to 100,000	3 days
125,001 to 250,000	2 days
250,001 to 500,000	6 days
500,001 or More	7 days

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

Car ownership within 5 miles:

0.6 to 1.0	11 days
1.1 to 1.5	21 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	32 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	32 days
-----------------	---------

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



LIST OF SITES relevant to selection parameters (Cont.)

9	DL-03-C-13 BLOCK OF FLATS SANDYFORD ROAD DUBLIN		DUBLIN
	Neighbourhood Centre (PPS6 Local Centre) Built-Up Zone Total No of Dwellings: 52 <i>Survey date: TUESDAY 10/09/13</i>		<i>Survey Type: MANUAL</i>
10	DL-03-C-14 BLOCKS OF FLATS BALLINTEER ROAD DUBLIN DUNDRUM		DUBLIN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 140 <i>Survey date: TUESDAY 10/09/13</i>		<i>Survey Type: MANUAL</i>
11	DL-03-C-15 BLOCKS OF FLATS MONKSTOWN ROAD DUBLIN MONKSTOWN		DUBLIN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 20 <i>Survey date: WEDNESDAY 01/10/14</i>		<i>Survey Type: MANUAL</i>
12	DL-03-C-16 BLOCKS OF FLATS BOTANIC AVENUE DUBLIN DRUMCONDRA		DUBLIN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 31 <i>Survey date: TUESDAY 22/11/16</i>		<i>Survey Type: MANUAL</i>
13	DS-03-C-03 BLOCKS OF FLATS CAESAR STREET DERBY		DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 30 <i>Survey date: WEDNESDAY 25/09/19</i>		<i>Survey Type: MANUAL</i>
14	EB-03-C-01 BLOCKS OF FLATS MYRESIDE ROAD EDINBURGH CRAIGLOCKHART		CITY OF EDINBURGH
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 <i>Survey date: TUESDAY 26/05/15</i>		<i>Survey Type: MANUAL</i>
15	GA-03-C-01 FLATS BALLYLOUGHANE ROAD GALWAY		GALWAY
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings: 34 <i>Survey date: THURSDAY 31/10/13</i>		<i>Survey Type: MANUAL</i>
16	LU-03-C-01 BLOCKS OF FLATS DONORE ROAD DROGHEDA		LOUTH
	Edge of Town Centre Residential Zone Total No of Dwellings: 52 <i>Survey date: THURSDAY 12/09/13</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

17	LU-03-C-02 NICHOLAS STREET DUNDALK	BLOCK OF FLATS		LOUTH
	Edge of Town Centre Residential Zone Total No of Dwellings:		33	
	<i>Survey date: MONDAY</i>		<i>16/09/13</i>	<i>Survey Type: MANUAL</i>
18	LU-03-C-03 NICHOLAS STREET DUNDALK	BLOCK OF FLATS		LOUTH
	Edge of Town Centre Residential Zone Total No of Dwellings:		20	
	<i>Survey date: MONDAY</i>		<i>16/09/13</i>	<i>Survey Type: MANUAL</i>
19	MG-03-C-01 MALL ROAD MONAGHAN	BLOCK OF FLATS		MONAGHAN
	Edge of Town Centre No Sub Category Total No of Dwellings:		28	
	<i>Survey date: FRIDAY</i>		<i>06/09/13</i>	<i>Survey Type: MANUAL</i>
20	MS-03-C-02 SOUTH FERRY QUAY LIVERPOOL BRUNSWICK DOCK Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:	BLOCKS OF FLATS		MERSEYSIDE
	<i>Survey date: TUESDAY</i>		<i>13/11/18</i>	<i>Survey Type: MANUAL</i>
21	MS-03-C-03 MARINERS WHARF LIVERPOOL QUEENS DOCK Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:	BLOCK OF FLATS		MERSEYSIDE
	<i>Survey date: TUESDAY</i>		<i>13/11/18</i>	<i>Survey Type: MANUAL</i>
22	NF-03-C-01 PAGE STAIR LANE KING'S LYNN	BLOCKS OF FLATS		NORFOLK
	Edge of Town Centre Built-Up Zone Total No of Dwellings:		51	
	<i>Survey date: THURSDAY</i>		<i>11/12/14</i>	<i>Survey Type: MANUAL</i>
23	NT-03-C-01 LAWRENCE WAY NOTTINGHAM	HOUSES (SPLIT INTO FLATS)		NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		56	
	<i>Survey date: TUESDAY</i>		<i>08/11/16</i>	<i>Survey Type: MANUAL</i>
24	NT-03-C-02 CASTLE MARINA ROAD NOTTINGHAM	HOUSES (SPLIT INTO FLATS)		NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		135	
	<i>Survey date: WEDNESDAY</i>		<i>09/11/16</i>	<i>Survey Type: MANUAL</i>
25	RI-03-C-01 465 PRIORY ROAD HULL	FLATS		EAST RIDING OF YORKSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		20	
	<i>Survey date: TUESDAY</i>		<i>13/05/14</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

26	SA-03-C-01 RACECOURSE ROAD AYR	BLOCK OF FLATS		SOUTH AYRSHEIRE
	Edge of Town Centre Residential Zone Total No of Dwellings:		51	
	<i>Survey date: TUESDAY</i>		<i>16/09/14</i>	<i>Survey Type: MANUAL</i>
27	SF-03-C-01 STATION HILL BURY ST EDMUNDS	BLOCKS OF FLATS		SUFFOLK
	Edge of Town Centre Built-Up Zone Total No of Dwellings:		85	
	<i>Survey date: THURSDAY</i>		<i>18/12/14</i>	<i>Survey Type: MANUAL</i>
28	SF-03-C-03 TOLLGATE LANE BURY ST EDMUNDS	BLOCKS OF FLATS		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		30	
	<i>Survey date: WEDNESDAY</i>		<i>03/12/14</i>	<i>Survey Type: MANUAL</i>
29	SR-03-C-01 FORTHESIDE WAY STIRLING	FLATS		STIRLING
	Edge of Town Centre No Sub Category Total No of Dwellings:		80	
	<i>Survey date: WEDNESDAY</i>		<i>18/06/14</i>	<i>Survey Type: MANUAL</i>
30	SR-03-C-02 ROSEBERRY TERRACE STIRLING	FLATS		STIRLING
	Edge of Town Centre Residential Zone Total No of Dwellings:		48	
	<i>Survey date: WEDNESDAY</i>		<i>18/06/14</i>	<i>Survey Type: MANUAL</i>
31	WA-03-C-01 UPPER YELLOW ROAD WATERFORD	BLOCKS OF FLATS		WATERFORD
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		51	
	<i>Survey date: TUESDAY</i>		<i>12/05/15</i>	<i>Survey Type: MANUAL</i>
32	WM-03-C-04 GILLQUART WAY COVENTRY PARKSIDE	BLOCKS OF FLATS		WEST MIDLANDS
	Edge of Town Centre Residential Zone Total No of Dwellings:		55	
	<i>Survey date: FRIDAY</i>		<i>11/11/16</i>	<i>Survey Type: MANUAL</i>

*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  
VEHICLES

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	32	54	0.051	32	54	0.167	32	54	0.218
08:00 - 09:00	32	54	0.056	32	54	0.205	32	54	0.261
09:00 - 10:00	32	54	0.074	32	54	0.104	32	54	0.178
10:00 - 11:00	32	54	0.059	32	54	0.077	32	54	0.136
11:00 - 12:00	32	54	0.067	32	54	0.080	32	54	0.147
12:00 - 13:00	32	54	0.084	32	54	0.081	32	54	0.165
13:00 - 14:00	32	54	0.070	32	54	0.086	32	54	0.156
14:00 - 15:00	32	54	0.084	32	54	0.081	32	54	0.165
15:00 - 16:00	32	54	0.101	32	54	0.063	32	54	0.164
16:00 - 17:00	32	54	0.118	32	54	0.080	32	54	0.198
17:00 - 18:00	32	54	0.187	32	54	0.086	32	54	0.273
18:00 - 19:00	32	54	0.170	32	54	0.099	32	54	0.269
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			<b>1.121</b>			<b>1.209</b>			<b>2.330</b>

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

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

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## Parameter summary

Trip rate parameter range selected: 9 - 184 (units: )  
Survey date range: 01/01/12 - 25/09/19  
Number of weekdays (Monday-Friday): 32  
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



Calculation Reference: AUDIT-638801-210608-0659

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL  
 Category : L - BUILDER'S MERCHANTS  
 TOTAL VEHICLES

Selected regions and areas:

05 EAST MIDLANDS  
 LN LINCOLNSHIRE 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: Gross floor area  
 Actual Range: 13051 to 13051 (units: sqm)  
 Range Selected by User: 600 to 13051 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 15/02/20

*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:

Tuesday 1 days

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

Selected survey types:

Manual count 1 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 undertaken using machines.*

Selected Locations:

Edge of Town Centre 1

*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:

Commercial Zone 1

*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.*

## Secondary Filtering selection:

Use Class:

E(a) 1 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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:

15,001 to 20,000 1 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 1 days

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

Car ownership within 5 miles:

1.1 to 1.5 1 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.*

Petrol filling station:

Included in the survey count 0 days

Excluded from count or no filling station 1 days

*This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.*

Travel Plan:

No 1 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 1 days

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

LIST OF SITES relevant to selection parameters

1 LN-01-L-02 JACKSON BUILDING CENTRE LINCOLNSHIRE  
SOUTH PARADE  
GRANTHAM

Edge of Town Centre  
Commercial Zone

Total Gross floor area: 13051 sqm

Survey date: TUESDAY

11/06/13

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 01 - RETAIL/L - BUILDER'S MERCHANTS

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	13051	0.069	1	13051	0.000	1	13051	0.069
07:00 - 08:00	1	13051	0.284	1	13051	0.215	1	13051	0.499
08:00 - 09:00	1	13051	0.391	1	13051	0.276	1	13051	0.667
09:00 - 10:00	1	13051	0.268	1	13051	0.268	1	13051	0.536
10:00 - 11:00	1	13051	0.345	1	13051	0.291	1	13051	0.636
11:00 - 12:00	1	13051	0.322	1	13051	0.306	1	13051	0.628
12:00 - 13:00	1	13051	0.284	1	13051	0.322	1	13051	0.606
13:00 - 14:00	1	13051	0.253	1	13051	0.268	1	13051	0.521
14:00 - 15:00	1	13051	0.268	1	13051	0.306	1	13051	0.574
15:00 - 16:00	1	13051	0.230	1	13051	0.253	1	13051	0.483
16:00 - 17:00	1	13051	0.138	1	13051	0.284	1	13051	0.422
17:00 - 18:00	1	13051	0.008	1	13051	0.061	1	13051	0.069
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			<b>2.860</b>			<b>2.850</b>			<b>5.710</b>

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

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

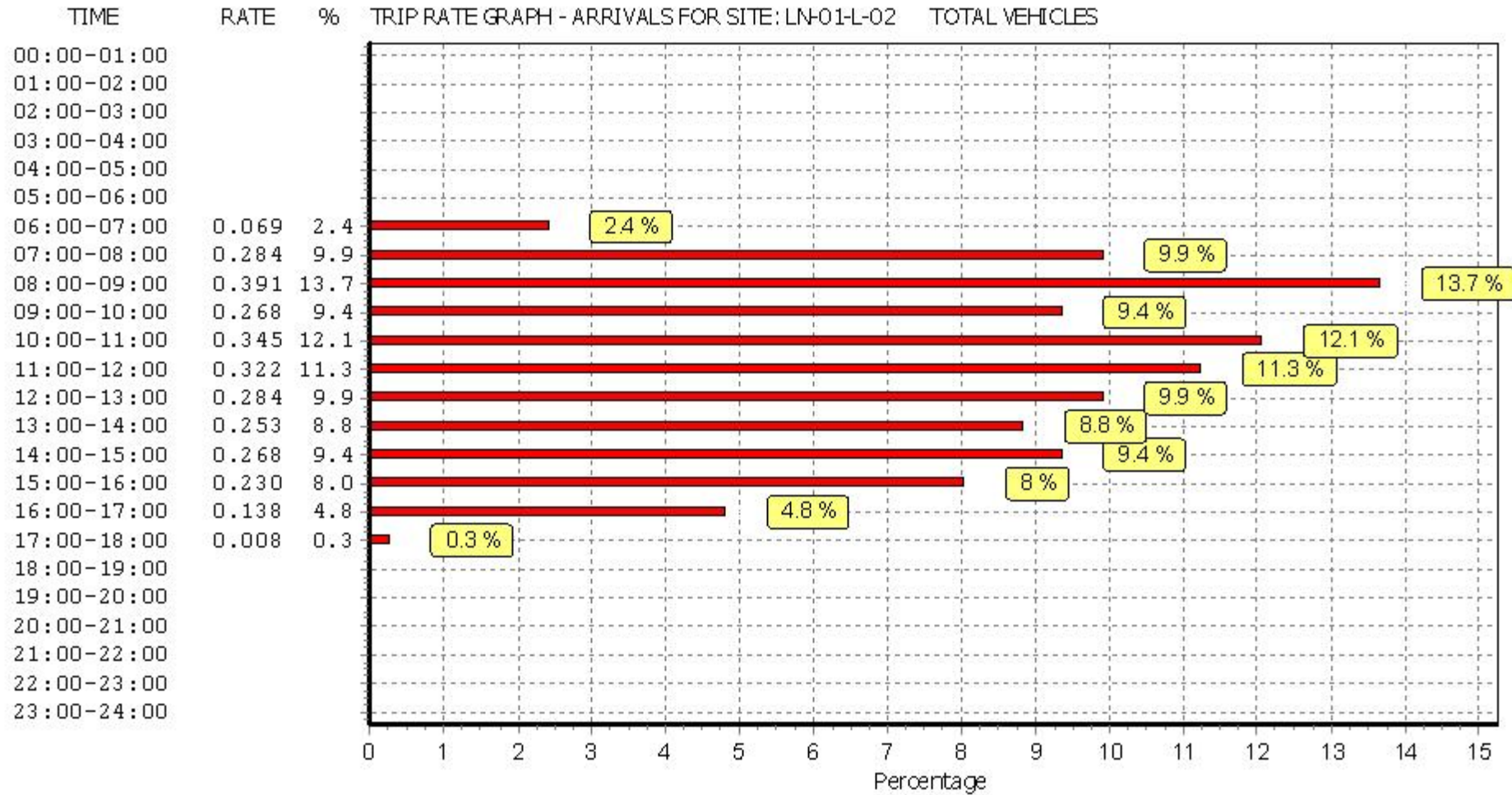
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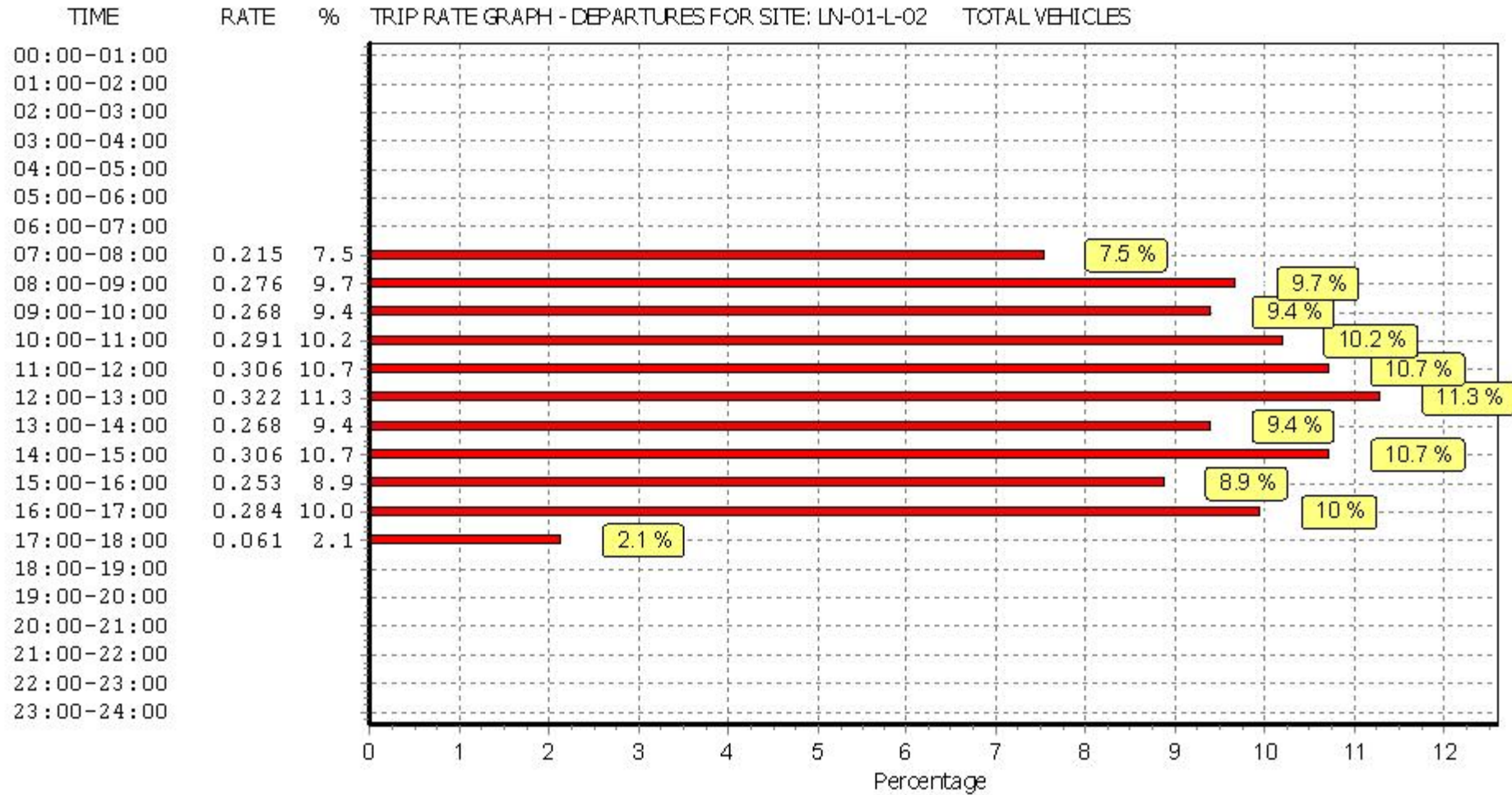
Parameter summary

Trip rate parameter range selected: 13051 - 13051 (units: sqm)  
 Survey date range: 01/01/13 - 15/02/20  
 Number of weekdays (Monday-Friday): 1  
 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.*

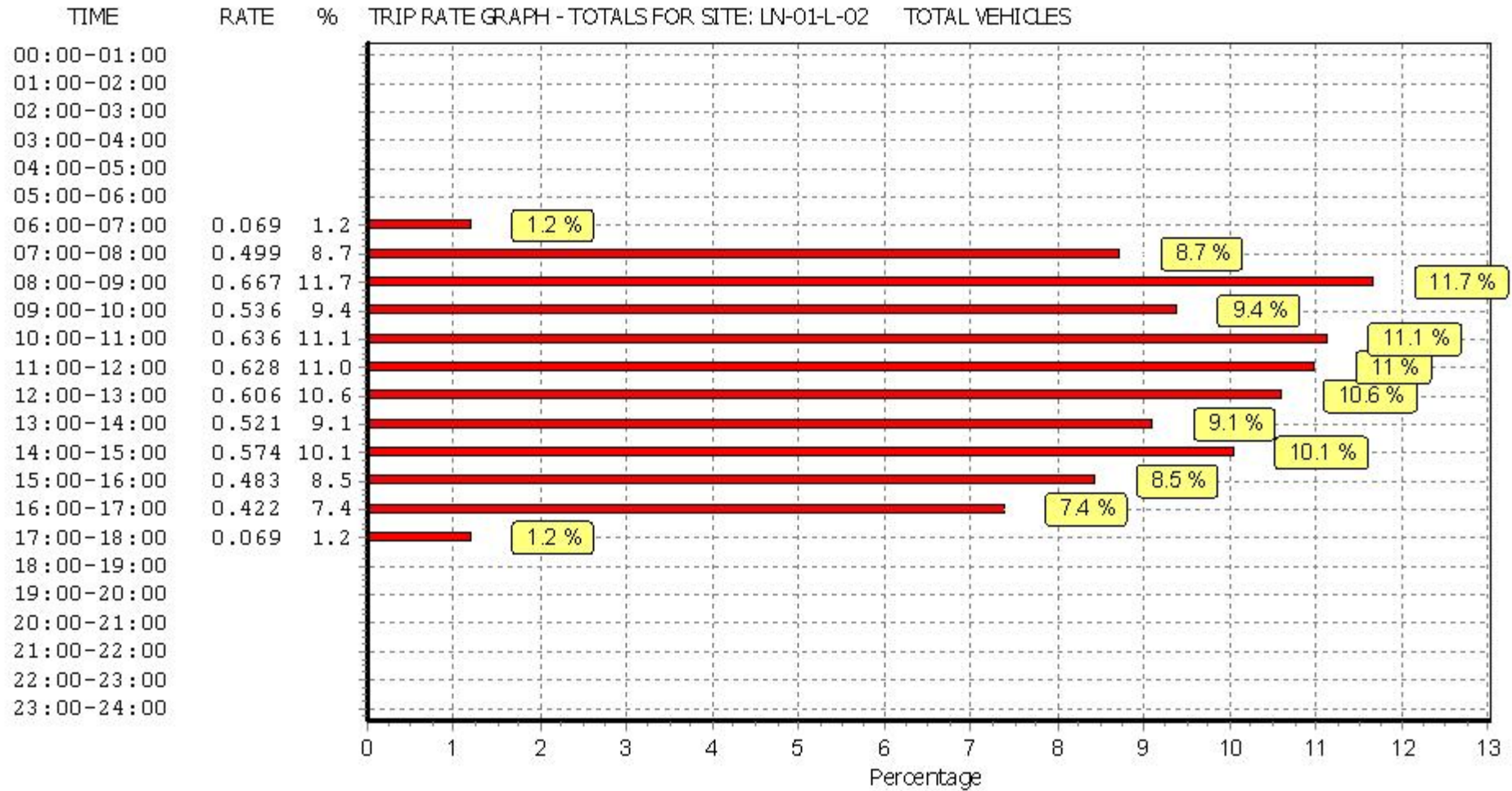


*This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified 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.*

Calculation Reference: AUDIT-638801-210621-0655

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
 Category : C - LEISURE CENTRE  
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EG EALING	3 days
	HD HILLINGDON	2 days
	HK HACKNEY	1 days
	LB LAMBETH	1 days
	WF WALTHAM FOREST	1 days
03	SOUTH WEST	
	DV DEVON	2 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	EL EAST Lothian	1 days
12	CONNAUGHT	
	CS SLIGO	1 days
	LT LEITRIM	1 days
13	MUNSTER	
	CR CORK	1 days
	TI TIPPERARY	1 days
17	ULSTER (NORTHERN IRELAND)	
	AR ARMAGH	1 days
	DO DOWN	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: Gross floor area  
 Actual Range: 1100 to 12188 (units: sqm)  
 Range Selected by User: 360 to 19750 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/19

*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	1 days
Tuesday	5 days
Wednesday	10 days
Thursday	6 days
Friday	2 days
Saturday	6 days

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

Selected survey types:

Manual count	30 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 undertaken using machines.*

Selected Locations:

Town Centre	1
Edge of Town Centre	14
Suburban Area (PPS6 Out of Centre)	8
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

*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	14
Retail Zone	1
Built-Up Zone	6
Village	1
Out of Town	1
High Street	1
No Sub Category	6

*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.*

Secondary Filtering selection:

Use Class:

n/a 30 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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	5 days
10,001 to 15,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	13 days
50,001 to 100,000	4 days
100,001 or More	1 days

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

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	5 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	5 days
500,001 or More	10 days

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

Car ownership within 5 miles:

0.6 to 1.0	18 days
1.1 to 1.5	11 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	2 days
No	28 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	22 days
1a (Low) Very poor	1 days
2 Poor	2 days
3 Moderate	1 days
4 Good	3 days
5 Very Good	1 days

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

LIST OF SITES relevant to selection parameters

1	AR-07-C-02 FOLLY LANE ARMAGH	LEISURE CENTRE	ARMAGH
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 3490 sqm <i>Survey date: TUESDAY 29/10/13</i>		<i>Survey Type: MANUAL</i>
2	CA-07-C-02 BACK LANE CAMBOURNE	LEISURE CENTRE	CAMBRI DGESHIRE
	Edge of Town Residential Zone Total Gross floor area: 1502 sqm <i>Survey date: THURSDAY 07/06/18</i>		<i>Survey Type: MANUAL</i>
3	CB-07-C-03 JAMES STREET CARLISLE	SWIMMING & FITNESS CENTRE	CUMBRIA
	Edge of Town Centre Built-Up Zone Total Gross floor area: 2500 sqm <i>Survey date: WEDNESDAY 22/06/16</i>		<i>Survey Type: MANUAL</i>
4	CR-07-C-02 ROSSA AVENUE CORK BISHOPSTOWN	LEISURE WORLD	CORK
	Edge of Town No Sub Category Total Gross floor area: 3450 sqm <i>Survey date: THURSDAY 19/06/14</i>		<i>Survey Type: MANUAL</i>
5	CS-07-C-01 STATION ROAD BALLISODARE	LEISURE CENTRE	SLIGO
	Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area: 1100 sqm <i>Survey date: SATURDAY 25/05/19</i>		<i>Survey Type: MANUAL</i>
6	DO-07-C-01 VALENTINE ROAD BANGOR	LEISURE CENTRE	DOWN
	Edge of Town Centre No Sub Category Total Gross floor area: 10529 sqm <i>Survey date: WEDNESDAY 21/11/18</i>		<i>Survey Type: MANUAL</i>
7	DS-07-C-01 CATHEDRAL ROAD DERBY	LEISURE CENTRE	DERBYSHIRE
	Town Centre Built-Up Zone Total Gross floor area: 5394 sqm <i>Survey date: WEDNESDAY 25/09/19</i>		<i>Survey Type: MANUAL</i>
8	DV-07-C-01 COWICK STREET EXETER	LEISURE CENTRE	DEVON
	Edge of Town Centre Retail Zone Total Gross floor area: 6133 sqm <i>Survey date: THURSDAY 28/11/13</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	DV-07-C-02 HEAVITREE ROAD EXETER	LEI SURE CENTRE		DEVON
	Edge of Town Centre Built-Up Zone Total Gross floor area:		1450 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>05/07/17</i>	<i>Survey Type: MANUAL</i>
10	EG-07-C-02 HIGH STREET ACTON	LEI SURE CENTRE		EALING
	Edge of Town Centre High Street Total Gross floor area:		2460 sqm	
	<i>Survey date: SATURDAY</i>		<i>27/06/15</i>	<i>Survey Type: MANUAL</i>
11	EG-07-C-03 RUISLIP ROAD EAST PERIVALE	LEI SURE CENTRE		EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		4700 sqm	
	<i>Survey date: SATURDAY</i>		<i>27/06/15</i>	<i>Survey Type: MANUAL</i>
12	EG-07-C-04 EASTCOTE LANE NORTH NORTHOLT	LEI SURE CENTRE		EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		4500 sqm	
	<i>Survey date: TUESDAY</i>		<i>30/06/15</i>	<i>Survey Type: MANUAL</i>
13	EL-07-C-01 NEWBIGGING MUSSELBURGH	LEI SURE CENTRE		EAST LOTHIAN
	Edge of Town Centre No Sub Category Total Gross floor area:		4125 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>25/04/18</i>	<i>Survey Type: MANUAL</i>
14	HD-07-C-01 HUME WAY RUISLIP	LEI SURE CENTRE		HILLINGDON
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		4000 sqm	
	<i>Survey date: FRIDAY</i>		<i>26/06/15</i>	<i>Survey Type: MANUAL</i>
15	HD-07-C-03 EAST AVENUE HAYES	LEI SURE CENTRE		HILLINGDON
	Edge of Town Centre Residential Zone Total Gross floor area:		5800 sqm	
	<i>Survey date: MONDAY</i>		<i>29/06/15</i>	<i>Survey Type: MANUAL</i>



LIST OF SITES relevant to selection parameters (Cont.)

16	HK-07-C-02 HYDE ROAD SHOREDITCH	LEISURE CENTRE	HACKNEY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4627 sqm <i>Survey date: WEDNESDAY 17/09/14</i>		
17	LB-07-C-01 DEVANE WAY WEST NORWOOD	LEISURE CENTRE	LAMBETH
	Edge of Town Centre Residential Zone Total Gross floor area: 5400 sqm <i>Survey date: WEDNESDAY 07/11/18</i>		
18	LT-07-C-02 ATTIFINLAY CARRICK-ON-SHANNON SUMMERHILL	LEISURE CENTRE	LEITRIM
	Edge of Town Residential Zone Total Gross floor area: 2597 sqm <i>Survey date: SATURDAY 20/05/17</i>		
19	NF-07-C-03 NORWICH ROAD WYMONDHAM	LEISURE CENTRE	NORFOLK
	Edge of Town Centre Residential Zone Total Gross floor area: 4970 sqm <i>Survey date: SATURDAY 09/11/19</i>		
20	NF-07-C-04 WHERRY ROAD NORWICH	LEISURE CENTRE	NORFOLK
	Edge of Town Centre Built-Up Zone Total Gross floor area: 2910 sqm <i>Survey date: THURSDAY 28/11/19</i>		
21	NT-07-C-04 GEDLING STREET NOTTINGHAM	LEISURE CENTRE	NOTTINGHAMSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area: 2955 sqm <i>Survey date: WEDNESDAY 26/06/13</i>		
22	NT-07-C-05 DENMAN STREET CENTRAL NOTTINGHAM RADFORD	LEISURE CENTRE	NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 2210 sqm <i>Survey date: FRIDAY 02/12/16</i>		
23	NY-07-C-02 GARGRAVE ROAD SKIPTON	LEISURE CENTRE	NORTH YORKSHIRE
	Edge of Town Out of Town Total Gross floor area: 2530 sqm <i>Survey date: SATURDAY 09/03/19</i>		
24	TI-07-C-02 DUBLIN ROAD NENAGH	LEISURE CENTRE	TIPPERARY
	Edge of Town No Sub Category Total Gross floor area: 2980 sqm <i>Survey date: THURSDAY 26/05/16</i>		

LIST OF SITES relevant to selection parameters (Cont.)

25	TW-07-C-03	LEI SURE CENTRE		TYNE & WEAR
	ALEXANDRA ROAD			
	GATESHEAD			
	MOUNT PLEASANT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	12188 sqm		
	Survey date: WEDNESDAY	01/05/19		Survey Type: MANUAL
26	WF-07-C-02	LEI SURE CENTRE		WALTHAM FOREST
	CHINGFORD ROAD			
	WALTHAMSTOW			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	8460 sqm		
	Survey date: TUESDAY	05/11/19		Survey Type: MANUAL
27	WL-07-C-01	LEI SURE CENTRE		WILTSHIRE
	NORTH STAR AVENUE			
	SWINDON			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:	9600 sqm		
	Survey date: WEDNESDAY	21/09/16		Survey Type: MANUAL
28	WM-07-C-02	LEI SURE CENTRE		WEST MIDLANDS
	BEECHES ROAD			
	BIRMINGHAM			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:	2600 sqm		
	Survey date: THURSDAY	26/09/19		Survey Type: MANUAL
29	WY-07-C-01	LEI SURE CENTRE		WEST YORKSHIRE
	QUARRY HILL			
	LEEDS			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:	4060 sqm		
	Survey date: TUESDAY	24/09/13		Survey Type: MANUAL
30	WY-07-C-02	LEI SURE CENTRE		WEST YORKSHIRE
	LODGE LANE			
	WETHERBY			
	Edge of Town Centre			
	No Sub Category			
	Total Gross floor area:	2182 sqm		
	Survey date: TUESDAY	20/09/16		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 07 - LEISURE/C - LEISURE CENTRE  
 TOTAL VEHICLES  
 Calculation factor: 100 sqm  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	6715	0.119	2	6715	0.052	2	6715	0.171
06:00 - 07:00	22	4957	0.352	22	4957	0.056	22	4957	0.408
07:00 - 08:00	27	4508	0.459	27	4508	0.292	27	4508	0.751
08:00 - 09:00	30	4380	0.670	30	4380	0.428	30	4380	1.098
09:00 - 10:00	30	4380	0.935	30	4380	0.626	30	4380	1.561
10:00 - 11:00	30	4380	0.853	30	4380	0.750	30	4380	1.603
11:00 - 12:00	30	4380	0.683	30	4380	0.733	30	4380	1.416
12:00 - 13:00	30	4380	0.590	30	4380	0.725	30	4380	1.315
13:00 - 14:00	30	4380	0.528	30	4380	0.597	30	4380	1.125
14:00 - 15:00	30	4380	0.544	30	4380	0.547	30	4380	1.091
15:00 - 16:00	30	4380	0.766	30	4380	0.568	30	4380	1.334
16:00 - 17:00	30	4380	0.975	30	4380	0.830	30	4380	1.805
17:00 - 18:00	29	4444	1.093	29	4444	1.065	29	4444	2.158
18:00 - 19:00	29	4444	1.114	29	4444	1.068	29	4444	2.182
19:00 - 20:00	29	4444	0.777	29	4444	0.982	29	4444	1.759
20:00 - 21:00	27	4641	0.414	27	4641	0.893	27	4641	1.307
21:00 - 22:00	25	4764	0.128	25	4764	0.583	25	4764	0.711
22:00 - 23:00	9	5112	0.020	9	5112	0.148	9	5112	0.168
23:00 - 24:00									
<b>Total Rates:</b>			<b>11.020</b>			<b>10.943</b>			<b>21.963</b>

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

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

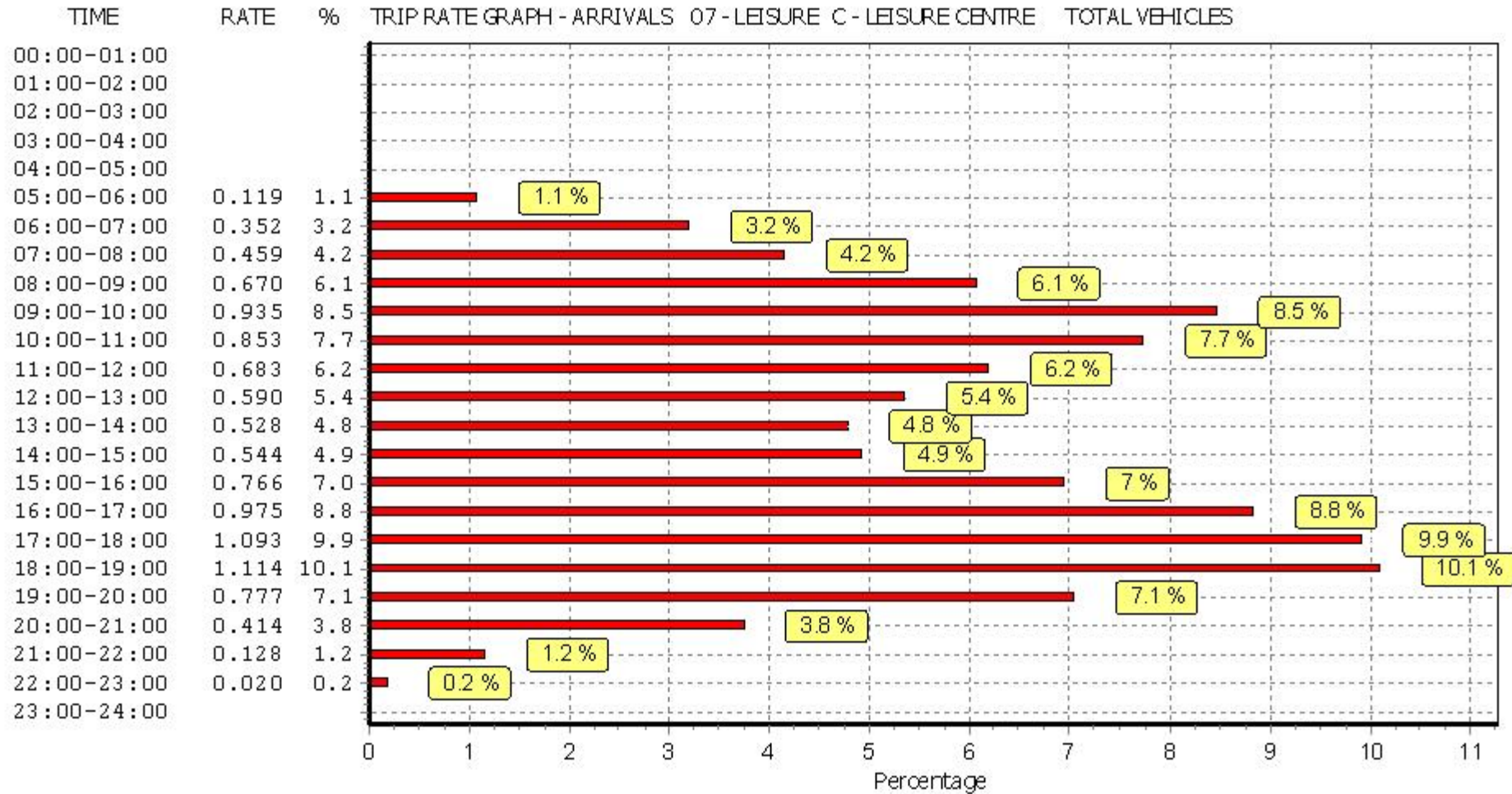
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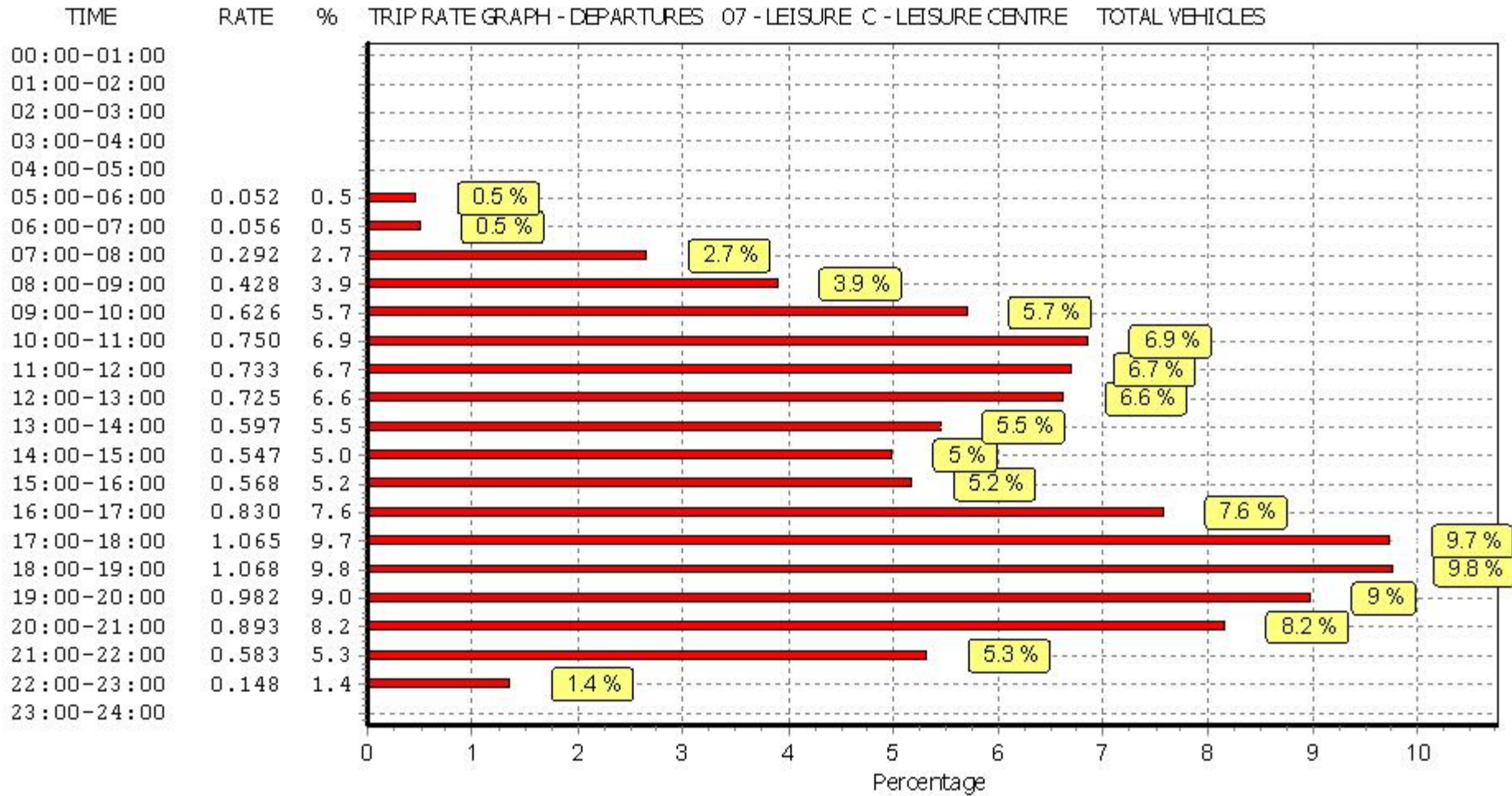
Parameter summary

Trip rate parameter range selected: 1100 - 12188 (units: sqm)  
 Survey date range: 01/01/13 - 28/11/19  
 Number of weekdays (Monday-Friday): 24  
 Number of Saturdays: 6  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 1  
 Surveys manually removed from selection: 0

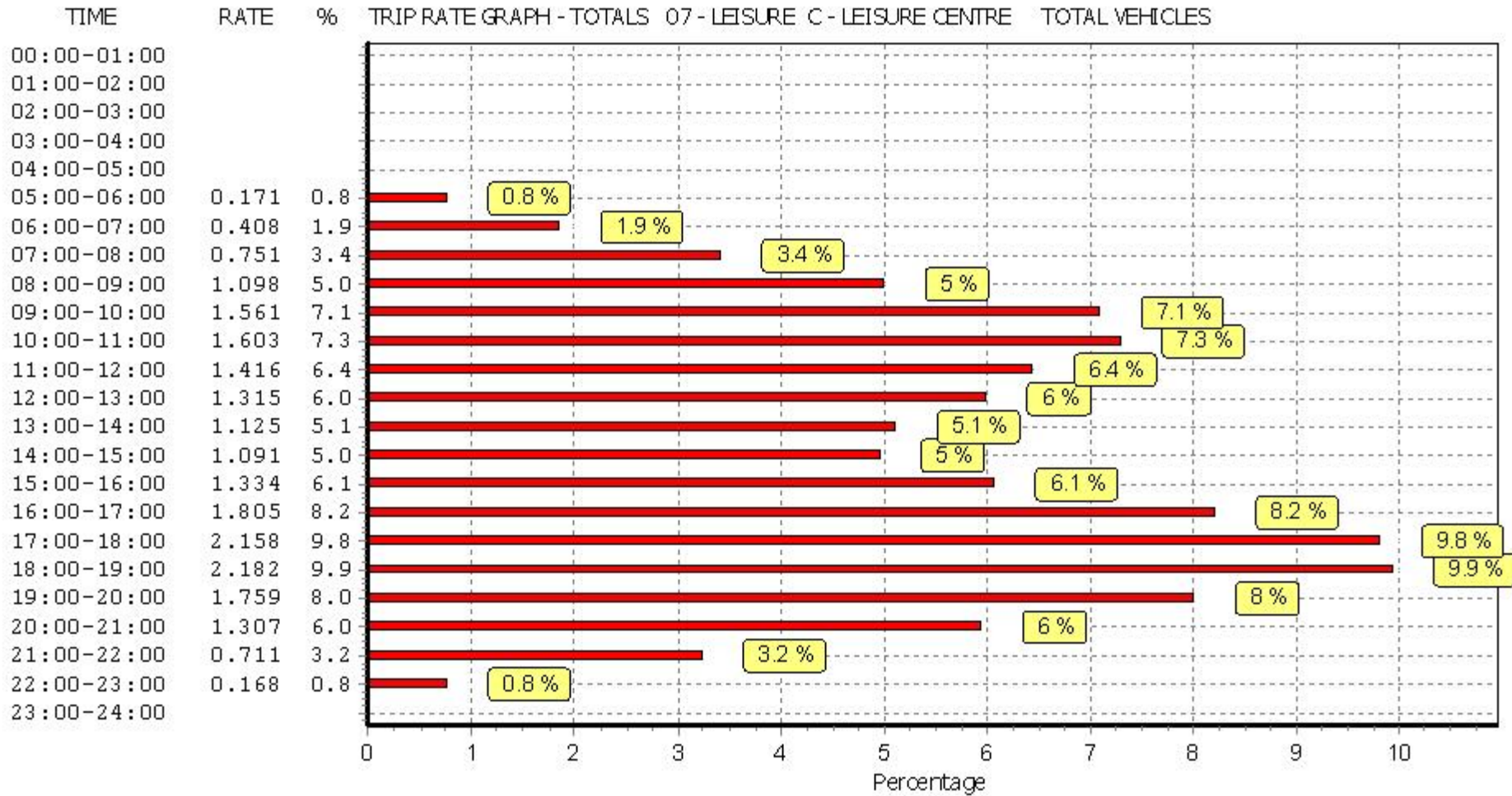
*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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.*

Calculation Reference: AUDIT-638801-210621-0617

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
 Category : C - LEISURE CENTRE  
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EG EALING	3 days
	HD HILLINGDON	2 days
	HK HACKNEY	1 days
	LB LAMBETH	1 days
	WF WALTHAM FOREST	1 days
03	SOUTH WEST	
	DV DEVON	2 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	2 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	EL EAST LOTHIAN	1 days
12	CONNAUGHT	
	CS SLIGO	1 days
	LT LEITRIM	1 days
13	MUNSTER	
	CR CORK	1 days
	TI TIPPERARY	1 days
17	ULSTER (NORTHERN IRELAND)	
	AR ARMAGH	1 days
	DO DOWN	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: Gross floor area  
 Actual Range: 1100 to 12188 (units: sqm)  
 Range Selected by User: 360 to 19750 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/19

*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	1 days
Tuesday	5 days
Wednesday	9 days
Thursday	6 days
Friday	2 days
Saturday	6 days

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

Selected survey types:

Manual count	29 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 undertaken using machines.*

Selected Locations:

Edge of Town Centre	14
Suburban Area (PPS6 Out of Centre)	8
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

*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	14
Retail Zone	1
Built-Up Zone	5
Village	1
Out of Town	1
High Street	1
No Sub Category	6

*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.*

Secondary Filtering selection:

Use Class:

n/a 29 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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	5 days
10,001 to 15,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	12 days
50,001 to 100,000	4 days
100,001 or More	1 days

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

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	5 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	4 days
500,001 or More	10 days

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

Car ownership within 5 miles:

0.6 to 1.0	18 days
1.1 to 1.5	10 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	2 days
No	27 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	21 days
1a (Low) Very poor	1 days
2 Poor	2 days
3 Moderate	1 days
4 Good	3 days
5 Very Good	1 days

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

LIST OF SITES relevant to selection parameters

1	AR-07-C-02 FOLLY LANE ARMAGH	LEISURE CENTRE	ARMAGH
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 3490 sqm <i>Survey date: TUESDAY 29/10/13</i>		<i>Survey Type: MANUAL</i>
2	CA-07-C-02 BACK LANE CAMBOURNE	LEISURE CENTRE	CAMBRI DGESHI RE
	Edge of Town Residential Zone Total Gross floor area: 1502 sqm <i>Survey date: THURSDAY 07/06/18</i>		<i>Survey Type: MANUAL</i>
3	CB-07-C-03 JAMES STREET CARLISLE	SWIMMING & FITNESS CENTRE	CUMBRIA
	Edge of Town Centre Built-Up Zone Total Gross floor area: 2500 sqm <i>Survey date: WEDNESDAY 22/06/16</i>		<i>Survey Type: MANUAL</i>
4	CR-07-C-02 ROSSA AVENUE CORK BISHOPSTOWN	LEISURE WORLD	CORK
	Edge of Town No Sub Category Total Gross floor area: 3450 sqm <i>Survey date: THURSDAY 19/06/14</i>		<i>Survey Type: MANUAL</i>
5	CS-07-C-01 STATION ROAD BALLISODARE	LEISURE CENTRE	SLIGO
	Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area: 1100 sqm <i>Survey date: SATURDAY 25/05/19</i>		<i>Survey Type: MANUAL</i>
6	DO-07-C-01 VALENTINE ROAD BANGOR	LEISURE CENTRE	DOWN
	Edge of Town Centre No Sub Category Total Gross floor area: 10529 sqm <i>Survey date: WEDNESDAY 21/11/18</i>		<i>Survey Type: MANUAL</i>
7	DV-07-C-01 COWICK STREET EXETER	LEISURE CENTRE	DEVON
	Edge of Town Centre Retail Zone Total Gross floor area: 6133 sqm <i>Survey date: THURSDAY 28/11/13</i>		<i>Survey Type: MANUAL</i>
8	DV-07-C-02 HEAVITREE ROAD EXETER	LEISURE CENTRE	DEVON
	Edge of Town Centre Built-Up Zone Total Gross floor area: 1450 sqm <i>Survey date: WEDNESDAY 05/07/17</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	EG-07-C-02 HIGH STREET ACTON	LEISURE CENTRE	EALING
	Edge of Town Centre High Street Total Gross floor area: 2460 sqm <i>Survey date: SATURDAY 27/06/15</i>		<i>Survey Type: MANUAL</i>
10	EG-07-C-03 RUISLIP ROAD EAST PERIVALE	LEISURE CENTRE	EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4700 sqm <i>Survey date: SATURDAY 27/06/15</i>		<i>Survey Type: MANUAL</i>
11	EG-07-C-04 EASTCOTE LANE NORTH NORTHOLT	LEISURE CENTRE	EALING
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4500 sqm <i>Survey date: TUESDAY 30/06/15</i>		<i>Survey Type: MANUAL</i>
12	EL-07-C-01 NEWBIGGING MUSSELBURGH	LEISURE CENTRE	EAST LOTHIAN
	Edge of Town Centre No Sub Category Total Gross floor area: 4125 sqm <i>Survey date: WEDNESDAY 25/04/15</i>		<i>Survey Type: MANUAL</i>
13	HD-07-C-01 HUME WAY RUISLIP	LEISURE CENTRE	HILLINGDON
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4000 sqm <i>Survey date: FRIDAY 26/06/15</i>		<i>Survey Type: MANUAL</i>
14	HD-07-C-03 EAST AVENUE HAYES	LEISURE CENTRE	HILLINGDON
	Edge of Town Centre Residential Zone Total Gross floor area: 5800 sqm <i>Survey date: MONDAY 29/06/15</i>		<i>Survey Type: MANUAL</i>
15	HK-07-C-02 HYDE ROAD SHOREDITCH	LEISURE CENTRE	HACKNEY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4627 sqm <i>Survey date: WEDNESDAY 17/09/14</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

16	LB-07-C-01 DEVANE WAY WEST NORWOOD	LEISURE CENTRE		LAMBETH
	Edge of Town Centre Residential Zone Total Gross floor area:		5400 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>07/11/18</i>	<i>Survey Type: MANUAL</i>
17	LT-07-C-02 ATTIFINLAY CARRICK-ON-SHANNON SUMMERHILL	LEISURE CENTRE		LEITRIM
	Edge of Town Residential Zone Total Gross floor area:		2597 sqm	
	<i>Survey date: SATURDAY</i>		<i>20/05/17</i>	<i>Survey Type: MANUAL</i>
18	NF-07-C-03 NORWICH ROAD WYMONDHAM	LEISURE CENTRE		NORFOLK
	Edge of Town Centre Residential Zone Total Gross floor area:		4970 sqm	
	<i>Survey date: SATURDAY</i>		<i>09/11/19</i>	<i>Survey Type: MANUAL</i>
19	NF-07-C-04 WHERRY ROAD NORWICH	LEISURE CENTRE		NORFOLK
	Edge of Town Centre Built-Up Zone Total Gross floor area:		2910 sqm	
	<i>Survey date: THURSDAY</i>		<i>28/11/19</i>	<i>Survey Type: MANUAL</i>
20	NT-07-C-04 GEDLING STREET NOTTINGHAM	LEISURE CENTRE		NOTTINGHAMSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:		2955 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>26/06/13</i>	<i>Survey Type: MANUAL</i>
21	NT-07-C-05 DENMAN STREET CENTRAL NOTTINGHAM RADFORD	LEISURE CENTRE		NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		2210 sqm	
	<i>Survey date: FRIDAY</i>		<i>02/12/16</i>	<i>Survey Type: MANUAL</i>
22	NY-07-C-02 GARGRAVE ROAD SKIPTON	LEISURE CENTRE		NORTH YORKSHIRE
	Edge of Town Out of Town Total Gross floor area:		2530 sqm	
	<i>Survey date: SATURDAY</i>		<i>09/03/19</i>	<i>Survey Type: MANUAL</i>
23	TI-07-C-02 DUBLIN ROAD NENAGH	LEISURE CENTRE		TIPPERARY
	Edge of Town No Sub Category Total Gross floor area:		2980 sqm	
	<i>Survey date: THURSDAY</i>		<i>26/05/16</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

24	TW-07-C-03	LEISURE CENTRE	TYNE & WEAR
	ALEXANDRA ROAD		
	GATESHEAD		
	MOUNT PLEASANT		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	12188 sqm	
	<i>Survey date: WEDNESDAY</i>	<i>01/05/19</i>	<i>Survey Type: MANUAL</i>
25	WF-07-C-02	LEISURE CENTRE	WALTHAM FOREST
	CHINGFORD ROAD		
	WALTHAMSTOW		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	8460 sqm	
	<i>Survey date: TUESDAY</i>	<i>05/11/19</i>	<i>Survey Type: MANUAL</i>
26	WL-07-C-01	LEISURE CENTRE	WILTSHIRE
	NORTH STAR AVENUE		
	SWINDON		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	9600 sqm	
	<i>Survey date: WEDNESDAY</i>	<i>21/09/16</i>	<i>Survey Type: MANUAL</i>
27	WM-07-C-02	LEISURE CENTRE	WEST MIDLANDS
	BEECHES ROAD		
	BIRMINGHAM		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	2600 sqm	
	<i>Survey date: THURSDAY</i>	<i>26/09/19</i>	<i>Survey Type: MANUAL</i>
28	WY-07-C-01	LEISURE CENTRE	WEST YORKSHIRE
	QUARRY HILL		
	LEEDS		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	4060 sqm	
	<i>Survey date: TUESDAY</i>	<i>24/09/13</i>	<i>Survey Type: MANUAL</i>
29	WY-07-C-02	LEISURE CENTRE	WEST YORKSHIRE
	LODGE LANE		
	WETHERBY		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	2182 sqm	
	<i>Survey date: TUESDAY</i>	<i>20/09/16</i>	<i>Survey Type: MANUAL</i>

*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 07 - LEISURE/C - LEISURE CENTRE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	6715	0.119	2	6715	0.052	2	6715	0.171
06:00 - 07:00	21	4936	0.367	21	4936	0.058	21	4936	0.425
07:00 - 08:00	26	4474	0.473	26	4474	0.294	26	4474	0.767
08:00 - 09:00	29	4345	0.691	29	4345	0.440	29	4345	1.131
09:00 - 10:00	29	4345	0.950	29	4345	0.640	29	4345	1.590
10:00 - 11:00	29	4345	0.861	29	4345	0.753	29	4345	1.614
11:00 - 12:00	29	4345	0.700	29	4345	0.739	29	4345	1.439
12:00 - 13:00	29	4345	0.605	29	4345	0.741	29	4345	1.346
13:00 - 14:00	29	4345	0.536	29	4345	0.614	29	4345	1.150
14:00 - 15:00	29	4345	0.561	29	4345	0.563	29	4345	1.124
15:00 - 16:00	29	4345	0.779	29	4345	0.590	29	4345	1.369
16:00 - 17:00	29	4345	0.992	29	4345	0.849	29	4345	1.841
17:00 - 18:00	28	4410	1.110	28	4410	1.070	28	4410	2.180
18:00 - 19:00	28	4410	1.139	28	4410	1.097	28	4410	2.236
19:00 - 20:00	28	4410	0.786	28	4410	0.997	28	4410	1.783
20:00 - 21:00	26	4612	0.430	26	4612	0.918	26	4612	1.348
21:00 - 22:00	24	4738	0.134	24	4738	0.603	24	4738	0.737
22:00 - 23:00	8	5077	0.022	8	5077	0.165	8	5077	0.187
23:00 - 24:00									
<b>Total Rates:</b>			11.255			11.183			22.438

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

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

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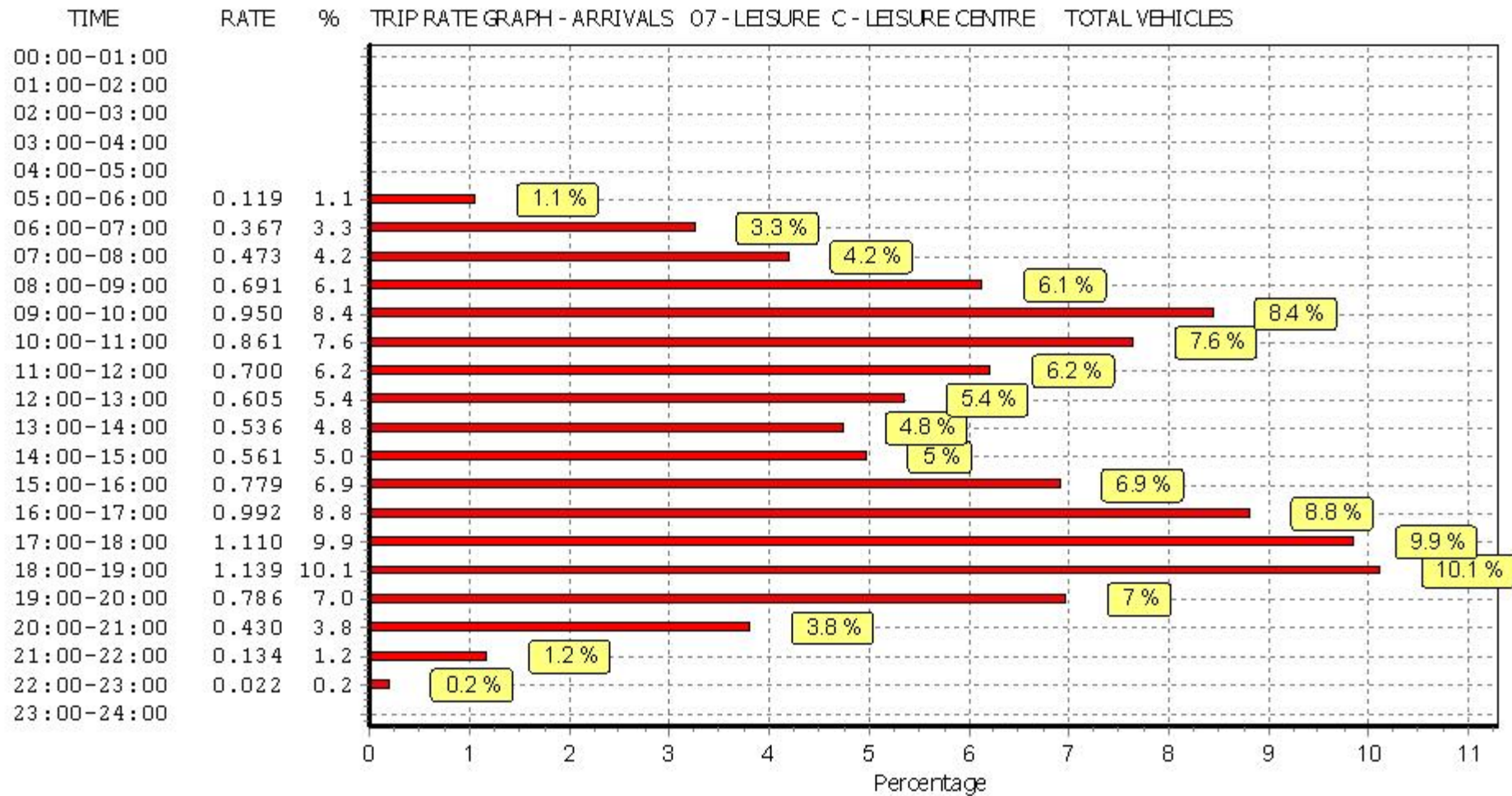
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#### Parameter summary

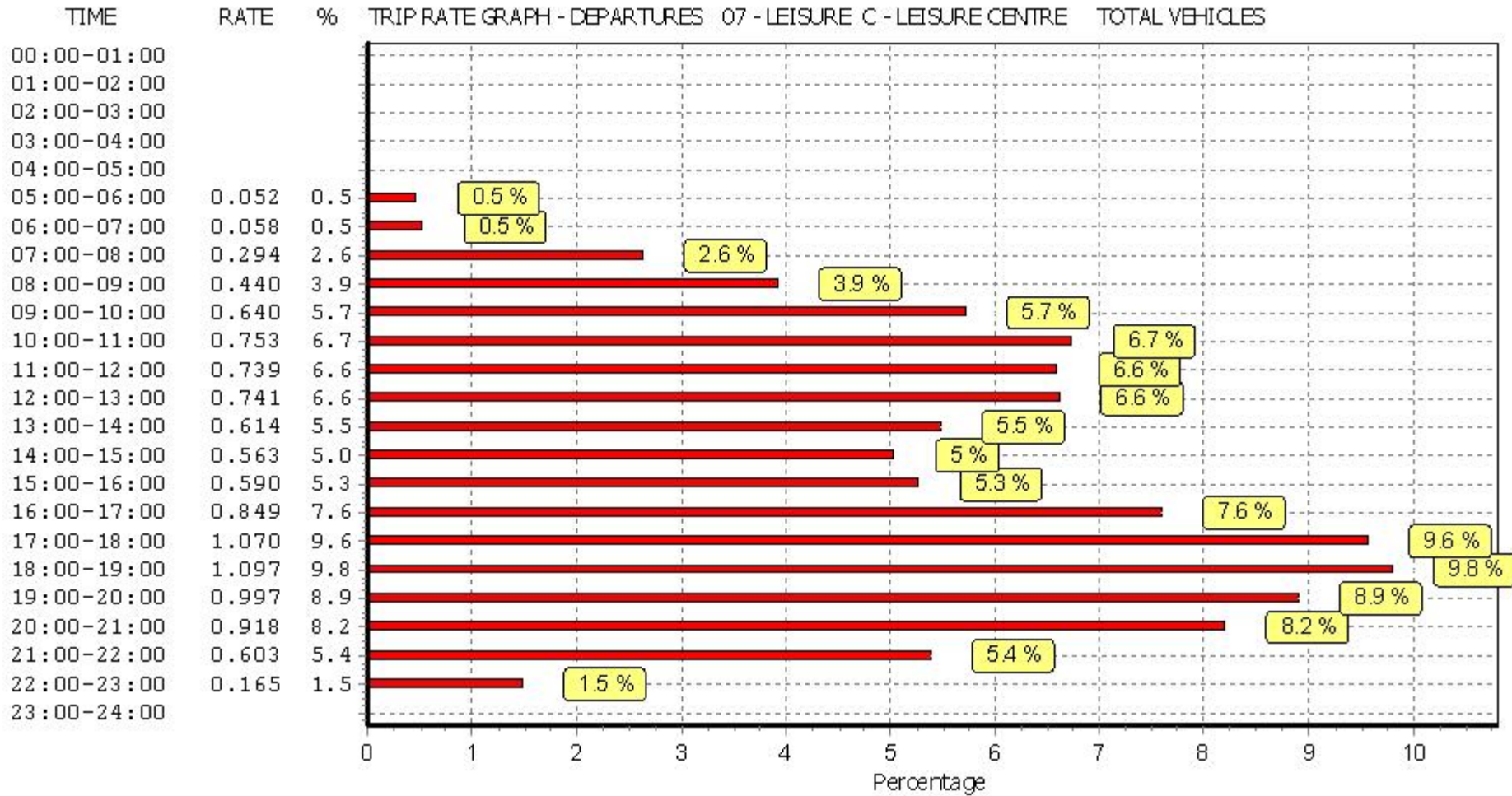
Trip rate parameter range selected:	1100 - 12188 (units: sqm)
Survey date range:	01/01/13 - 28/11/19
Number of weekdays (Monday-Friday):	23
Number of Saturdays:	6
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

*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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

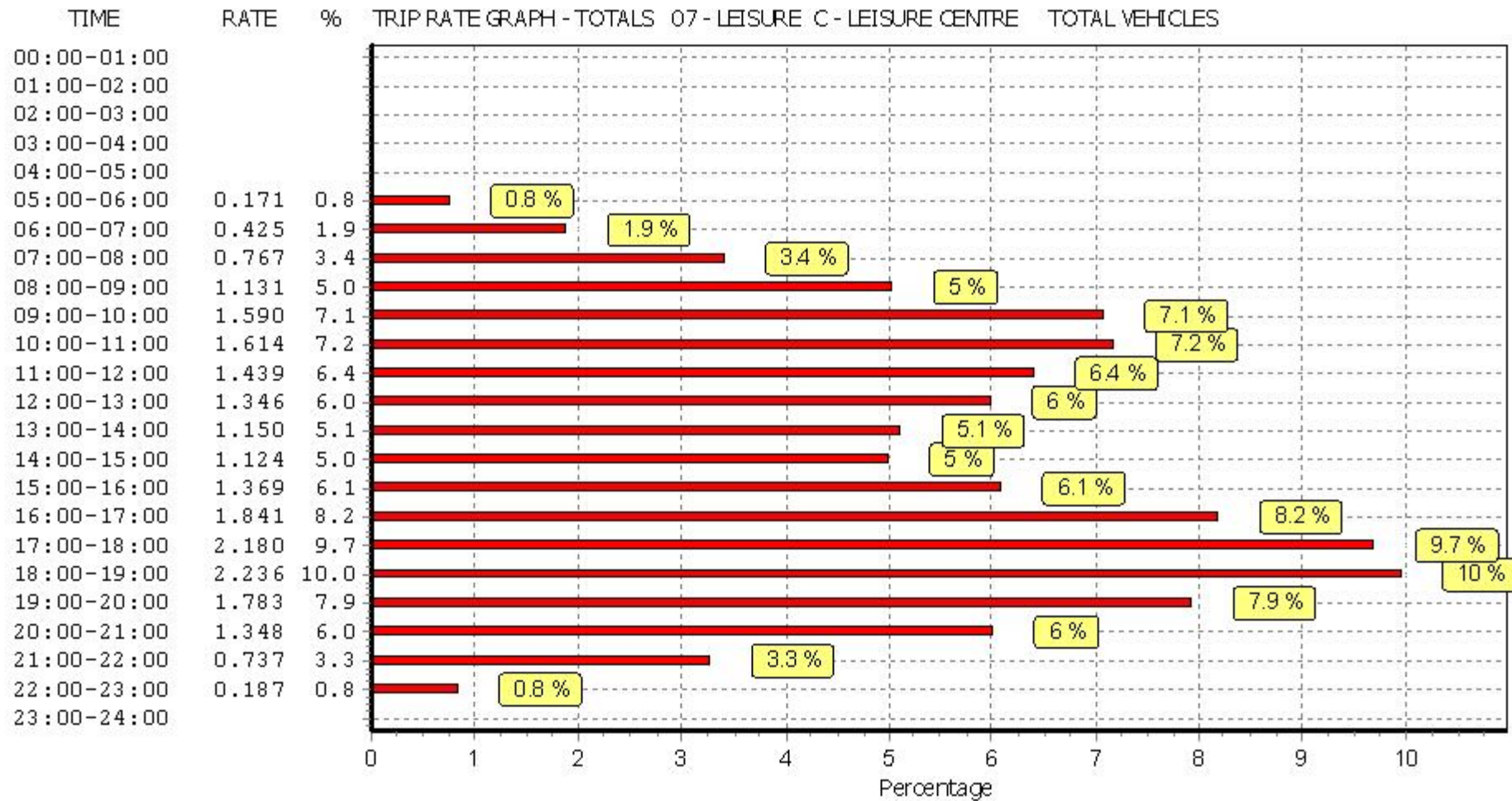




*This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified 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 CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
 Category : A - OFFICE  
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BT BRENT	2 days
	HD HILLINGDON	1 days
	HO HOUNSLOW	1 days
	KN KENSINGTON AND CHELSEA	1 days
	LB LAMBETH	1 days
	TH TOWER HAMLETS	1 days
	WH WANDSWORTH	1 days
02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	ES EAST SUSSEX	3 days
	HC HAMPSHIRE	1 days
	HF HERTFORDSHIRE	2 days
	SO SLOUGH	1 days
03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	3 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LE LEICESTERSHIRE	1 days
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	DH DURHAM	1 days
	TV TEES VALLEY	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CO CONWY	1 days
	MT MERTHYR TYDFIL	1 days
	PS POWYS	1 days
	SW SWANSEA	2 days
11	SCOTLAND	
	DU DUNDEE CITY	1 days
	SR STIRLING	1 days
12	CONNAUGHT	
	RO ROSCOMMON	1 days
13	MUNSTER	
	CR CORK	1 days
14	LEINSTER	
	LU LOUTH	1 days
15	GREATER DUBLIN	
	DL DUBLIN	3 days
16	ULSTER (REPUBLIC OF IRELAND)	
	MG MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	2 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: Gross floor area  
Actual Range: 178 to 120000 (units: sqm)  
Range Selected by User: 178 to 175000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 09/11/20

*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	10 days
Tuesday	15 days
Wednesday	12 days
Thursday	12 days
Friday	5 days
Saturday	1 days

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

Selected survey types:

Manual count	55 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 undertaken using machines.*

Selected Locations:

Edge of Town Centre	26
Suburban Area (PPS6 Out of Centre)	9
Edge of Town	13
Neighbourhood Centre (PPS6 Local Centre)	7

*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:

Industrial Zone	3
Commercial Zone	9
Development Zone	6
Residential Zone	8
Built-Up Zone	14
Village	1
Out of Town	1
High Street	2
No Sub Category	11

*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.*

## Secondary Filtering selection:

Use Class:

Not Known	55 days
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*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	5 days
5,001 to 10,000	8 days
10,001 to 15,000	7 days
15,001 to 20,000	5 days
20,001 to 25,000	3 days
25,001 to 50,000	19 days
50,001 to 100,000	4 days
100,001 or More	3 days

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

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	6 days
50,001 to 75,000	2 days
75,001 to 100,000	5 days
100,001 to 125,000	3 days
125,001 to 250,000	17 days
250,001 to 500,000	6 days
500,001 or More	13 days

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

Car ownership within 5 miles:

0.5 or Less	3 days
0.6 to 1.0	27 days
1.1 to 1.5	22 days
1.6 to 2.0	3 days

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

Travel Plan:

Yes	10 days
No	45 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	47 days
1b Very poor	1 days
4 Good	2 days
5 Very Good	2 days
6a Excellent	1 days
6b (High) Excellent	2 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
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LIST OF SITES relevant to selection parameters (Cont.)

9	CR-02-A-01 MAHON CRESCENT CORK	STATISTICS OFFICES	CORK
	Edge of Town No Sub Category Total Gross floor area: 8600 sqm <i>Survey date: MONDAY 23/06/14</i>		<i>Survey Type: MANUAL</i>
10	DH-02-A-03 ALDERMAN BEST WAY DARLINGTON	ENGINEERING COMPANY	DURHAM
	Edge of Town No Sub Category Total Gross floor area: 3530 sqm <i>Survey date: THURSDAY 18/10/18</i>		<i>Survey Type: MANUAL</i>
11	DL-02-A-05 GORT MUIRE DUBLIN BALLINTEER	OFFICE	DUBLIN
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total Gross floor area: 12474 sqm <i>Survey date: TUESDAY 10/09/13</i>		<i>Survey Type: MANUAL</i>
12	DL-02-A-06 CLONSKEAGH ROAD DUBLIN CLONSKEAGH	OFFICE	DUBLIN
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Gross floor area: 557 sqm <i>Survey date: THURSDAY 12/09/13</i>		<i>Survey Type: MANUAL</i>
13	DL-02-A-07 BELGARD SQUARE EAST DUBLIN TALLAGHT	OFFICES	DUBLIN
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total Gross floor area: 3230 sqm <i>Survey date: WEDNESDAY 20/06/18</i>		<i>Survey Type: MANUAL</i>
14	DS-02-A-01 PRIME PARK WAY DERBY	REAL ESTATE DEVELOPERS	DERBYSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area: 594 sqm <i>Survey date: WEDNESDAY 25/09/19</i>		<i>Survey Type: MANUAL</i>
15	DU-02-A-01 GREENMARKET DUNDEE	OFFICES	DUNDEE CITY
	Edge of Town Centre Development Zone Total Gross floor area: 3200 sqm <i>Survey date: THURSDAY 27/04/17</i>		<i>Survey Type: MANUAL</i>
16	ES-02-A-11 THE SIDINGS HASTINGS ORE VALLEY	HOUSING COMPANY	EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 186 sqm <i>Survey date: TUESDAY 17/11/15</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

17	ES-02-A-12 VICARAGE LANE HAILSHAM	COUNCIL OFFICES		EAST SUSSEX
	Edge of Town Centre Built-Up Zone Total Gross floor area:		3640 sqm	
	<i>Survey date: THURSDAY</i>		<i>26/11/15</i>	<i>Survey Type: MANUAL</i>
18	ES-02-A-13 ROMAN ROAD HOVE	OFFICES		EAST SUSSEX
	Edge of Town Centre Residential Zone Total Gross floor area:		280 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>04/07/18</i>	<i>Survey Type: MANUAL</i>
19	GM-02-A-09 NEW MOUNT STREET MANCHESTER	LEASED OFFICES		GREATER MANCHESTER
	Edge of Town Centre Built-Up Zone Total Gross floor area:		2500 sqm	
	<i>Survey date: MONDAY</i>		<i>26/09/16</i>	<i>Survey Type: MANUAL</i>
20	HC-02-A-12 NORTHERN ROAD PORTSMOUTH COSHAM	HMRC		HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area:		10100 sqm	
	<i>Survey date: MONDAY</i>		<i>23/11/15</i>	<i>Survey Type: MANUAL</i>
21	HD-02-A-09 MILLINGTON ROAD HAYES	DATA CENTRE		HILLINGDON
	Edge of Town Centre Commercial Zone Total Gross floor area:		12100 sqm	
	<i>Survey date: TUESDAY</i>		<i>26/06/18</i>	<i>Survey Type: MANUAL</i>
22	HF-02-A-03 60 VICTORIA STREET ST ALBANS	OFFICE		HERTFORDSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area:		610 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>16/10/13</i>	<i>Survey Type: MANUAL</i>
23	HF-02-A-04 STATION WAY ST ALBANS	OFFICES		HERTFORDSHIRE
	Edge of Town Centre Residential Zone Total Gross floor area:		5000 sqm	
	<i>Survey date: THURSDAY</i>		<i>02/10/14</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

24	HO-02-A-01 SYON LANE ISLEWORTH	SKY HEADQUARTERS	HOUNSLOW
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: 120000 sqm <i>Survey date: WEDNESDAY 05/07/17</i>		
25	KN-02-A-01 LADBROKE GROVE KENSAL GREEN	FRUIT DRINKS COMPANY	KENSINGTON AND CHELSEA
	Neighbourhood Centre (PPS6 Local Centre) Built-Up Zone Total Gross floor area: 2255 sqm <i>Survey date: MONDAY 17/06/19</i>		
26	LB-02-A-01 DURHAM STREET VAUXHALL	START UP OFFICES & STUDIOS	LAMBETH
	Edge of Town Centre Built-Up Zone Total Gross floor area: 10200 sqm <i>Survey date: MONDAY 19/11/18</i>		
27	LC-02-A-09 FURTHERGATE BLACKBURN	OFFICES	LANCASHIRE
	Suburban Area (PPS6 Out of Centre) Built-Up Zone Total Gross floor area: 2600 sqm <i>Survey date: TUESDAY 04/06/13</i>		
28	LE-02-A-04 BURTON STREET MELTON MOWBRAY	COUNCIL OFFICES	LEICESTERSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 3981 sqm <i>Survey date: WEDNESDAY 30/11/16</i>		
29	LU-02-A-01 INNER RELIEF ROAD DUNDALK	BETTING HEADQUARTERS	LOUTH
	Edge of Town Commercial Zone Total Gross floor area: 2052 sqm <i>Survey date: MONDAY 09/11/20</i>		
30	MG-02-A-02 ARMAGH ROAD MONAGHAN	OFFICES	MONAGHAN
	Edge of Town Out of Town Total Gross floor area: 3205 sqm <i>Survey date: WEDNESDAY 16/11/16</i>		
31	MS-02-A-02 MOUNT PLEASANT LIVERPOOL	SCIENCE PARK OFFICES	MERSEYSIDE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 11250 sqm <i>Survey date: TUESDAY 13/11/18</i>		

LIST OF SITES relevant to selection parameters (Cont.)

32	MT-02-A-02 CASTLE STREET MERTHYR TYDFIL	COUNCIL OFFICES	MERTHYR TYDFIL
	Edge of Town Centre Built-Up Zone Total Gross floor area: 5250 sqm <i>Survey date: THURSDAY 17/10/13</i>		<i>Survey Type: MANUAL</i>
33	NF-02-A-02 NORTH QUAY GREAT YARMOUTH	FINANCIAL PLANNERS	NORFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area: 894 sqm <i>Survey date: MONDAY 11/09/17</i>		<i>Survey Type: MANUAL</i>
34	NF-02-A-03 NORTH QUAY GREAT YARMOUTH	OFFICES	NORFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area: 5500 sqm <i>Survey date: TUESDAY 12/09/17</i>		<i>Survey Type: MANUAL</i>
35	NF-02-A-04 WHITING ROAD NORWICH	BUILDING CONSULTANT	NORFOLK
	Edge of Town Commercial Zone Total Gross floor area: 500 sqm <i>Survey date: WEDNESDAY 13/11/19</i>		<i>Survey Type: MANUAL</i>
36	NR-02-A-01 THE LAKES NORTHAMPTON	OFFICES	NORTHAMPTONSHIRE
	Edge of Town Commercial Zone Total Gross floor area: 9225 sqm <i>Survey date: THURSDAY 22/10/20</i>		<i>Survey Type: MANUAL</i>
37	NY-02-A-01 NORTH PARK ROAD HARROGATE	SOLICITORS	NORTH YORKSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 178 sqm <i>Survey date: THURSDAY 04/10/18</i>		<i>Survey Type: MANUAL</i>
38	NY-02-A-02 STATION ROAD RICHMOND	DISTRICT COUNCIL OFFICES	NORTH YORKSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area: 1930 sqm <i>Survey date: THURSDAY 14/03/19</i>		<i>Survey Type: MANUAL</i>
39	PS-02-A-01 SEVERN ROAD WELSHPOOL	COUNCIL OFFICES	POWYS
	Edge of Town Centre No Sub Category Total Gross floor area: 3920 sqm <i>Survey date: TUESDAY 12/05/15</i>		<i>Survey Type: MANUAL</i>
40	RO-02-A-02 GOLF LINKS ROAD ROSCOMMON ARDSALLAGH BEG	GOVERNMENT OFFICES	ROSCOMMON
	Edge of Town Centre Residential Zone Total Gross floor area: 7200 sqm <i>Survey date: TUESDAY 23/09/14</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

41	SF-02-A-02 BATH STREET IPSWICH	OFFICES		SUFFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area: 6505 sqm <i>Survey date: FRIDAY 19/07/13</i>			
42	SF-02-A-03 WHITE HOUSE ROAD IPSWICH	OFFICES		SUFFOLK
	Edge of Town Industrial Zone Total Gross floor area: 2800 sqm <i>Survey date: THURSDAY 24/09/20</i>			
43	SO-02-A-02 BATH ROAD SLOUGH	COUNCIL OFFICES		SLOUGH
	Edge of Town Centre Built-Up Zone Total Gross floor area: 5050 sqm <i>Survey date: THURSDAY 27/02/14</i>			
44	SR-02-A-02 WELLGREEN ROAD STIRLING	SERVICED OFFICES		STIRLING
	Edge of Town Centre Built-Up Zone Total Gross floor area: 2150 sqm <i>Survey date: TUESDAY 08/09/20</i>			
45	SW-02-A-01 LANGDON ROAD SWANSEA	OFFICES		SWANSEA
	Edge of Town Centre Development Zone Total Gross floor area: 6630 sqm <i>Survey date: FRIDAY 25/10/13</i>			
46	SW-02-A-02 KINGS ROAD SWANSEA	OFFICE		SWANSEA
	Edge of Town Centre Development Zone Total Gross floor area: 2225 sqm <i>Survey date: THURSDAY 24/10/13</i>			
47	TH-02-A-01 CAMBRIDGE HEATH ROAD BETHNAL GREEN	OFFICE SPACE FOR RENT		TOWER HAMLETS
	Neighbourhood Centre (PPS6 Local Centre) High Street Total Gross floor area: 7049 sqm <i>Survey date: WEDNESDAY 06/03/19</i>			
48	TV-02-A-05 HANZARD DRIVE NEAR BILLINGHAM WYNYARD	CHEMICAL COMPANY		TEES VALLEY
	Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area: 5110 sqm <i>Survey date: FRIDAY 04/09/20</i>			

LIST OF SITES relevant to selection parameters (Cont.)

49	TW-02-A-08	HOUSING ASSOCIATION OFFICE	TYNE & WEAR
	BENTON PARK ROAD NEWCASTLE UPON TYNE LONGBENTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 4800 sqm <i>Survey date: FRIDAY 19/10/18</i>		<i>Survey Type: MANUAL</i>
50	WH-02-A-03	OFFICE	WANDSWORTH
	BROUGHTON STREET NINE ELMS  Suburban Area (PPS6 Out of Centre) Built-Up Zone Total Gross floor area: 1400 sqm <i>Survey date: MONDAY 16/11/15</i>		<i>Survey Type: MANUAL</i>
51	WL-02-A-01	PET INSURANCE COMPANY	WILTSHIRE
	THE CRESCENT AMESBURY SUNRISE WAY Edge of Town Development Zone Total Gross floor area: 2500 sqm <i>Survey date: TUESDAY 18/09/18</i>		<i>Survey Type: MANUAL</i>
52	WM-02-A-04	OFFICE	WEST MIDLANDS
	BOURNVILLE LANE BIRMINGHAM  Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 1800 sqm <i>Survey date: TUESDAY 10/11/15</i>		<i>Survey Type: MANUAL</i>
53	WO-02-A-02	OFFICE	WORCESTERSHIRE
	MOOR STREET WORCESTER  Edge of Town Centre Built-Up Zone Total Gross floor area: 2000 sqm <i>Survey date: MONDAY 14/11/16</i>		<i>Survey Type: MANUAL</i>
54	WO-02-A-03	IT SERVICES	WORCESTERSHIRE
	STOURPORT ROAD KIDDERMINSTER  Edge of Town Industrial Zone Total Gross floor area: 5945 sqm <i>Survey date: TUESDAY 13/10/20</i>		<i>Survey Type: MANUAL</i>
55	WY-02-A-05	OFFICES	WEST YORKSHIRE
	PIONEER WAY CASTLEFORD WHITWOOD Edge of Town No Sub Category Total Gross floor area: 1230 sqm <i>Survey date: TUESDAY 23/05/17</i>		<i>Survey Type: MANUAL</i>

*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 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	2	65050	0.158	2	65050	0.020	2	65050	0.178
06:30 - 07:00	2	65050	0.244	2	65050	0.042	2	65050	0.286
07:00 - 07:30	53	6311	0.162	53	6311	0.022	53	6311	0.184
07:30 - 08:00	53	6311	0.368	53	6311	0.052	53	6311	0.420
08:00 - 08:30	54	6197	0.480	54	6197	0.056	54	6197	0.536
08:30 - 09:00	55	6192	0.559	55	6192	0.075	55	6192	0.634
09:00 - 09:30	55	6192	0.414	55	6192	0.077	55	6192	0.491
09:30 - 10:00	55	6192	0.252	55	6192	0.091	55	6192	0.343
10:00 - 10:30	55	6192	0.130	55	6192	0.076	55	6192	0.206
10:30 - 11:00	55	6192	0.095	55	6192	0.070	55	6192	0.165
11:00 - 11:30	55	6192	0.074	55	6192	0.064	55	6192	0.138
11:30 - 12:00	55	6192	0.087	55	6192	0.072	55	6192	0.159
12:00 - 12:30	55	6192	0.087	55	6192	0.125	55	6192	0.212
12:30 - 13:00	55	6192	0.108	55	6192	0.137	55	6192	0.245
13:00 - 13:30	55	6192	0.108	55	6192	0.123	55	6192	0.231
13:30 - 14:00	55	6192	0.119	55	6192	0.109	55	6192	0.228
14:00 - 14:30	55	6192	0.102	55	6192	0.089	55	6192	0.191
14:30 - 15:00	55	6192	0.072	55	6192	0.111	55	6192	0.183
15:00 - 15:30	55	6192	0.062	55	6192	0.135	55	6192	0.197
15:30 - 16:00	55	6192	0.059	55	6192	0.149	55	6192	0.208
16:00 - 16:30	55	6192	0.063	55	6192	0.304	55	6192	0.367
16:30 - 17:00	55	6192	0.067	55	6192	0.323	55	6192	0.390
17:00 - 17:30	55	6192	0.057	55	6192	0.512	55	6192	0.569
17:30 - 18:00	55	6192	0.046	55	6192	0.383	55	6192	0.429
18:00 - 18:30	53	6400	0.027	53	6400	0.265	53	6400	0.292
18:30 - 19:00	53	6400	0.023	53	6400	0.138	53	6400	0.161
19:00 - 19:30	2	61075	0.026	2	61075	0.115	2	61075	0.141
19:30 - 20:00	2	61075	0.020	2	61075	0.108	2	61075	0.128
20:00 - 20:30	2	61075	0.020	2	61075	0.058	2	61075	0.078
20:30 - 21:00	2	61075	0.015	2	61075	0.030	2	61075	0.045
21:00 - 21:30	1	120000	0.031	1	120000	0.039	1	120000	0.070
21:30 - 22:00	1	120000	0.017	1	120000	0.033	1	120000	0.050
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
<b>Total Rates:</b>			4.152			4.003			8.155

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

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



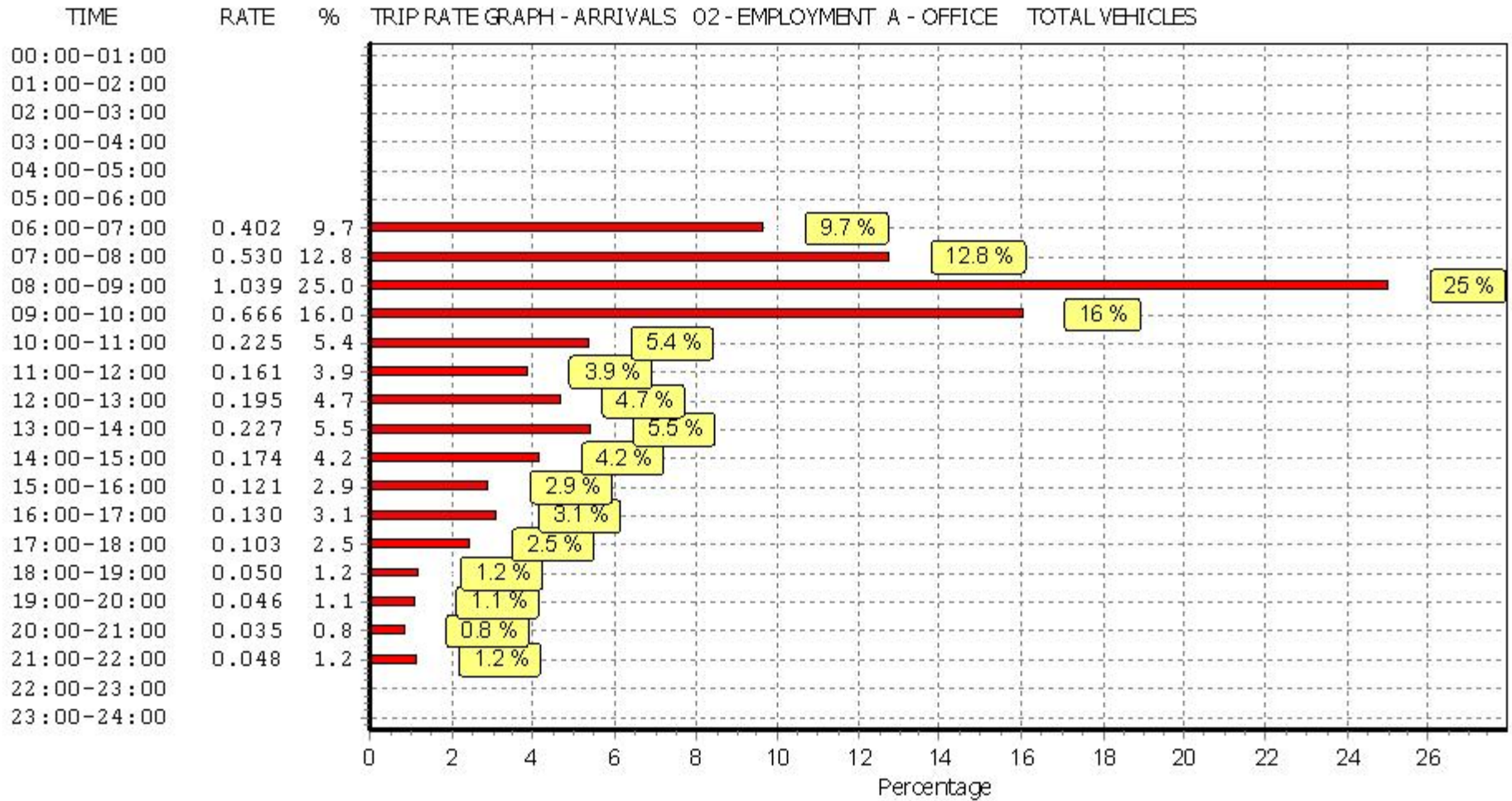
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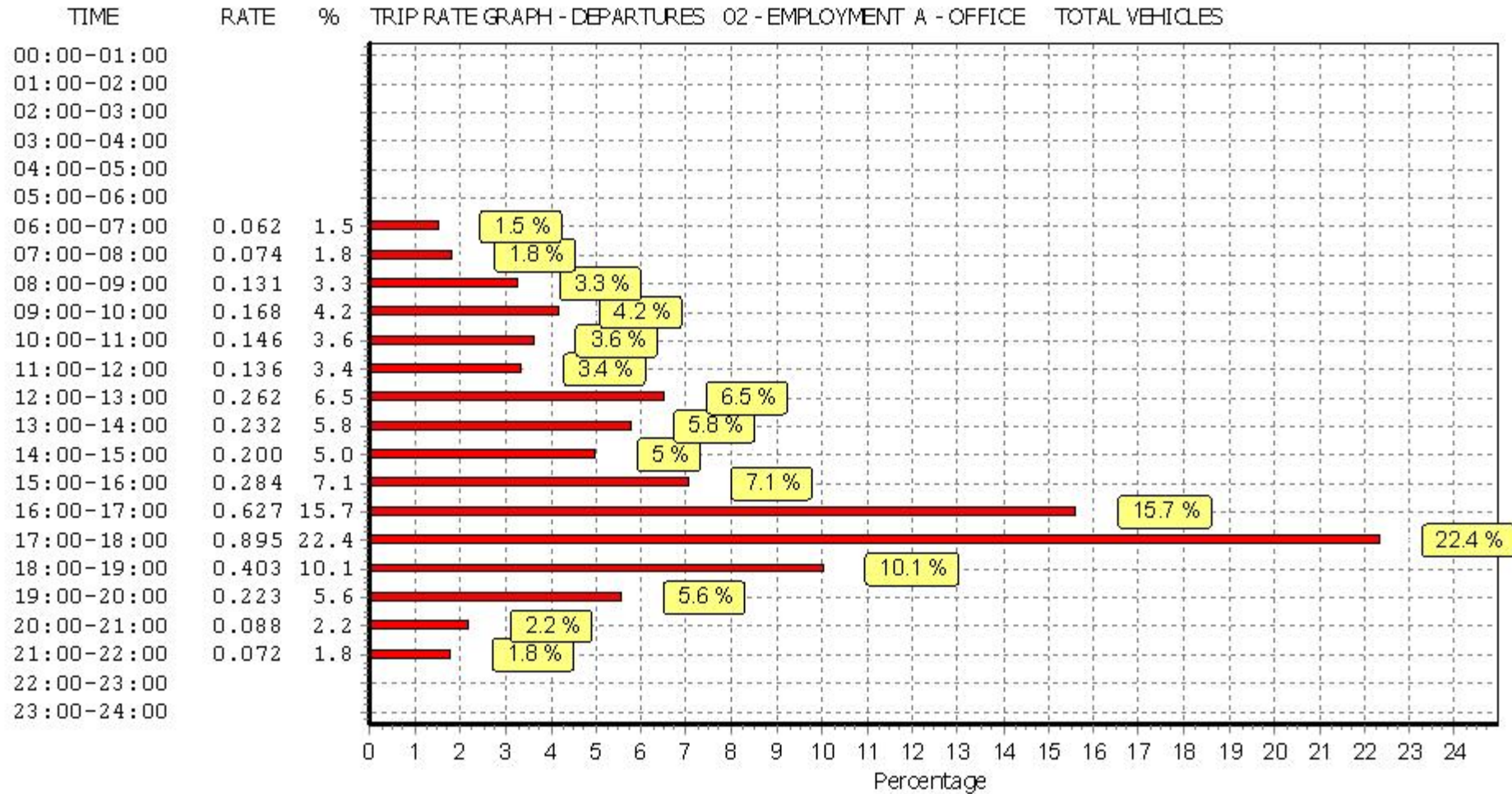
#### Parameter summary

Trip rate parameter range selected:	178 - 120000 (units: sqm)
Survey date date range:	01/01/13 - 09/11/20
Number of weekdays (Monday-Friday):	55
Number of Saturdays:	1
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

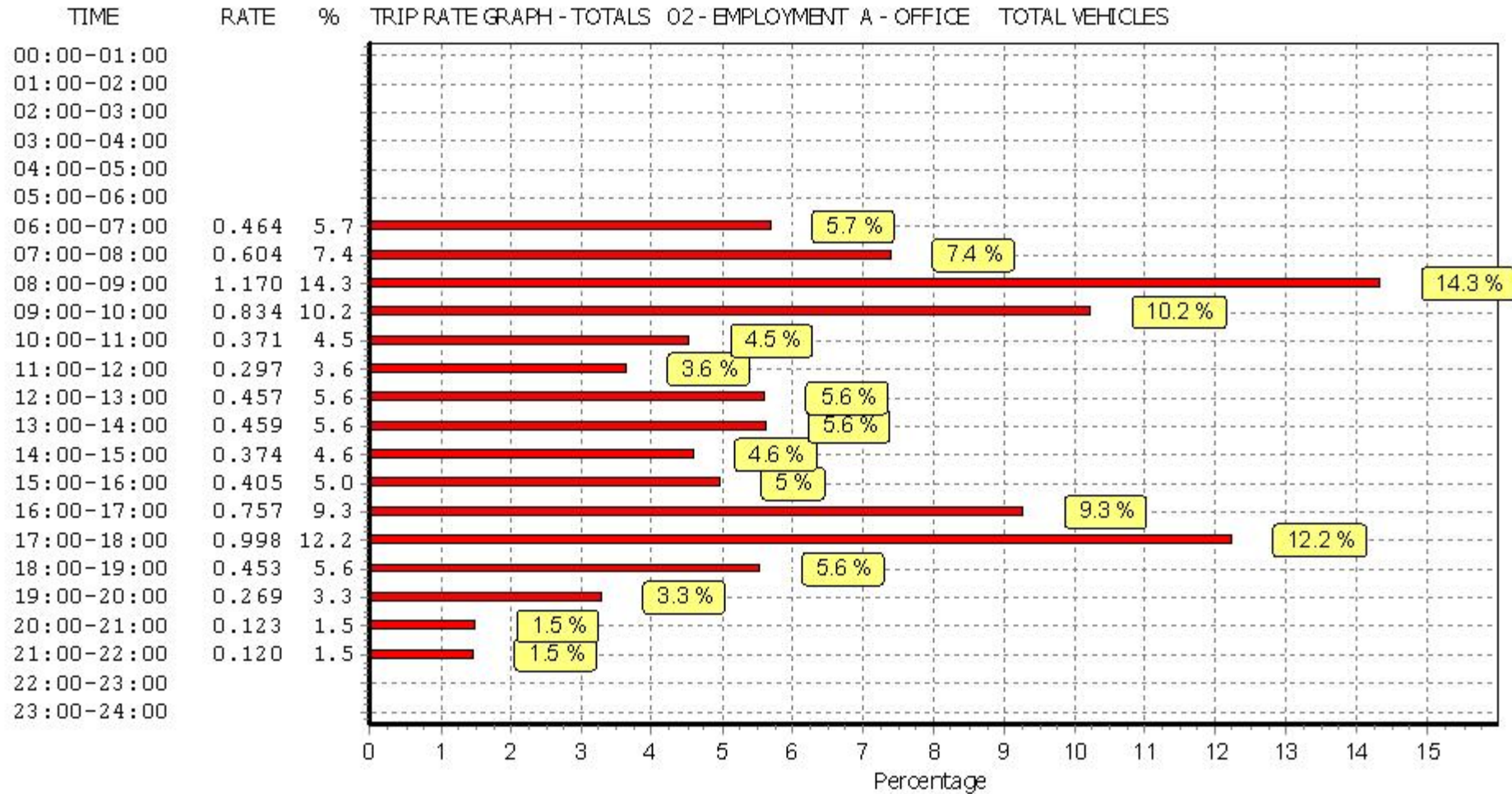
*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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.*

Calculation Reference: AUDIT-638801-210621-0623

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD &amp; DRINK

Category : B - RESTAURANTS

## TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BT BRENT	1 days
	EN ENFIELD	1 days
	LB LAMBETH	1 days
02	SOUTH EAST	
	HC HAMPSHIRE	1 days
	WS WEST SUSSEX	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	2 days
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
	WM WEST MIDLANDS	3 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
10	WALES	
	CF CARDIFF	1 days
11	SCOTLAND	
	RF RENFREWSHIRE	1 days
12	CONNAUGHT	
	RO ROSCOMMON	1 days
14	LEINSTER	
	LU LOUTH	2 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	2 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: Gross floor area  
 Actual Range: 130 to 2200 (units: sqm)  
 Range Selected by User: 75 to 2400 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 25/09/19

*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	4 days
Tuesday	4 days
Wednesday	1 days
Thursday	4 days
Friday	5 days
Saturday	1 days
Sunday	2 days

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

Selected survey types:

Manual count	21 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 undertaken using machines.*

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	7

*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:

Development Zone	5
Residential Zone	2
Retail Zone	2
Built-Up Zone	3
Village	2
Out of Town	1
High Street	3
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.*

Secondary Filtering selection:

Use Class:

E(b)	21 days
------	---------

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS@.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

5,000 or Less	1 days
5,001 to 25,000	1 days
25,001 to 50,000	3 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	8 days
500,001 or More	3 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	9 days
1.1 to 1.5	10 days
2.1 to 2.5	1 days

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

Travel Plan:

Yes	2 days
No	19 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	18 days
3 Moderate	1 days
5 Very Good	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1	AN-06-B-02 FRANKIE & BENNY'S HILSBOROUGH ROAD LISBURN		ANTRIM
	Edge of Town Retail Zone Total Gross floor area: 275 sqm <i>Survey date: FRIDAY 19/06/15</i>		<i>Survey Type: MANUAL</i>
2	AN-06-B-03 MODERN CUISINE LISBURN ROAD BELFAST		ANTRIM
	Suburban Area (PPS6 Out of Centre) High Street Total Gross floor area: 320 sqm <i>Survey date: FRIDAY 25/09/15</i>		<i>Survey Type: MANUAL</i>
3	BT-06-B-01 COFFEE SHOP & RESTAURANT EMPIRE WAY WEMBLEY		BRENT
	Suburban Area (PPS6 Out of Centre) Development Zone Total Gross floor area: 150 sqm <i>Survey date: MONDAY 18/05/15</i>		<i>Survey Type: MANUAL</i>
4	CF-06-B-02 FRANKIE & BENNY'S NEWPORT ROAD CARDIFF		CARDIFF
	Edge of Town Development Zone Total Gross floor area: 400 sqm <i>Survey date: SUNDAY 19/10/14</i>		<i>Survey Type: MANUAL</i>
5	CH-06-B-01 BBQ RESTAURANT SOUTERS LANE CHESTER		CHESHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 500 sqm <i>Survey date: TUESDAY 11/11/14</i>		<i>Survey Type: MANUAL</i>
6	DS-06-B-02 CHIQUITO PRIDE PARKWAY DERBY		DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Development Zone Total Gross floor area: 450 sqm <i>Survey date: SUNDAY 19/10/14</i>		<i>Survey Type: MANUAL</i>
7	DS-06-B-03 BRITISH RESTAURANT THORNHILL ROAD DERBY LITTLEOVER		DERBYSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Gross floor area: 350 sqm <i>Survey date: THURSDAY 12/07/18</i>		<i>Survey Type: MANUAL</i>
8	EN-06-B-01 ITALIAN RESTAURANT CHASE SIDE ENFIELD		ENFIELD
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Gross floor area: 370 sqm <i>Survey date: TUESDAY 17/11/15</i>		<i>Survey Type: MANUAL</i>
9	HC-06-B-01 PIZZA HUT BINNACLE WAY PORTSMOUTH COSHAM		HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Development Zone Total Gross floor area: 325 sqm <i>Survey date: MONDAY 23/11/15</i>		<i>Survey Type: MANUAL</i>



LIST OF SITES relevant to selection parameters (Cont.)

10	LB-06-B-01 STOCKWELL ROAD STOCKWELL	PORTUGUESE RESTAURANT	LAMBETH
	Edge of Town Centre No Sub Category Total Gross floor area:	194 sqm	
	<i>Survey date: MONDAY</i>	<i>24/06/19</i>	<i>Survey Type: MANUAL</i>
11	LN-06-B-01 BRAYFORD WHARF NORTH LINCOLN BRAYFORD WHARF	PREZZO	LINCOLNSHIRE
	Edge of Town Centre Development Zone Total Gross floor area:	1136 sqm	
	<i>Survey date: TUESDAY</i>	<i>10/10/17</i>	<i>Survey Type: MANUAL</i>
12	LU-06-B-01 CARLINGFORD ROAD R173 NEAR DUNDALK	RESTAURANT	LOUTH
	Free Standing (PPS6 Out of Town) Out of Town Total Gross floor area:	865 sqm	
	<i>Survey date: WEDNESDAY</i>	<i>25/09/13</i>	<i>Survey Type: MANUAL</i>
13	LU-06-B-02 DONORE ROAD DROGHEDA LAGAVOOREN	RESTAURANT	LOUTH
	Edge of Town No Sub Category Total Gross floor area:	2200 sqm	
	<i>Survey date: FRIDAY</i>	<i>19/06/15</i>	<i>Survey Type: MANUAL</i>
14	RF-06-B-01 LINWOOD ROAD PAISLEY PHOENIX LEISURE PARK	INDIAN RESTAURANT	RENFREWSHIRE
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total Gross floor area:	175 sqm	
	<i>Survey date: FRIDAY</i>	<i>20/06/14</i>	<i>Survey Type: MANUAL</i>
15	RO-06-B-01 MAIN STREET TULSK	IRISH RESTAURANT	ROSCOMMON
	Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area:	736 sqm	
	<i>Survey date: FRIDAY</i>	<i>27/04/18</i>	<i>Survey Type: MANUAL</i>
16	ST-06-B-01 STONE ROAD STOKE-ON-TRENT TRENTHAM	RESTAURANT	STAFFORDSHIRE
	Edge of Town Retail Zone Total Gross floor area:	259 sqm	
	<i>Survey date: THURSDAY</i>	<i>24/10/13</i>	<i>Survey Type: MANUAL</i>
17	WM-06-B-05 THE BUTTS COVENTRY	AKBARS	WEST MIDLANDS
	Edge of Town Centre Built-Up Zone Total Gross floor area:	600 sqm	
	<i>Survey date: THURSDAY</i>	<i>17/11/16</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

18	WM-06-B-06	ITALIAN RESTAURANT	WEST MIDLANDS
	EARLSDON STREET COVENTRY		
	Neighbourhood Centre (PPS6 Local Centre) High Street		
	Total Gross floor area:	175 sqm	
	Survey date:	THURSDAY 24/11/16	Survey Type: MANUAL
19	WM-06-B-07	INDIAN RESTAURANT	WEST MIDLANDS
	AUDNAM STOURBRIDGE AUDNAM		
	Neighbourhood Centre (PPS6 Local Centre) High Street		
	Total Gross floor area:	370 sqm	
	Survey date:	TUESDAY 28/11/17	Survey Type: MANUAL
20	WS-06-B-02	BRITISH FINE DINING	WEST SUSSEX
	ARUNDEL ROAD NEAR CHICHESTER TANGMERE		
	Neighbourhood Centre (PPS6 Local Centre) Village		
	Total Gross floor area:	130 sqm	
	Survey date:	SATURDAY 04/10/14	Survey Type: MANUAL
21	WY-06-B-01	CHINESE RESTAURANT	WEST YORKSHIRE
	BINGLEY STREET LEEDS		
	Edge of Town Centre Built-Up Zone		
	Total Gross floor area:	950 sqm	
	Survey date:	MONDAY 19/10/15	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 06 - HOTEL, FOOD &amp; DRINK/B - RESTAURANTS

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	2	660	0.152	2	660	0.227	2	660	0.379
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	2	530	0.000	2	530	0.000	2	530	0.000
08:00 - 09:00	3	486	0.274	3	486	0.206	3	486	0.480
09:00 - 10:00	5	417	1.008	5	417	0.240	5	417	1.248
10:00 - 11:00	14	461	1.210	14	461	0.651	14	461	1.861
11:00 - 12:00	19	524	1.355	19	524	0.914	19	524	2.269
12:00 - 13:00	19	524	2.369	19	524	1.265	19	524	3.634
13:00 - 14:00	19	524	2.098	19	524	2.189	19	524	4.287
14:00 - 15:00	19	524	1.295	19	524	1.918	19	524	3.213
15:00 - 16:00	20	517	0.891	20	517	1.249	20	517	2.140
16:00 - 17:00	21	520	1.107	21	520	0.897	21	520	2.004
17:00 - 18:00	21	520	1.738	21	520	0.970	21	520	2.708
18:00 - 19:00	21	520	2.287	21	520	1.830	21	520	4.117
19:00 - 20:00	21	520	2.214	21	520	1.958	21	520	4.172
20:00 - 21:00	21	520	1.281	21	520	2.104	21	520	3.385
21:00 - 22:00	21	520	0.887	21	520	1.491	21	520	2.378
22:00 - 23:00	20	503	0.566	20	503	1.232	20	503	1.798
23:00 - 24:00	18	512	0.228	18	512	0.890	18	512	1.118
<b>Total Rates:</b>			20.960			20.231			41.191

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

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

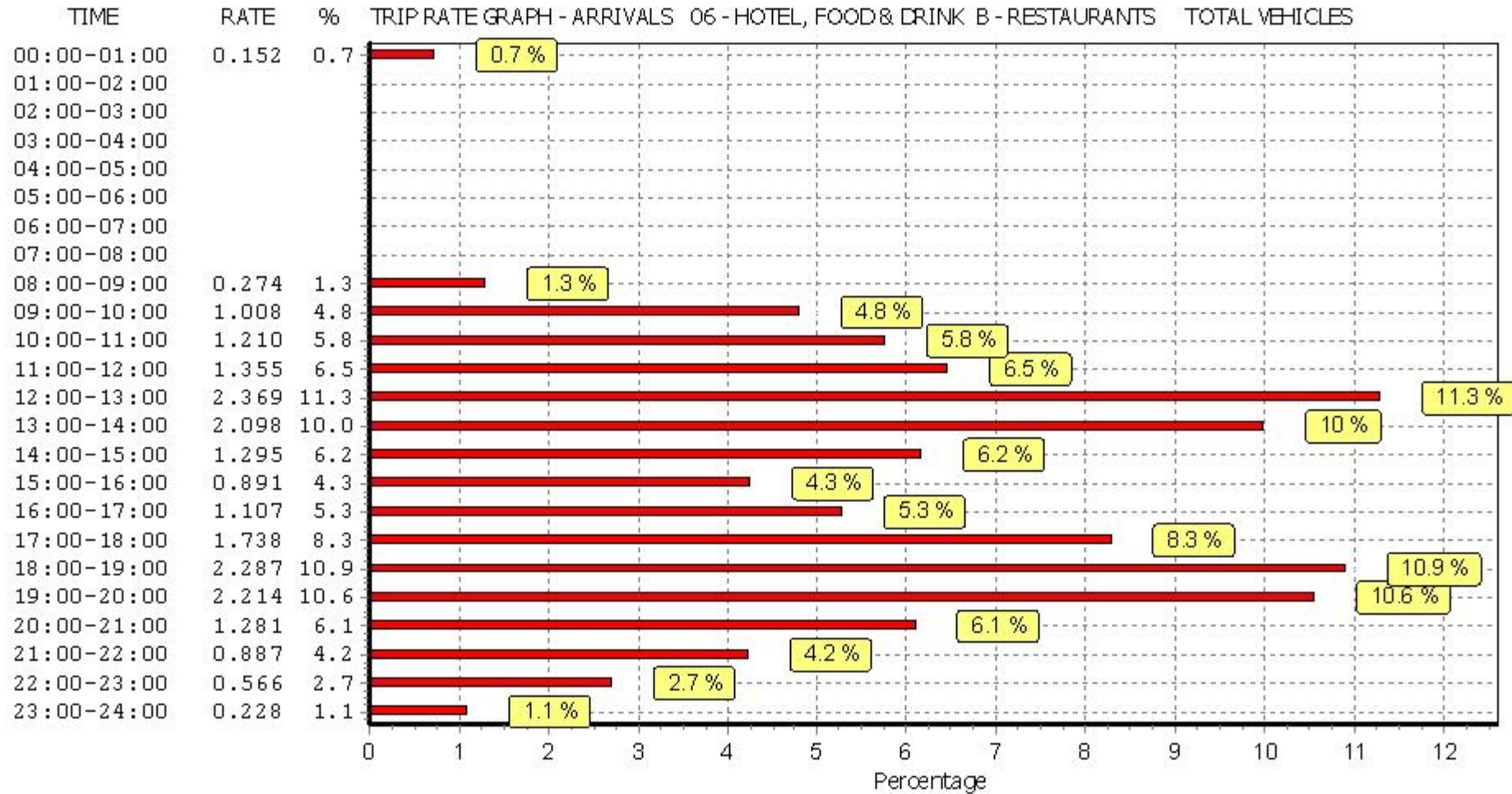
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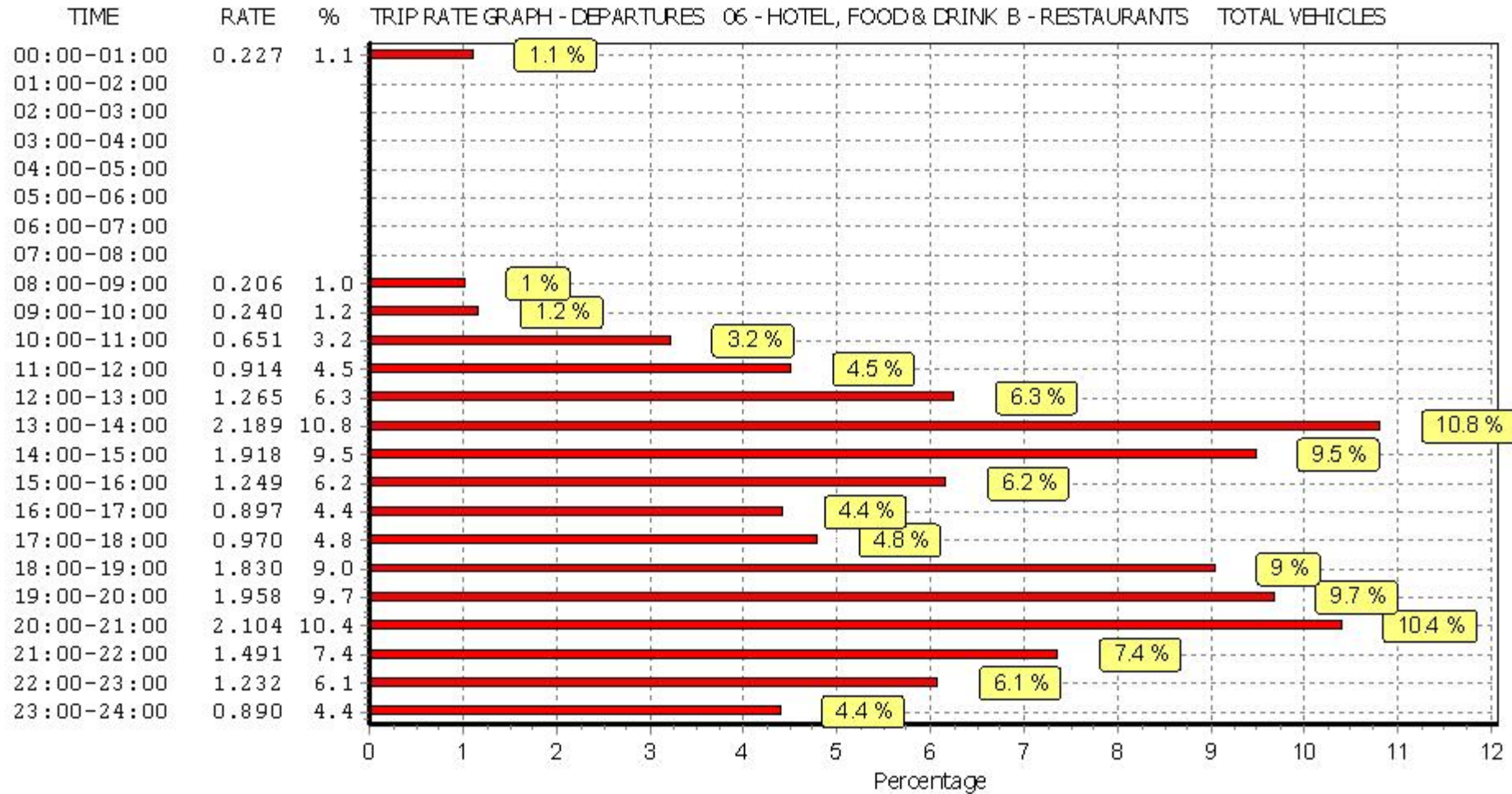
#### Parameter summary

Trip rate parameter range selected:	130 - 2200 (units: sqm)
Survey date range:	01/01/13 - 25/09/19
Number of weekdays (Monday-Friday):	18
Number of Saturdays:	1
Number of Sundays:	2
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

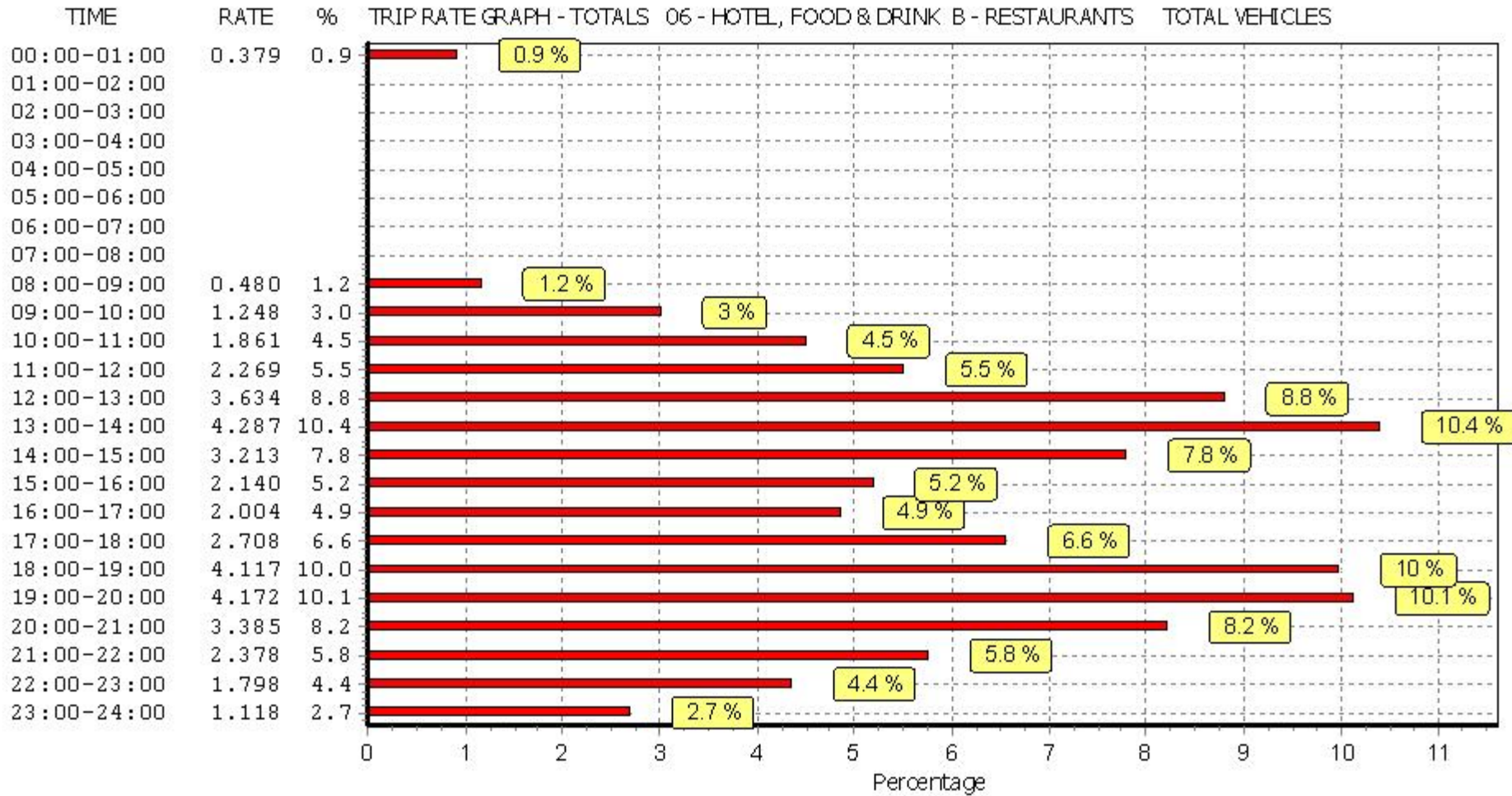
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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.*

Calculation Reference: AUDIT-638801-210622-0651

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL  
 Category : G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE  
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST KC KENT	1 days
03	SOUTH WEST DC DORSET	1 days
05	EAST MIDLANDS LN LINCOLNSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE WY WEST YORKSHIRE	2 days
08	NORTH WEST LC LANCASHIRE	1 days
12	CONNAUGHT CS SLIGO	1 days
17	ULSTER (NORTHERN IRELAND) AN ANTRIM	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: Gross floor area  
 Actual Range: 470 to 4755 (units: sqm)  
 Range Selected by User: 290 to 27843 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 14/03/19

*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:

Tuesday	2 days
Thursday	2 days
Saturday	4 days

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

Selected survey types:

Manual count	8 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 undertaken using machines.*

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	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:

Industrial Zone	1
Retail Zone	4
Built-Up Zone	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.*



Secondary Filtering selection:

Use Class:

E(a) 8 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	3 days
0.6 to 1.0	2 days
1.1 to 1.5	3 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.*

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	8 days

*This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.*

Travel Plan:

No 8 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 8 days

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

LIST OF SITES relevant to selection parameters

1	AN-01-G-01 BOUCHER ROAD BELFAST BALMORAL Suburban Area (PPS6 Out of Centre) Built-Up Zone Total Gross floor area: 2903 sqm <i>Survey date: THURSDAY 22/11/18</i>	DFS	ANTRIM	<i>Survey Type: MANUAL</i>
2	CS-01-G-02 PEARSE ROAD SLIGO CARRAROE RETAIL PARK Edge of Town Retail Zone Total Gross floor area: 3416 sqm <i>Survey date: SATURDAY 26/10/13</i>	SMYTHS TOYS	SLIGO	<i>Survey Type: MANUAL</i>
3	DC-01-G-02 GREAT WESTERN ROAD DORCHESTER  Edge of Town Centre Built-Up Zone Total Gross floor area: 2100 sqm <i>Survey date: SATURDAY 17/09/16</i>	THE RANGE	DORSET	<i>Survey Type: MANUAL</i>
4	KC-01-G-04 LONDON ROAD MAIDSTONE ROCKY HILL Edge of Town Centre Built-Up Zone Total Gross floor area: 470 sqm <i>Survey date: SATURDAY 12/05/18</i>	MAJESTIC WINE	KENT	<i>Survey Type: MANUAL</i>
5	LC-01-G-01 BLACKPOOL ROAD PRESTON RIBBLETON Suburban Area (PPS6 Out of Centre) Retail Zone Total Gross floor area: 4100 sqm <i>Survey date: TUESDAY 06/11/18</i>	CURRYS PC WORLD	LANCASHIRE	<i>Survey Type: MANUAL</i>
6	LN-01-G-01 TRITTON ROAD LINCOLN TRITTON RETAIL PARK Edge of Town Centre Retail Zone Total Gross floor area: 1600 sqm <i>Survey date: TUESDAY 31/10/17</i>	PETS AT HOME	LINCOLNSHIRE	<i>Survey Type: MANUAL</i>
7	WY-01-G-01 HOLDEN ING WAY BATLEY BIRSTALL Edge of Town Retail Zone Total Gross floor area: 4755 sqm <i>Survey date: SATURDAY 20/10/18</i>	CURRYS PC WORLD	WEST YORKSHIRE	<i>Survey Type: MANUAL</i>
8	WY-01-G-02 CLARENCE ROAD LEEDS HUNSLET Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 1140 sqm <i>Survey date: THURSDAY 14/03/19</i>	SUPA SOFA	WEST YORKSHIRE	<i>Survey Type: MANUAL</i>

*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 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	3	3205	0.052	3	3205	0.000	3	3205	0.052
08:00 - 09:00	8	2561	0.317	8	2561	0.103	8	2561	0.420
09:00 - 10:00	8	2561	0.791	8	2561	0.542	8	2561	1.333
10:00 - 11:00	8	2561	1.347	8	2561	0.991	8	2561	2.338
11:00 - 12:00	8	2561	1.504	8	2561	1.411	8	2561	2.915
12:00 - 13:00	8	2561	1.591	8	2561	1.562	8	2561	3.153
13:00 - 14:00	8	2561	2.021	8	2561	2.070	8	2561	4.091
14:00 - 15:00	8	2561	2.138	8	2561	2.080	8	2561	4.218
15:00 - 16:00	8	2561	1.831	8	2561	1.958	8	2561	3.789
16:00 - 17:00	8	2561	1.499	8	2561	1.616	8	2561	3.115
17:00 - 18:00	8	2561	1.059	8	2561	1.250	8	2561	2.309
18:00 - 19:00	8	2561	0.537	8	2561	0.737	8	2561	1.274
19:00 - 20:00	5	2235	0.618	5	2235	0.823	5	2235	1.441
20:00 - 21:00	4	2676	0.215	4	2676	0.411	4	2676	0.626
21:00 - 22:00	2	2502	0.040	2	2502	0.400	2	2502	0.440
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			15.560			15.954			31.514

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.

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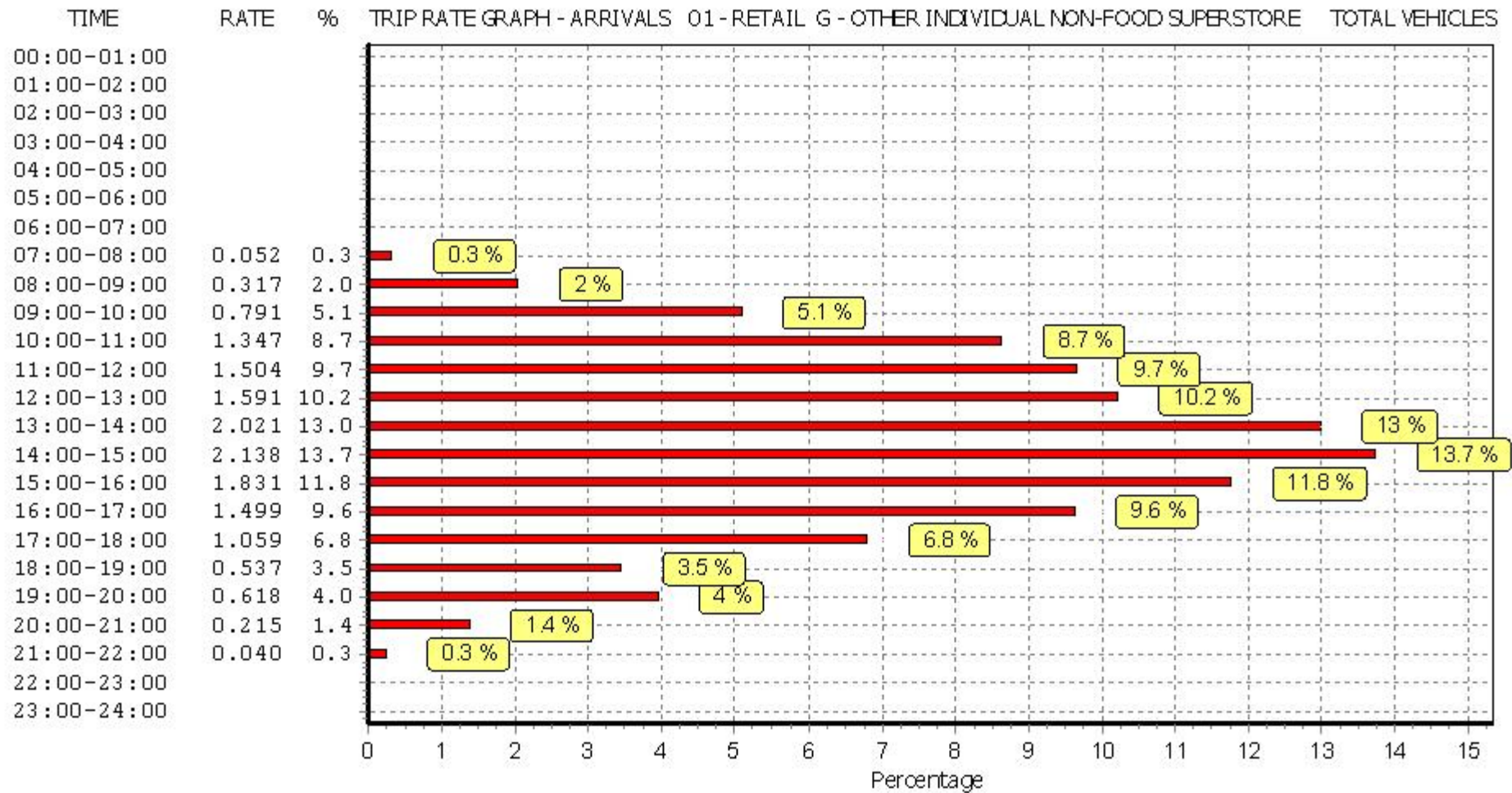
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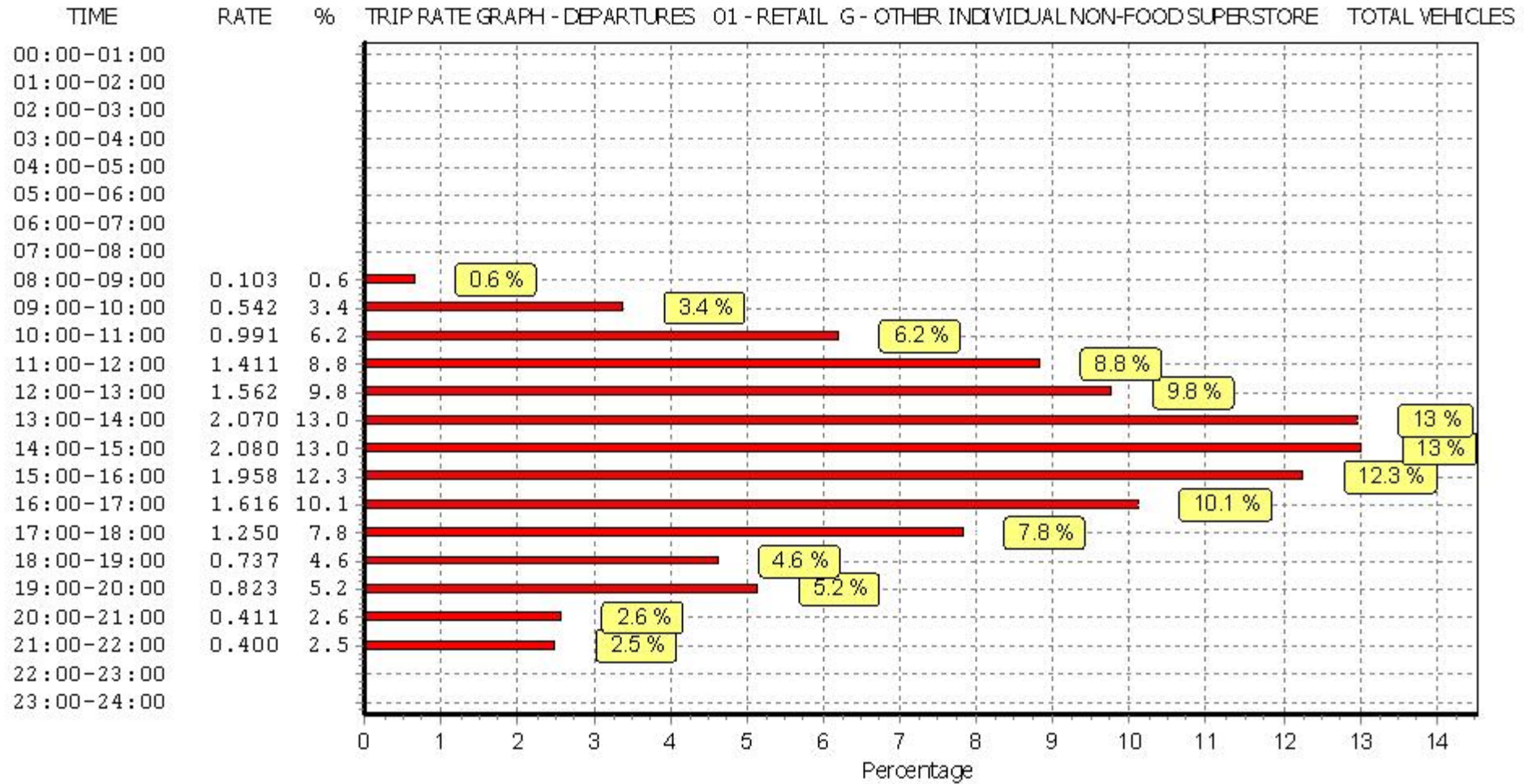
#### Parameter summary

Trip rate parameter range selected:	470 - 4755 (units: sqm)
Survey date range:	01/01/13 - 14/03/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	4
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

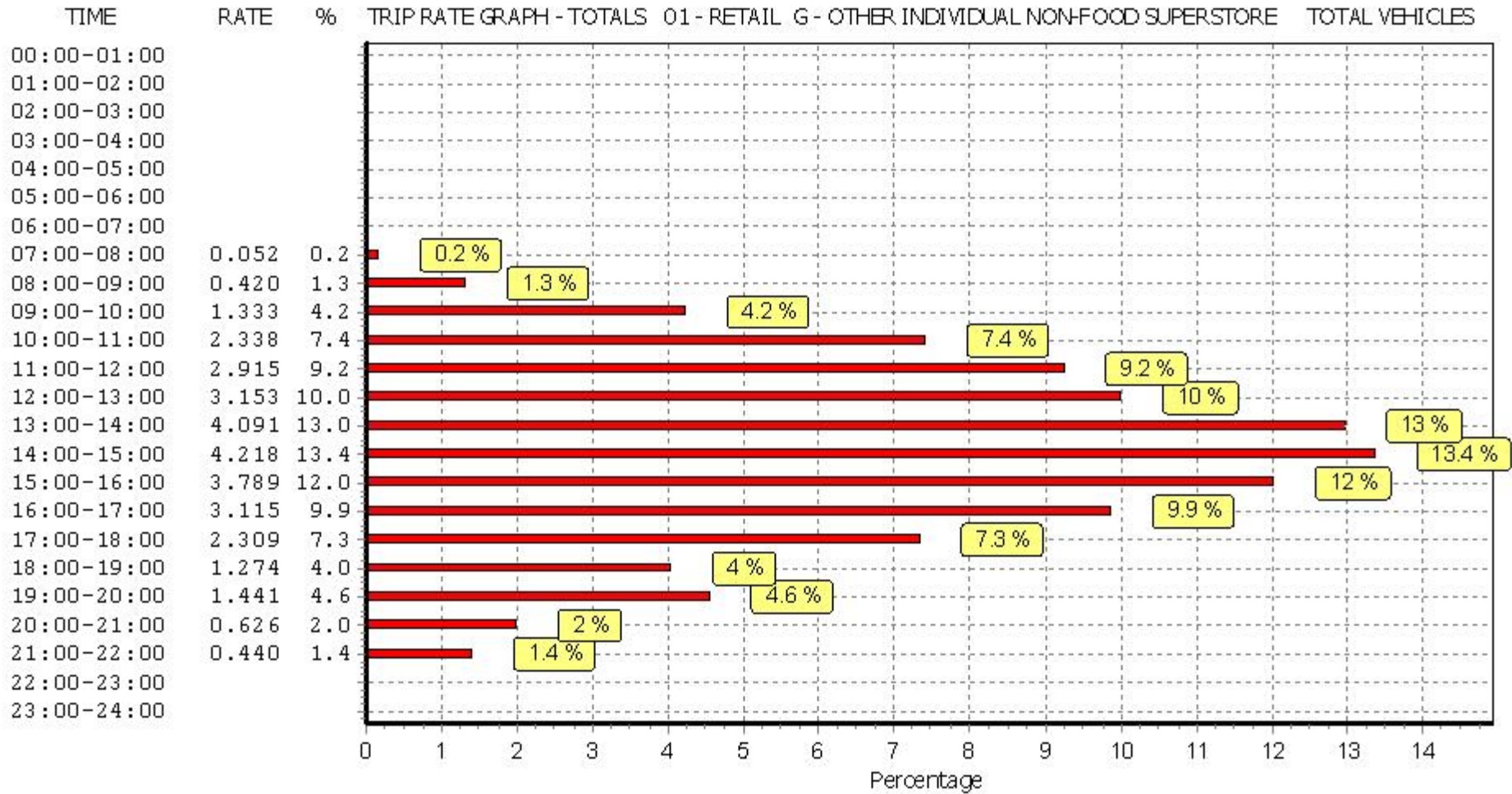
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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.*



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## **APPENDIX D**

PICADY Outputs



<b>Junctions 9</b>
<b>PICADY 9 - Priority Intersection Module</b>
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk
<b>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</b>

**Filename:** Santry Avenue Site Access 30.04.21.j9

**Path:** G:\2020\p200060\calcs\Picady

**Report generation date:** 30/04/2021 12:46:49

- »DO NOTHING SCENARIO - DN 2022, AM
- »DO NOTHING SCENARIO - DN 2022, PM
- »DO NOTHING SCENARIO - DN 2027, AM
- »DO NOTHING SCENARIO - DN 2027, PM
- »DO NOTHING SCENARIO - DN 2037, AM
- »DO NOTHING SCENARIO - DN 2037, PM
- »DO SOMETHING SCENARIO - DS 2022, AM
- »DO SOMETHING SCENARIO - DS 2022, PM
- »DO SOMETHING SCENARIO - DS 2027, AM
- »DO SOMETHING SCENARIO - DS 2027, PM
- »DO SOMETHING SCENARIO - DS 2037, AM
- »DO SOMETHING SCENARIO - DS 2037, 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.*

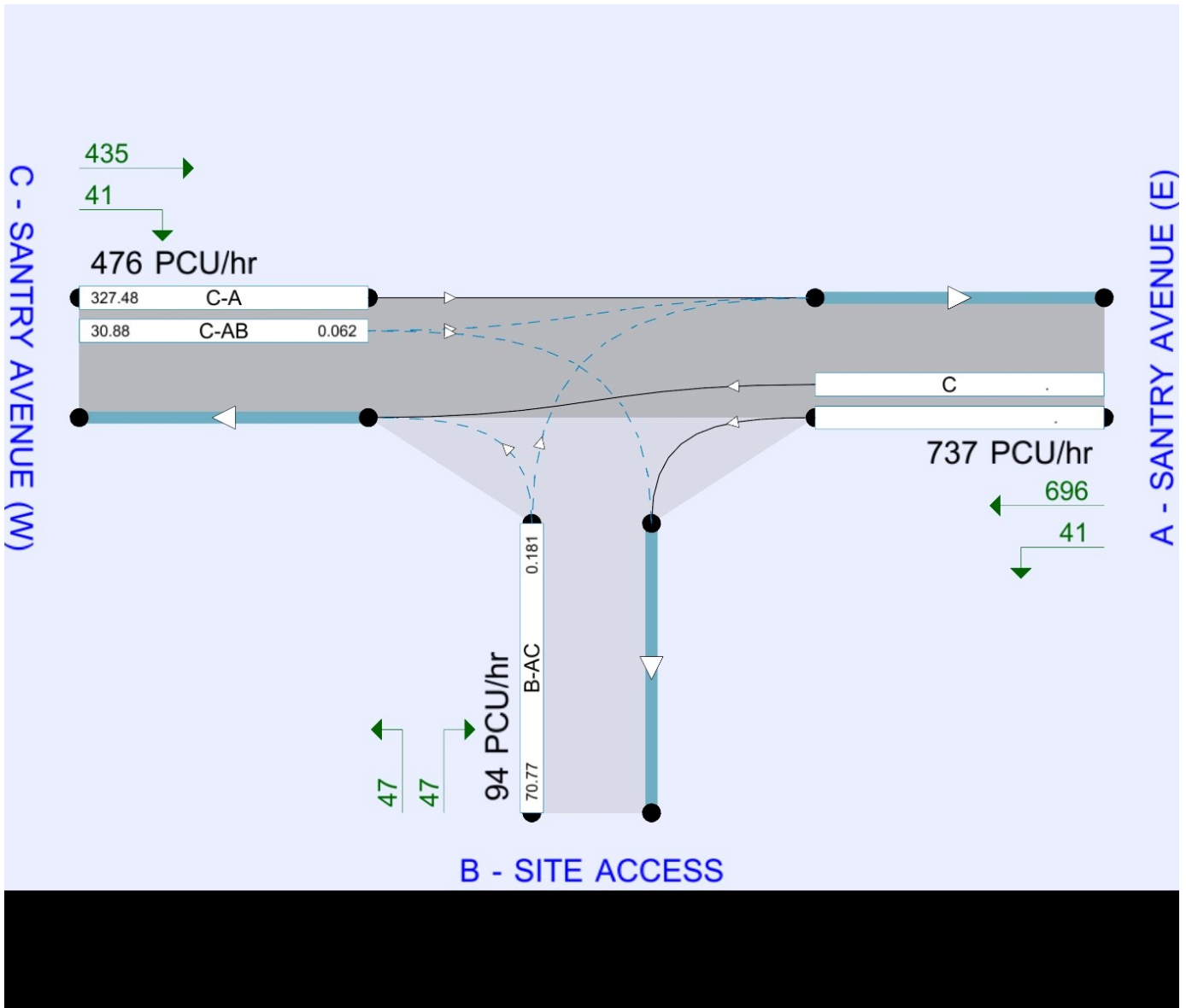
### File summary

#### File Description

<b>Title</b>	MIXED USE DEVELOPMENT
<b>Location</b>	SANTRY AVENUE
<b>Site number</b>	
<b>Date</b>	30/04/2021
<b>Version</b>	
<b>Status</b>	
<b>Identifier</b>	SAS
<b>Client</b>	Dwyer Nolan Ltd
<b>Jobnumber</b>	200060
<b>Enumerator</b>	HEADOFFICE"saeeds
<b>Description</b>	

### 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

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
DN 2022	AM	ONE HOUR	07:45	09:15	15	✓
DN 2022	PM	ONE HOUR	16:45	18:15	15	✓
DS 2022	AM	ONE HOUR	07:45	09:15	15	✓
DS 2022	PM	ONE HOUR	16:45	18:15	15	✓
DN 2027	AM	ONE HOUR	07:45	09:15	15	✓
DN 2027	PM	ONE HOUR	16:45	18:15	15	✓
DS 2027	AM	ONE HOUR	07:45	09:15	15	✓
DS 2027	PM	ONE HOUR	16:45	18:15	15	✓
DN 2037	AM	ONE HOUR	07:45	09:15	15	✓
DN 2037	PM	ONE HOUR	16:45	18:15	15	✓
DS 2037	AM	ONE HOUR	07:45	09:15	15	✓
DS 2037	PM	ONE HOUR	16:45	18:15	15	✓

# DO NOTHING SCENARIO - DN 2022, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.98	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DN 2022	AM	ONE HOUR	07:45	09:15	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	✓	620.00	100.000
B - SITE ACCESS		ONE HOUR	✓	50.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	431.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	42.000	578.000
B - SITE ACCESS	25.000	0.000	25.000
C - SANTRY AVENUE (W)	389.000	42.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.07	0.93
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.90	0.10	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	13.59	0.2	B	45.88	68.82
C-AB	0.10	9.45	0.1	A	38.58	57.87
C-A					356.92	535.37
A-B					38.54	57.81
A-C					530.38	795.57

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	416.71	0.090	37.21	0.0	0.1	10.423	B
C-AB	31.63	31.63	7.91	0.00	517.74	0.061	31.34	0.0	0.1	8.138	A
C-A	292.85	292.85	73.21	0.00			292.85				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	435.15	435.15	108.79	0.00			435.15				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	387.57	0.116	44.81	0.1	0.1	11.548	B
C-AB	37.78	37.78	9.45	0.00	495.73	0.076	37.70	0.1	0.1	8.645	A
C-A	349.68	349.68	87.42	0.00			349.68				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	519.61	519.61	129.90	0.00			519.61				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	346.44	0.159	54.80	0.1	0.2	13.568	B
C-AB	46.32	46.32	11.58	0.00	465.54	0.100	46.20	0.1	0.1	9.440	A
C-A	428.22	428.22	107.05	0.00			428.22				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	636.39	636.39	159.10	0.00			636.39				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	346.41	0.159	55.04	0.2	0.2	13.590	B
C-AB	46.32	46.32	11.58	0.00	465.54	0.100	46.32	0.1	0.1	9.445	A
C-A	428.22	428.22	107.05	0.00			428.22				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	636.39	636.39	159.10	0.00			636.39				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	387.52	0.116	45.19	0.2	0.1	11.575	B
C-AB	37.78	37.78	9.45	0.00	495.73	0.076	37.90	0.1	0.1	8.651	A
C-A	349.68	349.68	87.42	0.00			349.68				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	519.61	519.61	129.90	0.00			519.61				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	416.62	0.090	37.79	0.1	0.1	10.458	B
C-AB	31.63	31.63	7.91	0.00	517.74	0.061	31.71	0.1	0.1	8.148	A
C-A	292.85	292.85	73.21	0.00			292.85				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	435.15	435.15	108.79	0.00			435.15				



# DO NOTHING SCENARIO - DN 2022, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.49	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D2	DN 2022	FM	ONE HOUR	16:45	18:15	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	✓	623.00	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	415.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	26.000	597.000
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	373.000	42.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.04	0.96
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.90	0.10	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.26	15.55	0.4	C	75.24	112.87
C-AB	0.10	9.46	0.1	A	38.58	57.86
C-A					342.24	513.35
A-B					23.86	35.79
A-C					547.82	821.73

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	415.64	0.149	60.98	0.0	0.2	11.142	B
C-AB	31.63	31.63	7.91	0.00	517.18	0.061	31.34	0.0	0.1	8.148	A
C-A	280.81	280.81	70.20	0.00			280.81				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	449.45	449.45	112.36	0.00			449.45				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	386.32	0.191	73.45	0.2	0.3	12.647	B
C-AB	37.78	37.78	9.45	0.00	495.06	0.076	37.70	0.1	0.1	8.657	A
C-A	335.30	335.30	83.82	0.00			335.30				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	536.69	536.69	134.17	0.00			536.69				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	344.99	0.262	89.78	0.3	0.4	15.485	C
C-AB	46.32	46.32	11.58	0.00	464.71	0.100	46.20	0.1	0.1	9.458	A
C-A	410.60	410.60	102.65	0.00			410.60				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	657.31	657.31	164.33	0.00			657.31				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	344.95	0.262	90.27	0.4	0.4	15.546	C
C-AB	46.32	46.32	11.58	0.00	464.71	0.100	46.32	0.1	0.1	9.464	A
C-A	410.60	410.60	102.65	0.00			410.60				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	657.31	657.31	164.33	0.00			657.31				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	386.27	0.191	74.20	0.4	0.3	12.710	B
C-AB	37.78	37.78	9.45	0.00	495.06	0.076	37.90	0.1	0.1	8.665	A
C-A	335.30	335.30	83.82	0.00			335.30				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	536.69	536.69	134.17	0.00			536.69				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	415.55	0.149	62.01	0.3	0.2	11.209	B
C-AB	31.63	31.63	7.91	0.00	517.18	0.061	31.71	0.1	0.1	8.159	A
C-A	280.81	280.81	70.20	0.00			280.81				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	449.45	449.45	112.36	0.00			449.45				

# DO NOTHING SCENARIO - DN 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.96	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	DN 2027	AM	ONE HOUR	07:45	09:15	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	✓	669.00	100.000
B - SITE ACCESS		ONE HOUR	✓	50.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	464.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	42.000	627.000
B - SITE ACCESS	25.000	0.000	25.000
C - SANTRY AVENUE (W)	422.000	42.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.06	0.94
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.91	0.09	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	14.48	0.2	B	45.88	68.82
C-AB	0.10	9.75	0.1	A	38.58	57.88
C-A					387.19	580.79
A-B					38.54	57.81
A-C					575.35	863.02

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	404.98	0.093	37.20	0.0	0.1	10.754	B
C-AB	31.63	31.63	7.91	0.00	508.73	0.062	31.34	0.0	0.1	8.290	A
C-A	317.69	317.69	79.42	0.00			317.69				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	472.04	472.04	118.01	0.00			472.04				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	373.32	0.120	44.80	0.1	0.1	12.049	B
C-AB	37.79	37.79	9.45	0.00	484.99	0.078	37.71	0.1	0.1	8.852	A
C-A	379.34	379.34	94.84	0.00			379.34				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	563.66	563.66	140.92	0.00			563.66				



**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	328.48	0.168	54.77	0.1	0.2	14.453	B
C-AB	46.34	46.34	11.58	0.00	452.47	0.102	46.21	0.1	0.1	9.744	A
C-A	464.54	464.54	116.13	0.00			464.54				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	690.34	690.34	172.58	0.00			690.34				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	328.44	0.168	55.04	0.2	0.2	14.483	B
C-AB	46.34	46.34	11.58	0.00	452.47	0.102	46.33	0.1	0.1	9.750	A
C-A	464.54	464.54	116.13	0.00			464.54				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	690.34	690.34	172.58	0.00			690.34				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	373.27	0.120	45.21	0.2	0.2	12.080	B
C-AB	37.79	37.79	9.45	0.00	484.99	0.078	37.91	0.1	0.1	8.861	A
C-A	379.34	379.34	94.84	0.00			379.34				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	563.66	563.66	140.92	0.00			563.66				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	404.89	0.093	37.80	0.2	0.1	10.793	B
C-AB	31.63	31.63	7.91	0.00	508.73	0.062	31.71	0.1	0.1	8.304	A
C-A	317.69	317.69	79.42	0.00			317.69				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	472.04	472.04	118.01	0.00			472.04				

# DO NOTHING SCENARIO - DN 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.34	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	DN 2027	FM	ONE HOUR	16:45	18:15	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	✓	669.60	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	430.00	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)	0.000	26.000	643.600
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	404.000	26.000	0.000

### Proportions

	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From			
A - SANTRY AVENUE (E)	0.00	0.04	0.96
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.94	0.06	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.27	16.33	0.4	C	75.24	112.87
C-AB	0.06	9.36	0.1	A	23.87	35.80
C-A					370.71	556.07
A-B					23.86	35.79
A-C					590.58	885.87

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	407.45	0.152	60.96	0.0	0.2	11.404	B
C-AB	19.58	19.58	4.89	0.00	508.50	0.039	19.40	0.0	0.0	8.094	A
C-A	304.15	304.15	76.04	0.00			304.15				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	484.54	484.54	121.13	0.00			484.54				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	376.50	0.196	73.44	0.2	0.3	13.054	B
C-AB	23.38	23.38	5.84	0.00	484.60	0.048	23.33	0.0	0.1	8.583	A
C-A	363.18	363.18	90.80	0.00			363.18				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	578.58	578.58	144.65	0.00			578.58				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	332.78	0.271	89.74	0.3	0.4	16.256	C
C-AB	28.64	28.64	7.16	0.00	451.62	0.063	28.57	0.1	0.1	9.359	A
C-A	444.80	444.80	111.20	0.00			444.80				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	708.62	708.62	177.15	0.00			708.62				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	332.76	0.271	90.26	0.4	0.4	16.326	C
C-AB	28.64	28.64	7.16	0.00	451.62	0.063	28.64	0.1	0.1	9.361	A
C-A	444.80	444.80	111.20	0.00			444.80				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	708.62	708.62	177.15	0.00			708.62				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	376.47	0.196	74.24	0.4	0.3	13.125	B
C-AB	23.38	23.38	5.84	0.00	484.60	0.048	23.45	0.1	0.1	8.588	A
C-A	363.18	363.18	90.80	0.00			363.18				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	578.58	578.58	144.65	0.00			578.58				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	407.39	0.152	62.03	0.3	0.2	11.477	B
C-AB	19.58	19.58	4.89	0.00	508.50	0.039	19.62	0.1	0.0	8.100	A
C-A	304.15	304.15	76.04	0.00			304.15				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	484.54	484.54	121.13	0.00			484.54				

# DO NOTHING SCENARIO - DN 2037, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.95	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D9	DN 2037	AM	ONE HOUR	07:45	09:15	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	✓	716.00	100.000
B - SITE ACCESS		ONE HOUR	✓	50.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	496.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	42.000	674.000
B - SITE ACCESS	25.000	0.000	25.000
C - SANTRY AVENUE (W)	454.000	42.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.06	0.94
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.92	0.08	0.00

## Vehicle Mix



### Heavy Vehicle proportion

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

### Average PCU Per Veh

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

## 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	0.18	15.47	0.2	C	45.88	68.82
C-AB	0.11	10.06	0.1	B	38.59	57.89
C-A					416.55	624.82
A-B					38.54	57.81
A-C					618.47	927.71

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	393.65	0.096	37.18	0.0	0.1	11.096	B
C-AB	31.63	31.63	7.91	0.00	500.09	0.063	31.34	0.0	0.1	8.443	A
C-A	341.78	341.78	85.45	0.00			341.78				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	507.42	507.42	126.86	0.00			507.42				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	359.51	0.125	44.79	0.1	0.2	12.575	B
C-AB	37.79	37.79	9.45	0.00	474.70	0.080	37.71	0.1	0.1	9.062	A
C-A	408.10	408.10	102.03	0.00			408.10				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	605.91	605.91	151.48	0.00			605.91				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	310.97	0.177	54.74	0.2	0.2	15.435	C
C-AB	46.36	46.36	11.59	0.00	439.95	0.105	46.22	0.1	0.1	10.054	B
C-A	499.75	499.75	124.94	0.00			499.75				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	742.09	742.09	185.52	0.00			742.09				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	13.76	0.00	310.93	0.177	55.04	0.2	0.2	15.474	C
C-AB	46.36	46.36	11.59	0.00	439.95	0.105	46.35	0.1	0.1	10.060	B
C-A	499.75	499.75	124.94	0.00			499.75				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	742.09	742.09	185.52	0.00			742.09				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.95	11.24	0.00	359.46	0.125	45.25	0.2	0.2	12.614	B
C-AB	37.79	37.79	9.45	0.00	474.70	0.080	37.92	0.1	0.1	9.070	A
C-A	408.10	408.10	102.03	0.00			408.10				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	605.91	605.91	151.48	0.00			605.91				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.64	9.41	0.00	393.55	0.096	37.81	0.2	0.1	11.136	B
C-AB	31.63	31.63	7.91	0.00	500.09	0.063	31.72	0.1	0.1	8.457	A
C-A	341.78	341.78	85.45	0.00			341.78				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	507.42	507.42	126.86	0.00			507.42				

# DO NOTHING SCENARIO - DN 2037, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.35	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D10	DN 2037	PM	ONE HOUR	16:45	18:15	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	✓	722.00	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	461.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	26.000	696.000
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	435.000	26.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.04	0.96
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.94	0.06	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.29	17.69	0.4	C	75.24	112.87
C-AB	0.07	9.68	0.1	A	23.87	35.80
C-A					399.16	598.73
A-B					23.86	35.79
A-C					638.66	957.99

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	395.24	0.156	60.93	0.0	0.2	11.817	B
C-AB	19.58	19.58	4.89	0.00	498.85	0.039	19.40	0.0	0.0	8.257	A
C-A	327.49	327.49	81.87	0.00			327.49				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	523.99	523.99	131.00	0.00			523.99				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	361.68	0.204	73.41	0.2	0.3	13.721	B
C-AB	23.38	23.38	5.84	0.00	473.08	0.049	23.33	0.0	0.1	8.803	A
C-A	391.05	391.05	97.76	0.00			391.05				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	625.69	625.69	156.42	0.00			625.69				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	314.08	0.287	89.66	0.3	0.4	17.595	C
C-AB	28.65	28.65	7.16	0.00	437.54	0.065	28.57	0.1	0.1	9.679	A
C-A	478.93	478.93	119.73	0.00			478.93				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	766.31	766.31	191.58	0.00			766.31				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	314.06	0.287	90.26	0.4	0.4	17.686	C
C-AB	28.65	28.65	7.16	0.00	437.54	0.065	28.64	0.1	0.1	9.684	A
C-A	478.93	478.93	119.73	0.00			478.93				
A-B	28.63	28.63	7.16	0.00			28.63				
A-C	766.31	766.31	191.58	0.00			766.31				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	361.64	0.204	74.32	0.4	0.3	13.812	B
C-AB	23.38	23.38	5.84	0.00	473.08	0.049	23.45	0.1	0.1	8.808	A
C-A	391.05	391.05	97.76	0.00			391.05				
A-B	23.37	23.37	5.84	0.00			23.37				
A-C	625.69	625.69	156.42	0.00			625.69				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	395.19	0.156	62.05	0.3	0.2	11.900	B
C-AB	19.58	19.58	4.89	0.00	498.85	0.039	19.63	0.1	0.0	8.263	A
C-A	327.49	327.49	81.87	0.00			327.49				
A-B	19.57	19.57	4.89	0.00			19.57				
A-C	523.99	523.99	131.00	0.00			523.99				

# DO SOMETHING SCENARIO - DS 2022, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.50	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DS 2022	AM	ONE HOUR	07:45	09:15	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	✓	624.00	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	435.00	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)	0.000	46.000	578.000
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	389.000	46.000	0.000

### Proportions

	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
From			
A - SANTRY AVENUE (E)	0.00	0.07	0.93
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.89	0.11	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.26	15.56	0.4	C	75.24	112.87
C-AB	0.11	9.57	0.1	A	42.26	63.39
C-A					356.90	535.35
A-B					42.21	63.32
A-C					530.38	795.57

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	415.69	0.149	60.98	0.0	0.2	11.141	B
C-AB	34.64	34.64	8.66	0.00	517.05	0.067	34.33	0.0	0.1	8.198	A
C-A	292.85	292.85	73.21	0.00			292.85				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	435.15	435.15	108.79	0.00			435.15				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	386.30	0.191	73.45	0.2	0.3	12.647	B
C-AB	41.39	41.39	10.35	0.00	494.94	0.084	41.30	0.1	0.1	8.729	A
C-A	349.67	349.67	87.42	0.00			349.67				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	519.61	519.61	129.90	0.00			519.61				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	344.81	0.262	89.78	0.3	0.4	15.495	C
C-AB	50.76	50.76	12.69	0.00	464.69	0.109	50.62	0.1	0.1	9.560	A
C-A	428.19	428.19	107.05	0.00			428.19				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	636.39	636.39	159.10	0.00			636.39				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	344.78	0.262	90.27	0.4	0.4	15.556	C
C-AB	50.76	50.76	12.69	0.00	464.69	0.109	50.76	0.1	0.1	9.566	A
C-A	428.19	428.19	107.05	0.00			428.19				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	636.39	636.39	159.10	0.00			636.39				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	386.25	0.191	74.20	0.4	0.3	12.712	B
C-AB	41.39	41.39	10.35	0.00	494.94	0.084	41.52	0.1	0.1	8.735	A
C-A	349.67	349.67	87.42	0.00			349.67				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	519.61	519.61	129.90	0.00			519.61				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	415.59	0.149	62.01	0.3	0.2	11.210	B
C-AB	34.64	34.64	8.66	0.00	517.05	0.067	34.73	0.1	0.1	8.213	A
C-A	292.85	292.85	73.21	0.00			292.85				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	435.15	435.15	108.79	0.00			435.15				

# DO SOMETHING SCENARIO - DS 2022, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.69	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DS 2022	FM	ONE HOUR	16:45	18:15	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	✓	638.00	100.000
B - SITE ACCESS		ONE HOUR	✓	94.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	414.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	41.000	597.000
B - SITE ACCESS	47.000	0.000	47.000
C - SANTRY AVENUE (W)	373.000	41.000	0.000

### Proportions

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

		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

## 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	0.30	16.49	0.5	C	86.26	129.38
C-AB	0.10	9.53	0.1	A	37.66	56.48
C-A					342.24	513.36
A-B					37.62	56.43
A-C					547.82	821.73

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	414.72	0.171	69.88	0.0	0.2	11.452	B
C-AB	30.87	30.87	7.72	0.00	514.41	0.060	30.60	0.0	0.1	8.181	A
C-A	280.81	280.81	70.20	0.00			280.81				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	449.45	449.45	112.36	0.00			449.45				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	385.23	0.219	84.18	0.2	0.3	13.139	B
C-AB	36.88	36.88	9.22	0.00	491.74	0.075	36.80	0.1	0.1	8.703	A
C-A	335.30	335.30	83.82	0.00			335.30				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	536.69	536.69	134.17	0.00			536.69				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	343.64	0.301	102.86	0.3	0.5	16.403	C
C-AB	45.21	45.21	11.30	0.00	460.63	0.098	45.09	0.1	0.1	9.526	A
C-A	410.61	410.61	102.65	0.00			410.61				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	657.31	657.31	164.33	0.00			657.31				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	343.60	0.301	103.47	0.5	0.5	16.487	C
C-AB	45.21	45.21	11.30	0.00	460.63	0.098	45.21	0.1	0.1	9.532	A
C-A	410.61	410.61	102.65	0.00			410.61				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	657.31	657.31	164.33	0.00			657.31				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	385.18	0.219	85.12	0.5	0.3	13.225	B
C-AB	36.88	36.88	9.22	0.00	491.74	0.075	37.00	0.1	0.1	8.710	A
C-A	335.30	335.30	83.82	0.00			335.30				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	536.69	536.69	134.17	0.00			536.69				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	414.64	0.171	71.11	0.3	0.2	11.540	B
C-AB	30.87	30.87	7.72	0.00	514.41	0.060	30.95	0.1	0.1	8.193	A
C-A	280.81	280.81	70.20	0.00			280.81				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	449.45	449.45	112.36	0.00			449.45				

# 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.49	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	DS 2027	AM	ONE HOUR	07:45	09:15	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	✓	673.00	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	468.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	46.000	627.000
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	422.000	46.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.07	0.93
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.90	0.10	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.28	16.74	0.4	C	75.24	112.87
C-AB	0.11	9.88	0.1	A	42.27	63.41
C-A					387.17	580.76
A-B					42.21	63.32
A-C					575.35	863.02

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	403.96	0.153	60.95	0.0	0.2	11.521	B
C-AB	34.65	34.65	8.66	0.00	508.04	0.068	34.33	0.0	0.1	8.354	A
C-A	317.69	317.69	79.42	0.00			317.69				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	472.04	472.04	118.01	0.00			472.04				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	372.04	0.198	73.43	0.2	0.3	13.247	B
C-AB	41.39	41.39	10.35	0.00	484.22	0.085	41.30	0.1	0.1	8.937	A
C-A	379.33	379.33	94.83	0.00			379.33				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	563.66	563.66	140.92	0.00			563.66				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	326.82	0.276	89.71	0.3	0.4	16.659	C
C-AB	50.78	50.78	12.70	0.00	451.66	0.112	50.64	0.1	0.1	9.871	A
C-A	464.50	464.50	116.12	0.00			464.50				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	690.34	690.34	172.58	0.00			690.34				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	326.78	0.276	90.26	0.4	0.4	16.739	C
C-AB	50.78	50.78	12.70	0.00	451.66	0.112	50.78	0.1	0.1	9.877	A
C-A	464.50	464.50	116.12	0.00			464.50				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	690.34	690.34	172.58	0.00			690.34				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	371.98	0.198	74.27	0.4	0.3	13.325	B
C-AB	41.39	41.39	10.35	0.00	484.22	0.085	41.53	0.1	0.1	8.949	A
C-A	379.33	379.33	94.83	0.00			379.33				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	563.66	563.66	140.92	0.00			563.66				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	403.85	0.153	62.03	0.3	0.2	11.597	B
C-AB	34.65	34.65	8.66	0.00	508.04	0.068	34.74	0.1	0.1	8.368	A
C-A	317.69	317.69	79.42	0.00			317.69				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	472.04	472.04	118.01	0.00			472.04				

# 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.69	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	DS 2027	FM	ONE HOUR	16:45	18:15	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	✓	688.00	100.000
B - SITE ACCESS		ONE HOUR	✓	94.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	445.00	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)	0.000	41.000	647.000
	B - SITE ACCESS	47.000	0.000	47.000
	C - SANTRY AVENUE (W)	404.000	41.000	0.000

### 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)	0.91	0.09	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.32	17.82	0.5	C	86.26	129.38
C-AB	0.10	9.85	0.1	A	37.66	56.49
C-A					370.68	556.02
A-B					37.62	56.43
A-C					593.70	890.55

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	402.99	0.176	69.85	0.0	0.2	11.856	B
C-AB	30.88	30.88	7.72	0.00	505.21	0.061	30.59	0.0	0.1	8.337	A
C-A	304.14	304.14	76.04	0.00			304.14				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	487.10	487.10	121.77	0.00			487.10				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	370.98	0.228	84.15	0.2	0.3	13.789	B
C-AB	36.88	36.88	9.22	0.00	480.78	0.077	36.80	0.1	0.1	8.918	A
C-A	363.16	363.16	90.79	0.00			363.16				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	581.64	581.64	145.41	0.00			581.64				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	325.68	0.318	102.77	0.3	0.5	17.705	C
C-AB	45.23	45.23	11.31	0.00	447.28	0.101	45.10	0.1	0.1	9.843	A
C-A	444.73	444.73	111.18	0.00			444.73				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	712.36	712.36	178.09	0.00			712.36				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	325.65	0.318	103.47	0.5	0.5	17.818	C
C-AB	45.23	45.23	11.31	0.00	447.28	0.101	45.23	0.1	0.1	9.849	A
C-A	444.73	444.73	111.18	0.00			444.73				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	712.36	712.36	178.09	0.00			712.36				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	370.93	0.228	85.20	0.5	0.3	13.894	B
C-AB	36.88	36.88	9.22	0.00	480.78	0.077	37.01	0.1	0.1	8.927	A
C-A	363.16	363.16	90.79	0.00			363.16				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	581.64	581.64	145.41	0.00			581.64				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	402.90	0.176	71.14	0.3	0.2	11.949	B
C-AB	30.88	30.88	7.72	0.00	505.21	0.061	30.96	0.1	0.1	8.352	A
C-A	304.14	304.14	76.04	0.00			304.14				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	487.10	487.10	121.77	0.00			487.10				

# DO SOMETHING SCENARIO - DS 2037, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.50	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D11	DS 2037	AM	ONE HOUR	07:45	09:15	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	✓	720.00	100.000
B - SITE ACCESS		ONE HOUR	✓	82.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	500.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.000	46.000	674.000
B - SITE ACCESS	41.000	0.000	41.000
C - SANTRY AVENUE (W)	454.000	46.000	0.000

### Proportions

From	To		
	A - SANTRY AVENUE (E)	B - SITE ACCESS	C - SANTRY AVENUE (W)
A - SANTRY AVENUE (E)	0.00	0.06	0.94
B - SITE ACCESS	0.50	0.00	0.50
C - SANTRY AVENUE (W)	0.91	0.09	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.29	18.08	0.4	C	75.24	112.87
C-AB	0.12	10.20	0.1	B	42.29	63.43
C-A					416.52	624.79
A-B					42.21	63.32
A-C					618.47	927.71

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	392.61	0.157	60.93	0.0	0.2	11.911	B
C-AB	34.65	34.65	8.66	0.00	499.40	0.069	34.32	0.0	0.1	8.508	A
C-A	341.78	341.78	85.44	0.00			341.78				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	507.42	507.42	126.86	0.00			507.42				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	358.21	0.206	73.40	0.2	0.3	13.888	B
C-AB	41.40	41.40	10.35	0.00	473.94	0.087	41.31	0.1	0.1	9.151	A
C-A	408.09	408.09	102.02	0.00			408.09				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	605.91	605.91	151.48	0.00			605.91				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	309.27	0.292	89.64	0.3	0.4	17.975	C
C-AB	50.81	50.81	12.70	0.00	439.19	0.116	50.65	0.1	0.1	10.184	B
C-A	499.70	499.70	124.93	0.00			499.70				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	742.09	742.09	185.52	0.00			742.09				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	90.28	90.28	22.57	0.00	309.22	0.292	90.26	0.4	0.4	18.079	C
C-AB	50.81	50.81	12.70	0.00	439.19	0.116	50.80	0.1	0.1	10.195	B
C-A	499.70	499.70	124.93	0.00			499.70				
A-B	50.65	50.65	12.66	0.00			50.65				
A-C	742.09	742.09	185.52	0.00			742.09				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	73.72	73.72	18.43	0.00	358.15	0.206	74.34	0.4	0.3	13.982	B
C-AB	41.40	41.40	10.35	0.00	473.94	0.087	41.55	0.1	0.1	9.161	A
C-A	408.09	408.09	102.02	0.00			408.09				
A-B	41.35	41.35	10.34	0.00			41.35				
A-C	605.91	605.91	151.48	0.00			605.91				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	61.73	61.73	15.43	0.00	392.50	0.157	62.06	0.3	0.2	11.997	B
C-AB	34.65	34.65	8.66	0.00	499.40	0.069	34.74	0.1	0.1	8.523	A
C-A	341.78	341.78	85.44	0.00			341.78				
A-B	34.63	34.63	8.66	0.00			34.63				
A-C	507.42	507.42	126.86	0.00			507.42				

# DO SOMETHING SCENARIO - DS 2037, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.71	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)	6.00			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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.091	0.231	0.145	0.330
1	B-C	635.940	0.097	0.246	-	-
1	C-B	631.874	0.245	0.245	-	-

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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D12	DS 2037	PM	ONE HOUR	16:45	18:15	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	✓	737.00	100.000
B - SITE ACCESS		ONE HOUR	✓	94.00	100.000
C - SANTRY AVENUE (W)		ONE HOUR	✓	476.00	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)	0.000	41.000	696.000
	B - SITE ACCESS	47.000	0.000	47.000
	C - SANTRY AVENUE (W)	435.000	41.000	0.000

### 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)	0.91	0.09	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.34	19.38	0.5	C	86.26	129.38
C-AB	0.10	10.18	0.1	B	37.67	56.51
C-A					399.12	598.67
A-B					37.62	56.43
A-C					638.66	957.99

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	391.37	0.181	69.81	0.0	0.2	12.281	B
C-AB	30.88	30.88	7.72	0.00	496.20	0.062	30.59	0.0	0.1	8.499	A
C-A	327.48	327.48	81.87	0.00			327.48				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	523.99	523.99	131.00	0.00			523.99				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	356.84	0.237	84.12	0.2	0.3	14.499	B
C-AB	36.89	36.89	9.22	0.00	470.05	0.078	36.81	0.1	0.1	9.140	A
C-A	391.03	391.03	97.76	0.00			391.03				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	625.69	625.69	156.42	0.00			625.69				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	307.77	0.336	102.67	0.3	0.5	19.227	C
C-AB	45.25	45.25	11.31	0.00	434.22	0.104	45.11	0.1	0.1	10.174	B
C-A	478.84	478.84	119.71	0.00			478.84				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	766.31	766.31	191.58	0.00			766.31				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	103.50	103.50	25.87	0.00	307.74	0.336	103.46	0.5	0.5	19.377	C
C-AB	45.25	45.25	11.31	0.00	434.22	0.104	45.24	0.1	0.1	10.180	B
C-A	478.84	478.84	119.71	0.00			478.84				
A-B	45.14	45.14	11.29	0.00			45.14				
A-C	766.31	766.31	191.58	0.00			766.31				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.50	84.50	21.13	0.00	356.79	0.237	85.30	0.5	0.3	14.628	B
C-AB	36.89	36.89	9.22	0.00	470.05	0.078	37.02	0.1	0.1	9.147	A
C-A	391.03	391.03	97.76	0.00			391.03				
A-B	36.86	36.86	9.21	0.00			36.86				
A-C	625.69	625.69	156.42	0.00			625.69				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	70.77	70.77	17.69	0.00	391.28	0.181	71.17	0.3	0.2	12.386	B
C-AB	30.88	30.88	7.72	0.00	496.20	0.062	30.96	0.1	0.1	8.512	A
C-A	327.48	327.48	81.87	0.00			327.48				
A-B	30.87	30.87	7.72	0.00			30.87				
A-C	523.99	523.99	131.00	0.00			523.99				

<b>Junctions 9</b>
<b>PICADY 9 - Priority Intersection Module</b>
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2021
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**Filename:** Swords Road Site Access 30.04.21.j9  
**Path:** G:\2020\p200060\calcs\Picady  
**Report generation date:** 06/05/2021 10:49:23

- »DO NOTHING SCENARIO - DN 2022, AM
- »DO NOTHING SCENARIO - DN 2022, PM
- »DO NOTHING SCENARIO - DN 2027, AM
- »DO NOTHING SCENARIO - DN 2027, PM
- »DO NOTHING SCENARIO - DN 2037, AM
- »DO NOTHING SCENARIO - DN 2037, PM
- »DO SOMETHING SCENARIO - DS 2022, AM
- »DO SOMETHING SCENARIO - DS 2022, PM
- »DO SOMETHING SCENARIO - DS 2027, AM
- »DO SOMETHING SCENARIO - DS 2027, PM
- »DO SOMETHING SCENARIO - DS 2037, AM
- »DO SOMETHING SCENARIO - DS 2037, 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

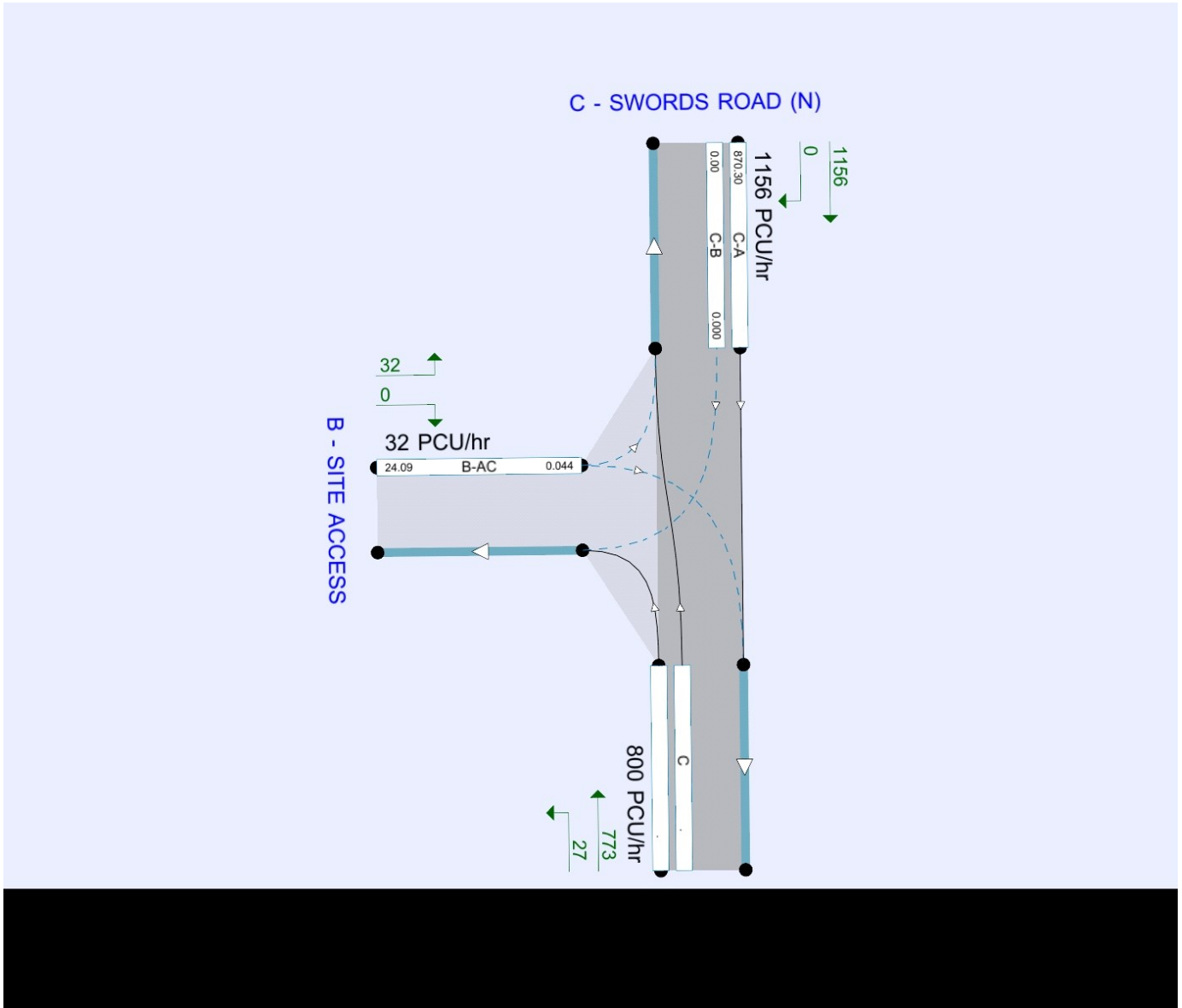
#### File Description

<b>Title</b>	MIXED USE DEVELOPMENT
<b>Location</b>	SANTRY AVENUE
<b>Site number</b>	
<b>Date</b>	30/04/2021
<b>Version</b>	
<b>Status</b>	
<b>Identifier</b>	SAS
<b>Client</b>	Dwyer Nolan Ltd
<b>Jobnumber</b>	200060
<b>Enumerator</b>	HEADOFFICE"saeeds
<b>Description</b>	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





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

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
DN 2022	AM	ONE HOUR	07:45	09:15	15	✓
DN 2022	PM	ONE HOUR	16:45	18:15	15	✓
DS 2022	AM	ONE HOUR	07:45	09:15	15	✓
DS 2022	PM	ONE HOUR	16:45	18:15	15	✓
DN 2027	AM	ONE HOUR	07:45	09:15	15	✓
DN 2027	PM	ONE HOUR	16:45	18:15	15	✓
DS 2027	AM	ONE HOUR	07:45	09:15	15	✓
DS 2027	PM	ONE HOUR	16:45	18:15	15	✓
DN 2037	AM	ONE HOUR	07:45	09:15	15	✓
DN 2037	PM	ONE HOUR	16:45	18:15	15	✓
DS 2037	AM	ONE HOUR	07:45	09:15	15	✓
DS 2037	PM	ONE HOUR	16:45	18:15	15	✓

# DO NOTHING SCENARIO - DN 2022, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.07	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D1	DN 2022	AM	ONE HOUR	07:45	09:15	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	✓	644.00	100.000
B - SITE ACCESS		ONE HOUR	✓	16.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1051.00	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)	0.000	28.000	616.000
	B - SITE ACCESS	0.000	0.000	16.000
	C - SWORDS ROAD (N)	1051.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.03	7.69	0.0	A	14.68	22.02
C-A					964.42	1446.62
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					25.69	38.54
A-C					565.25	847.88

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	12.05	12.05	3.01	0.00	565.16	0.021	11.95	0.0	0.0	7.158	A
C-A	791.25	791.25	197.81	0.00			791.25				
C-B	0.00	0.00	0.00	0.00	559.65	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	463.76	463.76	115.94	0.00			463.76				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	14.38	14.38	3.60	0.00	551.43	0.026	14.36	0.0	0.0	7.372	A
C-A	944.83	944.83	236.21	0.00			944.83				
C-B	0.00	0.00	0.00	0.00	545.63	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	553.77	553.77	138.44	0.00			553.77				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	532.43	0.033	17.58	0.0	0.0	7.691	A
C-A	1157.17	1157.17	289.29	0.00			1157.17				
C-B	0.00	0.00	0.00	0.00	526.25	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	678.23	678.23	169.56	0.00			678.23				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	532.43	0.033	17.62	0.0	0.0	7.691	A
C-A	1157.17	1157.17	289.29	0.00			1157.17				
C-B	0.00	0.00	0.00	0.00	526.25	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	678.23	678.23	169.56	0.00			678.23				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	14.38	14.38	3.60	0.00	551.43	0.026	14.41	0.0	0.0	7.376	A
C-A	944.83	944.83	236.21	0.00			944.83				
C-B	0.00	0.00	0.00	0.00	545.63	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	553.77	553.77	138.44	0.00			553.77				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	12.05	12.05	3.01	0.00	565.16	0.021	12.07	0.0	0.0	7.161	A
C-A	791.25	791.25	197.81	0.00			791.25				
C-B	0.00	0.00	0.00	0.00	559.65	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	463.76	463.76	115.94	0.00			463.76				

# DO NOTHING SCENARIO - DN 2022, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.13	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D2	DN 2022	FM	ONE HOUR	16:45	18:15	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	✓	680.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	992.00	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)	0.000	17.000	663.000
	B - SITE ACCESS	0.000	0.000	27.000
	C - SWORDS ROAD (N)	992.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.03	0.98
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix



### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.06	7.99	0.1	A	24.78	37.16
C-A					910.28	1365.41
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					15.60	23.40
A-C					608.38	912.57

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	560.35	0.036	20.16	0.0	0.0	7.329	A
C-A	746.83	746.83	186.71	0.00			746.83				
C-B	0.00	0.00	0.00	0.00	555.62	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	499.14	499.14	124.79	0.00			499.14				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	545.68	0.044	24.23	0.0	0.1	7.593	A
C-A	891.79	891.79	222.95	0.00			891.79				
C-B	0.00	0.00	0.00	0.00	540.81	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	596.02	596.02	149.01	0.00			596.02				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	525.39	0.057	29.67	0.1	0.1	7.987	A
C-A	1092.21	1092.21	273.05	0.00			1092.21				
C-B	0.00	0.00	0.00	0.00	520.35	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	729.98	729.98	182.49	0.00			729.98				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	525.39	0.057	29.73	0.1	0.1	7.989	A
C-A	1092.21	1092.21	273.05	0.00			1092.21				
C-B	0.00	0.00	0.00	0.00	520.35	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	729.98	729.98	182.49	0.00			729.98				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	545.68	0.044	24.33	0.1	0.1	7.598	A
C-A	891.79	891.79	222.95	0.00			891.79				
C-B	0.00	0.00	0.00	0.00	540.81	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	596.02	596.02	149.01	0.00			596.02				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	560.35	0.036	20.37	0.1	0.0	7.336	A
C-A	746.83	746.83	186.71	0.00			746.83				
C-B	0.00	0.00	0.00	0.00	555.62	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	499.14	499.14	124.79	0.00			499.14				

# DO NOTHING SCENARIO - DN 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.07	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	DN 2027	AM	ONE HOUR	07:45	09:15	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	✓	695.00	100.000
B - SITE ACCESS		ONE HOUR	✓	16.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1138.00	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)	0.000	28.000	667.000
	B - SITE ACCESS	0.000	0.000	16.000
	C - SWORDS ROAD (N)	1138.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.03	7.82	0.0	A	14.68	22.02
C-A					1044.25	1566.37
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					25.69	38.54
A-C					612.05	918.08

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	12.05	12.05	3.01	0.00	559.41	0.022	11.95	0.0	0.0	7.233	A
C-A	856.75	856.75	214.19	0.00			856.75				
C-B	0.00	0.00	0.00	0.00	553.93	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	502.15	502.15	125.54	0.00			502.15				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	14.38	14.38	3.60	0.00	544.55	0.026	14.36	0.0	0.0	7.468	A
C-A	1023.04	1023.04	255.76	0.00			1023.04				
C-B	0.00	0.00	0.00	0.00	538.80	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	599.62	599.62	149.90	0.00			599.62				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	524.01	0.034	17.58	0.0	0.0	7.819	A
C-A	1252.96	1252.96	313.24	0.00			1252.96				
C-B	0.00	0.00	0.00	0.00	517.89	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	734.38	734.38	183.60	0.00			734.38				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	524.01	0.034	17.62	0.0	0.0	7.819	A
C-A	1252.96	1252.96	313.24	0.00			1252.96				
C-B	0.00	0.00	0.00	0.00	517.89	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	734.38	734.38	183.60	0.00			734.38				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	14.38	14.38	3.60	0.00	544.55	0.026	14.42	0.0	0.0	7.469	A
C-A	1023.04	1023.04	255.76	0.00			1023.04				
C-B	0.00	0.00	0.00	0.00	538.80	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	599.62	599.62	149.90	0.00			599.62				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	12.05	12.05	3.01	0.00	559.41	0.022	12.07	0.0	0.0	7.237	A
C-A	856.75	856.75	214.19	0.00			856.75				
C-B	0.00	0.00	0.00	0.00	553.93	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	502.15	502.15	125.54	0.00			502.15				

# DO NOTHING SCENARIO - DN 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.12	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	DN 2027	FM	ONE HOUR	16:45	18:15	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	✓	735.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1074.00	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)	0.000	17.000	718.000
	B - SITE ACCESS	0.000	0.000	27.000
	C - SWORDS ROAD (N)	1074.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.02	0.98
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix



### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.06	8.14	0.1	A	24.78	37.16
C-A					985.52	1478.28
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					15.60	23.40
A-C					658.85	988.27

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	554.14	0.037	20.16	0.0	0.0	7.414	A
C-A	808.56	808.56	202.14	0.00			808.56				
C-B	0.00	0.00	0.00	0.00	549.45	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	540.55	540.55	135.14	0.00			540.55				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	538.27	0.045	24.23	0.0	0.1	7.704	A
C-A	965.50	965.50	241.38	0.00			965.50				
C-B	0.00	0.00	0.00	0.00	533.45	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	516.31	0.058	29.67	0.1	0.1	8.136	A
C-A	1182.50	1182.50	295.62	0.00			1182.50				
C-B	0.00	0.00	0.00	0.00	511.33	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	516.31	0.058	29.73	0.1	0.1	8.138	A
C-A	1182.50	1182.50	295.62	0.00			1182.50				
C-B	0.00	0.00	0.00	0.00	511.33	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	538.27	0.045	24.33	0.1	0.1	7.707	A
C-A	965.50	965.50	241.38	0.00			965.50				
C-B	0.00	0.00	0.00	0.00	533.45	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	554.14	0.037	20.37	0.1	0.0	7.421	A
C-A	808.56	808.56	202.14	0.00			808.56				
C-B	0.00	0.00	0.00	0.00	549.45	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	540.55	540.55	135.14	0.00			540.55				

# DO NOTHING SCENARIO - DN 2037, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.06	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D9	DN 2037	AM	ONE HOUR	07:45	09:15	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	✓	746.00	100.000
B - SITE ACCESS		ONE HOUR	✓	16.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1223.00	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)	0.000	28.000	718.000
	B - SITE ACCESS	0.000	0.000	16.000
	C - SWORDS ROAD (N)	1223.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.03	7.95	0.0	A	14.68	22.02
C-A					1122.25	1683.37
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					25.69	38.54
A-C					658.85	988.27

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	12.05	12.05	3.01	0.00	553.65	0.022	11.95	0.0	0.0	7.310	A
C-A	920.74	920.74	230.18	0.00			920.74				
C-B	0.00	0.00	0.00	0.00	548.21	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	540.55	540.55	135.14	0.00			540.55				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	14.38	14.38	3.60	0.00	537.68	0.027	14.36	0.0	0.0	7.566	A
C-A	1099.45	1099.45	274.86	0.00			1099.45				
C-B	0.00	0.00	0.00	0.00	531.98	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	515.60	0.034	17.58	0.0	0.0	7.951	A
C-A	1346.55	1346.55	336.64	0.00			1346.55				
C-B	0.00	0.00	0.00	0.00	509.52	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	17.62	17.62	4.40	0.00	515.60	0.034	17.62	0.0	0.0	7.951	A
C-A	1346.55	1346.55	336.64	0.00			1346.55				
C-B	0.00	0.00	0.00	0.00	509.52	0.000	0.00	0.0	0.0	0.000	A
A-B	30.83	30.83	7.71	0.00			30.83				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	14.38	14.38	3.60	0.00	537.68	0.027	14.42	0.0	0.0	7.567	A
C-A	1099.45	1099.45	274.86	0.00			1099.45				
C-B	0.00	0.00	0.00	0.00	531.98	0.000	0.00	0.0	0.0	0.000	A
A-B	25.17	25.17	6.29	0.00			25.17				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	12.05	12.05	3.01	0.00	553.65	0.022	12.07	0.0	0.0	7.311	A
C-A	920.74	920.74	230.18	0.00			920.74				
C-B	0.00	0.00	0.00	0.00	548.21	0.000	0.00	0.0	0.0	0.000	A
A-B	21.08	21.08	5.27	0.00			21.08				
A-C	540.55	540.55	135.14	0.00			540.55				

# DO NOTHING SCENARIO - DN 2037, 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 NOTHING SCENARIO	✓	D1,D2,D5,D6,D9,D10	100.000	100.000

# Junction Network

## Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.11	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D10	DN 2037	PM	ONE HOUR	16:45	18:15	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	✓	790.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1153.00	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)	0.000	17.000	773.000
	B - SITE ACCESS	0.000	0.000	27.000
	C - SWORDS ROAD (N)	1153.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.02	0.98
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix



### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.06	8.29	0.1	A	24.78	37.16
C-A					1058.01	1587.02
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					15.60	23.40
A-C					709.32	1063.98

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	547.93	0.037	20.16	0.0	0.0	7.501	A
C-A	868.04	868.04	217.01	0.00			868.04				
C-B	0.00	0.00	0.00	0.00	543.28	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	581.95	581.95	145.49	0.00			581.95				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	530.85	0.046	24.23	0.0	0.1	7.816	A
C-A	1036.52	1036.52	259.13	0.00			1036.52				
C-B	0.00	0.00	0.00	0.00	526.08	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	694.91	694.91	173.73	0.00			694.91				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	507.23	0.059	29.66	0.1	0.1	8.291	A
C-A	1269.48	1269.48	317.37	0.00			1269.48				
C-B	0.00	0.00	0.00	0.00	502.31	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	851.09	851.09	212.77	0.00			851.09				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	507.23	0.059	29.73	0.1	0.1	8.292	A
C-A	1269.48	1269.48	317.37	0.00			1269.48				
C-B	0.00	0.00	0.00	0.00	502.31	0.000	0.00	0.0	0.0	0.000	A
A-B	18.72	18.72	4.68	0.00			18.72				
A-C	851.09	851.09	212.77	0.00			851.09				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	530.85	0.046	24.33	0.1	0.1	7.820	A
C-A	1036.52	1036.52	259.13	0.00			1036.52				
C-B	0.00	0.00	0.00	0.00	526.08	0.000	0.00	0.0	0.0	0.000	A
A-B	15.28	15.28	3.82	0.00			15.28				
A-C	694.91	694.91	173.73	0.00			694.91				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	547.93	0.037	20.37	0.1	0.0	7.508	A
C-A	868.04	868.04	217.01	0.00			868.04				
C-B	0.00	0.00	0.00	0.00	543.28	0.000	0.00	0.0	0.0	0.000	A
A-B	12.80	12.80	3.20	0.00			12.80				
A-C	581.95	581.95	145.49	0.00			581.95				

# DO SOMETHING SCENARIO - DS 2022, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.12	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DS 2022	AM	ONE HOUR	07:45	09:15	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	✓	647.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1058.00	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To		
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
A - SWORDS ROAD (S)	0.000	31.000	616.000
B - SITE ACCESS	0.000	0.000	27.000
C - SWORDS ROAD (N)	1058.000	0.000	0.000

### Proportions

From	To		
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
A - SWORDS ROAD (S)	0.00	0.05	0.95
B - SITE ACCESS	0.00	0.00	1.00
C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

		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

## 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	0.06	7.88	0.1	A	24.78	37.16
C-A					970.84	1456.26
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					28.45	42.67
A-C					565.25	847.88

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	565.03	0.036	20.16	0.0	0.0	7.266	A
C-A	796.52	796.52	199.13	0.00			796.52				
C-B	0.00	0.00	0.00	0.00	559.32	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	463.76	463.76	115.94	0.00			463.76				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	551.27	0.044	24.23	0.0	0.1	7.513	A
C-A	951.12	951.12	237.78	0.00			951.12				
C-B	0.00	0.00	0.00	0.00	545.23	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	553.77	553.77	138.44	0.00			553.77				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	532.24	0.056	29.67	0.1	0.1	7.878	A
C-A	1164.88	1164.88	291.22	0.00			1164.88				
C-B	0.00	0.00	0.00	0.00	525.76	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	678.23	678.23	169.56	0.00			678.23				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	532.24	0.056	29.73	0.1	0.1	7.880	A
C-A	1164.88	1164.88	291.22	0.00			1164.88				
C-B	0.00	0.00	0.00	0.00	525.76	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	678.23	678.23	169.56	0.00			678.23				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	551.27	0.044	24.33	0.1	0.1	7.517	A
C-A	951.12	951.12	237.78	0.00			951.12				
C-B	0.00	0.00	0.00	0.00	545.23	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	553.77	553.77	138.44	0.00			553.77				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	565.03	0.036	20.37	0.1	0.0	7.272	A
C-A	796.52	796.52	199.13	0.00			796.52				
C-B	0.00	0.00	0.00	0.00	559.32	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	463.76	463.76	115.94	0.00			463.76				

# DO SOMETHING SCENARIO - DS 2022, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.15	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DS 2022	FM	ONE HOUR	16:45	18:15	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	✓	690.00	100.000
B - SITE ACCESS		ONE HOUR	✓	32.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	995.00	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)	0.000	27.000	663.000
	B - SITE ACCESS	0.000	0.000	32.000
	C - SWORDS ROAD (N)	995.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix



### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.07	8.09	0.1	A	29.36	44.05
C-A					913.03	1369.54
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					24.78	37.16
A-C					608.38	912.57

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.09	24.09	6.02	0.00	559.90	0.043	23.90	0.0	0.0	7.386	A
C-A	749.09	749.09	187.27	0.00			749.09				
C-B	0.00	0.00	0.00	0.00	554.49	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	499.14	499.14	124.79	0.00			499.14				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	28.77	28.77	7.19	0.00	545.14	0.053	28.72	0.0	0.1	7.667	A
C-A	894.48	894.48	223.62	0.00			894.48				
C-B	0.00	0.00	0.00	0.00	539.47	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	596.02	596.02	149.01	0.00			596.02				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	524.74	0.067	35.16	0.1	0.1	8.087	A
C-A	1095.52	1095.52	273.88	0.00			1095.52				
C-B	0.00	0.00	0.00	0.00	518.71	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	729.98	729.98	182.49	0.00			729.98				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	524.74	0.067	35.23	0.1	0.1	8.089	A
C-A	1095.52	1095.52	273.88	0.00			1095.52				
C-B	0.00	0.00	0.00	0.00	518.71	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	729.98	729.98	182.49	0.00			729.98				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	28.77	28.77	7.19	0.00	545.14	0.053	28.83	0.1	0.1	7.672	A
C-A	894.48	894.48	223.62	0.00			894.48				
C-B	0.00	0.00	0.00	0.00	539.47	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	596.02	596.02	149.01	0.00			596.02				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.09	24.09	6.02	0.00	559.90	0.043	24.14	0.1	0.0	7.391	A
C-A	749.09	749.09	187.27	0.00			749.09				
C-B	0.00	0.00	0.00	0.00	554.49	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	499.14	499.14	124.79	0.00			499.14				

# 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.12	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	DS 2027	AM	ONE HOUR	07:45	09:15	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	✓	698.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1145.00	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)	0.000	31.000	667.000
	B - SITE ACCESS	0.000	0.000	27.000
	C - SWORDS ROAD (N)	1145.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.06	8.01	0.1	A	24.78	37.16
C-A					1050.67	1576.01
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					28.45	42.67
A-C					612.05	918.08

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	559.27	0.036	20.16	0.0	0.0	7.343	A
C-A	862.02	862.02	215.50	0.00			862.02				
C-B	0.00	0.00	0.00	0.00	553.60	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	502.15	502.15	125.54	0.00			502.15				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	544.39	0.045	24.23	0.0	0.1	7.612	A
C-A	1029.33	1029.33	257.33	0.00			1029.33				
C-B	0.00	0.00	0.00	0.00	538.40	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	599.62	599.62	149.90	0.00			599.62				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	523.82	0.057	29.67	0.1	0.1	8.012	A
C-A	1260.67	1260.67	315.17	0.00			1260.67				
C-B	0.00	0.00	0.00	0.00	517.40	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	734.38	734.38	183.60	0.00			734.38				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	523.82	0.057	29.73	0.1	0.1	8.014	A
C-A	1260.67	1260.67	315.17	0.00			1260.67				
C-B	0.00	0.00	0.00	0.00	517.40	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	734.38	734.38	183.60	0.00			734.38				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	544.39	0.045	24.33	0.1	0.1	7.614	A
C-A	1029.33	1029.33	257.33	0.00			1029.33				
C-B	0.00	0.00	0.00	0.00	538.40	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	599.62	599.62	149.90	0.00			599.62				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	559.27	0.036	20.37	0.1	0.0	7.347	A
C-A	862.02	862.02	215.50	0.00			862.02				
C-B	0.00	0.00	0.00	0.00	553.60	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	502.15	502.15	125.54	0.00			502.15				

# 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.14	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	DS 2027	FM	ONE HOUR	16:45	18:15	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	✓	745.00	100.000
B - SITE ACCESS		ONE HOUR	✓	32.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1077.00	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)	0.000	27.000	718.000
	B - SITE ACCESS	0.000	0.000	32.000
	C - SWORDS ROAD (N)	1077.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix



### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.07	8.24	0.1	A	29.36	44.05
C-A					988.27	1482.41
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					24.78	37.16
A-C					658.85	988.27

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.09	24.09	6.02	0.00	553.70	0.044	23.89	0.0	0.0	7.473	A
C-A	810.82	810.82	202.71	0.00			810.82				
C-B	0.00	0.00	0.00	0.00	548.33	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	540.55	540.55	135.14	0.00			540.55				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	28.77	28.77	7.19	0.00	537.73	0.054	28.72	0.0	0.1	7.780	A
C-A	968.20	968.20	242.05	0.00			968.20				
C-B	0.00	0.00	0.00	0.00	532.11	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	515.66	0.068	35.16	0.1	0.1	8.240	A
C-A	1185.80	1185.80	296.45	0.00			1185.80				
C-B	0.00	0.00	0.00	0.00	509.69	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	515.66	0.068	35.23	0.1	0.1	8.242	A
C-A	1185.80	1185.80	296.45	0.00			1185.80				
C-B	0.00	0.00	0.00	0.00	509.69	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	28.77	28.77	7.19	0.00	537.73	0.054	28.84	0.1	0.1	7.782	A
C-A	968.20	968.20	242.05	0.00			968.20				
C-B	0.00	0.00	0.00	0.00	532.11	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.09	24.09	6.02	0.00	553.70	0.044	24.14	0.1	0.1	7.480	A
C-A	810.82	810.82	202.71	0.00			810.82				
C-B	0.00	0.00	0.00	0.00	548.33	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	540.55	540.55	135.14	0.00			540.55				

# DO SOMETHING SCENARIO - DS 2037, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.11	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D11	DS 2037	AM	ONE HOUR	07:45	09:15	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	✓	749.00	100.000
B - SITE ACCESS		ONE HOUR	✓	27.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1230.00	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)	0.000	31.000	718.000
	B - SITE ACCESS	0.000	0.000	27.000
	C - SWORDS ROAD (N)	1230.000	0.000	0.000

### Proportions

		To		
		A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)
From	A - SWORDS ROAD (S)	0.00	0.04	0.96
	B - SITE ACCESS	0.00	0.00	1.00
	C - SWORDS ROAD (N)	1.00	0.00	0.00

## Vehicle Mix

### Heavy Vehicle proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.06	8.15	0.1	A	24.78	37.16
C-A					1128.67	1693.00
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					28.45	42.67
A-C					658.85	988.27

### Main Results for each time segment

#### Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	20.33	20.33	5.08	0.00	553.52	0.037	20.16	0.0	0.0	7.423	A
C-A	926.01	926.01	231.50	0.00			926.01				
C-B	0.00	0.00	0.00	0.00	547.88	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	540.55	540.55	135.14	0.00			540.55				

#### Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.27	24.27	6.07	0.00	537.52	0.045	24.23	0.0	0.1	7.715	A
C-A	1105.74	1105.74	276.44	0.00			1105.74				
C-B	0.00	0.00	0.00	0.00	531.57	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (08:15-08:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	515.40	0.058	29.67	0.1	0.1	8.151	A
C-A	1354.26	1354.26	338.56	0.00			1354.26				
C-B	0.00	0.00	0.00	0.00	509.03	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	29.73	29.73	7.43	0.00	515.40	0.058	29.73	0.1	0.1	8.153	A
C-A	1354.26	1354.26	338.56	0.00			1354.26				
C-B	0.00	0.00	0.00	0.00	509.03	0.000	0.00	0.0	0.0	0.000	A
A-B	34.13	34.13	8.53	0.00			34.13				
A-C	790.53	790.53	197.63	0.00			790.53				

**Main results: (08:45-09:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.27	24.27	6.07	0.00	537.52	0.045	24.33	0.1	0.1	7.717	A
C-A	1105.74	1105.74	276.44	0.00			1105.74				
C-B	0.00	0.00	0.00	0.00	531.57	0.000	0.00	0.0	0.0	0.000	A
A-B	27.87	27.87	6.97	0.00			27.87				
A-C	645.47	645.47	161.37	0.00			645.47				

**Main results: (09:00-09:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	20.33	20.33	5.08	0.00	553.52	0.037	20.37	0.1	0.0	7.430	A
C-A	926.01	926.01	231.50	0.00			926.01				
C-B	0.00	0.00	0.00	0.00	547.88	0.000	0.00	0.0	0.0	0.000	A
A-B	23.34	23.34	5.83	0.00			23.34				
A-C	540.55	540.55	135.14	0.00			540.55				

# DO SOMETHING SCENARIO - DS 2037, 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	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.14	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

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	501.495	0.056	0.140	0.088	0.201
1	B-C	635.940	0.059	0.150	-	-
1	C-B	631.874	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.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D12	DS 2037	PM	ONE HOUR	16:45	18:15	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	✓	800.00	100.000
B - SITE ACCESS		ONE HOUR	✓	32.00	100.000
C - SWORDS ROAD (N)		ONE HOUR	✓	1156.00	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)	0.000	27.000	773.000
	B - SITE ACCESS	0.000	0.000	32.000
	C - SWORDS ROAD (N)	1156.000	0.000	0.000

### 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 proportion

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
A - SWORDS ROAD (S)	10	10	10	
B - SITE ACCESS	10	10	10	
C - SWORDS ROAD (N)	10	10	10	

### Average PCU Per Veh

From	To			
	A - SWORDS ROAD (S)	B - SITE ACCESS	C - SWORDS ROAD (N)	
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	

## 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	0.07	8.40	0.1	A	29.36	44.05
C-A					1060.77	1591.15
C-B	0.00	0.00	0.0	A	0.00	0.00
A-B					24.78	37.16
A-C					709.32	1063.98

### Main Results for each time segment

#### Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	24.09	24.09	6.02	0.00	547.49	0.044	23.89	0.0	0.1	7.562	A
C-A	870.30	870.30	217.57	0.00			870.30				
C-B	0.00	0.00	0.00	0.00	542.16	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	581.95	581.95	145.49	0.00			581.95				

#### Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	28.77	28.77	7.19	0.00	530.32	0.054	28.72	0.1	0.1	7.893	A
C-A	1039.22	1039.22	259.81	0.00			1039.22				
C-B	0.00	0.00	0.00	0.00	524.74	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	694.91	694.91	173.73	0.00			694.91				

**Main results: (17:15-17:30)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	506.58	0.070	35.16	0.1	0.1	8.399	A
C-A	1272.78	1272.78	318.19	0.00			1272.78				
C-B	0.00	0.00	0.00	0.00	500.67	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	851.09	851.09	212.77	0.00			851.09				

**Main results: (17:30-17:45)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	35.23	35.23	8.81	0.00	506.58	0.070	35.23	0.1	0.1	8.401	A
C-A	1272.78	1272.78	318.19	0.00			1272.78				
C-B	0.00	0.00	0.00	0.00	500.67	0.000	0.00	0.0	0.0	0.000	A
A-B	29.73	29.73	7.43	0.00			29.73				
A-C	851.09	851.09	212.77	0.00			851.09				

**Main results: (17:45-18:00)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	28.77	28.77	7.19	0.00	530.32	0.054	28.84	0.1	0.1	7.897	A
C-A	1039.22	1039.22	259.81	0.00			1039.22				
C-B	0.00	0.00	0.00	0.00	524.74	0.000	0.00	0.0	0.0	0.000	A
A-B	24.27	24.27	6.07	0.00			24.27				
A-C	694.91	694.91	173.73	0.00			694.91				

**Main results: (18:00-18:15)**

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-A-C	24.09	24.09	6.02	0.00	547.49	0.044	24.14	0.1	0.1	7.566	A
C-A	870.30	870.30	217.57	0.00			870.30				
C-B	0.00	0.00	0.00	0.00	542.16	0.000	0.00	0.0	0.0	0.000	A
A-B	20.33	20.33	5.08	0.00			20.33				
A-C	581.95	581.95	145.49	0.00			581.95				

## **APPENDIX E**

### Two Tier Bicycle Parking Rack



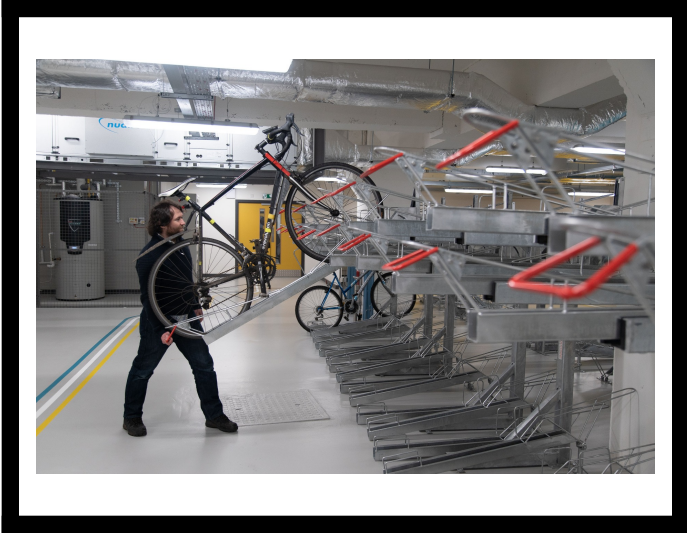
# Two Tier Bike Rack - With Gas Strut (BDS)

Ex. VAT: £165.00 **TOTAL**  
Inc. VAT: **£198.00**

\*Base price, not including any custom options.

## Product Images







## Description

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**The BDS Two Tier Bike Rack is a pioneering and user friendly cycle parking system, with excellent space saving bike storage, superb usability and high value; allowing you to house twice as many bikes in the same area and space as any standard bike rack.**

**The unique aspect of the space efficient and cost effective "Two Tier Bike Rack" makes it exclusive which has resulted in a growing requirement for it; especially in areas of high population densities such as stations, shopping centres, schools, car parks and offices.**

### For all types of bicycles

The Two Tier Bike Rack can accommodate all types of bicycles, such as mountain bikes and road bikes, which can be chained or D-locked on to the Two Tier Bike Rack for added security. The bicycle is well supported by wheel channels and the back wheel is stabilised by a gutter to lock the bicycle firmly into place.

### Simple and easy

The lower cycle rack has a sloping wheel channel, so the user does not have to bend between the levels which makes the two tier cycle rack system simple and easy to use for all ages. This rack is excellent for space saving as the cycle stands are so compact with a centre to centre distance of only 375mm.

## Capacity Calculator\*

**Estimate how many bikes you can store:**

**Length mm units:**

Calculate

Number of cycles stored:

\*Minimum height of 2.4 metres required

### Benefits of the Two Tier Bike Rack include:

- Available in a galvanised or powder coated finish (please call us for a quote).
- Easy to use upper tier using stainless steel bearings for long life and minimum maintenance
- The bicycle is held stable in the wheel channels with locking bars for additional security
- Accommodates all cycle types (mountain bikes, town bikes etc)
- Bicycle frame and wheel can be chained for security
- Cycle is well supported when being stored
- Lower rack has a sloping wheel channel, so the user does not have to bend between the levels
- Can be extended indefinitely
- Double or single sided versions available
- Robust construction, hot dip galvanised to BS EN ISO 1461
- Optional powder coating in any of the 192 RAL colours (Non moving parts)

- BDS Two Tier Bike Racks are the only "Cycling Score" approved two tier bike parking system
- Designed and manufactured by a company with over 50 years experience
- We even wrote a blog about the Two Tier Bike Rack [here](#).
- This bike rack can help contribute towards gaining ENE8 Cycle storage credits when used in the appropriate situation, under the Code for Sustainable Homes.
- Cycle stands are compact with a centre to centre distance of 375mm
- **Minimum height required is 2400mm** x minimum depth 1950mm (plus a recommended minimum entrance space of 1500mm)
- Easy lift gas strut fitted so lifting the bike up on the rack requires minimal force from the user, as per health and safety standards

#### **How many bikes can I fit in with the Two Tier Bike Rack?**

It's easy to work out. All you need to do, is measure the length of the area you want to fit the rack in. The length (mm) divided by 375mm = number of bikes that will fit on the bottom row. Multiply by 2 to get the total number of bike spaces and subtract 2 bikes to allow for the handle bars sticking out.

For example. 4000mm length divided by 375 = 10.666. Multiplied by 2 = 21.333. Round it down to 20 bikes.

#### **How much space in the room do I need?**

To be comfortable, we advise at least a 3500mm depth and a width of:

- 4 bikes - 1125mm
- 6 bikes - 1500mm
- 8 bikes - 1875mm
- 10 bikes - 2250mm
- 12 bikes - 2625mm
- 14 bikes - 3000mm
- 16 bikes - 3375mm
- 18 bikes - 3750mm
- 20 bikes - 4125mm
- Simply add 375mm for each extra 2 bikes.

#### **Lead Time on the BDS Two Tier Bike Rack**

Unlike many other Two Tier bike rack manufacturers, we carry stock of the main components so lead times can be much shorter than other suppliers. We have often delivered against very strict deadlines, The London Shard being an example; where we attended site, created a CAD layout plan for approval, designed a bespoke solution, manufactured and delivered in 4 weeks to the set and agreed deadlines.

**Typical delivery time:** 2-8 weeks

PLEASE CALL US ON 0800 612 6113 TO DISCUSS MORE DETAILS OR TECHNICAL INFORMATION.

[See our Two Tier Cycle Shelters here](#)

Product reference: TTBR1

# Some text

## Additional Information

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Best Sellers M2

Yes



## Additional Options

<b>Bike Rack Size</b>	4 bikes	£0.00
	6 bikes	£945.00
	8 bikes	£1,315.00
	10 bikes	£1,685.00
	12 bikes	£2,055.00
	14 bikes	£2,425.00
	16 bikes	£2,795.00
	18 bikes	£3,165.00
	20 bikes	£3,535.00
	Please contact for larger quantities	£0.00
<b>Choose Finish</b>	Hot Dipped Galvanised	£0.00
	Galvanised and Powder Coated Colour (Up to 20 bikes)	£385.00
<b>RAL Colour Code</b>	1023 Traffic Yellow	£0.00
	3000 Flame Red	£0.00
	5002 Ultramarine Blue	£0.00
	5017 Traffic Blue	£0.00
	6005 Moss Green	£0.00
	7015 Slate Grey	£0.00
	6024 Traffic Green	£0.00
	9005 Jet Black	£0.00
	9010 Pure White	£0.00
	Custom Colour	£220.00
<b>Bolts</b>	None	£0.00
	Fixing pack (Up to 6 Bike Frame)	£22.00
	Fixing pack (Up to 6-12 Bike Frame)	£44.00
	Fixing pack (Up to 12-20 Bike Frame)	£55.00



