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# **Traffic and Transport Assessment**

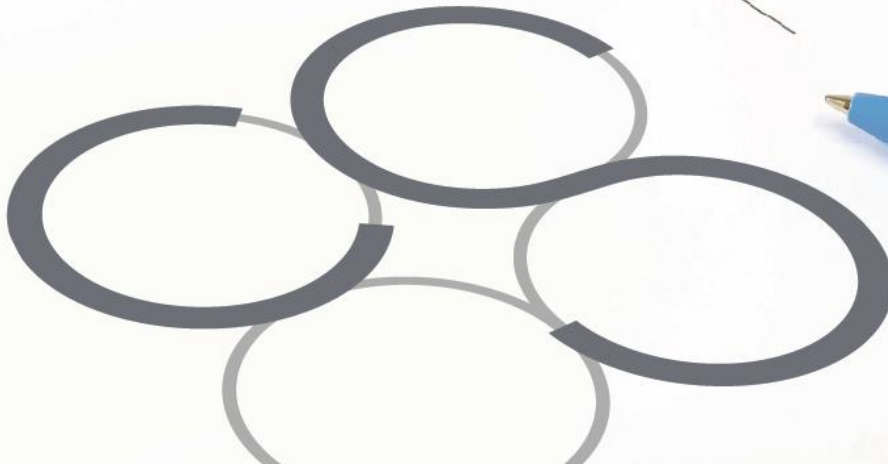
## **Proposed Residential Development**

### **Devoy Barracks, Naas, Co. Kildare**

Client: Land Development Agency

Job No. L086

March 2022





## TRAFFIC AND TRANSPORT ASSESSMENT

### PROPOSED RESIDENTIAL DEVELOPMENT, DEVOY BARRACKS, NAAS, CO. KILDARE

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## **1.0 INTRODUCTION**

### **1.1 Scope**

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by the Land Development Agency to prepare a Traffic and Transport Assessment for a proposed residential development at Devoy Barracks, Naas, Co. Kildare.

In preparing this report, CS Consulting has made reference to the following:

- Kildare County Development Plan 2017–2023
- Naas Local Area Plan 2021-2027
- TII Traffic and Transport Assessment Guidelines 2014
- TII Project Appraisal Guidelines 2011
- The Institute of Highways and Transportation Guidelines for Traffic Impact Assessments
- Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities) 2020
- Institution of Structural Engineers (IStructE) Design Recommendations for Multi-Storey and Underground Car Parks (2011, 4<sup>th</sup> edition)
- National Cycle Manual 2011
- Greater Dublin Area Cycle Network Plan 2013
- Design Manual for Urban Roads and Streets 2019

### **1.2 Objective**

The objective of this report is to examine the traffic implications associated with the proposed development, in terms of integration with existing traffic in the area. The report determines the impact of the proposed development on the existing road network, in particular through the operational assessment of 2no. existing and proposed road junctions in the

vicinity of the subject development site, including the proposed development access.

The report also examines the proposed development's vehicular access arrangements, car parking provision, site layout, and facilities for pedestrians and cyclists.

### 1.3 Study Methodology

The assessment methodology adopted for this report is summarised as follows:

- Traffic flow data – 12-hour classified vehicular traffic count surveys were undertaken on Tuesday the 30<sup>th</sup> of November 2021 by IDASO Ltd on behalf of CS Consulting. The surveys were conducted between 07:00 and 19:00 at 5no. existing junctions along John Devoy Road in Naas, Co. Kildare. These traffic flow data were scaled up to 2022 baseline levels using TII growth factors (given in sub-section 4.1).
- Trip generation – A development trip generation assessment has been carried out using data extracted from the Trip Rate Information Computer System (TRICS) database of traffic surveys, to determine the potential vehicular trips to and from the proposed development site during peak hours.
- Trip distribution – Based upon existing traffic characteristics and the surrounding road network, an appropriate distribution has been assigned to site development vehicular trips across the road network, as described in sub-section 4.3.
- Junction operation assessments – A spreadsheet model was created which contains the base year do-nothing traffic count data described above. Future year traffic forecasts were derived from these data using TII growth factors and development trip generation figures. These existing and predicted traffic flows were applied to the PICADY and

ARCADY models of 2no. key junctions on the surrounding road network. The performances of the junctions in these models were assessed for the baseline year (2022), the proposed year of opening (2024), 5 years after opening, and 15 years after opening (the Design Year Assessment).

- Parking – Car and bicycle parking provisions within the proposed development have been assessed with reference to the parking standards set out in the *Kildare County Development Plan 2017–2023*, the *Naas Local Area Plan 2021–2027*, and the *2020 Design Standards for New Apartments*.

#### **1.4 Structure of Report**

As outlined above, this Traffic and Transport Assessment report seeks to establish the traffic impact generated by the proposed development on the surrounding road network and subsequently ascertain the future operational performance of the local road network.

The structure of this report corresponds to the various stages outlined above, and the key tasks summarised below:

- Section 2 describes the proposed development location, existing land use, and the development proposals.
- Section 3 provides an overview of the existing traffic conditions and the local road network, identifying any existing issues related to traffic flow or road infrastructure of particular relevance to this transport appraisal.
- Sections 4 and 5 detail the analysis as described in the study methodology above. The analysis examines trip generation, trip distribution, and resulting junction operational performance with the development in place.

- Section 6 assesses the proposed car parking provision for the development, with reference to Local Authority standards and national planning guidelines.
- Section 7 addresses the development's access arrangements and internal layout.
- Section 8 provides an overview of the relevant opinions and recommendations received from An Bord Pleanála and from Kildare County Council in the course of the Strategic Housing Development application process to date, and details the measures taken in response to these comments.
- Section 9 presents the conclusions of the report.

## 1.5 Previous Planning Application Refusal

A previous SHD planning application for 221no. residential units on this site (Reference ABP-309954-21) was submitted to An Bord Pleanála on the 15<sup>th</sup> of April 2021. The application was refused permission on the 29<sup>th</sup> of July 2021. The reasons for refusal are outlined below, together with a brief synopsis of the new proposals for the subject development. Supplementary details are provided within Sections 6 and 7 of this report.

### 1.5.1 Quantum of Parking

Reason for Refusal:

*'Having regard to the location of the site and in particular the absence of high frequency urban public transport services within easy walking distance of the site, the Board considers that the level of car parking provision is deficient and that it would not serve the needs of future occupants of the development.'*

235no. car parking spaces were proposed in the previous planning application (Ref ABP-309954-21).

This application provides a total of 314no. car parking spaces:

- 84no. spaces shall be assigned to the houses.
- 216no. spaces shall be for the use of apartment/duplex residents and visitors.
- 6no. spaces shall be reserved for crèche staff.
- 8no. spaces shall operate as set down spaces for the crèche.

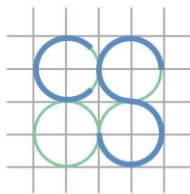
This increase in car parking provision results in parking ratios of 2no. spaces per house and 1.22no. spaces per duplex/apartment, which we believe to be appropriate for the development and will serve the needs of future occupants.

#### 1.5.2 On-Street Parking

Reason for Refusal:

*'The Board also considers that the street environment would be dominated to an unacceptable degree by surface parking and that this would undermine the sense of enclosure and overall amenity of the development and be contrary to the provisions of the Guidelines for Sustainable Residential Developments in Urban Areas and the accompanying Urban Design Manual, A Best Practice Guide, issued by the Department of the Environment, Heritage and Local Government in May 2009, in particular criteria Number 7 Layout and 11 Parking and the Design Manual for Urban Roads and Streets (DMURS) issued by the Department of Transport, Tourism and Sport and the Department of the Environment, Heritage and Local Government in March 2019, as amended, in particular Section 2.2.1 and Section 4.4.9. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.'*

The revised layout includes the provision of undercroft car parking at the south-east duplex housing cell. The first-floor podium level is



retained as communal open space and the layout of the typologies surrounding the undercroft parking have been revised to ensure the ground floor unit is entered at street level, and the upper floor unit is entered at podium level. The undercroft parking provides 108no. car parking spaces.

The car parking associated with the housing (84no. car parking spaces) is now located within the front curtilage of each dwelling.

The quantum, design and layout of on-street parking has been considerably altered since the previous SHD application. This current SHD application provides an overall reduction in on-street parking in the order of c. 54% when compared to the previous application.

Overall, the number of on-street parking spaces is reduced from 211no. on-street parking spaces in the previous SHD application, to 97no. on-street parking spaces in the current SHD application.

## 2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

### 2.1 Site Location

The proposed development site is located at Devoy Barracks, Naas, Co. Kildare, within the operational area of Kildare County Council. The area subject to the present planning application extends to 4.11ha.

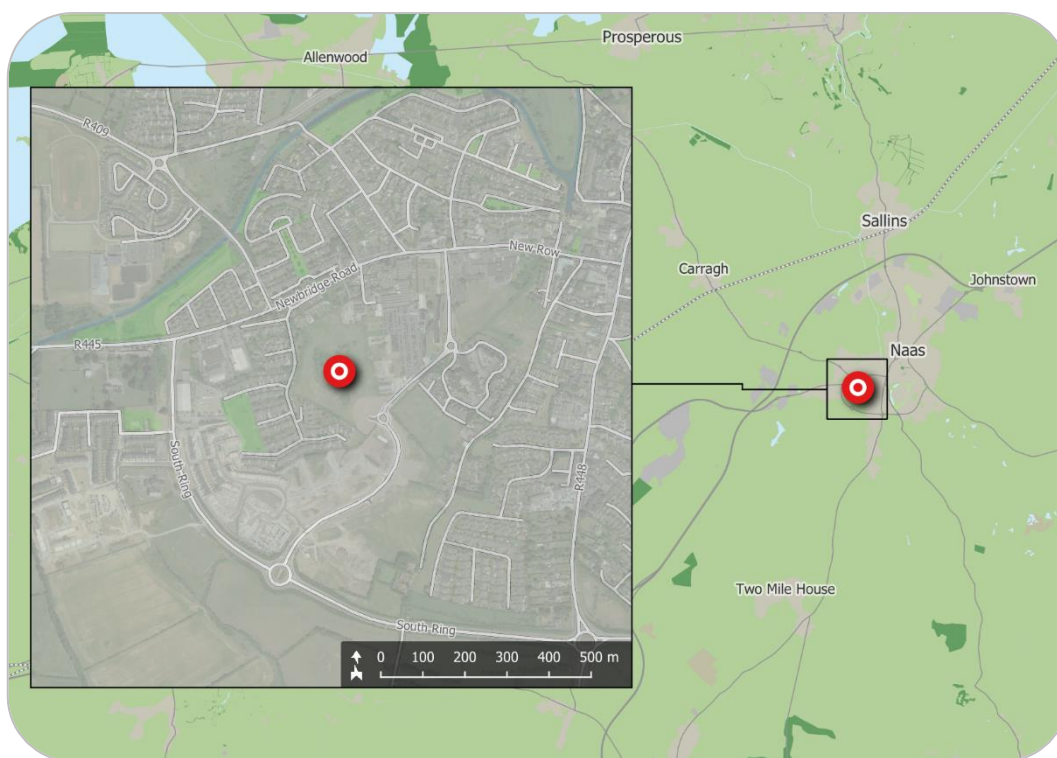


Figure 1 – Location of proposed development site  
(map data & imagery: EPA, OSM Contributors, Google)

The location of the proposed development site is shown in **Figure 1** above; the indicative extents of the development site, as well as relevant elements of the surrounding road network, are shown in more detail in **Figure 2**.

The site is bounded to the east by Kildare County Council lands, to the north by existing residential and commercial properties, and to the south and west by the existing Arconagh residential housing estate.



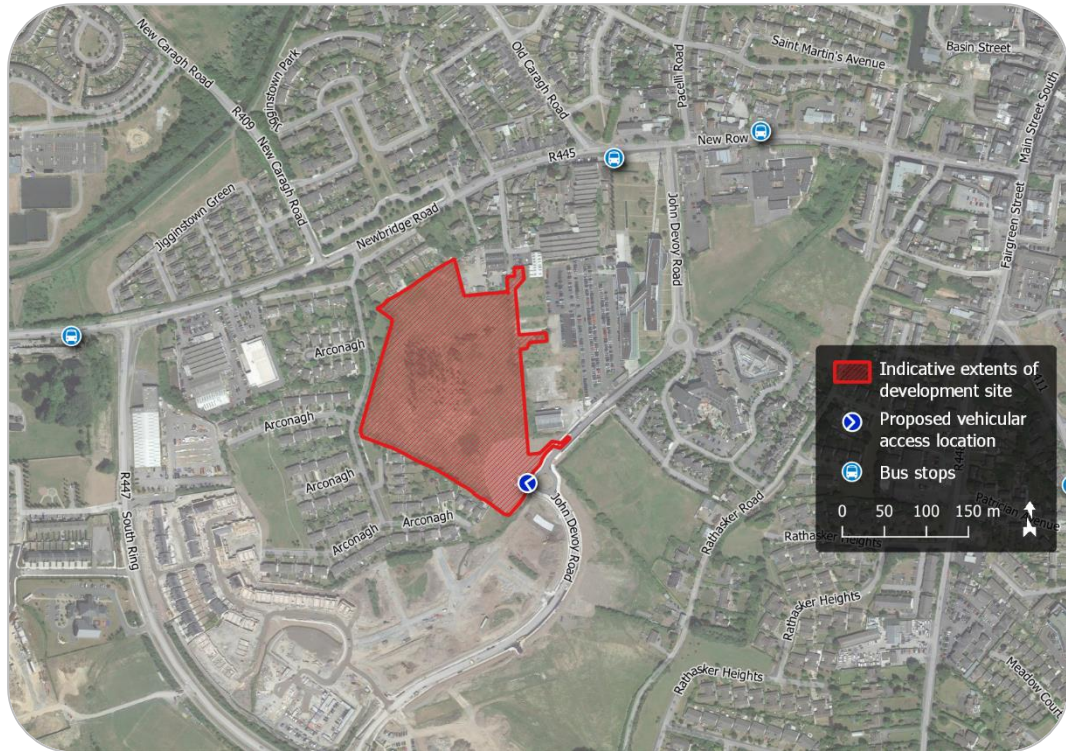


Figure 2 – Site extents and environs  
(map data & imagery: NTA, OSM Contributors, Google)

## 2.2 Existing Land Use

The subject lands are primarily greenfield.

## 2.3 Description of Proposed Development

The development site is located on John Devoe Road, Naas, Co Kildare, known as Devoy Barracks. The proposed development is for the construction of 219 no. residential units, comprising of a mix of terraced houses (42 no. in total), and duplex / apartment units (177 no. in total) ranging in height from 2 to 5 storeys, a 59-place childcare facility, public and communal open spaces and all associated site works and infrastructure. Vehicular and pedestrian access is proposed via an existing access point on the John Devoe Road along the southern boundary with additional pedestrian and cycle access provided to the east, and future



pedestrian and cycle connection opportunities provided to the north, west and east.

For the purposes of this Traffic and Transport Assessment, it has been assumed that the proposed development shall be completed and fully occupied by the year 2024.

### 3.0 RECEIVING ENVIRONMENT

#### 3.1 Existing Traffic Flows

Full turning movement classified traffic counts were carried out by Irish IDASO Ltd, on behalf of CS Consulting, over a 12-hour period (07:00–19:00) on Tuesday the 30<sup>th</sup> of November 2021. Count information was obtained at the following 5no. sites (see **Figure 3**):

- J1. Newbridge Road (R445) / John Devoy Road / Pacelli Road  
*(4-arm signal-controlled junction)*
- J2. John Devoy Road / Osprey Hotel Access  
*(4-arm roundabout junction)*
- J3. John Devoy Road / Áras Chill Dara Access  
*(3-arm priority-controlled junction)*
- J4. John Devoy Road / Development Site Access  
*(3-arm roundabout junction)*
- J5. South Ring (R447) / John Devoy Road  
*(3-arm roundabout junction)*

The peak hour traffic flows across all 5no. survey sites were found to be between 08:15 and 09:15 (AM peak hour) and between 16:45 and 17:45 (PM peak hour).

Raw data from these traffic surveys are provided in **Appendix A**. The traffic movements at each of the surveyed junctions during the peak hours have been isolated from the count data and have been scaled up to baseline levels for the year 2022 using standard TII growth factors (see sub-section 4.1). These total survey year and baseline year peak hour flows at the survey junctions are included in the traffic flow matrices given in **Appendix C** and are also given in **Table 1**.

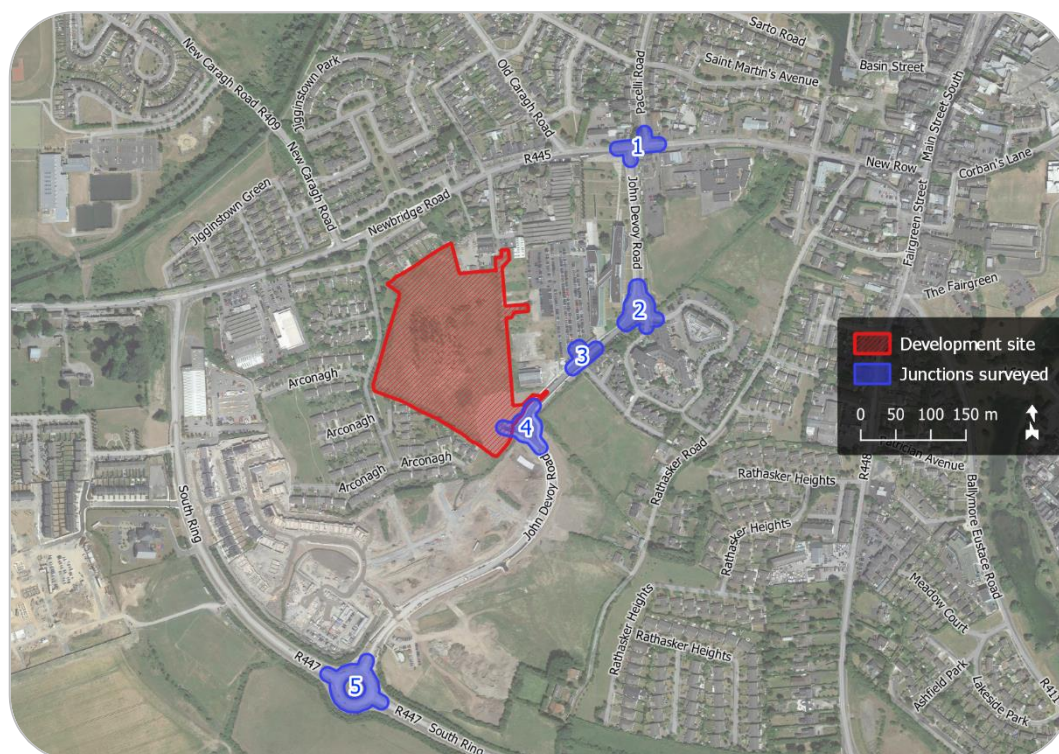


Figure 3 – Surveyed road junction sites  
(map data & imagery: OSM Contributors, Google)

Table 1 – Existing Weekday Peak Hour Traffic Flows at Surveyed Junctions

Time Period	Total Junction Traffic Movements (Passenger Car Units)				
	J1	J2	J3	J4	J5
Survey Year 2021					
AM Peak Hour (08:15-09:15)	1186	387	330	272	1937
PM Peak Hour (16:45-17:45)	1084	351	269	220	1479
Baseline Year 2022					
AM Peak Hour (08:15-09:15)	1208	393	336	278	1976
PM Peak Hour (16:45-17:45)	1105	358	274	224	1509

## 3.2 Existing Road Network Characteristics

### 3.2.1 John Devoy Road

- Single carriageway road, with a cumulative pavement width of approx. 10m generally.
- Local link road with a North/South alignment, connecting to the R445 to the north and to the R447 South Ring in the south.
- Operates within a 50km/h speed limit.
- Footpaths present along the entire length of the road. Cycle lanes present on both sides of John Devoy Road

### 3.2.2 Newbridge Road (R445)

- Single carriageway road, with a cumulative pavement width of approx. 10m in the vicinity of the junction with John Devoy Road.
- Regional road with an East/West alignment, connecting to the N7 national road to the east and to the M7 motorway to the west.
- Operates within a 50km/h speed limit in the vicinity of the junction with John Devoy Road.
- Footpaths present on both sides of the road in the vicinity of the junction with John Devoy Road. No cycle lanes present.

### 3.2.3 South Ring (R447)

- Single carriageway road, with a cumulative pavement width of approx. 10m in the vicinity of the junction with John Devoy Road.
- Regional road with an East/West alignment, connecting to the R445 Newbridge Road in the northwest and to R410 in the east.
- Operates within a 50km/h speed limit in the vicinity of the junction with John Devoy Road.
- Footpaths present on both sides of the road in the vicinity of the junction with John Devoy Road. No cycle lanes present.

### **3.3 Proposed Local Infrastructure Improvements**

As part of the *Cycle Network Plan for the Greater Dublin Area*, administered by the National Transport Authority, it is proposed that primary/secondary cycle route NA1 be implemented along Newbridge Road in the vicinity of the subject development site. No information is yet publicly available on the proposed design or delivery timeframe of this objective.

The *Naas Local Area Plan 2021-2027* provides for the medium-term implementation of a “pedestrian link between Devoy Barracks Site and Newbridge Road”, which would traverse the subject site on a north/south axis, as well as for the creation of a pedestrian/cyclist path between this link and the existing Arconagh estate to the west. The subject proposed development incorporates provision for future pedestrian and cyclist access connections at the site’s northern and western boundaries, to facilitate the creation of these links. The *Naas Local Area Plan 2021-2027* also indicates the future provision of additional cycle tracks or cycle lanes along the northern (older) section of John Devoy Road, as well as improved cycling facilities along the R445 (New Row) between John Devoy Road and Naas town centre.

No further relevant outstanding road development objectives or other significant transport-related infrastructural improvements in the vicinity of the subject site are given in either the *Naas Local Area Plan 2021-2027* or the *Kildare County Development Plan 2017-2023*.

### **3.4 Nearby Committed Developments**

Four further committed developments are located on John Devoy Road and the South Ring (R447) in proximity to the subject development site (see **Figure 4**).



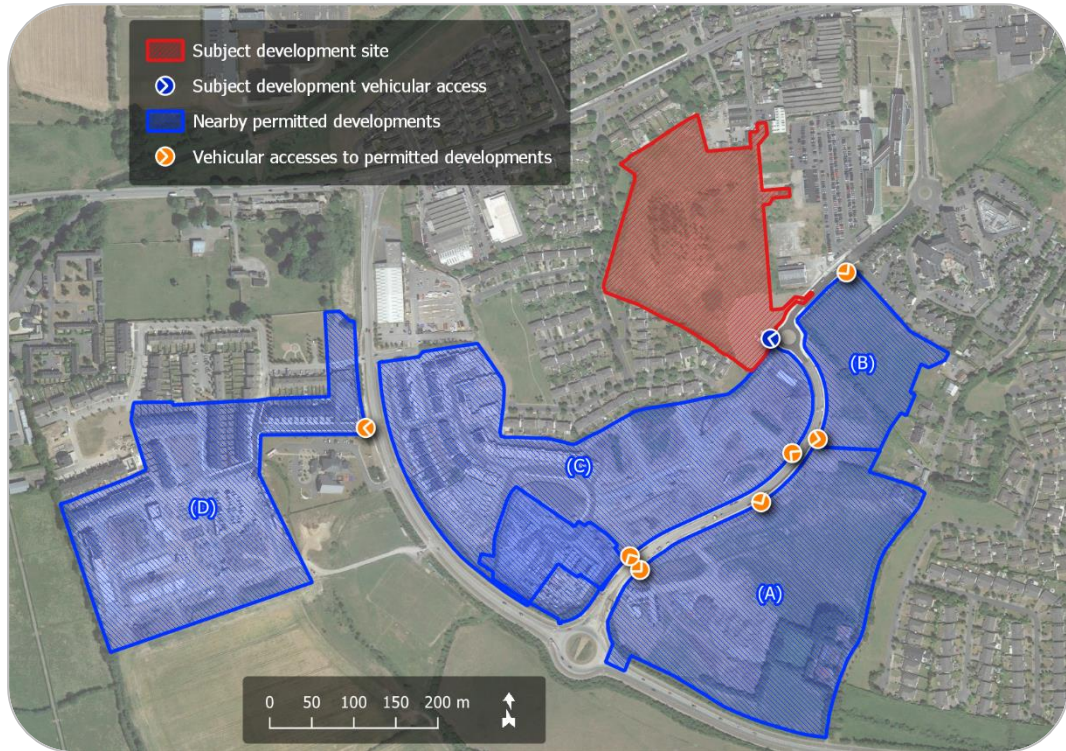


Figure 4 – Relevant nearby committed developments  
(map data & imagery: OSM Contributors, Google)

These are:

- (A) ABP ref. PL09.305701 (permission granted by ABP on 11.02.2020)  
Permitted 'Jigginstown' Strategic Housing Development comprising 314no. residential units, retail space, and crèche, with 578no. car parking spaces and vehicular access to/from John Devoy Road (in part via adjacent Elsmore development).

- (B) ABP ref. PL09.307258 (permission granted by ABP on 17.09.2020)  
Permitted 'Devoy Quarter' Strategic Housing Development comprising 152no. residential apartment units and associated crèche, with 177no. car parking spaces and vehicular access to/from John Devoy Road.
- (C) KCC refs. 09/500050, 15/955 & 17/1469  
Permitted 'Elsmore' development comprising 308no. residential units and a crèche, with vehicular access to/from John Devoy Road (which has been constructed under this application).
- (D) KCC refs. 16/1145, 17/886 & 19/85  
Permitted development comprising 183no. residential units, with vehicular access to/from the South Ring road (R447).

The 'Jigginstown' SHD and the 'Devoy Quarter' SHD are currently under construction. Committed developments (C) and (D) are now substantially complete and largely occupied, but were not fully occupied at the time of the traffic survey described in sub-section 3.1.

For the purposes of this Traffic and Transport Assessment, it has been assumed that all four of these committed developments shall be completed and fully occupied by the year 2024. The projected traffic to be generated by these developments has been included in the future year junction assessments, as described in sub-section 4.5 of this report.

## 4.0 TRAFFIC GENERATION AND TRIP DISTRIBUTION

### 4.1 Future Year Background Traffic Growth

The operational impact of traffic on the road network within the proposed development's area of influence has been assessed for the following years:

- 2022 Baseline year (existing traffic flows)
- 2024 Proposed opening year
- 2029 5 years after opening
- 2039 Design year (15 years after opening)

Unit 5.3 of the *TII Project Appraisal Guidelines (PE-PAG-02017 Travel Demand Projections)* has been used to apply growth factors to the existing traffic flows for the future year junction assessments. The TII annual growth rates applied are given in **Table 2**, and the resultant cumulative growth in background traffic for each assessment year is given in **Table 3**.

Table 2 – TII Central Growth Rates (Light Vehicles)

Geographic Area	Background Traffic Growth per Year	
	2016-2030	2030-2040
Kildare County	+ 1.97%	+ 0.62%

Table 3 – Predicted Background Traffic Growth <sup>1</sup>

2022 Baseline year	2024 Year of opening	2029 Opening year +5	2039 Opening year +15
+ 2.0%	+ 6.0%	+ 16.9%	+ 26.0%

<sup>1</sup> Cumulative percentage increases over 2021 surveyed traffic levels.



## 4.2 Subject Development Trip Generation

Trip generation factors from the Trip Rate Information Computer System (TRICS) database of traffic surveys have been used to predict the trip generation to and from the proposed development, once completed, for both the AM and PM peak hour periods. The TRICS database is maintained by a consortium of English County Councils but covers the entirety of Great Britain and Ireland. Full details of the TRICS information used in the assessments are provided in **Appendix B**.

The proposed development comprises the following elements relevant to vehicular trip generation:

- 42no. houses;
- 177no. apartment/duplex units; and
- a crèche with 59no. childcare places.

For a full schedule of the proposed development, please refer to the architectural documentation submitted with this application.

The TRICS sub-categories '03 Residential / A – Houses Privately Owned', '03 Residential / C – Flats Privately Owned', and '04 Education / D – Nursery' have been employed. These are described in the TRICS land use category definitions as follows:

### Houses Privately Owned

*"Housing developments where at least 75% of units are privately owned. Of the total number of units, 75% must also be houses (sum of "non-split" terraced, detached, semi-detached, bungalows, etc), with no more than 25% of the total units being flats. The TRICS definition of a privately owned dwelling is a dwelling at which residents have any degree of equity, or a dwelling that is owned by a private landlord and rented at market rates. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms."*

### Flats Privately Owned

"Housing developments where at least 75% of households are privately owned. Of the total number of units, 75% must also be flats (sum of flats in blocks and "split" houses), with no more than 25% of the total units being "non-split" houses. The TRICS definition of a privately owned dwelling is a dwelling at which residents have any degree of equity, or a dwelling that is owned by a private landlord and rented at market rates. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms."

### Nursery

"Pre-school centres. Trip rates are calculated by Gross Floor Area, Pupils, or Employees."

Table 4 – TRICS Trip Generation Rates

Houses		
Time Period	Arrivals per hour per dwelling	Departures per hour per dwelling
AM Peak (08:15-09:15)	0.149	0.402
PM Peak (16:45-17:45)	0.437	0.192
Apartment/Duplex Units		
Time Period	Arrivals per hour per dwelling	Departures per hour per dwelling
AM Peak (08:15-09:15)	0.080	0.139
PM Peak (16:45-17:45)	0.180	0.124
Crèche		
Time Period	Arrivals per hour per child	Departures per hour per child
AM Peak (08:15-09:15)	0.188	0.161
PM Peak (16:45-17:45)	0.131	0.150

The TRICS trip rates for the proposed development have been selected from the above categories, restricted insofar as possible to similar edge-of-

town-centre locations, and further refined with reference to 2016 CSO census data on the basis of:

- the population within 1 mile of the development site (12,000 approx.);
- the population within 5 miles of the development site (45,000 approx.);
- the aggregate mean car ownership rate within 5 miles of the development site (1.6 cars per household).

The trip rates selected are given in **Table 4** and the resultant proposed development trip generation figures obtained are given in **Table 5**.

Table 5 – Proposed Development Trip Generation from TRICS

Houses			
Time Period	Arrivals	Departures	Total Trips
AM Peak (08:15-09:15)	6	17	23
PM Peak (16:45-17:45)	18	8	26
Apartment/Duplex Units			
Time Period	Arrivals	Departures	Total Trips
AM Peak (08:15-09:15)	14	25	39
PM Peak (16:45-17:45)	32	22	54
Crèche			
Time Period	Arrivals	Departures	Total Trips
AM Peak (08:15-09:15)	11	9	20
PM Peak (16:45-17:45)	8	9	17
Development Totals			
Time Period	Arrivals	Departures	Total Trips
AM Peak (08:15-09:15)	31	51	82
PM Peak (16:45-17:45)	58	39	97

The development's crèche facility is intended to serve primarily residents of the subject development itself, for which reason it is expected that the majority of vehicular trips made to and from the crèche during background traffic peak hours (08:15-09:15 and 16:45-17:45) shall be pass-by trips by

residents (e.g. dropping off children on the way to work). Such trips would already be accounted for within the residential trip generation figure. As the crèche shall be open to use by those resident outside the development, it is however possible that a limited number of additional vehicular trips to and from the crèche may be generated by these users. To ensure a robust assessment of the development's trip generation, no discount has been applied to the TRICS-derived crèche trip generation figures.

### 4.3 Subject Development Trip Distribution

Table 6 – Existing Directional Splits at Survey Site 4  
*John Devoy Road / Subject Development Access*

Direction	Northbound	Southbound	TOTAL
AM Peak	66%	34%	100%
PM Peak	52%	48%	100%

Table 7 – Predicted Traffic Splits at Development Access  
*John Devoy Road / Subject Development Access*

Arrivals TO Subject Development			
From	John Devoy Road North	John Devoy Road South	TOTAL
AM Peak	34%	66%	100%
PM Peak	48%	52%	100%
Departures FROM Subject Development			
To	John Devoy Road North	John Devoy Road South	TOTAL
AM Peak	66%	34%	100%
PM Peak	52%	48%	100%

Vehicular traffic to and from the subject development may arrive or depart along John Devoy Road either from/to the north or from/to the south. It is assumed that vehicular traffic related to the development shall be distributed north/south in the same proportions as the existing surveyed

directional splits along John Devoy Road at the location of the development access junction (surveyed junction no. 4). These splits are given in **Table 6**.

At the existing access to Áras Chill Dara on John Devoy Road (surveyed junction no. 3), immediately to the north of the development access, it is assumed that vehicular traffic to and from the subject development shall continue along John Devoy Road and shall not turn into the Kildare County Council offices. The same assumption is made in respect of the Osprey Hotel, the access to which (surveyed junction no. 2) is also located on John Devoy Road.

At surveyed junction nos. 1 and 5, at either end of John Devoy Road, it is assumed that vehicular traffic generated by the subject development shall follow the existing directional splits observed by the traffic survey.

#### 4.4 Proportional Increase in Traffic

**Table 8** shows the absolute and proportional increases in peak hour traffic flows that shall result from the proposed development at each of the 5no. surveyed junctions shown in **Figure 3** (page 11).

The *TII Traffic and Transport Assessment Guidelines* (PE-PDV-02045) advise that Transport Assessments should generally be applied where traffic to and from a development is predicted to exceed 10% of the existing background traffic on the adjoining road (or 5% at sensitive locations). As shown in **Table 8**, only at surveyed junctions J2, J3, and J4 shall the subject development result in an increase of more than 5% in total traffic flows in either peak hour period.

Within the scope of this report, only junctions J3 and J4 have been subjected to detailed operational assessment (as described in Section 5). Surveyed junctions J1 and J5 are considered at low risk of detrimental

effects as a result of the proposed development, given the generally lower proportional increases in traffic flows that it shall give rise to at these locations, while junction J2 (the Osprey Hotel access roundabout) is considered at low risk due to the high capacity design of the existing roundabout and the low existing traffic flows at this location.

Table 8 – Changes in Traffic Flows at Surveyed Junctions

Junction Survey Site	Existing Traffic Flows at Junction <sup>2</sup>		Increase in Flows Through Junction <sup>3</sup>		Proportional Increase	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
J1	1208	1105	44	48	3.6%	4.3%
J2	393	358	44	48	11.2%	13.4%
J3	336	274	44	48	13.1%	17.5%
J4	278	224	82	97	29.5%	43.3%
J5	1976	1509	38	49	1.9%	3.2%

#### 4.5 Committed Development Trip Generation and Distribution

The vehicular trips predicted to be generated by the committed developments identified in sub-section 3.4 have been included in the background traffic flows for all future assessment years. The peak hour trip generation figures for these committed developments are given in **Table 9**; these have been sourced from the relevant technical reports submitted under their respective planning applications:

- (A) Traffic and Transport Assessment prepared by DBFL Consulting Engineers and submitted under SHD planning application ref. PL09.305701.

<sup>2</sup> Total 2022 baseline year vehicle movements (PCU/hour), with no additional development traffic.

<sup>3</sup> Operational phase trips generated by proposed development.

- (B) Traffic Impact Assessment prepared by TPS and submitted under SHD planning application ref. PL09.307258.
- (C) Traffic and Transport Assessment prepared by DBFL Consulting Engineers and submitted under KCC planning application ref. 09/500050.
- (D) Traffic and Transport Assessment prepared by DBFL Consulting Engineers and submitted under KCC planning application ref. 16/1145.

Table 9 – Total Committed Development Trip Generation

Committed Development <sup>4</sup>	Peak Period	Arrivals	Departures	Total Trips
(A)	AM	47	113	160
	PM	75	50	125
(B)	AM	6	24	30
	PM	21	10	31
(C)	AM	49	141	190
	PM	166	66	232
(D)	AM	25	75	100
	PM	54	32	86
TOTALS	AM	127	353	480
	PM	316	158	474

It should be noted that several of these reports consider slightly different AM and/or PM peak hours than those identified by the traffic survey conducted for the present assessment (an AM peak of 08:00-09:00 rather than 08:15-09:15, and a PM peak of 17:00-18:00 rather than 16:45-17:45). As the difference is of only 15 minutes in each case, however, the use of the trip generation figures provided in these reports is nevertheless considered adequate for the purposes of the present assessment.

<sup>4</sup> See Figure 4, page 10.

Vehicular traffic generated by these committed developments have been distributed in the same manner as those of the subject development.

Table 10 – Committed Dev. Trips Passing Subject Development Access

Committed Development	Peak Period	Arrivals	Departures	Total Trips
(A)	AM	16	74	90
	PM	36	26	62
(B)	AM	0	0	0
	PM	0	0	0
(C)	AM	17	93	110
	PM	79	35	114
(D)	AM	1	3	4
	PM	2	1	3
TOTALS	AM	34	170	204
	PM	117	62	179

It is noted that – as illustrated in **Figure 4** – there is significant overlap in the areas covered by committed developments (A) and (C), with the former application encompassing a part of the development area previously permitted under the latter. The true final trip generation of committed development (C) is therefore likely to be less than that predicted by its original Traffic and Transport Assessment (TTA); to ensure a robust assessment of cumulative traffic impact, however, no change has been made to the trip generation figures given in these two applications' respective TTA reports.



## 5.0 OPERATIONAL ASSESSMENT

### 5.1 Introduction

To determine the likely traffic impact of the proposed development, operational assessments of 2no. key junctions giving access to the subject site have been undertaken using the industry-standard TRL computer programs ARCADY and PICADY, for both the weekday AM peak hour and the weekday PM peak hour.



Figure 5 – Modelled road junctions  
(map data & imagery: OSM Contributors, Google)

The following junctions have been modelled and assessed:

- J3. John Devoy Road / Áras Chill Dara Access  
(3-arm priority-controlled junction)
- J4. John Devoy Road / Development Access  
(3-arm roundabout junction)

Junction performance is assessed based upon the four metrics defined in sub-section 5.3. Full junction modelling outputs are provided in **Appendix D**.

## 5.2 Assessment Scenarios

The performances of these junctions have been assessed under the following scenarios, using the existing and predicted traffic flows given in **Appendix C**:

- 2022 – baseline traffic conditions;
- 2024 (planned year of opening) – with & without subject development;
- 2029 – with & without subject development; and
- 2039 (design year) – with & without subject development.

## 5.3 Definitions

### Degree of Saturation:

The ratio of current traffic flow to ultimate capacity (also known as RFC) on a junction approach.

### Mean Maximum Queue

The highest estimated mean number of Passenger Car Units (PCUs) queued in any lane of a junction approach, averaged over the entire analysis period.

### Mean Delay per PCU:

The average delay incurred by a vehicle on a junction approach as a result of having to give way at a priority-controlled junction or roundabout.

### Practical Reserve Capacity:

The percentage by which the arriving traffic flow on a stream could increase before the junction as a whole would reach its effective capacity (i.e. 90% saturation).

## 5.4 Junction 3 Assessment Results

The following tables give the PICADY modelling results, for each of the assessment scenarios, at the existing access junction of Áras Chill Dara (Kildare County Council offices) on John Devoy Road.

- Arm A: John Devoy Road (to south-west)
- Arm B: Áras Chill Dara (to north-west)
- Arm C: John Devoy Road (to north-east)

The assessment results show that this junction currently operates well within its effective capacity on all approaches during both the AM and PM peak periods, with negligible vehicle queues and minimal delays. All junction approaches are shown to continue operating within their effective capacities past the year 2039, with vehicle queues and delays almost unchanged from those currently existing.

Table 11 – Assessment Site J3 Results

Junction Approach Arm	Degree of Saturation (%)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM
2022 – baseline year assessment – existing traffic flows								
A	n/a	n/a	n/a	n/a	n/a	n/a	358%	312%
B	2%	15%	0	0	6	7		
C	12%	1%	0	0	8	7		
2024 – opening year assessment – WITHOUT subject development								
A	n/a	n/a	n/a	n/a	n/a	n/a	213%	216%
B	2%	17%	0	0	7	7		
C	13%	1%	0	0	9	7		
2024 – opening year assessment – WITH subject development in place								
A	n/a	n/a	n/a	n/a	n/a	n/a	198%	199%
B	2%	17%	0	0	7	8		
C	13%	1%	0	0	9	7		
2029 assessment – WITHOUT subject development								
A	n/a	n/a	n/a	n/a	n/a	n/a	192%	192%
B	3%	18%	0	0	7	8		
C	15%	1%	0	0	9	7		

Table 12 – Assessment Site J3 Results (continued)

Junction Approach Arm	Degree of Saturation (%)		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM
2029 assessment – WITH subject development in place								
A	n/a	n/a	n/a	n/a	n/a	n/a	179%	178%
B	3%	19%	0	0	7	8		
C	15%	1%	0	0	9	7		
2039 – design year assessment – WITHOUT subject development								
A	n/a	n/a	n/a	n/a	n/a	n/a	176%	176%
B	3%	20%	0	0	7	8		
C	16%	1%	0	0	9	7		
2039 – design year assessment – WITH subject development in place								
A	n/a	n/a	n/a	n/a	n/a	n/a	164%	163%
B	3%	20%	0	0	7	8		
C	16%	1%	0	0	9	7		

In each of the future years assessed, the addition of the vehicular traffic generated by the proposed development is shown to have a negligible impact on junction performance, resulting in no discernible increase in mean approach queue length on any approach, and a maximum increase of 1 second in mean vehicle delay.

## 5.5 Junction 4 Assessment Results

The following table gives the ARCADY modelling results, for each of the 'with development' assessment scenarios, at the subject development's roundabout access on John Devoy Road.

- Arm A: John Devoy Road (to north-east)
- Arm B: John Devoy Road (to south-east)
- Arm C: Development Access (to west)

The assessment results show that the roundabout providing vehicular access to the development from John Devoy Road shall operate well within its effective capacity on all approaches during both the AM and PM peak

periods when the development is completed in 2024 and shall continue to do so past the design year 2039. Vehicle queueing on junction approaches shall be negligible, and vehicle delays minimal.

Table 13 – Assessment Site J4 Results

Junction Approach Arm	Degree of Saturation		Mean Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity	
	AM	PM	AM	PM	AM	PM	AM	PM
2024 – opening year assessment – WITH subject development in place								
A	19%	34%	0	1	5	7	144%	157%
B	37%	21%	1	0	5	4		
C	10%	6%	0	0	7	6		
2029 assessment – WITH subject development in place								
A	20%	35%	0	1	5	7	132%	145%
B	39%	23%	1	0	5	4		
C	10%	6%	0	0	7	6		
2039 – design year assessment – WITH subject development in place								
A	21%	37%	0	1	5	7	123%	137%
B	41%	24%	1	0	5	4		
C	10%	7%	0	0	7	6		

## 6.0 PARKING

As previously described, the subject development comprises a total of 219no. residential units, including:

- 42no. 3-bedroom houses;
- 64no. 1-bedroom duplex/apartment units;
- 105no. 2-bedroom duplex/apartment units; and
- 8no. 3-bedroom duplex/apartment units.

The development also includes a crèche with 59no. childcare places and an expected maximum staff complement of 11no. staff members.

### 6.1 Overall Car Parking Provision

The development shall include a total of 314no. car parking spaces, of which:

- 84no. spaces shall be assigned to houses;
- 216no. spaces shall be for the use of apartment/duplex residents and visitors;
- 6no. spaces shall be reserved for crèche staff; and
- 8no. spaces shall operate as set down spaces for the crèche.

The expected allocation of parking to houses, duplexes and apartments is identified on Coady Architects drawing **DEV-MCO-00-ZZ-DR-A-0510**. The proposed development is anticipated to be a mix of social and affordable housing, subject to commercial feasibility. The LDA wish to reserve the right to determine the final allocation of spaces between housing, duplexes and apartments based on the split of affordable sale and affordable rental units.

## 6.2 Applicable Car Parking Standards

Objective MTO 4.1 of the *Naas Local Area Plan 2021-2027* states that the Council intends to:

*“Apply the parking standards in the Kildare County Development Plan, and relevant Section 28 Guidelines, to all applications for planning permission in Naas.”*

Accordingly, the subject development's proposed car parking provision has been assessed as follows:

- car parking for houses within the development, as well as the proposed crèche, has been assessed against the *Kildare County Development Plan 2017–2023*; and
- car parking for apartments and duplex units within the development has been assessed against the 2020 policy document *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)*.

## 6.3 House and Crèche Car Parking Provision

Table 14 – House and Crèche Car Parking (against Kildare Dev. Plan)

Land Use	Car Parking Standards	Quantum	Standard Provision	Proposed Provision
Houses	2 spaces per unit	42 units	84 spaces	84 spaces
Crèche	0.5 spaces per staff member + 1 space per 4 children (maximum)	11 staff members + 59 children	20 spaces (maximum)	14 spaces
Total			104 spaces (maximum)	98 spaces

The proposed car parking provision to serve the houses and crèche within the development has been assessed against the *Kildare County*



*Development Plan 2017–2023*, which gives standard car parking rates for residential developments and maximum rates for non-residential developments. This comparison is given in **Table 14**, which illustrates that the proposed house and crèche car parking provision complies with the standards set out in the *Kildare County Development Plan 2017–2023*.

#### **6.4 Apartment and Duplex Car Parking Provision**

The proposed provision of car parking to serve the development's apartment and duplex units has been determined with reference to the *2020 Design Standards for New Apartments*, Section 4.0 of which gives more specific guidance on the parking provision for varying types of locations within town and cities.

The overall objective stated is:

*"The quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria."*

For Intermediate Urban Locations, the guidelines state:

*"In suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net, planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard."*

For Peripheral Urban Locations, the guidelines state:

*"As a benchmark guideline for apartments in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking, such as one space for every 3-4 apartments, should generally be required."*



The subject site is categorised as an 'Intermediate Urban Location', as defined in *Sustainable Urban Housing: Design Standards for New Apartments 2020*. Such locations are described in the Guidelines as:

- *"Sites within or close to i.e. within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m), of principal town or suburban centres or employment locations, that may include hospitals and third level institutions;*
- *"Sites within walking distance (i.e. between 10-15 minutes or 1,000-1,500m) of high capacity urban public transport stops (such as DART, commuter rail or Luas) or within reasonable walking distance (i.e. between 5-10 minutes or up to 1,000m) of high frequency (i.e. min 10 minute peak hour frequency) urban bus services or where such services can be provided";*
- *"Sites within easy walking distance (i.e. up to 5 minutes or 400-500m) of reasonably frequent (min 15 minute peak hour frequency) urban bus services."*

The centre of the site is 570m or 8 minutes' walking distance from the town centre (see **Figure 6**); the site therefore satisfies the first point of the definition of an Intermediate Urban Location. The site is also within a 10-minute walk of several reasonably frequent bus routes (see sub-section 7.10), although the most frequent of these operates at intervals of 20 minutes.

Within 'Intermediate Urban Locations', the 2020 *Design Standards for New Apartments* state that planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard. In addition, the policy states that for 'Peripheral Urban Locations', a benchmark guideline for apartments of one car parking space per unit should generally be required.

It is therefore implied that a maximum of one residents' car parking space per unit (excluding visitor parking) should generally be provided for

apartments in 'Intermediate Urban Locations'. Similarly, it may be inferred that a maximum of 1 visitor car parking space per 5 units is recommended for such locations. On this basis, it is submitted that the development's proposed car parking provision accords with the national policy guidelines (see **Table 15**).

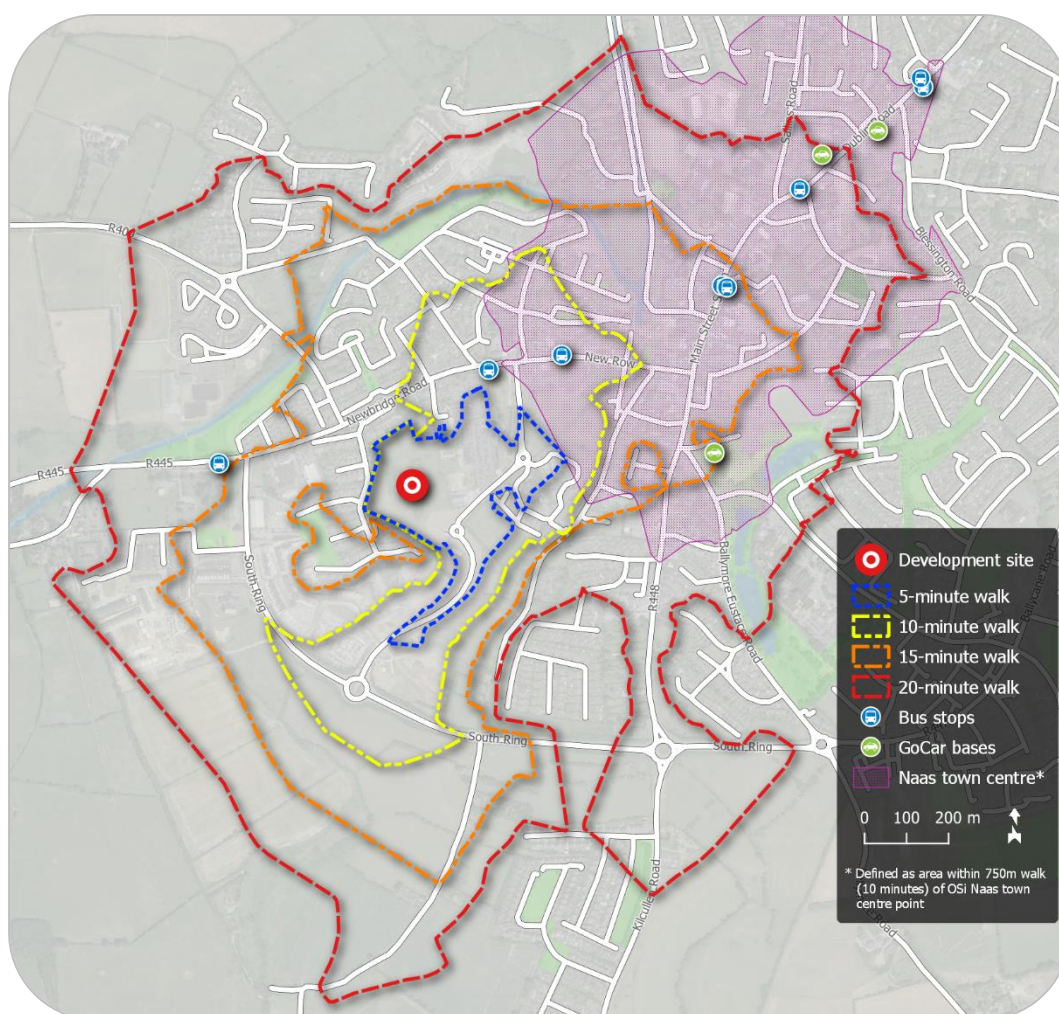


Figure 6 – Walking times from development site  
(map data & imagery: OSi, EPA, NTA, GoCar, OSM Contributors, Google)

It is submitted that the proposed provision of car parking for the development's apartments and duplexes, which equates to an average of 1.22 car parking spaces per unit, provides a balanced approach to this development site given the proximity of the development to Naas town

centre, the availability of nearby public transport facilities, and national objectives to reduce reliance on the private car as the primary mode of transport.

Table 15 – Apartment/Duplex Car Parking (against Apt. Guidelines)

Car Parking Type	Car Parking Standard (inferred)	Quantum	Standard Provision	Proposed Provision
Residents	1 space per unit	177 units	177 spaces	177 spaces
Visitors	1 space per 5 units	177 units	35 spaces	39 spaces
Total			212 spaces	216 spaces

## 6.5 National Policy Context

It should be noted that the national planning guidelines *Sustainable Residential Development in Urban Areas* (2009) suggest that parking numbers may be reduced within brownfield sites close to town centres and at sites within walking distance of public transport facilities such as bus and rail.

The subject development's proposed quantum of car parking provision also aligns with measures outlined within the *Project Ireland 2040 – National Development Plan 2018-2027* policy document which aims to encourage a significant modal shift away from private car usage and towards more active and sustainable modes such as walking, cycling, and public transport.

Government policy in this area is given force by the Climate Action and Low Carbon Development (Amendment) Bill 2021, which was passed by the Dáil on the 16<sup>th</sup> of June 2021. This legislation:

- places an obligation on the State to pursue the transition to a climate-neutral economy by the end of 2050;
- introduces a system of successive 5-year, economy-wide carbon budgets starting in 2021, which are to be set on a 15-year cycle (in the form of ceilings on how much CO<sub>2</sub> may be emitted by certain sectors of the economy);
- strengthens the role of the Climate Change Advisory Council in proposing carbon budgets;
- introduces a requirement to annually revise the Climate Action Plan (Ireland's first such plan was published in 2019) and prepare a National Long Term Climate Action Strategy at least every decade; and
- introduces a requirement for all Local Authorities to prepare individual Climate Action Plans, which will include both mitigation and adaptation measures.

The Bill contains an explicit requirement for the first two carbon budgets proposed by the Climate Change Advisory Council to provide for a reduction of 51% in total greenhouse gas emissions over the course of the first two budget periods ending on the 31<sup>st</sup> of December 2030 (from the annual greenhouse gas emissions reported for the calendar year 2018). This will entail an average annual reduction of 7% in carbon emissions across all sectors of the Irish economy.

In recent years, Ireland has consistently failed to meet annual emissions targets set under the EU Effort Sharing Decision, thereby incurring financial penalties of several hundred million euro. The agriculture and transport sectors remain the largest contributors to the State's overall CO<sub>2</sub> emissions.

## 6.6 Disabled-Accessible Car Parking

Neither the *Naas Local Area Plan 2021-2027* nor the *Kildare County Development Plan 2017-2023* requires the provision of disabled-accessible

parking in new residential developments. 14no. such spaces have however been included in the proposed development (representing 6.1% of the development's on-street and undercroft car parking provision); these are dispersed throughout the scheme.

## **6.7 Electric Vehicle Charging Provision**

Neither the *Naas Local Area Plan 2021-2027* nor the *Kildare County Development Plan 2017-2023* requires the provision of electric vehicle (EV) charging infrastructure in new residential developments. However, objective MTO 4.3 of the *Naas Local Area Plan 2021-2027* states that the Council intends to:

*"Ensure that all new proposed developments make provision for the use of electric vehicles through a significant increase in the provision of clearly and exclusively designated electric car charging points on public and private land in partnership with ESB and other relevant stakeholders and landowners."*

24no. spaces within the proposed development shall therefore be equipped with EV charging points (representing 10% of the development's on-street and undercroft car parking provision); these are dispersed throughout the scheme and are arranged in bays of 2no. spaces each. All other car parking spaces within the development shall be 'future-proofed' through the inclusion of ducting to allow the rapid future installation of additional EV charging points. All individual houses shall be constructed to have provision for fitting EV charging points.

## **6.8 Car Parking Management**

All of the proposed apartment/duplex car parking will remain within the control of an appointed company responsible for onsite car parking maintenance and management. A management regime will be

implemented by the company to control use of these on-site apartment/duplex car parking bays, thereby actively managing the availability of on-site car parking for residents and visitors.

Car parking spaces will not be permanently assigned to specific apartment/duplex units, and the outright purchase of one of the proposed residential apartment/duplex units will not include the ownership of a designated car parking space. Nevertheless, all residents of the proposed apartment/duplex units will have the opportunity to apply to the company for either (i) a resident's car parking permit (subject to annual renewal) granting access to a dedicated (assigned) on-site car parking space or (ii) a visitor's car parking permit (which will be issued electronically and subject to time restrictions).

Each permit will enable the resident (or visitor) to park a vehicle within a specific assigned parking bay as per the agreement. This management regime will enhance the availability of on-site car parking, and ensure that residents who need car parking can avail of an onsite car parking space, whilst residents that actually don't own a car are not unnecessarily assigned or charged for a car parking space. Apartment/duplex residents will be entitled to 1 no. residents' car parking permit per residential unit, if required. Additional residents' car parking permits will be assigned by the company upon application and according to availability and need, using either a priority list or a lottery system. Designated disabled-accessible spaces will be managed separately and assigned only to residents or visitors with a need for such spaces.

The car parking permit system will be complemented by a parking enforcement regime to deter undisciplined or nuisance parking. Vehicles parked outside marked bays or to which the relevant permit has not been issued will be subject to enforcement measures including clamping and/or towing. An external parking management contractor may be engaged for



this purpose. Clear signage will be erected within the development to inform all drivers of the applicable restrictions on car parking.

In addition to active parking control measures, the development's internal road network includes physical design features such as kerb buildouts to prevent informal parking, and the implementation of on-street car parking along the internal road network shall provide a further deterrent.

The applicant wishes to reserve the right to amend the allocation of parking based on the future needs of residents and the commercial management of the development.

## **6.9 Bicycle Parking Provision**

The development shall include a total of 482no. bicycle parking spaces. These consist of:

- 184no. internal bike storage spaces to serve apartment/duplex residents;
- 114no. bike spaces within the terraces of ground floor apartment/duplex units;
- 84no. bike spaces within the curtilages of houses (2no. spaces per unit);
- 90no. publicly accessible short-stay bicycle parking spaces for apartment/duplex visitors; and
- 10no. bicycle parking spaces for crèche staff and parents.

The bicycle parking provision serving the apartments and duplex units within the development ensures compliance with the recommendations of the *2020 Design Standards for New Apartments*, as shown in **Table 16**.



Table 16 – Apartment/Duplex Bicycle Parking (against Apt. Guidelines)

Bicycle Parking Type	Minimum Standard	Quantum	Minimum Provision	Proposed Provision
Residents	1 space per bedroom	298 bedrooms	298 spaces	298 spaces
Visitors	1 space per 2 units	177 units	89 spaces	90 spaces
Total			387 spaces	388 spaces

The proposed overall bicycle parking provision has also been assessed against the *Kildare County Development Plan 2017–2023*, which specifies standard bicycle parking rates by development land use type. This comparison is given in **Table 17**.

Table 17 – Overall Bicycle Parking (against County Development Plan)

Land Use Type	Cycle Parking Standard	Quantum	Standard Provision	Proposed Provision
Apartments	1 [resident's] space per unit	177 units	177 spaces	298 spaces
	1 visitor space per 2 units	177 units	89 spaces	90 spaces
Houses	n/a	42 units	n/a	84 spaces
Crèche	1 space per 5 staff members + 1 space per 10 children	11 staff members + 59 children	8 spaces	10 spaces
Total			274 spaces	482 spaces

The development's proposed bicycle parking provision significantly exceeds the standard requirements of the *Kildare County Development Plan 2017–2023*, providing ample cycle parking facilities to support a high

modal share for cycling among development residents and visitors. This is in keeping with the approach taken to avoid excessive car parking provision.

#### **6.10 Residential Car Club**

The allocation of internal GoCar spaces (or a similar car sharing schemes) will be considered with the providers of this service at detailed design stage, subject to commercial viability and anticipated interest from future occupants. GoCar spaces can be assigned at various locations throughout the scheme to encourage their use as an alternative to car ownership.

## 7.0 ACCESS, INTERNAL LAYOUT, SERVICING, PUBLIC TRANSPORT

### 7.1 Development Access

Vehicular access to the proposed development shall be accommodated through tie-in of the development's internal road network with an existing unused roundabout spur on John Devoy Road, at the subject site's south-eastern boundary (see **Figure 2**, page 8, and **Figure 5**, page 25).

The existing roundabout spur has a carriageway width of 6.0m and is flanked to either side by 4.0m-wide footpaths. The connection between the development's internal road network and the existing external road network has been designed in accordance with the requirements of the *Design Manual for Urban Roads and Streets*.

### 7.2 Internal Site Layout and Road Hierarchy

The internal road network of the development comprises residential access streets with a carriageway width of 6.0m, with on-street car parking (both perpendicular and parallel) provided to either side. Pedestrian footpaths with a minimum width of 2.0m are provided along all internal streets, generally set back behind car parking and/or verges.

Refer to the following CS Consulting drawings for further details of the internal road layout design, including road markings and signage:

- **DEV-CSC-00-XX-DR-C-0102** (Site Layout)
- **DEV-CSC-00-XX-DR-C-0103** (Road Layout)
- **DEV-CSC-00-XX-DR-C-0104** (Road Profiles)
- **DEV-CSC-00-XX-DR-C-0105/0106** (Road Details)
- **DEV-CSC-00-XX-DR-C-0116** (Road Markings and Signage)
- **DEV-CSC-00-XX-DR-C-0117** (Kerb Layout)
- **DEV-CSC-00-XX-DR-C-0160** (Undercroft Layout)

### **7.3 Undercroft Car Park**

To prevent on-street car parking becoming visually dominant within the development, and in accordance with sub-section 4.4.9 of the *Design Manual for Urban Roads and Streets* (DMURS), an undercroft car park is provided within the southernmost residential block. This undercroft car park accommodates 108no. car parking spaces and has its entrance close to the development's main access junction on John Devoy Road; this ensures that vehicles travelling to and from these parking spaces are diverted from the majority of the development's internal street network.

All car parking spaces within the undercroft are arranged perpendicularly to either side of two-way circulation aisles with a minimum width of 6.95m, in compliance with the IStructE *Design Recommendations for Multi-storey and Underground Car Parks*. A minimum vertical clearance of 2.6m is maintained along the vehicular route from the undercroft access to the internal disabled-accessible parking space.

### **7.4 Road Alignments and Traffic Calming**

The development's internal road network has been designed for a maximum vehicle speed of 20km/h, and signage shall be provided indicating this speed limit. The internal road alignments avoid excessively long straight sections, incorporating horizontal deflections as a deterrent to excessive speed. In addition, the presence of on-street parking bays shall act as a natural passive traffic calming measure. These design features are complemented by raised pedestrian crossings on internal streets, which also provide vertical deflections to calm traffic.

### **7.5 Pedestrian and Cyclist Infrastructure**

Pedestrian and cyclist access to the development shall initially be provided at the following 2no. locations:

- the development's primary access on John Devoy Road, at the site's south-eastern boundary; and
- a pedestrian connection adjacent to the MERITS building on the Kildare County Council lands, at the site's eastern boundary (the exact location and design details of which will be agreed with Kildare County Council as part of the detailed design process).

The development's internal layout and landscaping also allow for the future provision of a further 5no. pedestrian and cyclist access points at the following locations:

- three connections to the existing Arconagh estate, delivered up to the site's western boundary, one of which incorporates a cycle track;
- a connection to the St. Patrick's Terrace cul-de-sac, at the site's north-eastern corner; and
- a future potential pedestrian and cycle connection via Kildare County Council lands, as indicated in the *Naas Local Area Plan 2019-2023*.

Within the development, the internal road network shall include shared surfaces as well as raised and/or segregated footpaths, providing safe movement for both pedestrians and cyclists.

A total of 482no. bicycle parking spaces are to be provided within the development: 382no. bicycle parking spaces for residents of the development shall be provided in dedicated cycle stores or within dwelling curtilages, and a further 100no. publicly accessible bicycle parking spaces for visitor and crèche use shall be provided externally at surface level.

## **7.6 Development Servicing and Waste Collection**

The internal layout of the development allows both development servicing (such as deliveries) and waste collection to be conducted within the

development itself, thereby avoiding the obstruction of either vehicular or pedestrian traffic on the surrounding road network.

TRICS analysis indicates that the development will require at most the following number of servicing vehicle trips per week:

- 4no. refuse collection vehicles
- 230no. Light Goods Vehicles (i.e. vans)
- 55no. Heavy Goods Vehicles

Swept path analyses relevant to operational servicing are shown on the following CS Consulting drawings:

- **DEV-CSC-00-XX-DR-C-0108**

Further detail of the development's waste collection arrangements is given in the **Operational Waste Management Plan** prepared by Enviroguide Ltd. and submitted under separate cover in support of this application.

## 7.7 Crèche Set-Down Arrangements

8no. on-street set-down car parking spaces are provided to serve the development's crèche, of which 4no. spaces are located in a recessed area separated by a traffic island from the main road carriageway.

**Table 18** gives the TRICS crèche vehicular arrival rates throughout a typical weekday, and the resultant number of vehicular arrivals by hour for a crèche accommodating 59no. children. This shows that the maximum expected rate of vehicular arrivals is 13no. trips per hour, occurring between 08:00 and 09:00. This equates to 1.6 arrivals per set-down space.

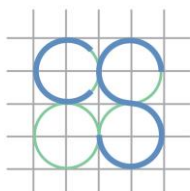


Table 18 – Crèche Set-Down Parking Demand by Hour

Time Period	TRICS Vehicular Arrival Rates (per child)	Vehicular Arrivals (for 59 children)	Vehicular Arrivals per Set-Down Space (8 spaces)
07:00 - 08:00	0.102	6	0.8
08:00 - 09:00	0.212	13	1.6
09:00 - 10:00	0.106	6	0.8
10:00 - 11:00	0.084	5	0.6
11:00 - 12:00	0.053	3	0.4
12:00 - 13:00	0.080	5	0.6
13:00 - 14:00	0.031	2	0.3
14:00 - 15:00	0.027	2	0.3
15:00 - 16:00	0.053	3	0.4
16:00 - 17:00	0.044	3	0.4
17:00 - 18:00	0.159	9	1.1
18:00 - 19:00	0.005	0	0.0

If these trips were to be evenly spaced across a 60-minute period, this would equate to 1 vehicle arrival every 37 minutes, for each set-down space. In reality, these trips are likely to be clustered within a shorter timeframe. As shown in **Table 19**, the development's 8no. crèche set-down spaces are however sufficient to accommodate this demand even if all vehicular arrivals between 08:00 and 09:00 were concentrated in a single 15-minute period.

Table 19 – Crèche Set-Down Demand Concentration

Time Span	Maximum Vehicular Arrivals per Set-Down Space (8 spaces)	Minimum Potential Average Vehicle Turnaround Time per Set-Down Space
60 minutes	1.6	37 minutes
30 minutes	1.6	19 minutes
15 minutes	1.6	9 minutes



## 7.8 Swept Path Analysis

Swept path analyses have been carried out for both a refuse vehicle and a fire tender manoeuvring within the proposed development, as well as for cars. These analyses, provided on drawings **DEV-CSC-00-XX-DR-C-0107** and **DEV-CSC-00-XX-DR-C-0108** within this planning application, indicate that the design of the development accesses and internal layout can accommodate these vehicle movements where required.

## 7.9 Independent Quality Audit

An independent Quality Audit of the proposed development layout and access arrangements has been conducted by Roadplan Consulting on behalf of CS Consulting. This incorporates the following four components:

- access audit
- cycling audit
- walking audit
- road safety audit

The Quality Audit was completed in March 2022. Design changes have been made in response to the recommendations of the Quality Audit and the measures adopted have been accepted by the audit team. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0163** for details.

The Quality Audit report document issued by Roadplan Consulting, together with the audit response form, are provided as **Appendix E** to the present report.

## 7.10 Public Transport and Shared Transport

### 7.10.1 Rail Services

The subject development site is located within a 15-minute cycle of Naas and Sallins Rail Station. Intercity rail services operating to and from this station connect the development directly to many towns and cities such as Dublin, Kilkenny, Carlow and Waterford. A Commuter service also terminates at Heuston Station, in Dublin City Centre. Commuter trains serve Naas and Sallins Rail Station at intervals of approximately 20 minutes at peak times.

### 7.10.2 Bus Services

Bus stops on Newbridge Road, within a 10-minute walk of the subject site (see **Figure 6**, page 34), are served by 7no. bus routes and their variants, operated by several bus operators. Details of these bus routes are given in **Table 20**, and their extents are shown in **Figure 7**.

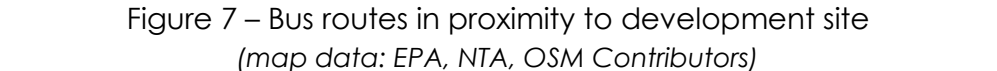
Table 20 – Bus Services within 10-minute Walk of Site

Route No.	Operator	Destinations	Weekday Services <sup>5</sup>	Peak Interval
125	Go-Ahead	Newbridge / UCD	2	-
126 <sup>6</sup>	Go-Ahead	Rathangan / Dublin	35	20 min
717	Avalen	Clonmel / Dublin Airport	2	-
726	Dublin Coach	Portlaoise / Dublin Airport	24	60 min
736	Kenneally's	Tramore / Dublin Airport	3	-
826	Kyanitedale	Monasterevin / Naas	9	60 min
846	Kenneally's	Clane / Naas	10	30 min

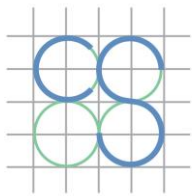
<sup>5</sup> Average number of services per day in each direction, Monday-Friday

<sup>6</sup> Including route variants a,b,d,e,n,t,u

Route No.	Operator	Destinations	Weekday Services	Peak Interval
130/a	Go-Ahead	Athy / Dublin	5	120 min
139	JJ Kavanagh	Corduff / Naas	9	120 min
737	JJ Kavanagh	Naas / Dublin Airport	12	30 min



An existing base for the GoCar car-sharing service is located in the Fairgreen Car Park off Ballymore Road, approx. 650m to the east of the subject site and within a 15-minute walk or a 5-minute bicycle journey. An additional GoCar base is located at the Naas Retail Park



near the M7 (approx. 1.75km to the west of the subject site), which is within a 10-minute bicycle journey.

## **8.0 COMMENTS RECEIVED FROM PLANNING AUTHORITIES**

Both An Bord Pleanála and Kildare County Council have reviewed the planning documentation submitted in respect of the proposed development during the pre-application consultation phase of the SHD process (including a previous version of the present Traffic and Transport Assessment, then titled Traffic Impact Assessment). A tripartite pre-application consultation meeting has also been held with An Bord Pleanála and Kildare County Council.

The relevant opinions of An Bord Pleanála that pertain to traffic and transport matters, as communicated to the applicant, are reproduced below; also examined in this section are the recommendations of Kildare County Council's Roads, Transportation & Public Safety Department (RTPSD), which were issued to An Bord Pleanála. In each case, we describe measures taken by the design team in response to these opinions and recommendations.

### **8.1 Opinions Issued by An Bord Pleanála**

An Bord Pleanála has issued an opinion enumerating the items of specific information that should be submitted with any application for permission. The following items among these are of relevance to this Traffic and Transport Assessment.

#### **8.1.1 ABP Item 3 – Car Parking and Street Layout**

*Justification, and where appropriate amendment, to demonstrate that car parking quantity and location, road layout, including design and materiality of the different street types within the street hierarchy (eg proposed homezones, etc) complies with the provisions of the Design Manual for Urban Roads and Streets (DMURS) and the Sustainable Urban Housing: Design Standards for New Apartments,*

*Guidelines for Planning Authorities (2020). The application should demonstrate that car parking provision should be convenient and accessible to residents.*

### Response to ABP Item 3

As described in Section 6 of this report, the proposed development includes a total of 314no. car parking spaces, of which:

- 84no. spaces shall be assigned to the houses
- 216no. spaces shall be for the use of apartment/duplex residents and visitors
- 6no. spaces shall be reserved for crèche staff
- 8no. spaces shall operate as set down spaces for the crèche.

This car parking provision results in parking ratios of 2no. spaces per house, in compliance with the *Kildare County Development Plan 2017–2023* standards, and 1.22no. spaces per duplex/apartment, which accords with the recommendations of the *2020 Design Standards for New Apartments (Guidelines for Planning Authorities)*.

To avoid a preponderance of on-street car parking within the development, in accordance with sub-section 4.4.9 of the *Design Manual for Urban Roads and Streets (DMURS)*, an undercroft car park comprising 108no. car parking spaces is provided at the south-east duplex housing cell.

Coady Architects drawing **DEV-MCO-00-ZZ-DR-A-0510** shows the proposed allocation of car parking spaces within the development and illustrates the proximity of these to the residential units that they shall serve.

The proposed development's internal road layout has been designed in accordance with the *Design Manual for Urban Roads and Streets (DMURS)*, in particular through the following measures to deter high vehicle speeds and to prioritise pedestrian and cyclist movement:

- Reduced kerb radii at internal junctions.
- Raised tables at internal junctions and pedestrian crossings.
- Perpendicular on-street car parking spaces at suitable locations.
- Homezone shared surface areas.
- Footpaths and pedestrian crossings to accommodate pedestrian desire lines, with dropped kerbs and tactile paving.

Refer to the following CS Consulting drawings for further details of the internal road layout design, including road markings and signage:

- **DEV-CSC-00-XX-DR-C-0102** (Site Layout)
- **DEV-CSC-00-XX-DR-C-0103** (Road Layout)
- **DEV-CSC-00-XX-DR-C-0116** (Road Markings and Signage)
- **DEV-CSC-00-XX-DR-C-0117** (Kerb Layout)
- **DEV-CSC-00-XX-DR-C-0160** (Undercroft Layout)

For a more extensive description of the proposed development's compliance with the design principles set out in the *Design Manual for Urban Roads and Streets*, please refer to the DMURS Statement of Consistency provided separately in support of this planning application.

#### 8.1.2 ABP Item 4(i) – Traffic and Transport Assessment

*A detailed Traffic and Transport Assessment (TTA).*

##### Response to ABP Item 4(i)

The present document satisfies the requirement for submission of a Traffic and Transport Assessment.

#### 8.1.3 ABP Item 4(ii) – Mobility Management and Parking Management

*A Mobility Management Plan and a Parking Management Strategy.*



#### Response to ABP Item 4(ii)

A Residential Travel Plan is submitted under separate cover in support of this planning application; this outlines mobility management measures to support residents and visitors in employing sustainable modes of travel to and from the development.

Sub-section 6.8 of the present report describes the car parking management strategy for the proposed development, including the allocation of parking spaces to residents and visitors, as well as measures (both active and passive) to control undisciplined parking.

#### 8.1.4 ABP Item 4(iii) – Servicing

*An operational service plan including a detailed swept path analysis. The service plan should also consider the management of car parking and drop-off requirements of the proposed creche.*

#### Response to ABP Item 4(iii)

Vehicular servicing of the proposed development is examined in sub-section 7.6 of this report. This details the development's expected incoming and outgoing (i.e. refuse collection) servicing requirements. Swept path analyses relevant to operational servicing are shown on the following CS Consulting drawings:

- **DEV-CSC-00-XX-DR-C-0107**
- **DEV-CSC-00-XX-DR-C-108**

A parking demand analysis has also been conducted in respect of the set-down spaces to serve the proposed crèche; this is given in sub-section 7.7 of this report.

#### 8.1.5 ABP Item 4(iv) – Quality Audit

*A Quality Audit in accordance with Annex 4 of DMURS, including a Road Safety Audit. The audit should consider, inter alia, the design and layout of parking within the development.*

##### Response to ABP Item 4(iv)

As described in sub-section 7.9 of this report, an independent Quality Audit of the proposed development layout and access arrangements (incorporating a Road Safety Audit) has been conducted by Roadplan Consulting on behalf of CS Consulting.

Design changes have been made in response to the recommendations of the Quality Audit and the measures adopted have been accepted by the audit team. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0163** for details.

#### 8.1.6 ABP Item 4(v) – Construction Traffic Management

*A construction traffic management plan.*

##### Response to ABP Item 4(v)

A **Stage 1 Construction Management Plan** is provided under separate cover in support of this planning application. Section 8 of that document details the management of construction traffic during the development's construction phase.

## 8.2 Recommendations of Kildare County Council

The Roads, Transportation & Public Safety Department (RTPSD) of Kildare County Council issued an internal report on the 27<sup>th</sup> of October 2021, recommending that the following points relating to transportation be comprehensively addressed.

#### 8.2.1 KCC Point 1 – Parking, Internal Roads, and EV Charging

*The applicant is requested to submit revised Site Layout Plan drawings at scales of 1:500 indicating the following:*

- a. *Revised parking standard for the duplex / apartment units of 1.75 spaces per unit in accordance with Table 17.9 of Chapter 17 of the Kildare County Development Plan 2017 - 2023 or a revised parking standard of 1.33 spaces per unit (236 parking spaces in total) due to its less accessible urban location in accordance with Section 4.22 of the of the DHPLG "Design Standards for New Apartments" March 2018 in conjunction with a revised Mobility Management Plan providing a robust justification for this reduced parking standard and the manner in which unauthorised parking of vehicles shall be prevented within the development. The drawings shall indicate directly accessible off-street parking spaces to serve the duplex and apartment development in **Cell B** and **Cell C** in accordance with Section 4.4.9 of the Design Manual for Urban Roads and Streets (DMURS) 2019.*
- b. *Vehicular parking spaces for the crèche development to be in accordance with Table 17.9 of Chapter 17 of the Kildare County Development Plan 2017-2023. Consideration to be had to locating a parking area east of the crèche at the location of the proposed "Attenuation Tank 3" that is in the ownership of the Housing Agency. Written consent to be provided from the Housing Agency.*
- c. *Dual electrical charge points to be provided at the within curtilage spaces for the house units to allow for the night-time charging of Electric Vehicles (EVs), linked to the individual domestic electricity meter. The EV Charger should be compatible with the Sustainable Energy Authority of Ireland's Triple E Register. Elevation details to be indicated at scales of 1:25.*

- d. *Electric car charge points / arrangements to serve the duplex and apartment development. The EV Charger should be compatible with the Sustainable Energy Authority of Ireland's Triple E Register. Consideration to be had to minimizing trip hazards. Elevation details to be indicated at scales of 1:25. Electric car charge points to be located in off-street parking areas that will not be taken in charge by Kildare County Council.*
- e. *Electric car charge points / arrangements to serve the crèche development to be located in off-street parking. The EV Charger should be compatible with the Sustainable Energy Authority of Ireland's Triple E Register. Consideration shall be had to minimizing trip hazards. Elevation details to be indicated at scales of 1:25.*
- f. *Lines of sight at all junctions within the development to be in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2019.*
- g. *All corner radii within the development to be in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2019.*
- h. *The locations of 30 km/h Slow Zone signs in accordance with the Department of Transport, Tourism and Sport's traffic signs advice note TSAN-2016-02 and the omission of the proposed 20 km/h RUS044 speed limit signs.*
- i. *All signs and road markings to be in accordance with the Department of Transport, Tourism and Sport (DTTAS) Traffic Signs Manual. All proposed signage to be indicated on this drawing including stop signs.*
- j. *Surface wearing course of all roads with in residential development to be Stone Mastic Asphalt, SMA 14 surf PMB 65/105-60 des 45mm thick, in compliance with clause 942 of NRA/TII specification.*

- k. Disabled parking bays to be in accordance with the Irish Wheelchair Association's Best Practice Access Guidelines, clearly marked with 100 mm wide white lines with a durable permanent material and have a 1.2 metre wide accessibility aisles hatched in yellow. The disabled parking bays are also to be marked with a white wheelchair symbol.
- l. Perpendicular on street vehicular parking spaces within the residential development to be marked in 2.5 metre x 5.0 metre bays in 100 mm wide white lines with a durable permanent material.
- m. Parallel vehicular parking spaces within the residential development to be marked in 2.5 metre x 6.0 metre bays in 100 mm wide white lines with a durable permanent material.
- n. Permeability links with St Patricks Terrace and Arconagh Estate and at the Merits Building. The applicant is requested to review public lighting in these areas and submit upgrade proposals in demonstrating passive surveillance in preventing anti-social behaviour. The applicant is requested to liaise with the residents with St Patricks Terrace and Arconagh Estate having regard to the provision of these permeability links.
- o. All footpaths to have a concrete finish and to be 2 metres in width.

#### Responses to KCC Point 1 items

- a. The proposed development includes a total of 216no. car parking spaces to serve its 177no. apartment/duplex units. This results in a car parking ratio of 1.22no. spaces per duplex/apartment, which accords with the recommendations of the 2020 Design Standards for New Apartments (Guidelines for Planning Authorities) and is in keeping with other nearby developments recently permitted. Full

*details of the rationale supporting the development's proposed car parking provision are given in Section 6 of this report.*

- b. *As described in sub-section 6.3 of this report, the proposed vehicular parking provision for the development's crèche is in accordance with Table 17.9 of Chapter 17 of the Kildare County Development Plan 2017–2023. A parking demand analysis has also been conducted in respect of the set-down spaces to serve the proposed crèche; this is given in sub-section 7.7 of this report.*
- c. It is not proposed to provide EV charging facilities within house curtilages. All houses within the development shall however be constructed to have provision for fitting EV charging points.
- d. 22no. undercroft and on-street car parking spaces serving the development's apartment and duplex units shall be equipped with EV charging points (to be products listed on the SEAI Triple E Register); these are dispersed throughout the scheme and are arranged in bays of 2no. spaces each. All other car parking spaces within the development shall be 'future-proofed' through the inclusion of ducting to allow the rapid future installation of additional EV charging points. All individual houses shall be constructed to have provision for fitting EV charging points. Refer to drawings prepared by JV Tierney & Co (electrical engineering consultants) for details of the proposed EV charging infrastructure.
- e. 2no. undercroft car parking spaces for crèche staff shall be equipped with EV charging points (to be products listed on the SEAI Triple E Register). Refer to drawings prepared by JV Tierney & Co (electrical engineering consultants) for details of the proposed EV charging infrastructure.
- f. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0103** for details of sightlines at the development access and at internal junctions. These sightlines meet DMURS requirements.

- g. All kerb radii within the development are in accordance with the *Design Manual for Urban Roads and Streets (DMURS)* 2019.
- h. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0116** for details of road signage and road markings within the proposed development.
- i. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0116** for details of road signage and road markings within the proposed development.
- j. Refer to CS Consulting drawings **DEV-CSC-00-XX-DR-C-0105** and **DEV-CSC-00-XX-DR-C-0106** for details of road buildups within the proposed development.
- k. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0116** for details of road signage and road markings within the proposed development.
- l. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0116** for details of road signage and road markings within the proposed development.
- m. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0116** for details of road signage and road markings within the proposed development.
- n. In addition to the development's primary access on John Devoy Road, at the site's south-eastern boundary, a pedestrian and cyclist permeability link shall initially be provided only at the site's eastern boundary, adjacent to the MERITS building on the Kildare County Council lands. The exact location and design details of this link, including public lighting proposals, will be agreed with Kildare County Council as part of the detailed design process. Provision is made within the development for additional permeability links to the Arconagh estate at the site's western boundary and to St. Patrick's Terrace at the site's north-eastern corner; the applicant



does however not have control over all lands necessary to complete these links beyond the site boundary.

- o. All footpaths within the development have a minimum width of 2.0m. Proposed footpath details are shown on Consulting drawings **DEV-CSC-00-XX-DR-C-0105** and **DEV-CSC-00-XX-DR-C-0106**.

### 8.2.2 KCC Point 2 – Swept Path Analyses

*Having consideration to **Item 1.** and the requested revised vehicular parking arrangements set out in the foregoing, the applicant is requested to submit a revised critical swept path analysis on a site layout plan at a scale of 1:500 indicating the manoeuvrability on site for a private vehicle, a fire tender and a 3 axle refuse collection vehicle 10.22 metres by 2.25 metres in dimension. The applicant is requested to indicate access, egress and manoeuvrability of these respective vehicles at Cell C.*

#### Response to KCC Point 2

Please refer to the following CS Consulting drawings for details of the requested swept path analyses:

- **DEV-CSC-00-XX-DR-C-0107**
- **DEV-CSC-00-XX-DR-C-0108**

### 8.2.3 KCC Point 3 – Road Safety Audit

*The applicant is requested to submit a stage 1 and 2 Road Safety Audit / Assessment (RSA) by an independent approved and certified auditor. The RSA is to assess:*

- p. The internal areas of the proposed residential and crèche development.*
- q. The interface between the application site and the roundabout at the John Devoy Road.*

*The applicant is requested to make the necessary changes to the design proposals following the stage 1 and 2 RSA. The applicant is requested to note that if the application is subsequently granted, then the applicant will be required to carry out a stage 3 audit / assessment.*

#### Response to KCC Point 3

As described in sub-section 7.9 of this report, an independent Quality Audit of the proposed development layout and access arrangements (incorporating a Road Safety Audit) has been conducted by Roadplan Consulting on behalf of CS Consulting.

Design changes have been made in response to the recommendations of the Quality Audit and the measures adopted have been accepted by the audit team. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0163** for details.

#### 8.2.4 KCC Point 4 – Lighting

*The applicant is requested to submit a revised JV Tierney & Co "Proposed Public Lighting Services" Site Layout Plan at a scale of 1:500 and elevations drawing at an appropriate scale to be accompanied by a lighting report containing a detailed commentary and concluding statement to the Planning Authority clearly demonstrating:*

- a. The proposed lighting scheme shall not be a source of light pollution in minimising light overspill on the public road network, adjacent lands and property.*
- b. Permeability links with St Patricks Terrace and Arconagh Estate and at the Merits Building. A review is to be carried out of the public lighting in these areas and submit upgrade proposals in demonstrating passive surveillance in preventing anti-social behaviour at these locations.*

- c. *The proposed lighting scheme is in accordance the Kildare County Council Lighting Policy Street Lighting Technical Specification June 2019.*
- d. *The side elevation and heights of the tow proposed light columns to be indicated on the drawing,*
- e. *The types of light fittings to be indicated on this drawing,*
- f. *Environmental zones and obtrusive light limitations for exterior lighting installations,*
- g. *Impact upon Vehicular / Vulnerable road users within the development and at the interface with the John Devoy Road,*
- h. *Upward light output ratio of the lighting scheme for the development, and*

#### Response to KCC Point 4

Please refer to drawings and documents prepared by JV Tierney & Co (lighting consultants) for details relevant to the above requested information.

#### 8.2.5 KCC Point 5 – Traffic Transport Impact Assessment

*Having consideration to **Item 1.**, the applicant is requested to submit a revised Traffic Transport Impact Assessment to address the requested amendments to the proposed development.*

#### Response to KCC Point 5

The present document satisfies the requirement for a revised Traffic and Transport Assessment.

#### 8.2.6 KCC Point 6 – Mobility Management Plan

*In conjunction with **Item 1 a.**, the applicant is requested to submit a revised Mobility Management Plan Kildare County Council that is to contain:*

- a. *The manner in which the unauthorised parking of vehicles will be prevented within the development site having regard to the reduced parking standard of 1.33 spaces per unit for duplex and apartment development.*
- b. *Full details and the promotion of all existing public transport links and timetables serving Naas including the locations of bus stops and taxi ranks. This is also to list all public transport links to prominent employment centres.*
- c. *Walking and cycling routes in Naas.*
- d. *The manner in which future residents of the duplex and apartment units will be informed of the reduced parking standard and vehicular parking spaces available prior to the occupation of these units.*
- e. *The provision of a car sharing service on site.*

#### Response to KCC Point 6

A revised Residential Travel Plan (RTP) is submitted under separate cover in support of this planning application.

#### 8.2.7 KCC Point 7 – Construction Management Plan

*The applicant is requested to submit to a revised Construction Management Plan that is to contain:*

- a. *A Construction Traffic Management Plan indicating all haul routes to and from the site. Delivery times for plant and materials and waste collection shall have consideration to morning and evening peak school times in the area. Construction related traffic is not permitted to travel through Naas Town Centre. This plan is also to contain mitigation measures to minimize the effects the proposed development would have on the immediate public road network and existing traffic movements.*

- b. The removal of the proposal of a second construction entrance onto the Ardconagh Estate.*
- c. Wheelwash arrangements and locations for the construction phase.*
- d. Location of the construction compound, vehicular parking, bicycle parking and storage areas during the construction phase. (This is in the interest of the existing residential amenity of properties in the area).*
- e. Relevant construction site warning signs shall be in accordance with the Department of Transport, Tourism and Sport (DTTAS) Traffic Signs Manual for the overall development.*
- f. Revised hours of operation during the construction phase to be 08.00 hours to 18.00 hours Monday to Friday and 0.800 hours to 14.00 hours Saturday. No work permitted on the Sundays and public holidays. (This is in the interest of the existing residential amenity of properties in the area).*

#### Response to KCC Point 7

A **Stage 1 Construction Management Plan** is provided under separate cover in support of this planning application. Section 8 of that document details the management of construction traffic during the development's construction phase.

## 9.0 SUMMARY & CONCLUSIONS

This report examines the impact of a proposed residential development at Devoy Barracks, Naas, Co. Kildare on the performance of the surrounding road network, and assesses the development's internal layout, car and bicycle parking provision, and servicing arrangements.

The main observations and conclusions of this study are as follows:

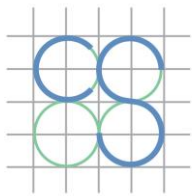
- The proposed development shall not generate excessive vehicular traffic flows. Total vehicle trips (arrivals and departures combined) of 82 PCU are predicted during the AM peak hour, and total vehicle trips of 97 PCU in the PM peak hour.
- The 3-arm roundabout on John Devoy Road providing vehicular access to the proposed development shall operate well within effective capacity when the development is completed in 2024 and shall continue to do so past the design year 2039.
- The existing 3-arm priority controlled access junction of Áras Chill Dara, located on John Devoy Road in proximity to the development access roundabout, currently operates well within effective capacity on all approaches and shall continue to do so past the design year 2039. Traffic related to the proposed development shall have a negligible influence on the operation of this junction.
- The proposed provision of car and bicycle parking within the development accords with national policy on reducing car dependency and the promoting sustainable transport modes, and in particular complies with the guidance set out in the *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)* issued in 2018 by the Department of Housing, Planning and Local Government and subsequently amended in 2020.

- Swept path analyses have been conducted for a refuse vehicle and a fire tender manoeuvring within the proposed development, as well as for cars. These indicate that the design of the development access and its internal layout can accommodate these vehicle movements where required.
- An independent Quality Audit of the proposed development layout and access arrangements has been conducted by Roadplan Consulting on behalf of CS Consulting. Design changes have been made in response to the recommendations of the Quality Audit and the measures adopted have been accepted by the audit team. Refer to CS Consulting drawing **DEV-CSC-00-XX-DR-C-0163** for details.

In summary, the assessment indicates that the proposed development can be supported by the existing road infrastructure, that the parking provision for the proposed development reflects national planning policy, and that the development access design and internal layout are fit for purpose and comply with the *Design Manual for Urban Roads and Streets* and the *Design Recommendations for Multi-Storey and Underground Car Parks*.

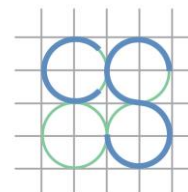
It is also noted that the proposed development incorporates significant improvements over that previously refused by An Bord Pleanála (Reference ABP-309954-21), in relation to the quantum and arrangement of car parking. The ratio of car parking has been increased to 1.4no. spaces per residential unit overall (2no. spaces per house and 1.22no. spaces per apartment/duplex), and an undercroft car park is provided to prevent on-street car parking becoming dominant within the development.

The quantum, design and layout of on-street parking has been considerably altered since the previous SHD application. This current SHD application provides an overall reduction in on-street parking in the order of c. 54% when compared to the previous application.



Overall, the number of on-street parking spaces is reduced from 211no. on-street parking spaces in the previous SHD application, to 97no. on-street parking spaces in the current SHD application.



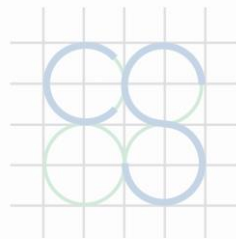


CS CONSULTING  
GROUP

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## Appendix A

### **Traffic Survey Data**



CS CONSULTING  
GROUP



**Data Analysis Services**  
Traffic Transportation - Commercial Innovation

203 21382 John Devoy Rd

with compliments

**Survey Name:** 203 21382 John Devoy Rd  
**Date:** Tue 30 Nov 2021



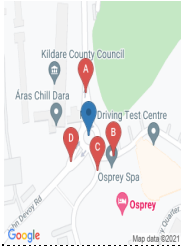
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TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU											
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07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	3	0	0	0	10	10	0	0	1	0	0	0	0	0	0	1	1	0	0	5	0	1	1	0	0	7	7.5									
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	12	12	0	0	2	0	0	0	0	0	0	2	2	0	0	6	0	0	0	0	0	6	6									
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	8	0	0	0	42	42	0	0	3	0	0	0	0	0	0	3	3	0	0	13	0	2	1	0	0	16	16.5									
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2									
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	3	0	0	0	16	16	0	0	2	0	1	0	0	0	3	3	1	0	3	0	0	0	0	0	4	3.2										
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	1	9	10	0	0	2	0	0	0	0	0	2	2	1	0	3	0	0	0	0	0	4	3.2										
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	8	0	0	3	0	0	0	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0	0									
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	4	0	0	1	42	43	0	0	7	0	1	1	0	0	9	9.5	2	0	8	0	0	0	0	0	0	10	8.4									
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	11	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	1									
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2									
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	4.5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	4										
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2	0	0	0	16	16	0	0	2	0	0	0	0	0	2	2	0	0	2	0	2	0	0	0	0	4	4									
H/TOT	0	0																																																	

	B=> A										B=>> B										B==> C										B==> D										
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	
07:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	9	9	0	0	22	0	7	0	0	0	29	29
07:15	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5	1	0	0	10	10.5	0	0	27	1	3	0	0	2	33	35	
07:30	0	0	1	0	0	1	0	0	2	2.5	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6	6	1	0	20	0	10	2	0	0	33	33.2	
07:45	0	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	14	1	3	0	0	0	18	18	0	0	28	3	8	2	0	0	41	42	
H/TOT	0	0	11	0	0	1	0	0	12	12.5	0	0	0	0	0	0	0	0	0	0	0	0	31	2	9	1	0	0	43	43.5	1	0	97	4	28	4	0	2	136	139	
08:00	0	0	4	0	1	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0	0	0	0	16	0	3	0	1	1	21	23.3	0	1	36	0	4	1	1	0	43	44.2	
08:15	0	0	5	0	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	13	1	1	0	0	0	15	15	0	0	55	0	8	1	0	5	69	74.5	
08:30	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	18	1	3	0	0	0	21	21	0	0	54	0	2	4	1	0	1	66	61.5
08:45	0	0	6	0	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	19	1	1	0	0	0	21	21	0	0	85	0	2	4	0	0	3	90	93
H/TOT	0	0	22	0	3	1	0	0	26	26.3	0	0	0	0	0	0	0	0	0	0	0	0	66	2	8	0	1	1	78	80.3	0	1	230	0	18	3	1	9	262	273.2	
09:00	0	1	7	0	0	0	0	0	8	7.4	0	0	0	0	0	0	0	0	0	0	0	0	16	1	0	0	0	0	17	17	0	0	55	2	3	0	0	1	61	62	
09:15	0	0	7	0	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5	5.5	0	1	53	0	6	2	0	1	63	64.4	
09:30	0	0	14	0	1	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	11	1	1	1	0	0	14	14.5	0	0	43	0	6	3	0	0	52	53.5	
09:45	0	0	6	0	4	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	1	0	9	2	4	0	0	0	16	15.2	0	0	52	3	10	2	0	2	68	72
H/TOT	0	1	34	0	6	0	0	0	41	40.4	0	0	0	0	0	0	0	0	0	0	0	1	0	40	4	5	2	2	0	52	52.2	0	1	203	5	25	7	0	4	247	251.9
10:00	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	16	2	3	2	0	0	23	24	0	0	42	1	12	0	0	2	57	59	
10:15	0	0	4	1	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	8	1	1	1	0	0	11	11.5	0	0	54	1	5	1	0	0	61	61.5	
10:30	0	0	5	1	3	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	1	7	1	1	0	0	0	10	9.4	0	0	43	0	5	0	0	1	49	50	
10:45	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	17	1	1	0	0	0	19	19	0	0	63	1	6	1	0	2	73	75.5	
H/TOT	0	0	23	2	4	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	1	48	5	6	3	0	0	63	63.5	0	0	207	3	38	2	0	5	240	248
11:00	0	0	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	12	1	2	2	0	0	17	18	0	0	50	1	6	1	0	0	58	58.5	
11:15	0	0	10	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	8	8	0	0	55	2	7	1	0	2	67	69.5	
11:30	0	0	5	0	2	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	9	0	1	1	0	0	11	11.5	0	0	53	2	10	0	0	0	65	65	
11:45	0	1	7	0	1	0	0	0	9	8.4	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	6	6	0	0	67	0	6	1	0	1	75	76.5	
H/TOT	0	1	28	0	3	0	0	0	32	31.4	0	0	0	0	0	0	0	0	0	0	0	0	32	3	4	3	0	0	42	43.5	0	0	225	5	29	3	0	3	265	269.5	
12:00	0	0	3	1	4	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	10	0	2	0	0	0	12	12	0	0	57	0	6	1	0	1	65	66.5	
12:15	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	12	1	1	0	0	0	14	14	0	0	67	2	4	0	0	1	1	75	77.3
12:30	0	0	9	0	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	7	4	0	0	0	0	11	11	0	0	54	1	2	1	0	1	59	60.5	
12:45	0	0	12	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	10	10	0	0	66	1	4	2	0	2	75	78	
H/TOT	0	0	31	1	5	0	0	0	37	37	0	0	0	0	0	0	0	0	0	0	0	0	38	6	3	0	0	0	47	47	0	0	244	4	16	4	1	5	274	282.3	
13:00	0	0	10	1	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	9	0	0	47	1	8	0	0	0	1	57	58
13:15	0	0	9	0	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	16	1	0	0	0	0	17	17	0	0	68	3	3	0	0	1	72	73	
13:30	0	0	12	0	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	0	10	10	0	1	84	1	14	1	0	2	104	104.9	
13:45	0	0	7	0	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	16	0	1	0	0	0	17	17	0	0	65	1	4	0	0	1	71	72	
H/TOT	0	0	38	0	6	0	0	0	44	42	0	0	0	0	0	0	0	0	0	0	0	0	50	1	7	0	0	0	53	53	0	1	268	3	29	1	0	2	301	307	
14:00	0	0	9	0	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	7	3	0	1	0	0	11	11.5	0	0	51	3	12	1	0	0	67	67.5	
14:15	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	11	2	1	1	0	0	15	15.5	1	0	70	1	8	0	0	1	81	81.2	
14:30	0	0	10	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	10	0	0	53	0	7	1	0	1	62	63.5	
14:45	0	0	8	0	2	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	16	1	3	0	0	0	20	20	0	0	58	1	6	0	0	1	66	67	
H/TOT	0	0	35	0	3	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	0	44	6	4	2	0	0	56	57	1	0	232	5	33	2	0	3	276	279.2	
15:00	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	8	2	1	0	0	0	11	11	0	0	70	2	9	1	0	1	83	85	
15:15	0	0	10	0	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	6	1	1	0	0	0	8	8	0	0	56	1	6	3	0	0	66	67.5	
15:30	0	0	4	0	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	10	10	0	0	52	3	7	3	0	2	67	70.5	
15:45	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	0	14	14	0	0	76	0	7	0	0	6	85	95	
H/TOT	0	0	23	0	2	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	0	36	5	2	0	0	0	43	43	0	0	254	6	29	7	0	1	307	312.5	
16:00	0	0	3	0	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	12</																		

	C>=>A										C>=>B										C>=>C										C>=>D												
TIME	P/C	M/C	CAR	TAXI	LGV	O/GV1	O/GV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	O/GV1	O/GV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	O/GV1	O/GV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	O/GV1	O/GV2	PSV	TOT	PCU			
07:00	0	0	1	0	0	0	0	0	1	1	0	0	6	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3		
07:15	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7		
07:30	0	0	1	0	0	0	0	0	1	1	0	0	13	0	1	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5.3	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	8	0	2	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	
H/TOT	0	0	2	0	0	0	0	0	2	2	0	0	37	1	3	0	0	0	0	41	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	21.3
08:00	0	0	0	0	0	0	0	0	0	0	0	0	10	1	3	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	12.5	
08:15	0	0	2	0	0	0	0	0	2	2	0	0	15	0	2	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	
08:30	0	0	0	0	0	0	0	0	1	1	2	0	0	17	2	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	12.4	
08:45	0	0	4	0	0	0	0	0	4	4	0	0	20	1	0	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	22	
H/TOT	0	0	6	0	0	0	0	0	7	7	8	0	62	4	6	1	0	0	0	73	73.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	85.9	
09:00	0	0	6	0	0	0	0	0	6	6	0	0	12	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14.5	
09:15	0	0	2	1	0	0	0	0	3	3	1	0	10	1	0	0	0	0	0	12	11.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9
09:30	0	0	1	0	0	0	0	0	1	1	0	0	8	0	2	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	
09:45	0	0	2	0	0	0	0	0	2	2	1	1	9	0	1	2	0	0	0	14	13.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	
H/TOT	0	0	11	1	1	0	0	0	12	12	2	1	39	1	3	2	0	0	0	44	44.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40.5
10:00	0	0	0	1	1	1	1	0	3	3.5	0	1	16	2	4	0	0	0	0	24	26.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	18.3
10:15	0	0	1	0	0	1	0	0	2	2.5	0	0	8	0	2	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19.5	
10:30	0	0	2	0	1	1	0	0	3	3	0	0	14	0	1	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	1	0	0	0	13	13.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	15.4	
H/TOT	0	0	3	1	2	2	0	0	8	8	0	1	49	2	8	1	0	1	0	62	62.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	44.3
11:00	0	0	0	1	0	0	0	0	1	1	0	0	9	0	1	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	
11:15	0	0	1	0	2	0	0	0	3	3	0	0	9	0	1	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	14.8	
11:30	0	0	2	0	0	0	0	0	2	2	0	0	12	0	1	1	0	0	0	14	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	
11:45	0	0	2	0	0	0	0	0	2	2	0	0	12	1	3	1	0	0	0	17	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
H/TOT	0	0	5	1	2	0	0	0	8	8	0	0	42	1	6	2	0	0	0	51	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	46.8	
12:00	0	0	2	0	0	0	0	0	2	2	0	0	11	1	2	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	1	13	0	4	1	0	0	19	18.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	
12:30	0	0	2	0	0	0	0	0	2	2	0	0	10	1	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13.5	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	
H/TOT	0	0	4	0	0	0	0	0	4	4	0	0	39	2	6	1	0	0	0	49	48.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	61.5	
13:00	0	0	2	1	2	0	0	0	5	5	0	0	18	0	0	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21.5	
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H/TOT	0	0	9	1	1	0	0	0	11	11	0	1	49	3	1	0	0	1	0	55	55.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	63.5	
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H/TOT	1	0	6	1	0	0	0	0	8	7																																	

TIME	D=> A										TOT	PCU	D=> B										TOT	PCU	D=> C										TOT	PCU																
	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	P/C	M/C			CAR	TAXI	LGV	OGV1	OGV2	PSV	P/C	M/C	CAR	TAXI			LGV	OGV1	OGV2	PSV																								
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07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	47	1	8	1	0	2	60	61.7	0	0	5	0	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	5	1	0	3	49	52.5	0	1	6	0	2	1	0	1	11	11.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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H/TOT	0	0	4	0	0	0	0	0	0	4	4	2	0	201	1	26	4	0	10	246	254.4	0	1	30	0	5	2	0	1	39	40.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	1	0	28	1	0	0	0	0	0	30	29.2	0	0	269	8	32	9	0	4	322	330.5	0	4	63	6	2	1	0	0	76	74.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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H/TOT	0	0	18	0	1	1	0	0	0	20	20.5	0	2	344	6	23	2	0	6	283	288.8	0	2	39	8	5	1	1	0	56	56.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	25	0	2	0	0	0	0	27	27	1	0	237	6	33	5	1	5	288	296	0	0	42	6	4	1	0	0	53	53.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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13:30	0	0	8	0	0	0	0																																													





# IDASO

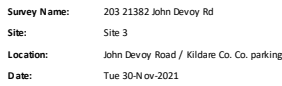
Survey Name: 203 21382 John Devoy Rd  
Site: Site 2  
Location: John Devoy Road / Osprey Hotel  
Date: Tue 30-Nov-2021

A=>A											A=>B											A=>C											A=>D										
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU			
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	2	0	0	5	0	1	0	0	0	6	6		
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H/TOT	0	0	1	0	0	0	0	1	2	3.3	0	1	19	1	4	3	0	0	0	28	28.9	0	0	15	0	2	0	0	0	1	18	18	0	0	32	0	8	0	0	0	40	40	
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H/TOT	0	0	2	0	0	0	0	0	2	2	0	0	31	4	4	0	0	0	0	39	39	0	0	19	0	1	0	0	0	20	20	0	0	93	1	9	2	1	4	110	116.3		
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H/TOT	0	0	2	0	0	0	0	0	2	2	0	4	35	9	1	1	0	0	0	50	48.1	0	0	21	0	2	0	0	0	0	23	23	0	0	52	0	4	2	0	0	58	59	
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H/TOT	0	0	2	0	0	0	0	0	2	2	0	1	19	7	4	1	0	0	0	32	31.9	0	0	17	0	0	1	0	0	0	18	18.5	0	0	42	1	6	2	0	0	51	52	
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12:30	0	0	1	0	0	0	0	0	1	1	0	0	8	3	0	0	0	0	0	11	11	0	0	4	1	0	0	0	0	5	5	0	0	8	1	1	0	0	0	10	10		
12:45	0	0	0	0	0	0	0	0	0	0	0	0	8	0	2	0	0	0	0	10	10	0	0	2	1	0	0	0	0	3	3	0	0	9	0	0	0	0	0	9	9		
H/TOT	0	0	3	0	0	0	0	0	3	3	0	0	26	7	2	0	0	0	0	35	35	0	0	15	5	2	0	0	0	22	22	0	0	40	1	4	1	0	0	46	46.5		
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5	0	0	2	0	0	0	0	0	2	2	0	0	7	0	0	0	0	0	7	7		
13:15	0	0	1	0	0	0	0	0	1	1	0	0	5	1	1	0	0	0	0	7	7	0	0	7	0	0	0	0	0	7	7	0	0	17	0	0	0	0	0	17	17		
13:30	0	0	1	0	0	0	0	0	1	1	0	0	9	2	0	0	0	0	0	11	11	0	0	2	0	0	0	0	0	2	2	0	0	10	0	1	0	0	0	11	11		
13:45	0	0	0	0	0	0	0	0	0	0	0	0	1	7	1	1	0	0	0	10	9.4	0	0	7	0	0	0	0	0	7	7	0	0	16	1	1	0	0	0	18	18		
H/TOT	0	0	2	0	0	0	0	0	2	2	0	1	26	4	2	0	0	0	0	33	32.4	0	0	18	0	0	0	0	0	0	18	18	0	0	50	1	2	0	0	0	53	53	
14:00	0	0	0	0	0	0	0	0	0	0	0	0	5	2	1	1	0	0	0	9	9.5	0	0	2	1	0	0	0	0	3	3	0	0	13	1	0	0	0	0	14	14		
14:15	0	0	1	0	0	0	0	0	1	1	0	0	9	2	1	0	0	0	0	12	12	0	0	5	0	1	0	0	0	6	6	0	0	10	0	2	1	0	0	13	13.5		
14:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	6	0	0	3	0	0	0	0	0	3	3	0	0	9	1	1	0	0	0	11	11		
14:45	0	0	0	0	0	0	0	0	0	0	0	0	1	15	4	0	0	0	0	20	19.4	0	0	6	0	1	0	0	0	7	7	0	0	11	1	4	0	0	0	16	16		
H/TOT	0	0	1	0	0	0	0	0	1	1	0	1	35	8	2	1	0	0	0	47	46.9	0	0	16	1	2	0	0	0	0	19	19	0	0	43	3	7	1	0	0			

B=>A										B=>B										B=>C										B=>D												
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU		
07:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
07:15	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	3	0	0	0	0	3	3		
H/TOT	0	0	13	0	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	3	0	0	0	0	5	5		
08:00	0	0	6	2	2	1	0	0	11	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	1	0	0	7	7.5	
08:15	0	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	5	5		
08:30	0	1	6	2	1	0	0	0	10	9.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	
08:45	0	0	1	2	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
H/TOT	0	1	18	6	3	1	0	0	29	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	3	1	0	0	15	15.5	
09:00	0	0	6	1	0	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6	6	
09:15	0	0	3	3	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	4	3.9
09:30	0	0	5	1	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	
09:45	0	1	4	1	1	0	0	0	7	6.4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	2	3	0	0	0	0	5	5	
H/TOT	0	1	18	6	1	1	0	0	27	26.9	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	1	1	0	1	7	6	0	2	0	0	16	16.4
10:00	0	3	7	7	2	0	0	0	19	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	4	0	1	0	0	0	5	5	
10:15	0	0	4	3	4	2	0	0	13	14	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	
10:30	0	0	3	2	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	0	0	6	6.5	
10:45	0	1	8	0	0	0	0	0	9	8.4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	1	1	0	0	0	0	2	2		
H/TOT	0	4	22	12	6	2	0	0	46	46.6	0	0	0	1	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	3	3	0	0	10	2	7	1	0	0	25	25.5	
11:00	0	0	3	2	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	6	6	
11:15	0	2	4	0	0	0	0	0	6	4.8	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	4	1	0	0	0	0	5	5		
11:30	0	0	9	4	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2		
H/TOT	0	2	18	6	1	0	0	0	27	25.8	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2	0	0	9	4	0	0	0	0	13	13	
12:00	0	0	7	3	2	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	4	0	0	0	0	0	4	4	
12:15	0	1	3	1	0	1	0	0	6	5.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	4	
12:30	0	0	4	0	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	2		
12:45	0	0	3	2	0	0	0	0	5	5	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	4	
H/TOT	0	1	17	6	3	1	0	0	28	27.9	0	0	0	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	1	1	0	0	2	2	0	0	0	0	14	14	
13:00	0	0	7	2	1	1	0	0	11	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	5	4.2	
13:15	0	0	2	0	1	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2	
13:30	0	0	8	1	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	3	
13:45	0	0	8	0	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0	0	6	6	
H/TOT	0	0	25	3	2	0	0	0	33	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18.5
14:00	0	0	5	2	0	0	0	1	8	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4	
14:15	0	1	7	1	0	0	0	0	9	8.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4	
14:30	0	0	2	3	0	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	2	0	0	0	0	3	3		
14:45	0	0	7	1	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5	
H/TOT	0	1	21	7	1	1	0	1	32	32.9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	14	2	0	0	0	0	16	16	
15:00	0	1	11	4	0	0	0	0	16	15.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8		
15:15	0	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	2	0	0	0	0	0	2	2		
15:30	0	0	7	1	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2	
15:45	0	1	3	0	0	0	0	0	4	3.4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4.2	
H/TOT	0	2	26	5	0	0	0	0	33	33.8	0	0	1	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	2	0	0	12	2	0	0	0	0	15	16.2	
16:00	0	0	8	2	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	7	7	
16:15	0	0	4	1	0																																					

	C=> A										C=> B											C=> C											C=> D										
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU			
07:00	0	0	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
07:15	0	0	5	0	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1		
07:30	0	0	4	0	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	4		
07:45	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1		
H/TOT	0	0	18	0	2	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	6	6	6	0	0	7	7				
08:00	0	0	4	0	0	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	3			
08:30	0	0	4	1	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	5	5			
08:45	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1			
H/TOT	0	0	19	1	1	0	0	1	22	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	0	9	9			
09:00	0	0	4	0	0	0	0	0	4	4	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2			
09:15	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	3	0	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1			
09:45	0	0	5	0	0	0	0	0	5	5	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	16	0	1	0	0	0	17	17	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	3			
10:00	0	0	5	0	0	0	0	0	5	5	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3	3			
10:15	0	0	6	1	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	0	0	5	0	0	0	0	0	5	5	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	5	0	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	4			
H/TOT	0	0	21	1	1	0	0	0	23	23	0	0	1	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	5	1	1	0	0	0	7	7				
11:00	0	0	10	2	2	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	3			
11:15	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	3	0	0	0	0	0	3	3				
11:30	0	0	7	0	0	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2				
11:45	0	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1			
H/TOT	0	0	25	2	2	1	0	0	30	30.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	8	0	1	0	0	0	9	9				
12:00	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1				
12:15	0	0	4	1	2	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	3				
12:30	0	0	4	1	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2				
12:45	0	0	7	0	0	0	0	0	7	7	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5				
H/TOT	0	0	17	2	3	0	0	0	22	22	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	10	0	1	0	0	0	11	11				
13:00	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	3				
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H/TOT	1	0	24	0	1	0	0	0	28	25.2	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	7	7				
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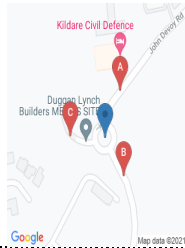
	D>=> A									D>=> B									D>=> C									D>=> D														
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU		
07:00	0	0	0	5	0	1	0	0	6	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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H/TOT	0	0	26	0	4	0	0	0	30	30	0	0	10	1	1	0	0	0	0	12	12	0	0	3	0	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	45	3	4	3	0	0	56	56.7	0	0	21	3	0	1	0	0	25	25.5	0	0	8	1	0	0	0	0	9	9	0	0	1	0	0	0	0	0	0	1	1	1
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H/TOT	0	0	36	1	9	1	0	0	47	47.5	0	0	14	3	0	0	0	0	18	17.4	0	0	3	1	0	0	0	0	4	4	0	0	1	0	0	0	0	0	1	1	1	1
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H/TOT	0	0	60	2	13	1	0	0	73	75	1	0	13	4	0	0	0	0	16	15.2	0	0	2	1	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	0	0	64	2	4	0	0	0	70	70	0	0	10	2	0	0	0	1	13	14	0	0	5	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0
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H/TOT	1	0	58	1	18	2	1	0	73	74.4	0	0	11	6	2	1	0	0	15	16.4	0	0	15	6	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	1	1	1
16:00	2	0	30	0																																						



	A ==> A										A ==> B										A ==> C										
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	31	0	9	0	0	0	46	46	0	0	12	0	0	0	0	0	13	12.2	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	69	0	7	3	1	4	84	90.8	0	0	46	1	3	0	0	0	50	50	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	26	6	2	2	0	0	37	37.4	0	0	35	1	2	2	0	0	40	41	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	34	4	7	1	1	0	47	48.5	1	0	29	0	3	0	0	0	24	23.7	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	13	2	1	1	0	0	17	17.5	0	0	8	1	2	1	0	0	12	12.5	
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H/TOT	0	0	1	0	0	0	0	0	1	1	2	0	46	7	3	0	0	0	60	58.9	0	0	19	0	0	0	0	0	19	19	
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	39	5	2	0	0	0	46	46	0	0	25	0	7	1	0	0	33	33.5	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	15	2	2	0	0	0	15	12	0	0	0	0	0	0	0	0	0	0	
15:15	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	9	9	0	0	3	0	1	0	0	0	4	4	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	10	1	1	0	0	0	12	12	0	0	1	0	0	0	0	0	1	1	
15:45	0	0	0	0	0	0	0	0	0	0	0	2	19	1	1	0	0	1	24	23.4	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	48	5	4	0	0	1	60	58.9	0	0	6	0	3	0	0	0	0	0	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	17	0	1	0	0	0	18	18	1	0	1	0	1	0	0	0	3	2.2	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1	0	0	0	9	9	0	0	1	0	0	0	0	0	1	1	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	13	11	0	0	0	0	0	0	0	0	0	0	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	21	2	0	0	0	0	23	23	0	0	3	0	0	0	0	0	3	3	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	58	3	2	0	0	0	63	63	0	0	0	0	0	0	0	0	0	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	14	2	2	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	14	0	1	0	0	0	15	15	0	0	1	0	0	0	0	0	1	1	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12	12	0	0	1	0	0	0	0	0	1	1	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	13	0	1	0	0	0	14	14	0	0	1	0	0	0	0	0	1	1	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	53	2	4	0	0	0	59	59	0	0	3	0	0	0	0	0	3	3	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	15	2	2	2	0	0	19	19	0	0	0	0	0	0	0	0	0	0	
18:15	0	0	0	0	0	0	0	0	0	0	1	0	9	1	2	0	0	0	13	12.2	0	0	1	0	0	0	0	0	1	1	
18:30	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	0	0	0	7	1	3	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	38	7	8	0	0	0	22	21.5	0	0	2	0	0	0	0	0	0	0	
12 TOT	0	0	1	0	0	0	0	0	1	1	6	1	529	44	57	7	2	5	651	656.7	3	0	219	3	22	6	0	0	253	253.5	

TIME	B == A								TOT	PCU	B == B								TOT	PCU	B == C								TOT	PCU	
	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV			
07:00	0	0	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	10	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	10	0	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
07:45	0	0	14	1	3	0	0	0	18	18	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	40	1	4	0	0	0	45	45	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0
08:00	0	0	19	0	2	0	0	0	21	21	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0
08:15	0	0	22	1	2	0	0	0	25	25	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	32	1	2	1	0	2	38	40.5	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0
08:45	1	0	34	0	0	0	0	0	35	34.2	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	107	2	6	1	0	2	119	120.7	0	0	0	0	0	0	0	0	0	39	0	2	0	0	0	0	0	0	0	0	0
09:00	1	0	25	0	1	0	0	0	27	26.2	0	0	0	0	0	0	0	0	0	14	0	1	0	0	0	0	0	0	0	0	0
09:15	1	0	11	1	0	1	0	0	14	13.7	0	0	0	0	0	0	0	0	0	11	0	4	0	0	0	0	0	0	0	0	0
09:30	1	0	10	1	0	0	0	0	12	11.2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	15	3	1	2	0	0	22	22.2	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
H/TOT	4	0	61	5	2	3	0	0	75	73.3	0	0	0	0	0	0	0	0	0	33	0	6	0	0	0	0	0	0	0	0	0
10:00	0	0	12	3	4	1	0	0	21	22.5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	4	1	2	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
10:30	0	0	10	3	2	0	0	0	15	15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	7	2	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	33	9	8	2	0	1	53	55	0	0	0	0	0	0	0	0	0	11	0	2	0	0	0	0	0	0	0	0	0
11:00	0	1	8	1	2	0	0	0	12	11.4	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0
11:15	0	0	8	2	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	6	0	4	1	0	0	11	11.5	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
11:45	0	0	7	2	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
H/TOT	0	1	29	5	7	1	0	0	43	42.9	0	0	0	0	0	0	0	0	0	9	0	3	0	1	0	0	0	0	0	0	0
12:00	0	0	16	0	2	0	0	0	18	18	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
12:15	0	0	9	1	2	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
12:30	0	0	7	1	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0
12:45	0	0	3	1	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	35	3	6	1	0	0	45	45.5	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	18	1	0	2	0	0	21	22	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	14	0	1	0	0	1	16	17	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	12	1	1	0	0	0	14	14	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
13:45	2	0	10	0	1	0	0	0	13	11.4	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	54	2	3	2	0	1	64	56.2	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0
14:00	2	1	0	12	0	0	0	0	13	14	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	14	3	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	12	1	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	19	0	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	57	4	2	0	0	1	64	65	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	10	0	0	1	0	1	12	12	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
15:15	1	0	11	0	1	0	0	1	14	14.2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	15	2	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	1	1	19	0	0	0	0	0	21	19.6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	1	35	2	2	1	0	2	65	65.5	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
16:00	1	0	23	1	5	0	0	0	30	29.2	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
16:15	0	0	25	3	3	0	0	0	31	31	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	17	3	4	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	12	1	4	1	1	0	19	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	1	54	7	16	1	1	0	104	105	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0
17:00	0	0	17	1	1	0	0	0	19	19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	44	0	6	1	0	0	51	51.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	17	0	4	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	16	1	2	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
H/TOT	0	0	94	2	13	1	0	0	110	110.5	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
18:00	0	0	6	2	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	9	1	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	1	0	15	1	0	0	0	0	17	16.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	38	4	0	0	0	0	43	42.2	0	0	0	0	0	0	0	0	0												

C>=> A										C>=> B										C>=> C										
TIME	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
07:45	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
08:15	0	0	0	2	0	0	0	0	2	2	2	0	2	0	0	0	0	0	0	4	2.4	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	2	0	0	0	0	2	2	2	0	3	0	0	0	0	0	0	7	5.4	0	0	0	0	0	0	0	0	0
09:00	0	0	4	0	0	0	0	0	4	4	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
09:15	0	0	7	2	0	0	0	0	9	9	0	0	3	0	1	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
09:30	0	0	2	2	2	0	0	0	4	4	0	0	1	0	0	1	0	0	0	2	2.5	0	0	0	0	0	0	0	0	0
09:45	0	0	2	0	0	1	0	0	3	3.5	0	0	2	0	1	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
H/TOT	0	0	15	2	2	1	0	0	20	20.5	0	0	6	0	3	1	0	0	0	10	10.5	0	0	0	0	0	0	0	0	0
10:00	0	0	8	0	3	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	4	0	0	0	0	0	4	4	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
10:30	0	0	4	0	1	0	0	0	5	5	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
10:45	0	0	2	0	1	1	0	0	4	4.5	0	0	2	0	1	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
H/TOT	0	0	18	0	5	1	0	0	24	24.5	0	0	5	0	1	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
11:00	0	0	6	0	0	0	0	0	6	6	0	0	5	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
11:15	0	0	7	0	0	0	0	0	7	7	0	0	2	0	2	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
11:30	0	0	4	0	1	0	0	0	5	5	0	0	2	0	1	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
11:45	0	0	8	0	1	0	0	0	9	9	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	25	0	2	0	0	0	27	27	0	0	10	0	3	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0
12:00	0	0	8	1	0	0	0	0	9	9	0	0	5	0	1	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
12:15	0	0	11	0	1	0	0	0	12	12	0	0	3	0	2	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
12:30	0	0	11	0	1	0	0	0	12	12	0	0	2	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
12:45	0	0	7	0	0	0	0	0	7	7	0	0	5	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
H/TOT	0	0	37	1	2	1	0	0	41	41.5	0	0	16	0	3	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0
13:00	0	0	9	0	0	0	0	0	9	9	0	0	7	0	0	1	0	0	0	8	8.5	0	0	0	0	0	0	0	0	0
13:15	0	0	6	0	0	0	0	0	6	6	0	0	6	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
13:30	0	0	6	0	0	0	0	0	6	6	0	0	7	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
13:45	0	0	2	0	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
H/TOT	0	0	29	0	0	0	0	0	29	29	0	0	22	0	0	1	0	0	0	25	25.5	0	0	0	0	0	0	0	0	0
14:00	0	0	5	0	0	0	0	0	5	5	0	0	5	0	1	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
14:15	0	0	9	0	0	0	0	0	9	9	0	0	3	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
14:30	0	0	7	0	1	0	0	0	8	8	0	0	0	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0
14:45	0	0	3	0	0	0	0	0	3	3	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
H/TOT	0	0	24	0	1	0	0	0	29	29	0	0	10	0	1	1	0	0	0	12	12.5	0	0	0	0	0	0	0	0	0
15:00	0	0	2	2	0	4	0	0	6	6	0	0	5	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
15:15	0	0	6	0	1	0	0	0	7	7	0	0	2	0	1	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
15:30	0	0	1	0	1	0	0	0	2	2	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
15:45	0	0	2	0	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
H/TOT	0	0	11	0	6	0	0	0	15	15	0	0	9	0	2	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
16:00	0	0	5	0	2	0	0	0	7	7	0	0	5	0	1	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
16:15	1	0	3	0	1	0	0	0	5	4.2	0	0	3	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
16:30	0	0	5	0	0	0	0	0	5	5	0	0	3	0	1	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
16:45	0	0	9	0	0	0	0	0	9	9	0	0	6	0	1	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
H/TOT	0	0	23	0	3	0	0	0	29	29	0	0	15	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0
17:00	0	0	15	0	0	0	0	0	15	15	0	0	10	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0
17:15	0	0	12	0	0	0	0	0	12	12	0	0	11	0	0	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
17:30	0	0	10	0	0	0	0	0	10	10	0	0	8	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
17:45	0	0	5	0	1	0	0	0	6	6	0	0	3	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
H/TOT	0	0	42	0	1	0	0	0	43	43	0	0	32	0	0	0	0	0	0	32	32	0	0	0	0	0	0	0	0	0
18:00	0	0	6	0	0	0	0	0	6	6	0	0	8	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
18:15	0	0	1	0	0	0	0	0	1	1	0	0	4	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
18:30	0	0	2	0	0	0	0	0	2	2	0	0	1	0	0	1	0	0	0	2	2.5	0	0	0	0	0	0	0	0	0
18:45	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
H/TOT	0	0	10	0	0	0	0	0	10	10	0	0	14	0	0	1	0	0	0	15	15.5	0	0	0	0	0	0	0	0	0
12 TOT	1	0	228	3	24	3	0	0	259	259.7	2	0	148	0	16	4	0	0	0	170	170.4	0	0	0	0	0	0	0	0	0



# IDASO

Survey Name: 203 21382 John Devoey Rd  
Site: Site 4  
Location: John Devoey Road / Access spur  
Date: Tue 30-Nov-2021

TIME	A=>A										TOT	PCU	A=>B										TOT	PCU	A=>C										TOT	PCU	
	P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV					P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV					P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV					
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	2	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	3	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45	0	0	1	0	0	0	0	0	0	1	1	0	0	10	0	2	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/TOT	0	0	1	0	0	0	0	0	0	1	1	0	0	32	1	7	0	0	0	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	2	0	1	1	19	21.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:15	0	0	0	0	0	0	0	0	0	0	0	2	0	21	0	5	2	0	0	30	29.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	3	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/TOT	0	0	0	0	0	0	0	0	0	0	0	2	0	75	0	7	2	1	4	91	95.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	14	2	1	1	0	0	18	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	1	1	1	0	9	8.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	2	0	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	32	6	4	4	0	0	47	48.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	5	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	1	1	0	12	13.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	2	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	38	4	9	1	1	0	53	54.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	0	0	0	0	0	0	1	1	0	0	17	2	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	1	0	13	1	1	0	0	0	16	15.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	4	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	1	0	0	0	0	0	0	1	1	1	0	44	4	7	1	0	0	57	56.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	3	0	0	0	0	0	0	3	3	0	0	14	0	3	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15	0	0	2	0	0	0	0	0	0	2	2	0	0	13	1	1	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	1	0	0	0	0	1	1	0	0	14	1	3	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0	0	0	18	18	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
H/TOT	0	0	5	0	1	0	0	0	0	6	6	0	0	58	3	7	0	0	0	68	68	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
13:00	0	0	0	0	0	1	0	0	0	1	1.5	2	0	19	1	0	0	0	0	22	20.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	14	4	1	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:45	0	0	1	0	0	0	0	0	0	1	1	0	0	22	0	1	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	1	0	0	1	0	0	0	2	2.5	2	0	71	5	2	0	0	0	80	78.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	1	0	0	0	0	1	1	0	0	14	1	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	0	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	15	2	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	1	0	0	0	0	1	1	0	0	48	6	2	1	0	0	57	57.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	17	2	3	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:15	0	0	1	0	0	0	0	0	0	1	1	0	0	7	1	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	2	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:45	0	0	0	0	0	0	0	0	0	0	0	2	0	21	1	0	0	0	1	25	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	1	0	0	0	0	0	0	1	1	2	0	57	5	6	0	0	1	71	70.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	2	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	0	1	0	0	0	0	0	1	1	0	0	15	0	1	0	0	0																		



[illegible]

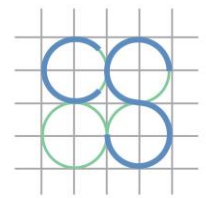




TIME	B=>A									B=>B									B=>C												
	P/C	M/C	CAR	TAXI	LGW	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGW	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGW	OGV1	OGV2	PSV	TOT	PCU	
07:00	0	0	6	0	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	30	0	4	2	2	0	38	41.6	
07:15	0	0	7	0	3	0	1	0	11	12.3	0	0	0	0	0	0	0	0	0	0	0	1	41	0	4	3	2	0	51	54.5	
07:30	0	0	10	0	3	2	0	0	15	16	0	0	0	0	0	0	0	0	0	0	0	0	55	0	3	5	1	0	64	67.8	
07:45	0	0	16	0	1	1	1	0	19	20.8	0	0	0	0	0	0	0	0	0	0	0	0	87	0	4	3	2	2	98	104.1	
H/TOT	0	0	39	0	8	3	2	0	52	56.1	0	0	0	0	0	0	0	0	0	0	0	0	1	213	0	15	13	7	2	251	266
08:00	0	0	15	0	2	0	1	0	18	19.3	0	0	0	0	0	0	0	0	0	0	0	0	135	1	11	3	1	0	151	153.8	
08:15	0	0	24	1	2	1	2	0	30	33.1	0	0	2	0	0	0	0	0	2	2	0	0	130	0	16	0	5	2	153	161.5	
08:30	0	0	23	1	2	1	1	1	29	31.8	0	0	0	0	0	0	0	0	0	0	0	0	178	0	15	1	2	1	197	201.1	
08:45	0	0	45	0	0	2	3	0	50	54.9	0	0	0	0	0	0	0	0	0	0	0	0	1	159	1	11	2	6	4	184	196.2
H/TOT	0	0	107	2	6	4	7	1	127	139.1	0	0	2	0	0	0	0	0	2	2	0	0	1	602	2	53	6	14	7	685	712.6
09:00	0	0	27	0	3	0	1	0	31	32.3	0	0	0	0	0	0	1	0	1	1	2.3	1	0	148	2	8	4	6	2	171	182
09:15	0	0	12	1	1	3	3	0	20	25.4	0	0	0	0	0	0	0	0	0	0	0	2	93	1	8	1	4	1	110	115.5	
09:30	0	0	19	0	0	3	2	0	24	28.1	0	0	0	0	0	1	0	0	1	1.5	0	0	82	0	5	4	1	0	92	95.3	
09:45	0	0	14	1	1	1	2	0	19	22.1	0	0	1	0	0	1	0	0	2	2.5	0	0	63	0	2	5	0	2	72	76.5	
H/TOT	0	0	72	2	5	7	8	0	94	107.9	0	0	1	0	0	2	1	0	4	6.3	1	2	386	3	23	14	11	5	445	469.3	
10:00	0	0	5	1	5	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	62	1	9	1	1	0	74	75.8	
10:15	0	0	3	1	2	2	2	0	10	13.6	0	0	0	0	0	0	0	0	0	0	0	0	1	76	0	11	4	2	2	96	102
10:30	0	0	9	2	0	3	2	0	16	20.1	0	0	0	0	0	0	0	0	0	0	0	0	2	64	0	9	3	3	0	81	85.2
10:45	0	0	7	1	1	2	3	0	14	18.9	0	0	0	0	0	0	0	0	0	0	0	0	0	66	1	9	3	3	0	82	87.4
H/TOT	0	0	24	5	8	7	7	0	51	63.6	0	0	0	0	0	0	0	0	0	0	0	0	3	268	2	38	11	9	2	333	350.4
11:00	0	1	7	0	2	0	4	0	14	18.6	0	0	2	0	0	0	0	0	3	3.5	0	0	82	2	7	5	5	1	102	112	
11:15	0	0	8	2	1	2	2	0	15	18.6	0	0	0	0	0	0	0	0	2	2	3	0	0	76	1	17	4	1	1	100	104.3
11:30	0	0	9	2	4	1	3	0	19	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	76	1	5	5	2	0	89	94.1
11:45	0	0	12	0	3	1	2	0	18	21.1	0	0	1	0	0	1	0	0	2	2.5	1	0	75	2	22	1	2	0	103	105.3	
H/TOT	0	1	36	4	10	4	11	0	66	81.7	0	0	3	0	0	4	0	0	7	9	1	0	309	6	51	15	10	2	394	415.7	
12:00	0	0	13	0	5	1	3	0	22	26.4	0	0	0	0	0	0	0	0	0	0	0	0	0	83	0	11	3	5	0	102	110
12:15	0	0	11	0	5	2	4	0	22	28.2	0	0	0	0	0	0	0	0	0	0	0	0	0	92	1	10	1	1	1	106	108.8
12:30	0	0	13	2	1	0	4	0	20	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	85	0	10	2	1	0	98	100.3
12:45	0	0	9	1	1	1	2	0	14	17.1	0	0	0	0	0	2	0	0	2	3	0	0	82	2	17	1	1	0	103	104.8	
H/TOT	0	0	46	3	12	4	13	0	78	96.9	0	0	0	0	0	2	0	0	2	3	0	0	342	3	48	7	8	1	409	423.9	
13:00	0	0	11	1	0	0	0	0	12	12	0	0	0	0	1	0	0	0	1	1	1	0	0	94	0	10	2	2	0	108	111.6
13:15	0	0	15	0	2	1	0	1	19	20.5	0	0	0	0	1	0	0	0	1	1	1	0	1	95	0	11	3	1	0	111	113.2
13:30	0	0	18	1	1	2	1	0	23	25.3	0	0	0	0	0	0	0	0	0	0	0	1	0	83	3	14	3	5	2	111	120.2
13:45	0	0	14	0	2	0	2	0	18	20.6	0	0	1	0	2	0	0	0	3	3	3	0	0	77	0	6	3	2	1	89	94.1
H/TOT	0	0	58	2	5	3	3	1	72	88.4	0	0	1	0	4	0	0	0	5	5	5	1	1	249	3	41	11	10	3	415	438.1
14:00	0	0	14	2	1	2	3	0	22	26.9	0	0	0	0	0	0	0	0	1	1	1	0	0	89	0	9	5	2	0	105	110.1
14:15	0	0	14	2	0	1	3	0	20	24.4	0	0	0	0	0	0	0	0	0	0	0	0	1	100	1	11	2	5	3	123	132.9
14:30	0	0	12	1	1	0	2	0	16	18.6	0	0	1	0	0	0	0	0	1	1	1	0	1	106	0	6	6	4	1	124	132.6
14:45	0	0	21	1	2	2	2	0	28	31.6	0	0	3	0	1	1	0	0	5	5.5	0	0	1	130	5	7	0	9	4	156	171.1
H/TOT	0	0	61	6	4	5	10	0	86	101.5	0	0	4	0	2	1	0	0	7	7.5	0	3	425	6	33	13	20	8	508	546.7	
15:00	0	0	10	0	1	2	2	0	15	18.6	0	0	3	0	0	1	0	0	4	4.5	0	0	0	92	1	14	4	2	0	113	117.6
15:15	0	0	6	0	1	0	2	1	10	13.6	0	0	0	0	0	0	0	0	0	0	0	0	0	91	0	21	2	1	1	116	119.3
15:30	0	0	7	0	1	1	2	0	11	14.1	0	0	0	0	0	0	0	0	0	0	0	0	0	98	1	9	4	2	2	116	122.6
15:45	0	0	21	1	0	2	2	0	26	29.6	0	0	1	0	0	0	0	0	1	1	1	0	127	1	15	6	2	0	152	156.8	
H/TOT	0	0	44	1	3	5	8	1	62	75.9	0	0	4	0	0	1	0	0	4	5	5.5	1	0	408	3	59	16	7	3	497	516.3
16:00	0	0	23	0	1	0	0	0	24	24	0	0	1	0	0	0	0	0	1	1	1	0	0	153	1	6	4	7	4	175	190.1
16:15	0	0	27	0	1	0	4	0	32	37.2	0	0	1	0	0	0	0	0	1	1	0	0	164	4	24	1	3	3	199	206.4	
16:30	0	0	15	0	2	3	2	0	22	26.1	0	0	0	0	0	0	0	0	0	0	0	0	135	3	10	1	5	1	155	163	
16:45	0	0	11	0	1	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	139	2	27	1	5	2	176	185
H/TOT	0	0	76	0	5	3	6	0	90	99.3	0	0	2	0	0	0	0	0	2	2	0	0	0	591	10	67	7	20	10	705	744.5
17:00	0	0	14	0	2	0	2	0	18	20.6	0	0	1	0	0	0	0	0	1	1	1	0	0	162	1	18	1	2	0	184	187.1
17:15	0	0	35	0	5	1	0	0	41	41.5	0	0	3	0	0	0	0	0	3	3	0	0									

TIME	C=> A										TOT	PCU	C=> B										TOT	PCU	C=> C										TOT	PCU
	P/C	M/C	CAR	TAXI	LGW	OGV1	OGV2	PSV	P/C	M/C			CAR	TAXI	LGW	OGV1	OGV2	PSV	P/C	M/C	CAR	TAXI			LGW	OGV1	OGV2	PSV								
07:00	0	0	4	0	7	0	0	0	0	11	11	0	0	29	0	15	0	0	1	45	46	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15	0	0	11	0	10	0	0	0	0	21	21	0	0	39	0	5	0	4	1	49	55.2	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30	0	0	10	0	3	2	1	0	0	16	18.3	0	0	61	1	9	2	4	0	77	83.2	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45	0	0	17	1	5	2	1	0	0	26	28.3	0	0	85	0	24	1	4	3	117	125.7	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/TOT	0	0	42	1	25	4	2	0	0	74	78.6	0	0	214	1	53	3	12	5	288	310.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00	0	0	11	1	4	2	1	0	0	19	21.3	0	0	125	0	16	4	4	2	151	160.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15	1	0	18	1	1	1	0	0	0	22	21.7	0	0	192	0	14	3	6	1	216	226.3	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
08:30	0	0	15	0	2	0	0	0	1	18	19	0	0	204	0	12	0	3	2	221	226.9	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
08:45	0	1	12	0	4	1	0	0	0	17	17.9	0	0	134	0	20	8	2	1	165	172.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	1	1	56	2	11	4	1	1	1	77	79.9	0	0	655	0	62	15	15	6	753	786	0	0	2	0	0	0	0	0	0	0	2	2	2		
09:00	0	0	14	0	3	1	0	0	0	18	18.5	0	0	97	0	22	3	5	1	128	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15	0	0	14	1	3	0	0	0	0	18	18	0	0	87	2	14	5	6	0	114	124.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	6	0	3	0	2	0	0	11	13.6	0	0	67	1	4	2	3	0	77	81.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45	0	0	9	2	3	0	0	0	0	14	14	0	0	88	2	13	5	8	1	117	130.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	43	3	12	1	2	0	0	61	64.1	0	0	339	5	53	15	22	2	436	474.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00	0	0	5	1	1	1	0	0	1	9	10.5	0	0	51	0	5	2	5	2	65	74.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15	0	0	5	0	1	1	0	0	0	7	7.5	0	3	53	2	8	1	1	0	68	68	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
10:30	0	0	7	2	3	0	0	0	0	12	12	0	0	56	0	8	4	3	0	71	76.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	9	0	2	0	0	0	0	11	11	0	0	70	0	12	2	2	1	87	91.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	36	3	7	2	0	1	1	39	40	0	3	230	2	33	9	11	3	291	311	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	9	0	2	0	0	0	0	11	11	0	0	61	1	16	5	2	0	85	90.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	6	1	1	0	0	0	0	8	8	0	0	71	0	6	1	1	0	79	80.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	3	0	3	0	3	0	0	9	12.9	0	1	48	0	13	1	2	0	65	67.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	7	1	1	0	1	0	1	10	11.3	0	0	69	0	4	1	2	0	76	79.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	25	2	7	0	4	0	0	38	43.2	0	1	249	1	39	8	7	0	305	317.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00	0	0	5	0	1	0	0	0	0	6	6	0	0	82	3	6	2	1	0	94	96.3	0	0	0	0	0	0	1	0	0	0	0	0	1.5	1.5	
12:15	0	0	6	1	3	0	0	0	0	10	10	0	0	76	1	15	2	1	1	96	99.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	6	0	2	1	0	0	0	9	9.5	0	0	80	0	6	4	3	0	93	98.9	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
12:45	0	0	2	0	0	0	1	0	0	3	3.5	0	0	88	1	8	0	2	1	100	103.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	19	1	6	2	0	0	0	28	29	0	0	326	5	35	8	7	2	383	398.1	0	0	1	0	0	0	0	0	0	0	0	0	0	2.5	2.5
13:00	0	0	9	0	0	0	0	0	0	9	9	0	1	92	1	10	4	1	0	109	111.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15	0	0	11	1	2	0	1	0	0	15	16.3	0	0	92	1	10	1	2	0	106	109.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:30	0	0	5	0	1	1	0	0	0	7	7.5	0	0	99	3	6	3	3	0	114	119.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:45	0	0	8	0	2	0	0	0	0	10	10	0	0	114	0	7	4	1	1	127	131.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	33	1	5	1	1	0	0	41	42.8	0	1	397	5	33	12	7	1	456	471.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:00	1	0	8	0	2	0	0	1	0	12	12.2	0	1	99	2	5	3	0	1	111	112.9	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
14:15	0	0	4	0	3	0	0	0	0	7	7	0	0	94	0	5	3	4	1	107	114.7	0	0	1	0	0	0	0	0	0	0	0	1	1	1	
14:30	0	0	7	0	3	0	0	0	0	10	10	0	0	80	2	7	5	3	1	98	105.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:45	0	0	13	0	3	0	1	0	0	17	18.3	0	0	92	2	7	4	2	1	108	113.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	1	0	32	0	11	0	1	1	1	46	47.5	0	1	365	6	24	15	9	4	424	446.6	0	0	2	0	0	0	0	0	0	0	0	2	2	2	
15:00	0	0	6	0	1	0	0	2	1	11	13	0	1	89	4	12	1	6	2	115	124.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:15	0	0	12	0	3	1	0	0	0	16	16.5	0	0	90	2	14	2	7	2	117	129.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:30	0	0	10	2	1	0	0	1	0	14	15.3	0	0	96	0	18	1	2	3	120	126.1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
15:45	0	1	9	0	4	0	1	0	0	15	15.7	0	0	126	0	11	2	4	1	144	151.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	1	39	2	9	1	2	2	2	56	60.5	0	1	401	6	55	6	19	8	496	531.1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
16:00	0	0	14	0	1	0	0	0	0	15	15	0	0	126	1	16	4	4	3	154	164.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	0	0	16	0	1	0	1	0	0	18	19.3	0	2	84	0																					



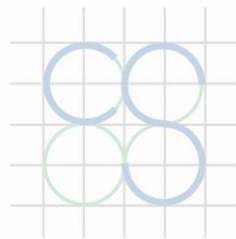


CS CONSULTING  
GROUP

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## Appendix B

### **TRICS Data**



CS CONSULTING  
GROUP



Calculation Reference: AUDIT-656801-220302-0318

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : A - HOUSES PRIVATELY OWNED  
MULTI-MODAL TOTAL VEHICLES

## Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
	KC KENT	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days

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

## Primary Filtering selection:

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

Parameter: No of Dwellings  
Actual Range: 14 to 70 (units: )  
Range Selected by User: 4 to 1817 (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: 01/01/13 to 23/09/21

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

## Selected survey days:

Tuesday	1 days
Wednesday	3 days
Thursday	1 days

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

## Selected survey types:

Manual count	5 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:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	4

*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	5
------------------	---

*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 5 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 3 days

10,001 to 15,000 2 days

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

Population within 5 miles:

25,001 to 50,000 5 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 5 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 3 days

No 2 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 5 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

1	DL-03-A-10 R124 MALAHIDE SAINT HELENS Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	SEMI DETACHED & DETACHED      65 20/06/18	DUBLIN	<i>Survey Type: MANUAL</i>
2	HC-03-A-23 CANADA WAY LIPHOOK  Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: <i>Survey date: TUESDAY</i>	HOUSES & FLATS     62 19/11/19	HAMPSHIRE	<i>Survey Type: MANUAL</i>
3	KC-03-A-09 WESTERN LINK FAVERSHAM DAVINGTON Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	MIXED HOUSES & FLATS     14 09/06/21	KENT	<i>Survey Type: MANUAL</i>
4	NF-03-A-04 NORTH WALSHAM ROAD NORTH WALSHAM  Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	MIXED HOUSES     70 18/09/19	NORFOLK	<i>Survey Type: MANUAL</i>
5	SH-03-A-05 SANDCROFT TELFORD SUTTON HILL Edge of Town Residential Zone Total No of Dwellings: <i>Survey date: THURSDAY</i>	SEMI-DETACHED/TERRACED     54 24/10/13	SHROPSHIRE	<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/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.75

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	5	53	0.094	5	53	0.400	5	53	0.494
08:00 - 09:00	5	53	0.132	5	53	0.460	5	53	0.592
09:00 - 10:00	5	53	0.185	5	53	0.204	5	53	0.389
10:00 - 11:00	5	53	0.155	5	53	0.196	5	53	0.351
11:00 - 12:00	5	53	0.174	5	53	0.249	5	53	0.423
12:00 - 13:00	5	53	0.260	5	53	0.223	5	53	0.483
13:00 - 14:00	5	53	0.234	5	53	0.192	5	53	0.426
14:00 - 15:00	5	53	0.219	5	53	0.264	5	53	0.483
15:00 - 16:00	5	53	0.275	5	53	0.204	5	53	0.479
16:00 - 17:00	5	53	0.392	5	53	0.177	5	53	0.569
17:00 - 18:00	5	53	0.453	5	53	0.196	5	53	0.649
18:00 - 19:00	5	53	0.381	5	53	0.162	5	53	0.543
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.954			2.927			5.881

*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: 14 - 70 (units: )  
 Survey date range: 01/01/13 - 23/09/21  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 4  
 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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.015	5	53	0.015	5	53	0.030
08:00 - 09:00	5	53	0.000	5	53	0.000	5	53	0.000
09:00 - 10:00	5	53	0.008	5	53	0.008	5	53	0.016
10:00 - 11:00	5	53	0.008	5	53	0.004	5	53	0.012
11:00 - 12:00	5	53	0.011	5	53	0.011	5	53	0.022
12:00 - 13:00	5	53	0.008	5	53	0.008	5	53	0.016
13:00 - 14:00	5	53	0.011	5	53	0.011	5	53	0.022
14:00 - 15:00	5	53	0.008	5	53	0.008	5	53	0.016
15:00 - 16:00	5	53	0.008	5	53	0.011	5	53	0.019
16:00 - 17:00	5	53	0.008	5	53	0.008	5	53	0.016
17:00 - 18:00	5	53	0.004	5	53	0.004	5	53	0.008
18:00 - 19:00	5	53	0.004	5	53	0.004	5	53	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.093			0.092			0.185

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.004	5	53	0.004	5	53	0.008
08:00 - 09:00	5	53	0.004	5	53	0.004	5	53	0.008
09:00 - 10:00	5	53	0.008	5	53	0.008	5	53	0.016
10:00 - 11:00	5	53	0.004	5	53	0.008	5	53	0.012
11:00 - 12:00	5	53	0.004	5	53	0.008	5	53	0.012
12:00 - 13:00	5	53	0.004	5	53	0.004	5	53	0.008
13:00 - 14:00	5	53	0.000	5	53	0.000	5	53	0.000
14:00 - 15:00	5	53	0.000	5	53	0.000	5	53	0.000
15:00 - 16:00	5	53	0.008	5	53	0.000	5	53	0.008
16:00 - 17:00	5	53	0.000	5	53	0.004	5	53	0.004
17:00 - 18:00	5	53	0.000	5	53	0.000	5	53	0.000
18:00 - 19:00	5	53	0.004	5	53	0.000	5	53	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.040			0.040			0.080

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.000	5	53	0.000	5	53	0.000
08:00 - 09:00	5	53	0.000	5	53	0.000	5	53	0.000
09:00 - 10:00	5	53	0.000	5	53	0.000	5	53	0.000
10:00 - 11:00	5	53	0.000	5	53	0.000	5	53	0.000
11:00 - 12:00	5	53	0.008	5	53	0.008	5	53	0.016
12:00 - 13:00	5	53	0.000	5	53	0.000	5	53	0.000
13:00 - 14:00	5	53	0.000	5	53	0.000	5	53	0.000
14:00 - 15:00	5	53	0.000	5	53	0.000	5	53	0.000
15:00 - 16:00	5	53	0.000	5	53	0.000	5	53	0.000
16:00 - 17:00	5	53	0.000	5	53	0.000	5	53	0.000
17:00 - 18:00	5	53	0.000	5	53	0.000	5	53	0.000
18:00 - 19:00	5	53	0.000	5	53	0.000	5	53	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.000	5	53	0.015	5	53	0.015
08:00 - 09:00	5	53	0.000	5	53	0.019	5	53	0.019
09:00 - 10:00	5	53	0.000	5	53	0.004	5	53	0.004
10:00 - 11:00	5	53	0.008	5	53	0.000	5	53	0.008
11:00 - 12:00	5	53	0.004	5	53	0.008	5	53	0.012
12:00 - 13:00	5	53	0.004	5	53	0.000	5	53	0.004
13:00 - 14:00	5	53	0.008	5	53	0.000	5	53	0.008
14:00 - 15:00	5	53	0.004	5	53	0.000	5	53	0.004
15:00 - 16:00	5	53	0.008	5	53	0.000	5	53	0.008
16:00 - 17:00	5	53	0.008	5	53	0.000	5	53	0.008
17:00 - 18:00	5	53	0.000	5	53	0.004	5	53	0.004
18:00 - 19:00	5	53	0.011	5	53	0.000	5	53	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.055			0.050			0.105

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.



TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS

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	5	53	0.113	5	53	0.600	5	53	0.713
08:00 - 09:00	5	53	0.147	5	53	0.675	5	53	0.822
09:00 - 10:00	5	53	0.245	5	53	0.279	5	53	0.524
10:00 - 11:00	5	53	0.170	5	53	0.245	5	53	0.415
11:00 - 12:00	5	53	0.245	5	53	0.325	5	53	0.570
12:00 - 13:00	5	53	0.313	5	53	0.298	5	53	0.611
13:00 - 14:00	5	53	0.279	5	53	0.253	5	53	0.532
14:00 - 15:00	5	53	0.279	5	53	0.325	5	53	0.604
15:00 - 16:00	5	53	0.423	5	53	0.275	5	53	0.698
16:00 - 17:00	5	53	0.574	5	53	0.283	5	53	0.857
17:00 - 18:00	5	53	0.638	5	53	0.275	5	53	0.913
18:00 - 19:00	5	53	0.540	5	53	0.242	5	53	0.782
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.966			4.075			8.041

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

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	5	53	0.008	5	53	0.091	5	53	0.099
08:00 - 09:00	5	53	0.060	5	53	0.128	5	53	0.188
09:00 - 10:00	5	53	0.083	5	53	0.057	5	53	0.140
10:00 - 11:00	5	53	0.049	5	53	0.068	5	53	0.117
11:00 - 12:00	5	53	0.068	5	53	0.023	5	53	0.091
12:00 - 13:00	5	53	0.026	5	53	0.049	5	53	0.075
13:00 - 14:00	5	53	0.068	5	53	0.057	5	53	0.125
14:00 - 15:00	5	53	0.064	5	53	0.030	5	53	0.094
15:00 - 16:00	5	53	0.125	5	53	0.072	5	53	0.197
16:00 - 17:00	5	53	0.079	5	53	0.042	5	53	0.121
17:00 - 18:00	5	53	0.042	5	53	0.049	5	53	0.091
18:00 - 19:00	5	53	0.060	5	53	0.045	5	53	0.105
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.732			0.711			1.443

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL BUS/TRAM PASSENGERS

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	5	53	0.000	5	53	0.030	5	53	0.030
08:00 - 09:00	5	53	0.004	5	53	0.079	5	53	0.083
09:00 - 10:00	5	53	0.011	5	53	0.038	5	53	0.049
10:00 - 11:00	5	53	0.023	5	53	0.015	5	53	0.038
11:00 - 12:00	5	53	0.011	5	53	0.000	5	53	0.011
12:00 - 13:00	5	53	0.011	5	53	0.019	5	53	0.030
13:00 - 14:00	5	53	0.004	5	53	0.008	5	53	0.012
14:00 - 15:00	5	53	0.011	5	53	0.015	5	53	0.026
15:00 - 16:00	5	53	0.030	5	53	0.023	5	53	0.053
16:00 - 17:00	5	53	0.034	5	53	0.000	5	53	0.034
17:00 - 18:00	5	53	0.015	5	53	0.008	5	53	0.023
18:00 - 19:00	5	53	0.026	5	53	0.011	5	53	0.037
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.180			0.246			0.426

*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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL RAIL PASSENGERS

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	5	53	0.000	5	53	0.045	5	53	0.045
08:00 - 09:00	5	53	0.000	5	53	0.064	5	53	0.064
09:00 - 10:00	5	53	0.000	5	53	0.011	5	53	0.011
10:00 - 11:00	5	53	0.000	5	53	0.000	5	53	0.000
11:00 - 12:00	5	53	0.000	5	53	0.000	5	53	0.000
12:00 - 13:00	5	53	0.004	5	53	0.000	5	53	0.004
13:00 - 14:00	5	53	0.000	5	53	0.000	5	53	0.000
14:00 - 15:00	5	53	0.000	5	53	0.004	5	53	0.004
15:00 - 16:00	5	53	0.004	5	53	0.000	5	53	0.004
16:00 - 17:00	5	53	0.026	5	53	0.000	5	53	0.026
17:00 - 18:00	5	53	0.057	5	53	0.000	5	53	0.057
18:00 - 19:00	5	53	0.060	5	53	0.008	5	53	0.068
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.151			0.132			0.283

*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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

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	5	53	0.000	5	53	0.075	5	53	0.075
08:00 - 09:00	5	53	0.004	5	53	0.143	5	53	0.147
09:00 - 10:00	5	53	0.011	5	53	0.049	5	53	0.060
10:00 - 11:00	5	53	0.023	5	53	0.015	5	53	0.038
11:00 - 12:00	5	53	0.011	5	53	0.000	5	53	0.011
12:00 - 13:00	5	53	0.015	5	53	0.019	5	53	0.034
13:00 - 14:00	5	53	0.004	5	53	0.008	5	53	0.012
14:00 - 15:00	5	53	0.011	5	53	0.019	5	53	0.030
15:00 - 16:00	5	53	0.034	5	53	0.023	5	53	0.057
16:00 - 17:00	5	53	0.060	5	53	0.000	5	53	0.060
17:00 - 18:00	5	53	0.072	5	53	0.008	5	53	0.080
18:00 - 19:00	5	53	0.087	5	53	0.019	5	53	0.106
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.332			0.378			0.710

*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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.75

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	5	53	0.121	5	53	0.781	5	53	0.902
08:00 - 09:00	5	53	0.211	5	53	0.966	5	53	1.177
09:00 - 10:00	5	53	0.340	5	53	0.389	5	53	0.729
10:00 - 11:00	5	53	0.249	5	53	0.328	5	53	0.577
11:00 - 12:00	5	53	0.328	5	53	0.355	5	53	0.683
12:00 - 13:00	5	53	0.358	5	53	0.366	5	53	0.724
13:00 - 14:00	5	53	0.358	5	53	0.317	5	53	0.675
14:00 - 15:00	5	53	0.358	5	53	0.374	5	53	0.732
15:00 - 16:00	5	53	0.589	5	53	0.370	5	53	0.959
16:00 - 17:00	5	53	0.721	5	53	0.325	5	53	1.046
17:00 - 18:00	5	53	0.751	5	53	0.336	5	53	1.087
18:00 - 19:00	5	53	0.698	5	53	0.306	5	53	1.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.082			5.213			10.295

*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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.072	5	53	0.358	5	53	0.430
08:00 - 09:00	5	53	0.109	5	53	0.434	5	53	0.543
09:00 - 10:00	5	53	0.140	5	53	0.174	5	53	0.314
10:00 - 11:00	5	53	0.098	5	53	0.147	5	53	0.245
11:00 - 12:00	5	53	0.147	5	53	0.185	5	53	0.332
12:00 - 13:00	5	53	0.215	5	53	0.200	5	53	0.415
13:00 - 14:00	5	53	0.196	5	53	0.155	5	53	0.351
14:00 - 15:00	5	53	0.204	5	53	0.230	5	53	0.434
15:00 - 16:00	5	53	0.245	5	53	0.166	5	53	0.411
16:00 - 17:00	5	53	0.347	5	53	0.151	5	53	0.498
17:00 - 18:00	5	53	0.411	5	53	0.177	5	53	0.588
18:00 - 19:00	5	53	0.355	5	53	0.147	5	53	0.502
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.539			2.524			5.063

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.004	5	53	0.015	5	53	0.019
08:00 - 09:00	5	53	0.019	5	53	0.019	5	53	0.038
09:00 - 10:00	5	53	0.023	5	53	0.011	5	53	0.034
10:00 - 11:00	5	53	0.038	5	53	0.038	5	53	0.076
11:00 - 12:00	5	53	0.004	5	53	0.038	5	53	0.042
12:00 - 13:00	5	53	0.030	5	53	0.011	5	53	0.041
13:00 - 14:00	5	53	0.026	5	53	0.026	5	53	0.052
14:00 - 15:00	5	53	0.008	5	53	0.026	5	53	0.034
15:00 - 16:00	5	53	0.015	5	53	0.023	5	53	0.038
16:00 - 17:00	5	53	0.026	5	53	0.011	5	53	0.037
17:00 - 18:00	5	53	0.038	5	53	0.015	5	53	0.053
18:00 - 19:00	5	53	0.019	5	53	0.011	5	53	0.030
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.250			0.244			0.494

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.



TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
 MULTI-MODAL MOTOR CYCLES  
 Calculation factor: 1 DWELLS  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	53	0.000	5	53	0.008	5	53	0.008
08:00 - 09:00	5	53	0.000	5	53	0.004	5	53	0.004
09:00 - 10:00	5	53	0.008	5	53	0.004	5	53	0.012
10:00 - 11:00	5	53	0.008	5	53	0.000	5	53	0.008
11:00 - 12:00	5	53	0.000	5	53	0.000	5	53	0.000
12:00 - 13:00	5	53	0.004	5	53	0.000	5	53	0.004
13:00 - 14:00	5	53	0.000	5	53	0.000	5	53	0.000
14:00 - 15:00	5	53	0.000	5	53	0.000	5	53	0.000
15:00 - 16:00	5	53	0.000	5	53	0.004	5	53	0.004
16:00 - 17:00	5	53	0.011	5	53	0.004	5	53	0.015
17:00 - 18:00	5	53	0.000	5	53	0.000	5	53	0.000
18:00 - 19:00	5	53	0.000	5	53	0.000	5	53	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.031			0.024			0.055

*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.*

Calculation Reference: AUDIT-656801-220302-0356

#### TRIP RATE CALCULATION SELECTION PARAMETERS:

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

##### Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
14	LEINSTER	
	LU LOUTH	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: No of Dwellings  
 Actual Range: 14 to 51 (units: )  
 Range Selected by User: 6 to 493 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

##### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 30/06/21

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

##### Selected survey days:

Monday	2 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

##### Selected survey types:

Manual count	5 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)	2

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

##### Selected Location Sub Categories:

Residential Zone	4
Built-Up 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:

C3 5 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 2 days

10,001 to 15,000 3 days

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

Population within 5 miles:

25,001 to 50,000 2 days

50,001 to 75,000 3 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 5 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 5 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 5 days

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

LIST OF SITES relevant to selection parameters

1	DC-03-C-02 PALM COURT WEYMOUTH SPA ROAD Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: <i>Survey date: FRIDAY</i>	FLATS IN BLOCKS      14 28/03/14	DORSET	<i>Survey Type: MANUAL</i>
2	LU-03-C-02 NICHOLAS STREET DUNDALK  Edge of Town Centre Residential Zone Total No of Dwellings: <i>Survey date: MONDAY</i>	BLOCK OF FLATS     33 16/09/13	LOUTH	<i>Survey Type: MANUAL</i>
3	LU-03-C-03 NICHOLAS STREET DUNDALK  Edge of Town Centre Residential Zone Total No of Dwellings: <i>Survey date: MONDAY</i>	BLOCK OF FLATS     20 16/09/13	LOUTH	<i>Survey Type: MANUAL</i>
4	NF-03-C-01 PAGE STAIR LANE KING'S LYNN  Edge of Town Centre Built-Up Zone Total No of Dwellings: <i>Survey date: THURSDAY</i>	BLOCKS OF FLATS     51 11/12/14	NORFOLK	<i>Survey Type: MANUAL</i>
5	SF-03-C-03 TOLLGATE LANE BURY ST EDMUNDS  Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: <i>Survey date: WEDNESDAY</i>	BLOCKS OF FLATS     30 03/12/14	SUFFOLK	<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

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.97

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	5	30	0.095	5	30	0.115	5	30	0.210
08:00 - 09:00	5	30	0.054	5	30	0.135	5	30	0.189
09:00 - 10:00	5	30	0.135	5	30	0.135	5	30	0.270
10:00 - 11:00	5	30	0.095	5	30	0.122	5	30	0.217
11:00 - 12:00	5	30	0.128	5	30	0.095	5	30	0.223
12:00 - 13:00	5	30	0.088	5	30	0.101	5	30	0.189
13:00 - 14:00	5	30	0.115	5	30	0.115	5	30	0.230
14:00 - 15:00	5	30	0.135	5	30	0.122	5	30	0.257
15:00 - 16:00	5	30	0.115	5	30	0.108	5	30	0.223
16:00 - 17:00	5	30	0.068	5	30	0.101	5	30	0.169
17:00 - 18:00	5	30	0.216	5	30	0.128	5	30	0.344
18:00 - 19:00	5	30	0.135	5	30	0.115	5	30	0.250
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.379			1.392			2.771

*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: 14 - 51 (units: )  
 Survey date range: 01/01/13 - 30/06/21  
 Number of weekdays (Monday-Friday): 5  
 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.*

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

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	30	0.007	5	30	0.007	5	30	0.014
08:00 - 09:00	5	30	0.000	5	30	0.000	5	30	0.000
09:00 - 10:00	5	30	0.007	5	30	0.007	5	30	0.014
10:00 - 11:00	5	30	0.000	5	30	0.000	5	30	0.000
11:00 - 12:00	5	30	0.000	5	30	0.000	5	30	0.000
12:00 - 13:00	5	30	0.000	5	30	0.000	5	30	0.000
13:00 - 14:00	5	30	0.000	5	30	0.000	5	30	0.000
14:00 - 15:00	5	30	0.007	5	30	0.007	5	30	0.014
15:00 - 16:00	5	30	0.000	5	30	0.000	5	30	0.000
16:00 - 17:00	5	30	0.000	5	30	0.000	5	30	0.000
17:00 - 18:00	5	30	0.007	5	30	0.007	5	30	0.014
18:00 - 19:00	5	30	0.000	5	30	0.000	5	30	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.028			0.028			0.056

*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.*

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	30	0.000	5	30	0.007	5	30	0.007
08:00 - 09:00	5	30	0.000	5	30	0.000	5	30	0.000
09:00 - 10:00	5	30	0.014	5	30	0.007	5	30	0.021
10:00 - 11:00	5	30	0.000	5	30	0.007	5	30	0.007
11:00 - 12:00	5	30	0.000	5	30	0.000	5	30	0.000
12:00 - 13:00	5	30	0.007	5	30	0.007	5	30	0.014
13:00 - 14:00	5	30	0.007	5	30	0.007	5	30	0.014
14:00 - 15:00	5	30	0.007	5	30	0.007	5	30	0.014
15:00 - 16:00	5	30	0.007	5	30	0.000	5	30	0.007
16:00 - 17:00	5	30	0.000	5	30	0.007	5	30	0.007
17:00 - 18:00	5	30	0.000	5	30	0.000	5	30	0.000
18:00 - 19:00	5	30	0.000	5	30	0.000	5	30	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.042			0.049			0.091

*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.*

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

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	30	0.007	5	30	0.000	5	30	0.007
08:00 - 09:00	5	30	0.014	5	30	0.014	5	30	0.028
09:00 - 10:00	5	30	0.007	5	30	0.000	5	30	0.007
10:00 - 11:00	5	30	0.000	5	30	0.007	5	30	0.007
11:00 - 12:00	5	30	0.007	5	30	0.000	5	30	0.007
12:00 - 13:00	5	30	0.000	5	30	0.007	5	30	0.007
13:00 - 14:00	5	30	0.000	5	30	0.007	5	30	0.007
14:00 - 15:00	5	30	0.000	5	30	0.000	5	30	0.000
15:00 - 16:00	5	30	0.014	5	30	0.014	5	30	0.028
16:00 - 17:00	5	30	0.014	5	30	0.007	5	30	0.021
17:00 - 18:00	5	30	0.000	5	30	0.000	5	30	0.000
18:00 - 19:00	5	30	0.000	5	30	0.000	5	30	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.063			0.056			0.119

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.



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

MULTI-MODAL VEHICLE OCCUPANTS

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	5	30	0.128	5	30	0.149	5	30	0.277
08:00 - 09:00	5	30	0.074	5	30	0.182	5	30	0.256
09:00 - 10:00	5	30	0.182	5	30	0.176	5	30	0.358
10:00 - 11:00	5	30	0.122	5	30	0.182	5	30	0.304
11:00 - 12:00	5	30	0.196	5	30	0.128	5	30	0.324
12:00 - 13:00	5	30	0.128	5	30	0.149	5	30	0.277
13:00 - 14:00	5	30	0.155	5	30	0.142	5	30	0.297
14:00 - 15:00	5	30	0.142	5	30	0.209	5	30	0.351
15:00 - 16:00	5	30	0.149	5	30	0.149	5	30	0.298
16:00 - 17:00	5	30	0.074	5	30	0.135	5	30	0.209
17:00 - 18:00	5	30	0.284	5	30	0.162	5	30	0.446
18:00 - 19:00	5	30	0.216	5	30	0.182	5	30	0.398
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.850			1.945			3.795

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.

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

MULTI-MODAL PEDESTRIANS

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	5	30	0.000	5	30	0.034	5	30	0.034
08:00 - 09:00	5	30	0.027	5	30	0.074	5	30	0.101
09:00 - 10:00	5	30	0.074	5	30	0.061	5	30	0.135
10:00 - 11:00	5	30	0.020	5	30	0.034	5	30	0.054
11:00 - 12:00	5	30	0.061	5	30	0.027	5	30	0.088
12:00 - 13:00	5	30	0.034	5	30	0.034	5	30	0.068
13:00 - 14:00	5	30	0.081	5	30	0.054	5	30	0.135
14:00 - 15:00	5	30	0.068	5	30	0.041	5	30	0.109
15:00 - 16:00	5	30	0.068	5	30	0.034	5	30	0.102
16:00 - 17:00	5	30	0.054	5	30	0.054	5	30	0.108
17:00 - 18:00	5	30	0.115	5	30	0.101	5	30	0.216
18:00 - 19:00	5	30	0.034	5	30	0.014	5	30	0.048
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.636			0.562			1.198

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.

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

MULTI-MODAL BUS/TRAM PASSENGERS

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	5	30	0.000	5	30	0.034	5	30	0.034
08:00 - 09:00	5	30	0.000	5	30	0.074	5	30	0.074
09:00 - 10:00	5	30	0.000	5	30	0.007	5	30	0.007
10:00 - 11:00	5	30	0.000	5	30	0.000	5	30	0.000
11:00 - 12:00	5	30	0.007	5	30	0.007	5	30	0.014
12:00 - 13:00	5	30	0.014	5	30	0.007	5	30	0.021
13:00 - 14:00	5	30	0.000	5	30	0.000	5	30	0.000
14:00 - 15:00	5	30	0.014	5	30	0.007	5	30	0.021
15:00 - 16:00	5	30	0.020	5	30	0.007	5	30	0.027
16:00 - 17:00	5	30	0.027	5	30	0.000	5	30	0.027
17:00 - 18:00	5	30	0.027	5	30	0.000	5	30	0.027
18:00 - 19:00	5	30	0.027	5	30	0.000	5	30	0.027
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.136			0.143			0.279

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
 MULTI-MODAL TOTAL RAIL PASSENGERS  
 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	5	30	0.000	5	30	0.014	5	30	0.014
08:00 - 09:00	5	30	0.000	5	30	0.007	5	30	0.007
09:00 - 10:00	5	30	0.000	5	30	0.007	5	30	0.007
10:00 - 11:00	5	30	0.007	5	30	0.007	5	30	0.014
11:00 - 12:00	5	30	0.000	5	30	0.007	5	30	0.007
12:00 - 13:00	5	30	0.000	5	30	0.000	5	30	0.000
13:00 - 14:00	5	30	0.000	5	30	0.000	5	30	0.000
14:00 - 15:00	5	30	0.000	5	30	0.000	5	30	0.000
15:00 - 16:00	5	30	0.007	5	30	0.000	5	30	0.007
16:00 - 17:00	5	30	0.007	5	30	0.000	5	30	0.007
17:00 - 18:00	5	30	0.020	5	30	0.000	5	30	0.020
18:00 - 19:00	5	30	0.000	5	30	0.000	5	30	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.041			0.042			0.083

*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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED  
 MULTI-MODAL PUBLIC TRANSPORT USERS  
 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	5	30	0.000	5	30	0.047	5	30	0.047
08:00 - 09:00	5	30	0.000	5	30	0.081	5	30	0.081
09:00 - 10:00	5	30	0.000	5	30	0.014	5	30	0.014
10:00 - 11:00	5	30	0.007	5	30	0.007	5	30	0.014
11:00 - 12:00	5	30	0.007	5	30	0.014	5	30	0.021
12:00 - 13:00	5	30	0.014	5	30	0.007	5	30	0.021
13:00 - 14:00	5	30	0.000	5	30	0.000	5	30	0.000
14:00 - 15:00	5	30	0.014	5	30	0.007	5	30	0.021
15:00 - 16:00	5	30	0.027	5	30	0.007	5	30	0.034
16:00 - 17:00	5	30	0.034	5	30	0.000	5	30	0.034
17:00 - 18:00	5	30	0.047	5	30	0.000	5	30	0.047
18:00 - 19:00	5	30	0.027	5	30	0.000	5	30	0.027
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.177			0.184			0.361

*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.*

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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.97

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	5	30	0.135	5	30	0.230	5	30	0.365
08:00 - 09:00	5	30	0.115	5	30	0.351	5	30	0.466
09:00 - 10:00	5	30	0.264	5	30	0.250	5	30	0.514
10:00 - 11:00	5	30	0.149	5	30	0.230	5	30	0.379
11:00 - 12:00	5	30	0.270	5	30	0.169	5	30	0.439
12:00 - 13:00	5	30	0.176	5	30	0.196	5	30	0.372
13:00 - 14:00	5	30	0.236	5	30	0.203	5	30	0.439
14:00 - 15:00	5	30	0.223	5	30	0.257	5	30	0.480
15:00 - 16:00	5	30	0.257	5	30	0.203	5	30	0.460
16:00 - 17:00	5	30	0.176	5	30	0.196	5	30	0.372
17:00 - 18:00	5	30	0.446	5	30	0.264	5	30	0.710
18:00 - 19:00	5	30	0.277	5	30	0.196	5	30	0.473
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.724			2.745			5.469

*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.*

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

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	30	0.074	5	30	0.095	5	30	0.169
08:00 - 09:00	5	30	0.047	5	30	0.128	5	30	0.175
09:00 - 10:00	5	30	0.081	5	30	0.095	5	30	0.176
10:00 - 11:00	5	30	0.088	5	30	0.095	5	30	0.183
11:00 - 12:00	5	30	0.088	5	30	0.068	5	30	0.156
12:00 - 13:00	5	30	0.081	5	30	0.095	5	30	0.176
13:00 - 14:00	5	30	0.095	5	30	0.095	5	30	0.190
14:00 - 15:00	5	30	0.101	5	30	0.095	5	30	0.196
15:00 - 16:00	5	30	0.088	5	30	0.088	5	30	0.176
16:00 - 17:00	5	30	0.061	5	30	0.061	5	30	0.122
17:00 - 18:00	5	30	0.196	5	30	0.108	5	30	0.304
18:00 - 19:00	5	30	0.122	5	30	0.095	5	30	0.217
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.122			1.118			2.240

*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.*

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	30	0.014	5	30	0.007	5	30	0.021
08:00 - 09:00	5	30	0.007	5	30	0.007	5	30	0.014
09:00 - 10:00	5	30	0.034	5	30	0.027	5	30	0.061
10:00 - 11:00	5	30	0.007	5	30	0.020	5	30	0.027
11:00 - 12:00	5	30	0.041	5	30	0.027	5	30	0.068
12:00 - 13:00	5	30	0.000	5	30	0.000	5	30	0.000
13:00 - 14:00	5	30	0.014	5	30	0.014	5	30	0.028
14:00 - 15:00	5	30	0.020	5	30	0.014	5	30	0.034
15:00 - 16:00	5	30	0.020	5	30	0.020	5	30	0.040
16:00 - 17:00	5	30	0.007	5	30	0.034	5	30	0.041
17:00 - 18:00	5	30	0.014	5	30	0.014	5	30	0.028
18:00 - 19:00	5	30	0.014	5	30	0.020	5	30	0.034
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.192			0.204			0.396

*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.*



Calculation Reference: AUDIT-656801-220302-0327

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION  
Category : D - NURSERY  
TOTAL VEHICLES

## Selected regions and areas:

04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
09	NORTH	
	TV TEES VALLEY	1 days
11	SCOTLAND	
	SR STIRLING	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:	Number of pupils
Actual Range:	25 to 110 (units: )
Range Selected by User:	18 to 450 (units: )

Parking Spaces Range: All Surveys Included

## Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 06/05/21

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

## Selected survey days:

Monday	1 days
Wednesday	1 days
Friday	2 days

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

## Selected survey types:

Manual count	4 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
Edge of Town	3

*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	3
No Sub Category	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(f) 4 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 2 days

15,001 to 20,000 2 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

75,001 to 100,000 3 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 2 days

1.1 to 1.5 2 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 4 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 4 days

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

LIST OF SITES relevant to selection parameters

1	SF-04-D-03 CAMP ROAD LOWESTOFT	NURSERY		SUFFOLK
	Edge of Town Centre Residential Zone Total Number of pupils:		110	
	Survey date: WEDNESDAY		10/12/14	Survey Type: MANUAL
2	SR-04-D-01 HENDERSON STREET STIRLING BRIDGE OF ALLAN	NURSERY		STIRLING
	Edge of Town No Sub Category Total Number of pupils:		30	
	Survey date: MONDAY		16/06/14	Survey Type: MANUAL
3	TV-04-D-01 COTSWOLD DRIVE REDCAR	NURSERY		TEES VALLEY
	Edge of Town Residential Zone Total Number of pupils:		25	
	Survey date: FRIDAY		19/05/17	Survey Type: MANUAL
4	WK-04-D-01 THE RIDGEWAY STRATFORD UPON AVON	NURSERY		WARWICKSHIRE
	Edge of Town Residential Zone Total Number of pupils:		61	
	Survey date: FRIDAY		29/06/18	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 04 - EDUCATION/D - NURSERY

TOTAL VEHICLES

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.102	4	57	0.009	4	57	0.111
08:00 - 09:00	4	57	0.212	4	57	0.186	4	57	0.398
09:00 - 10:00	4	57	0.106	4	57	0.080	4	57	0.186
10:00 - 11:00	4	57	0.084	4	57	0.040	4	57	0.124
11:00 - 12:00	4	57	0.053	4	57	0.040	4	57	0.093
12:00 - 13:00	4	57	0.080	4	57	0.142	4	57	0.222
13:00 - 14:00	4	57	0.031	4	57	0.071	4	57	0.102
14:00 - 15:00	4	57	0.027	4	57	0.031	4	57	0.058
15:00 - 16:00	4	57	0.053	4	57	0.062	4	57	0.115
16:00 - 17:00	4	57	0.044	4	57	0.053	4	57	0.097
17:00 - 18:00	4	57	0.159	4	57	0.181	4	57	0.340
18:00 - 19:00	3	67	0.005	3	67	0.085	3	67	0.090
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.956			0.980			1.936

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: 25 - 110 (units: )  
Survey date range: 01/01/13 - 06/05/21  
Number of weekdays (Monday-Friday): 4  
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.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

TAXIS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.000	4	57	0.000	4	57	0.000
08:00 - 09:00	4	57	0.013	4	57	0.004	4	57	0.017
09:00 - 10:00	4	57	0.000	4	57	0.009	4	57	0.009
10:00 - 11:00	4	57	0.000	4	57	0.000	4	57	0.000
11:00 - 12:00	4	57	0.004	4	57	0.004	4	57	0.008
12:00 - 13:00	4	57	0.000	4	57	0.000	4	57	0.000
13:00 - 14:00	4	57	0.000	4	57	0.000	4	57	0.000
14:00 - 15:00	4	57	0.000	4	57	0.000	4	57	0.000
15:00 - 16:00	4	57	0.000	4	57	0.000	4	57	0.000
16:00 - 17:00	4	57	0.000	4	57	0.000	4	57	0.000
17:00 - 18:00	4	57	0.000	4	57	0.000	4	57	0.000
18:00 - 19:00	3	67	0.000	3	67	0.000	3	67	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

*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.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

OGVS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.000	4	57	0.000	4	57	0.000
08:00 - 09:00	4	57	0.000	4	57	0.000	4	57	0.000
09:00 - 10:00	4	57	0.009	4	57	0.009	4	57	0.018
10:00 - 11:00	4	57	0.004	4	57	0.000	4	57	0.004
11:00 - 12:00	4	57	0.000	4	57	0.004	4	57	0.004
12:00 - 13:00	4	57	0.004	4	57	0.004	4	57	0.008
13:00 - 14:00	4	57	0.000	4	57	0.000	4	57	0.000
14:00 - 15:00	4	57	0.000	4	57	0.000	4	57	0.000
15:00 - 16:00	4	57	0.000	4	57	0.000	4	57	0.000
16:00 - 17:00	4	57	0.000	4	57	0.000	4	57	0.000
17:00 - 18:00	4	57	0.000	4	57	0.000	4	57	0.000
18:00 - 19:00	3	67	0.000	3	67	0.000	3	67	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

*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.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

CYCLISTS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.000	4	57	0.000	4	57	0.000
08:00 - 09:00	4	57	0.004	4	57	0.004	4	57	0.008
09:00 - 10:00	4	57	0.000	4	57	0.000	4	57	0.000
10:00 - 11:00	4	57	0.000	4	57	0.000	4	57	0.000
11:00 - 12:00	4	57	0.000	4	57	0.000	4	57	0.000
12:00 - 13:00	4	57	0.000	4	57	0.000	4	57	0.000
13:00 - 14:00	4	57	0.000	4	57	0.000	4	57	0.000
14:00 - 15:00	4	57	0.000	4	57	0.000	4	57	0.000
15:00 - 16:00	4	57	0.000	4	57	0.000	4	57	0.000
16:00 - 17:00	4	57	0.004	4	57	0.004	4	57	0.008
17:00 - 18:00	4	57	0.004	4	57	0.004	4	57	0.008
18:00 - 19:00	3	67	0.000	3	67	0.000	3	67	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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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TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

CARS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.102	4	57	0.009	4	57	0.111
08:00 - 09:00	4	57	0.195	4	57	0.177	4	57	0.372
09:00 - 10:00	4	57	0.097	4	57	0.062	4	57	0.159
10:00 - 11:00	4	57	0.075	4	57	0.035	4	57	0.110
11:00 - 12:00	4	57	0.040	4	57	0.022	4	57	0.062
12:00 - 13:00	4	57	0.075	4	57	0.137	4	57	0.212
13:00 - 14:00	4	57	0.031	4	57	0.071	4	57	0.102
14:00 - 15:00	4	57	0.027	4	57	0.031	4	57	0.058
15:00 - 16:00	4	57	0.049	4	57	0.062	4	57	0.111
16:00 - 17:00	4	57	0.044	4	57	0.049	4	57	0.093
17:00 - 18:00	4	57	0.159	4	57	0.181	4	57	0.340
18:00 - 19:00	3	67	0.005	3	67	0.085	3	67	0.090
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.899			0.921			1.820

*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.*



TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

LGVS

Calculation factor: 1

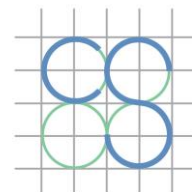
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	57	0.000	4	57	0.000	4	57	0.000
08:00 - 09:00	4	57	0.004	4	57	0.004	4	57	0.008
09:00 - 10:00	4	57	0.000	4	57	0.000	4	57	0.000
10:00 - 11:00	4	57	0.004	4	57	0.004	4	57	0.008
11:00 - 12:00	4	57	0.009	4	57	0.009	4	57	0.018
12:00 - 13:00	4	57	0.000	4	57	0.000	4	57	0.000
13:00 - 14:00	4	57	0.000	4	57	0.000	4	57	0.000
14:00 - 15:00	4	57	0.000	4	57	0.000	4	57	0.000
15:00 - 16:00	4	57	0.004	4	57	0.000	4	57	0.004
16:00 - 17:00	4	57	0.000	4	57	0.004	4	57	0.004
17:00 - 18:00	4	57	0.000	4	57	0.000	4	57	0.000
18:00 - 19:00	3	67	0.000	3	67	0.000	3	67	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.021			0.021			0.042

*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.*



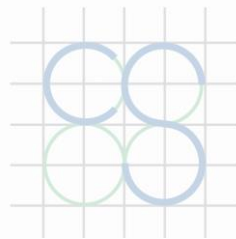


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## Appendix C

### **Traffic Flow Matrices**



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Junction Site 1 - Peak Hour Traffic Flow Matrices (Passenger Car Units)

2021 AM Peak (08:15-09:15)		SURVEYED TRAFFIC FLOWS				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	74	292	27	393
John Devoy Road (S)		72	0	69	14	155
R445 Newbridge Rd (W)		462	96	0	17	575
Pacelli Road (N)		45	11	7	0	63
TOTALS		579	181	368	58	1186

2021 PM Peak (16:45-17:45)		SURVEYED TRAFFIC FLOWS				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	43	352	36	431
John Devoy Road (S)		57	0	123	10	190
R445 Newbridge Rd (W)		296	59	0	40	395
Pacelli Road (N)		45	4	19	0	68
TOTALS		398	106	494	86	1084

2022 AM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	75	298	28	401
John Devoy Road (S)		73	0	70	14	157
R445 Newbridge Rd (W)		471	98	0	17	586
Pacelli Road (N)		46	11	7	0	64
TOTALS		590	184	375	59	1208

2022 PM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	44	359	37	440
John Devoy Road (S)		58	0	125	10	193
R445 Newbridge Rd (W)		302	60	0	41	403
Pacelli Road (N)		46	4	19	0	69
TOTALS		406	108	503	88	1105

2024 AM Peak		Other committed development flows				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	16	0	0	16
John Devoy Road (S)		87	0	81	16	184
R445 Newbridge Rd (W)		0	18	0	0	18
Pacelli Road (N)		0	2	0	0	2
TOTALS		87	36	81	16	220

2024 PM Peak		Other committed development flows				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	53	0	0	53
John Devoy Road (S)		22	0	43	3	68
R445 Newbridge Rd (W)		0	70	0	0	70
Pacelli Road (N)		0	4	0	0	4
TOTALS		22	127	43	3	195

2024 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	94	310	29	433
John Devoy Road (S)		163	0	154	31	348
R445 Newbridge Rd (W)		490	120	0	18	628
Pacelli Road (N)		48	14	7	0	69
TOTALS		701	228	471	78	1478

2024 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	99	373	38	510
John Devoy Road (S)		82	0	173	14	269
R445 Newbridge Rd (W)		314	133	0	42	489
Pacelli Road (N)		48	8	20	0	76
TOTALS		444	240	566	94	1344

2024 AM Peak		SUBJECT DEVELOPMENT FLOWS				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	4	0	0	4
John Devoy Road (S)		15	0	15	3	33
R445 Newbridge Rd (W)		0	6	0	0	6
Pacelli Road (N)		0	0	0	0	0
TOTALS		15	10	15	3	43

2024 PM Peak		SUBJECT DEVELOPMENT FLOWS				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	11	0	0	11
John Devoy Road (S)		6	0	13	1	20
R445 Newbridge Rd (W)		0	16	0	0	16
Pacelli Road (N)		0	1	0	0	1
TOTALS		6	28	13	1	48

2024 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	98	310	29	437
John Devoy Road (S)		178	0	169	34	381
R445 Newbridge Rd (W)		490	126	0	18	634
Pacelli Road (N)		48	14	7	0	69
TOTALS		716	238	486	81	1521

2024 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	110	373	38	521
John Devoy Road (S)		88	0	186	15	289
R445 Newbridge Rd (W)		314	149	0	42	505
Pacelli Road (N)		48	9	20	0	77
TOTALS		450	268	579	95	1392

2029 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	102	341	32	475
John Devoy Road (S)		171	0	162	32	365
R445 Newbridge Rd (W)		540	130	0	20	690
Pacelli Road (N)		53	15	8	0	76
TOTALS		764	247	511	84	1606

2029 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	103	411	42	556
John Devoy Road (S)		89	0	187	15	291
R445 Newbridge Rd (W)		346	139	0	47	532
Pacelli Road (N)		53	9	22	0	84
TOTALS		488	251	620	104	1463

2029 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	106	341	32	479
John Devoy Road (S)		186	0	177	35	398
R445 Newbridge Rd (W)		540	136	0	20	696
Pacelli Road (N)		53	15	8	0	76
TOTALS		779	257	526	87	1649

2029 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	114	411	42	567
John Devoy Road (S)		95	0	200	16	311
R445 Newbridge Rd (W)		346	155	0	47	548
Pacelli Road (N)		53	10	22	0	85
TOTALS		494	279	633	105	1511

2039 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	109	368	34	511
John Devoy Road (S)		178	0	168	34	380
R445 Newbridge Rd (W)		582	139	0	21	742
Pacelli Road (N)		57	16	9	0	82
TOTALS		817	264	545	89	1715

2039 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	107	444	45	596
John Devoy Road (S)		94	0	198	16	308
R445 Newbridge Rd (W)		373	144	0	50	567
Pacelli Road (N)		57	9	24	0	90
TOTALS		524	260	666	111	1561

2039 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	113	368	34	515
John Devoy Road (S)		193	0	183	37	413
R445 Newbridge Rd (W)		582	145	0	21	748
Pacelli Road (N)		57	16	9	0	82
TOTALS		832	274	560	92	1758

2039 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From	To	R445 New Row (E)	John Devoy Road (S)	R445 Newbridge Rd	Pacelli Road (N)	TOTALS
R445 New Row (E)		0	118	444	45	607
John Devoy Road (S)		100	0	211	17	328
R445 Newbridge Rd (W)		373	160	0	50	583
Pacelli Road (N)		57	10	24	0	91
TOTALS		530	288	679	112	1609

Junction Site 2 - Peak Hour Traffic Flow Matrices (Passenger Car Units)

2021 AM Peak (08:15-09:15)		SURVEYED TRAFFIC FLOWS				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	2	41	21	118	182	
Osprey Hotel (E)	26	0	0	14	40	
Osprey Hotel (SE)	21	1	0	11	33	
John Devo Road (SW)	99	20	13	0	132	
TOTALS	148	62	34	143	387	

2021		PM Peak		(16:45-17:45)		SURVEYED TRAFFIC FLOWS	
From	To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)		1	32	30	46	109	
Osprey Hotel (E)		25	0	2	16	43	
Osprey Hotel (SE)		33	0	0	9	42	
John Devo Road (SW)		131	14	11	1	157	
TOTALS		190	46	43	72	351	

2022		AM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)		
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	2	42	21	120	185	
Osprey Hotel (E)	27	0	0	14	41	
Osprey Hotel (SE)	21	1	0	11	33	
John Devo Road (SW)	101	20	13	0	134	
TOTALS	151	63	34	145	393	

2022		PM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)		
From	To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS
John Devo Road (N)		1	33	31	47	112
Osprey Hotel (E)		25	0	2	16	43
Osprey Hotel (SE)		34	0	0	9	43
John Devo Road (SW)		134	14	11	1	160
TOTALS		194	47	44	73	358

2024 AM Peak		Other committed development flows				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	0	0	0	36	36	
Osprey Hotel (E)	0	0	0	0	0	
Osprey Hotel (SE)	0	0	0	0	0	
John Devo Road (SW)	186	0	0	0	186	
TOTALS	186	0	0	36	222	

2024 PM Peak		Other committed development flows				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	0	0	0	127	127	
Osprey Hotel (E)	0	0	0	0	0	
Osprey Hotel (SE)	0	0	0	0	0	
John Devo Road (SW)	67	0	0	0	67	
TOTALS	67	0	0	127	194	

2024 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	2	43	22	161	228	
Osprey Hotel (E)	28	0	0	15	43	
Osprey Hotel (SE)	22	1	0	12	35	
John Devo Road (SW)	291	21	14	0	326	
TOTALS	343	65	36	188	632	

2024		PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)		
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	1	34	32	176	243	
Osprey Hotel (E)	27	0	2	17	46	
Osprey Hotel (SE)	35	0	0	10	45	
John Devo Road (SW)	206	15	12	1	234	
TOTALS	269	49	46	204	568	

2024 AM Peak		SUBJECT DEVELOPMENT FLOWS				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	0	0	0	11	11	
Osprey Hotel (E)	0	0	0	0	0	
Osprey Hotel (SE)	0	0	0	0	0	
John Devo Road (SW)	33	0	0	0	33	
TOTALS	33	0	0	11	44	

2024 PM Peak		SUBJECT DEVELOPMENT FLOWS				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	0	0	0	28	28	
Osprey Hotel (E)	0	0	0	0	0	
Osprey Hotel (SE)	0	0	0	0	0	
John Devo Road (SW)	20	0	0	0	20	
TOTALS	20	0	0	28	48	

2024 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	2	43	22	172	239	
Osprey Hotel (E)	28	0	0	15	43	
Osprey Hotel (SE)	22	1	0	12	35	
John Devo Road (SW)	324	21	14	0	359	
TOTALS	376	65	36	199	676	

2024		PM Peak				WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)	
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS		
John Devo Road (N)	1	34	32	204	271		
Osprey Hotel (E)	27	0	2	17	46		
Osprey Hotel (SE)	35	0	0	10	45		
John Devo Road (SW)	226	15	12	1	254		
TOTALS	289	49	46	232	616		

2029		AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)		
From	To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS
John Devo Road (N)		2	48	25	174	249
Osprey Hotel (E)		30	0	0	16	46
Osprey Hotel (SE)		25	1	0	13	39
John Devo Road (SW)		302	23	15	0	340
TOTALS		359	72	40	203	674

2029		PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)		
From	To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS
John Devo Road (N)		1	37	35	181	254
Osprey Hotel (E)		29	0	2	19	50
Osprey Hotel (SE)		39	0	0	11	50
John Devo Road (SW)		220	16	13	1	250
TOTALS		289	53	50	212	604

2029 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	2	48	25	185	260	
Osprey Hotel (E)	30	0	0	16	46	
Osprey Hotel (SE)	25	1	0	13	39	
John Devo Road (SW)	335	23	15	0	373	
TOTALS	392	72	40	214	718	

2029		PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)		
From	To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS
John Devo Road (N)		1	37	35	209	282
Osprey Hotel (E)		29	0	2	19	50
Osprey Hotel (SE)		39	0	0	11	50
John Devo Road (SW)		240	16	13	1	270
TOTALS		309	53	50	240	652

2039 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	3	52	26	185	266	
Osprey Hotel (E)	33	0	0	18	51	
Osprey Hotel (SE)	26	1	0	14	41	
John Devo Road (SW)	311	25	16	0	352	
TOTALS	373	78	42	217	710	

2039		PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)		
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	1	40	38	185	264	
Osprey Hotel (E)	32	0	3	20	55	
Osprey Hotel (SE)	42	0	0	11	53	
John Devo Road (SW)	232	18	14	1	265	
TOTALS	307	58	55	217	637	

2039 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)				
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS	
John Devo Road (N)	3	52	26	196	277	
Osprey Hotel (E)	33	0	0	18	51	
Osprey Hotel (SE)	26	1	0	14	41	
John Devo Road (SW)	344	25	16	0	385	
TOTALS	406	78	42	228	754	

2039		PM Peak					WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)	
From \ To	John Devo Road (N)	Osprey Hotel (E)	Osprey Hotel (SE)	John Devo Road (SW)	TOTALS			
John Devo Road (N)	1	40	38	213	292			
Osprey Hotel (E)	32	0	3	20	55			
Osprey Hotel (SE)	42	0	0	11	53			
John Devo Road (SW)	252	18	14	1	285			
TOTALS	327	58	55	245	685			

## Junction Site 3 - Peak Hour Traffic Flow Matrices (Passenger Car Units)

2021 AM Peak (08:15-09:15)		SURVEYED TRAFFIC FLOWS			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	51	126	177
KCC Car Park		5	0	6	11
John Devo Road (N)		87	55	0	142
TOTALS		92	106	132	330

2021 PM Peak (16:45-17:45)		SURVEYED TRAFFIC FLOWS			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	113	114
KCC Car Park		36	0	46	82
John Devo Road (N)		68	5	0	73
TOTALS		104	6	159	269

2022 AM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	52	128	180
KCC Car Park		5	0	6	11
John Devo Road (N)		89	56	0	145
TOTALS		94	108	134	336

2022 PM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	115	116
KCC Car Park		37	0	47	84
John Devo Road (N)		69	5	0	74
TOTALS		106	6	162	274

2024 AM Peak		Other committed development flows			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	0	186	186
KCC Car Park		0	0	0	0
John Devo Road (N)		36	0	0	36
TOTALS		36	0	186	222

2024 PM Peak		Other committed development flows			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	0	67	67
KCC Car Park		0	0	0	0
John Devo Road (N)		127	0	0	127
TOTALS		127	0	67	194

2024 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	54	320	374
KCC Car Park		5	0	6	11
John Devo Road (N)		128	58	0	186
TOTALS		133	112	326	571

2024 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	187	188
KCC Car Park		38	0	49	87
John Devo Road (N)		199	5	0	204
TOTALS		237	6	236	479

2024 AM Peak		SUBJECT DEVELOPMENT FLOWS			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	0	33	33
KCC Car Park		0	0	0	0
John Devo Road (N)		11	0	0	11
TOTALS		11	0	33	44

2024 PM Peak		SUBJECT DEVELOPMENT FLOWS			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	0	20	20
KCC Car Park		0	0	0	0
John Devo Road (N)		28	0	0	28
TOTALS		28	0	20	48

2024 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	54	353	407
KCC Car Park		5	0	6	11
John Devo Road (N)		139	58	0	197
TOTALS		144	112	359	615

2024 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	207	208
KCC Car Park		38	0	49	87
John Devo Road (N)		227	5	0	232
TOTALS		265	6	256	527

2029 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	60	333	393
KCC Car Park		6	0	7	13
John Devo Road (N)		138	64	0	202
TOTALS		144	124	340	608

2029 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	199	200
KCC Car Park		42	0	54	96
John Devo Road (N)		206	6	0	212
TOTALS		248	7	253	508

2029 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	60	366	426
KCC Car Park		6	0	7	13
John Devo Road (N)		149	64	0	213
TOTALS		155	124	373	652

2029 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	219	220
KCC Car Park		42	0	54	96
John Devo Road (N)		234	6	0	240
TOTALS		276	7	273	556

2039 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	64	345	409
KCC Car Park		6	0	8	14
John Devo Road (N)		146	69	0	215
TOTALS		152	133	353	638

2039 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	209	210
KCC Car Park		45	0	58	103
John Devo Road (N)		213	6	0	219
TOTALS		258	7	267	532

2039 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	64	378	442
KCC Car Park		6	0	8	14
John Devo Road (N)		157	69	0	226
TOTALS		163	133	386	682

2039 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	To	John Devo Road (S)	KCC Car Park	John Devo Road (N)	TOTALS
John Devo Road (S)		0	1	229	230
KCC Car Park		45	0	58	103
John Devo Road (N)		241	6	0	247
TOTALS		286	7	287	580

Junction Site 4 - Peak Hour Traffic Flow Matrices (Passenger Car Units)

2021 AM Peak (08:15-09:15)		SURVEYED TRAFFIC FLOWS			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	93	0	93	
John Devoy Road (SE)	178	1	0	179	
Development Access (W)	0	0	0	0	
TOTALS	178	94	0	272	

2021 PM Peak (16:45-17:45)		SURVEYED TRAFFIC FLOWS		
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS
John Devoy Road (NE)	3	102	0	105
John Devoy Road (SE)	112	3	0	115
Development Access (W)	0	0	0	0
TOTALS	115	105	0	220

2022 AM Peak		BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	95	0	95	
John Devoy Road (SE)	182	1	0	183	
Development Access (W)	0	0	0	0	
TOTALS	182	96	0	278	

2022		PM Peak				BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)	
From	To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS		
John Devoy Road (NE)		3	104	0	107		
John Devoy Road (SE)		114	3	0	117		
Development Access (W)		0	0	0	0		
TOTALS		117	107	0	224		

2024 AM Peak		Other committed development flows			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	34	0	34	
John Devoy Road (SE)	170	0	0	170	
Development Access (W)	0	0	0	0	
TOTALS	170	34	0	204	

2024 PM Peak		Other committed development flows			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	117	0	117	
John Devoy Road (SE)	62	0	0	62	
Development Access (W)	0	0	0	0	
TOTALS	62	117	0	179	

2024 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	133	0	133	
John Devoy Road (SE)	359	1	0	360	
Development Access (W)	0	0	0	0	
TOTALS	359	134	0	493	

2024 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	3	225	0	228	
John Devoy Road (SE)	181	3	0	184	
Development Access (W)	0	0	0	0	
TOTALS	184	228	0	412	

2024 AM Peak		SUBJECT DEVELOPMENT FLOWS			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	0	11	11	
John Devoy Road (SE)	0	0	20	20	
Development Access (W)	33	18	0	51	
TOTALS	33	18	31	82	

2024 PM Peak		SUBJECT DEVELOPMENT FLOWS			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	0	28	28	
John Devoy Road (SE)	0	0	30	30	
Development Access (W)	20	19	0	39	
TOTALS	20	19	58	97	

2024 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	133	11	144	
John Devoy Road (SE)	359	1	20	380	
Development Access (W)	33	18	0	51	
TOTALS	392	152	31	575	

2024 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	3	225	28	256	
John Devoy Road (SE)	181	3	30	214	
Development Access (W)	20	19	0	39	
TOTALS	204	247	58	509	

2029 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From	To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS
John Devoy Road (NE)		0	143	0	143
John Devoy Road (SE)		378	1	0	379
Development Access (W)		0	0	0	0
TOTALS		378	144	0	522

2029 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From	To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS
John Devoy Road (NE)		4	236	0	240
John Devoy Road (SE)		193	4	0	197
Development Access (W)		0	0	0	0
TOTALS		197	240	0	437

2029 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	143	11	154	
John Devoy Road (SE)	378	1	20	399	
Development Access (W)	33	18	0	51	
TOTALS	411	162	31	604	

2029 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	4	236	28	268	
John Devoy Road (SE)	193	4	30	227	
Development Access (W)	20	19	0	39	
TOTALS	217	259	58	534	

2039 AM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	151	0	151	
John Devoy Road (SE)	394	1	0	395	
Development Access (W)	0	0	0	0	
TOTALS	394	152	0	546	

2039 PM Peak		WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	4	246	0	250	
John Devoy Road (SE)	203	4	0	207	
Development Access (W)	0	0	0	0	
TOTALS	207	250	0	457	

2039 AM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	0	151	11	162	
John Devoy Road (SE)	394	1	20	415	
Development Access (W)	33	18	0	51	
TOTALS	427	170	31	628	

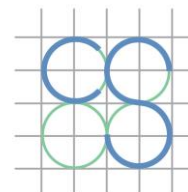
2039 PM Peak		WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)			
From \ To	John Devoy Road (NE)	John Devoy Road (SE)	Development Access (W)	TOTALS	
John Devoy Road (NE)	4	246	28	278	
John Devoy Road (SE)	203	4	30	237	
Development Access (W)	20	19	0	39	
TOTALS	227	269	58	554	



## Junction Site 5 - Peak Hour Traffic Flow Matrices (Passenger Car Units)

2021 AM Peak (08:15-09:15) SURVEYED TRAFFIC FLOWS						2021 PM Peak (16:45-17:45) SURVEYED TRAFFIC FLOWS					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	78	763	843		R447 South Ring (W)	4	64	506	574	
John Devoy Road (N)	44	2	151	197		John Devoy Road (N)	78	2	87	167	
R447 South Ring (E)	741	152	4	897		R447 South Ring (E)	639	95	4	738	
TOTALS	787	232	918	1937		TOTALS	721	161	597	1479	
2022 AM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)						2022 PM Peak BASELINE TRAFFIC FLOWS (surveyed flows + TII growth factor)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	80	778	860		R447 South Ring (W)	4	65	516	585	
John Devoy Road (N)	45	2	154	201		John Devoy Road (N)	80	2	89	171	
R447 South Ring (E)	756	155	4	915		R447 South Ring (E)	652	97	4	753	
TOTALS	803	237	936	1976		TOTALS	736	164	609	1509	
2024 AM Peak Other committed development flows						2024 PM Peak Other committed development flows					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	0	25	26	51		R447 South Ring (W)	0	56	9	65	
John Devoy Road (N)	23	0	73	96		John Devoy Road (N)	29	1	32	62	
R447 South Ring (E)	9	44	0	53		R447 South Ring (E)	19	80	0	99	
TOTALS	32	69	99	200		TOTALS	48	137	41	226	
2024 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2024 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	108	835	945		R447 South Ring (W)	4	124	545	673	
John Devoy Road (N)	70	2	233	305		John Devoy Road (N)	112	3	124	239	
R447 South Ring (E)	795	205	4	1004		R447 South Ring (E)	697	181	4	882	
TOTALS	867	315	1072	2254		TOTALS	813	308	673	1794	
2024 AM Peak SUBJECT DEVELOPMENT FLOWS						2024 PM Peak SUBJECT DEVELOPMENT FLOWS					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	0	7	0	7		R447 South Ring (W)	0	12	0	12	
John Devoy Road (N)	4	0	14	18		John Devoy Road (N)	9	0	10	19	
R447 South Ring (E)	0	13	0	13		R447 South Ring (E)	0	18	0	18	
TOTALS	4	20	14	38		TOTALS	9	30	10	49	
2024 AM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)						2024 PM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	115	835	952		R447 South Ring (W)	4	136	545	685	
John Devoy Road (N)	74	2	247	323		John Devoy Road (N)	121	3	134	258	
R447 South Ring (E)	795	218	4	1017		R447 South Ring (E)	697	199	4	900	
TOTALS	871	335	1086	2292		TOTALS	822	338	683	1843	
2029 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2029 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	116	918	1036		R447 South Ring (W)	5	131	600	736	
John Devoy Road (N)	74	2	250	326		John Devoy Road (N)	120	3	134	257	
R447 South Ring (E)	875	222	5	1102		R447 South Ring (E)	766	191	5	962	
TOTALS	951	340	1173	2464		TOTALS	891	325	739	1955	
2029 AM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)						2029 PM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	2	123	918	1043		R447 South Ring (W)	5	143	600	748	
John Devoy Road (N)	78	2	264	344		John Devoy Road (N)	129	3	144	276	
R447 South Ring (E)	875	235	5	1115		R447 South Ring (E)	766	209	5	980	
TOTALS	955	360	1187	2502		TOTALS	900	355	749	2004	
2039 AM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)						2039 PM Peak WITHOUT SUBJECT DEVELOPMENT (surveyed flows + TII growth factor + committed development)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	3	123	987	1113		R447 South Ring (W)	5	137	647	789	
John Devoy Road (N)	78	3	263	344		John Devoy Road (N)	127	4	142	273	
R447 South Ring (E)	943	236	5	1184		R447 South Ring (E)	824	200	5	1029	
TOTALS	1024	362	1255	2641		TOTALS	956	341	794	2091	
2039 AM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)						2039 PM Peak WITH SUBJECT DEVELOPMENT IN PLACE (surveyed + TII growth factor + committed dev. + subject dev.)					
From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS		From \ To	R447 South Ring (W)	John Devoy Road (N)	R447 South Ring (E)	TOTALS	
R447 South Ring (W)	3	130	987	1120		R447 South Ring (W)	5	149	647	801	
John Devoy Road (N)	82	3	277	362		John Devoy Road (N)	136	4	152	292	
R447 South Ring (E)	943	249	5	1197		R447 South Ring (E)	824	218	5	1047	
TOTALS	1028	382	1269	2679		TOTALS	965	371	804	2140	



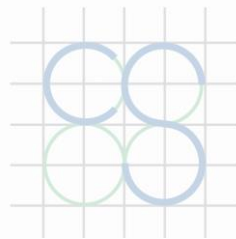


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## Appendix D

### **Modelling Outputs**



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Junctions 8							
PICADY 8 - Priority Intersection Module							
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Filename: L086 Junction 3 PICADY Model 20220314.arc8

Path: J:\L\_JOBS\Job-L086\B\_Documents\C\_Civil\A-Reports\Traffic\Traffic Modelling

Report generation date: 14/03/2022 11:43:58

## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	A1 - 2022 Baseline							
Stream B-AC	0.02	6.27	0.02	358 % [Stream C-B]	0.18	6.91	0.15	312 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.13	7.66	0.12		0.01	6.65	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2024 No Dev							
Stream B-AC	0.02	7.03	0.02	213 % [Stream C-B]	0.20	7.45	0.17	216 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.15	8.52	0.13		0.01	6.86	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2024 With Dev							
Stream B-AC	0.02	7.18	0.02	198 % [Stream C-B]	0.20	7.59	0.17	199 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.15	8.68	0.13		0.01	6.93	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2029 No Dev							
Stream B-AC	0.03	7.18	0.03	192 % [Stream C-B]	0.22	7.68	0.18	192 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.17	8.75	0.15		0.01	6.91	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2029 With Dev							
Stream B-AC	0.03	7.34	0.03	179 % [Stream C-B]	0.23	7.83	0.19	178 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.17	8.92	0.15		0.01	6.98	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2039 No Dev							
Stream B-AC	0.03	7.19	0.03	176 % [Stream C-B]	0.25	7.87	0.20	176 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.19	8.95	0.16		0.01	6.95	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
	A1 - 2039 With Dev							
Stream B-AC	0.03	7.35	0.03	164 % [Stream C-B]	0.25	8.03	0.20	163 % [Stream B-AC]
Stream C-A	-	-	-		-	-	-	
Stream C-B	0.19	9.13	0.16		0.01	7.01	0.01	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

"D1 - 2022 Baseline, AM" model duration: 08:00 - 09:30

"D2 - 2022 Baseline, PM" model duration: 08:00 - 09:30

"D3 - 2024 No Dev, AM" model duration: 08:00 - 09:30  
"D4 - 2024 No Dev, PM" model duration: 08:00 - 09:30  
"D5 - 2024 With Dev, AM" model duration: 08:00 - 09:30  
"D6 - 2024 With Dev, PM" model duration: 08:00 - 09:30  
"D7 - 2029 No Dev, AM" model duration: 08:00 - 09:30  
"D8 - 2029 No Dev, PM" model duration: 08:00 - 09:30  
"D9 - 2029 With Dev, AM" model duration: 08:00 - 09:30  
"D10 - 2029 With Dev, PM" model duration: 08:00 - 09:30  
"D15 - 2039 No Dev, AM" model duration: 08:00 - 09:30  
"D16 - 2039 No Dev, PM" model duration: 08:00 - 09:30  
"D17 - 2039 With Dev, AM" model duration: 08:00 - 09:30  
"D18 - 2039 With Dev, PM" model duration: 08:00 - 09:30

Run using Junctions 8.0.3.332 at 14/03/2022 11:43:52

File summary

File Description

Title	Devoy Barracks
Location	Naas, Co. Kildare
Site Number	3
Date	14/03/2022
Version	
Status	
Identifier	
Client	
Jobnumber	L086
Enumerator	GF
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75		✓	Delay	0.90	36.00	20.00

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

(Default Analysis Set) - 2022 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2022 Baseline, AM	2022 Baseline	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.43	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold

Left	Normal/unknown	358	Stream C-B
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## Arms

### Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

### Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

### Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

### Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

### 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	180.00	100.000
Áras Chill Dara	ONE HOUR	✓	11.00	100.000
John Devoy Road North	ONE HOUR	✓	145.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	135.51	135.51		
08:00-08:15	Áras Chill Dara	8.28	8.28		
08:00-08:15	John Devoy Road North	109.16	109.16		
08:15-08:30	John Devoy Road South	161.82	161.82		
08:15-08:30	Áras Chill Dara	9.89	9.89		
08:15-08:30	John Devoy Road North	130.35	130.35		
08:30-08:45	John Devoy Road South	198.18	198.18		
08:30-08:45	Áras Chill Dara	12.11	12.11		
08:30-08:45	John Devoy Road North	159.65	159.65		
08:45-09:00	John Devoy Road South	198.18	198.18		
08:45-09:00	Áras Chill Dara	12.11	12.11		
08:45-09:00	John Devoy Road North	159.65	159.65		
09:00-09:15	John Devoy Road South	161.82	161.82		
09:00-09:15	Áras Chill Dara	9.89	9.89		
09:00-09:15	John Devoy Road North	130.35	130.35		
09:15-09:30	John Devoy Road South	135.51	135.51		
09:15-09:30	Áras Chill Dara	8.28	8.28		
09:15-09:30	John Devoy Road North	109.16	109.16		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
From	A	0.000	52.000	128.000
	B	5.000	0.000	6.000
	C	89.000	56.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
From	A	0.00	0.29	0.71
	B	0.45	0.00	0.55
	C	0.61	0.39	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
From	A	0.000	0.000	0.000



## Results

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	6.27	0.02	A	10.09	15.14	1.54	6.10	0.02	1.54	6.10
C-A	-	-	-	-	81.67	122.50	-	-	-	-	-
C-B	0.12	7.66	0.13	A	51.39	77.08	9.45	7.36	0.11	9.45	7.36
A-B	-	-	-	-	47.72	71.57	-	-	-	-	-
A-C	-	-	-	-	117.46	176.18	-	-	-	-	-

*No errors or warnings*

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2022 Baseline, PM	2022 Baseline	PM		ONE HOUR	08:00	09:30	90	15				✓		

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		6.90	A

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	312	Stream B-AC

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

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Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	116.00	100.000
Áras Chill Dara	ONE HOUR	✓	84.00	100.000
John Devoy Road North	ONE HOUR	✓	74.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	87.33	87.33		
08:00-08:15	Áras Chill Dara	63.24	63.24		
08:00-08:15	John Devoy Road North	55.71	55.71		
08:15-08:30	John Devoy Road South	104.28	104.28		
08:15-08:30	Áras Chill Dara	75.51	75.51		
08:15-08:30	John Devoy Road	66.52	66.52		

	North				
08:30-08:45	John Devoy Road South	127.72	127.72		
08:30-08:45	Áras Chill Dara	92.49	92.49		
08:30-08:45	John Devoy Road North	81.48	81.48		
08:45-09:00	John Devoy Road South	127.72	127.72		
08:45-09:00	Áras Chill Dara	92.49	92.49		
08:45-09:00	John Devoy Road North	81.48	81.48		
09:00-09:15	John Devoy Road South	104.28	104.28		
09:00-09:15	Áras Chill Dara	75.51	75.51		
09:00-09:15	John Devoy Road North	66.52	66.52		
09:15-09:30	John Devoy Road South	87.33	87.33		
09:15-09:30	Áras Chill Dara	63.24	63.24		
09:15-09:30	John Devoy Road North	55.71	55.71		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

		To		
		A	B	C
From	A	0.000	1.000	115.000
	B	37.000	0.000	47.000
	C	69.000	5.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.44	0.00	0.56
	C	0.93	0.07	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.15	6.91	0.18	A	77.08	115.62	12.74	6.61	0.14	12.74	6.61
C-A	-	-	-	-	63.32	94.97	-	-	-	-	-
C-B	0.01	6.65	0.01	A	4.59	6.88	0.75	6.55	0.01	0.75	6.55
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-

A-C	-	-	-	-	105.53	158.29	-	-	-	-	-
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## (Default Analysis Set) - 2024 No Dev, AM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 No Dev, AM	2024 No Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.28	A

### Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	213	Stream C-B

## Arms

### Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

### Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

### Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

### Pedestrian Crossings

Name	Crossing Type

John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	374.00	100.000
Áras Chill Dara	ONE HOUR	✓	11.00	100.000
John Devoy Road North	ONE HOUR	✓	186.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	281.57	281.57		
08:00-08:15	Áras Chill Dara	8.28	8.28		
08:00-08:15	John Devoy Road North	140.03	140.03		
08:15-08:30	John Devoy Road South	336.22	336.22		
08:15-08:30	Áras Chill Dara	9.89	9.89		
08:15-08:30	John Devoy Road North	167.21	167.21		
08:30-08:45	John Devoy Road South	411.78	411.78		
08:30-08:45	Áras Chill Dara	12.11	12.11		
08:30-08:45	John Devoy Road North	204.79	204.79		
08:45-09:00	John Devoy Road South	411.78	411.78		
08:45-09:00	Áras Chill Dara	12.11	12.11		
08:45-09:00	John Devoy Road North	204.79	204.79		
09:00-09:15	John Devoy Road South	336.22	336.22		
09:00-09:15	Áras Chill Dara	9.89	9.89		
09:00-09:15	John Devoy Road North	167.21	167.21		
09:15-09:30	John Devoy Road South	281.57	281.57		

09:15-09:30	Áras Chill Dara	8.28	8.28		
09:15-09:30	John Devoy Road North	140.03	140.03		

## Turning Proportions

Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	54.000	320.000
	B	5.000	0.000	6.000
	C	128.000	58.000	0.000

Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.14	0.86
	B	0.45	0.00	0.55
	C	0.69	0.31	0.00

## Vehicle Mix

Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	7.03	0.02	A	10.09	15.14	1.69	6.71	0.02	1.69	6.71
C-A	-	-	-	-	117.46	176.18	-	-	-	-	-
C-B	0.13	8.52	0.15	A	53.22	79.83	10.69	8.03	0.12	10.69	8.03
A-B	-	-	-	-	49.55	74.33	-	-	-	-	-
A-C	-	-	-	-	293.64	440.46	-	-	-	-	-

## (Default Analysis Set) - 2024 No Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout	Description	Include In	Use Specific	Specific Demand Set	Locked	Network Flow	Network Capacity	Reason For
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	Capacity Model		Report	Demand Set(s)	(s)		Scaling Factor (%)	Scaling Factor (%)	Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 No Dev, PM	2024 No Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.42	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	216	Stream B-AC

Arms

Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	188.00	100.000
Áras Chill Dara	ONE HOUR	✓	87.00	100.000
John Devoy Road North	ONE HOUR	✓	204.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	141.54	141.54		
08:00-08:15	Áras Chill Dara	65.50	65.50		
08:00-08:15	John Devoy Road North	153.58	153.58		
08:15-08:30	John Devoy Road South	169.01	169.01		
08:15-08:30	Áras Chill Dara	78.21	78.21		
08:15-08:30	John Devoy Road North	183.39	183.39		
08:30-08:45	John Devoy Road South	206.99	206.99		
08:30-08:45	Áras Chill Dara	95.79	95.79		
08:30-08:45	John Devoy Road North	224.61	224.61		
08:45-09:00	John Devoy Road South	206.99	206.99		
08:45-09:00	Áras Chill Dara	95.79	95.79		
08:45-09:00	John Devoy Road North	224.61	224.61		
09:00-09:15	John Devoy Road South	169.01	169.01		
09:00-09:15	Áras Chill Dara	78.21	78.21		
09:00-09:15	John Devoy Road North	183.39	183.39		
09:15-09:30	John Devoy Road South	141.54	141.54		
09:15-09:30	Áras Chill Dara	65.50	65.50		
09:15-09:30	John Devoy Road North	153.58	153.58		

# Turning Proportions

## Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.000	1.000	187.000
	B	38.000	0.000	49.000
From	C	199.000	5.000	0.000

## Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

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From	To			
		A	B	C
	A	0.00	0.01	0.99
	B	0.44	0.00	0.56
	C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.17	7.45	0.20	A	79.83	119.75	14.03	7.03	0.16	14.03	7.03
C-A	-	-	-	-	182.61	273.91	-	-	-	-	-
C-B	0.01	6.86	0.01	A	4.59	6.88	0.77	6.73	0.01	0.77	6.73
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	171.59	257.39	-	-	-	-	-

(Default Analysis Set) - 2024 With Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 With Dev, AM	2024 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.44	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	198	Stream C-B

# Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	407.00	100.000
Áras Chill Dara	ONE HOUR	✓	11.00	100.000
John Devoy Road North	ONE HOUR	✓	197.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	306.41	306.41		
08:00-08:15	Áras Chill Dara	8.28	8.28		
08:00-08:15	John Devoy Road North	148.31	148.31		
08:15-08:30	John Devoy Road South	365.88	365.88		
08:15-08:30	Áras Chill Dara	9.89	9.89		
08:15-08:30	John Devoy Road North	177.10	177.10		
08:30-08:45	John Devoy Road South	448.12	448.12		
08:30-08:45	Áras Chill Dara	12.11	12.11		
08:30-08:45	John Devoy Road North	216.90	216.90		
08:45-09:00	John Devoy Road South	448.12	448.12		
08:45-09:00	Áras Chill Dara	12.11	12.11		
08:45-09:00	John Devoy Road North	216.90	216.90		
09:00-09:15	John Devoy Road South	365.88	365.88		
09:00-09:15	Áras Chill Dara	9.89	9.89		
09:00-09:15	John Devoy Road North	177.10	177.10		
09:15-09:30	John Devoy Road South	306.41	306.41		
09:15-09:30	Áras Chill Dara	8.28	8.28		
09:15-09:30	John Devoy Road North	148.31	148.31		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.000	54.000	353.000
	B	5.000	0.000	6.000
	C	139.000	58.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.00	0.13	0.87
	B	0.45	0.00	0.55
	C	0.71	0.29	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To		
	A	B	C
	A	0.000	0.000
	B	0.000	0.000
	C	0.000	0.000

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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	7.18	0.02	A	10.09	15.14	1.72	6.83	0.02	1.72	6.83
C-A	-	-	-	-	127.55	191.32	-	-	-	-	-
C-B	0.13	8.68	0.15	A	53.22	79.83	10.85	8.15	0.12	10.85	8.15
A-B	-	-	-	-	49.55	74.33	-	-	-	-	-
A-C	-	-	-	-	323.92	485.88	-	-	-	-	-

(Default Analysis Set) - 2024 With Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 With Dev, PM	2024 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.55	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	199	Stream B-AC

Arms

Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor

John Devoy Road North	John Devoy Road North		Major
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## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	208.00	100.000
Áras Chill Dara	ONE HOUR	✓	87.00	100.000
John Devoy Road North	ONE HOUR	✓	232.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	156.59	156.59		
08:00-08:15	Áras Chill Dara	65.50	65.50		
08:00-08:15	John Devoy Road North	174.66	174.66		

08:15-08:30	John Devoy Road South	186.99	186.99		
08:15-08:30	Áras Chill Dara	78.21	78.21		
08:15-08:30	John Devoy Road North	208.56	208.56		
08:30-08:45	John Devoy Road South	229.01	229.01		
08:30-08:45	Áras Chill Dara	95.79	95.79		
08:30-08:45	John Devoy Road North	255.44	255.44		
08:45-09:00	John Devoy Road South	229.01	229.01		
08:45-09:00	Áras Chill Dara	95.79	95.79		
08:45-09:00	John Devoy Road North	255.44	255.44		
09:00-09:15	John Devoy Road South	186.99	186.99		
09:00-09:15	Áras Chill Dara	78.21	78.21		
09:00-09:15	John Devoy Road North	208.56	208.56		
09:15-09:30	John Devoy Road South	156.59	156.59		
09:15-09:30	Áras Chill Dara	65.50	65.50		
09:15-09:30	John Devoy Road North	174.66	174.66		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	1.000	207.000
	B	38.000	0.000	49.000
	C	227.000	5.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.00	1.00
	B	0.44	0.00	0.56
	C	0.98	0.02	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.17	7.59	0.20	A	79.83	119.75	14.24	7.13	0.16	14.24	7.14

C-A	-	-	-	-	208.30	312.45	-	-	-	-	-
C-B	0.01	6.93	0.01	A	4.59	6.88	0.78	6.78	0.01	0.78	6.78
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	189.95	284.92	-	-	-	-	-

## (Default Analysis Set) - 2029 No Dev, AM

### Data Errors and Warnings

*No errors or warnings*

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029 No Dev, AM	2029 No Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.48	A

### Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	192	Stream C-B

## Arms

### Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

### Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

### Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	393.00	100.000
Áras Chill Dara	ONE HOUR	✓	13.00	100.000
John Devoy Road North	ONE HOUR	✓	202.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	295.87	295.87		
08:00-08:15	Áras Chill Dara	9.79	9.79		
08:00-08:15	John Devoy Road North	152.08	152.08		
08:15-08:30	John Devoy Road South	353.30	353.30		
08:15-08:30	Áras Chill Dara	11.69	11.69		
08:15-08:30	John Devoy Road North	181.59	181.59		
08:30-08:45	John Devoy Road South	432.70	432.70		
08:30-08:45	Áras Chill Dara	14.31	14.31		
08:30-08:45	John Devoy Road North	222.41	222.41		
08:45-09:00	John Devoy Road South	432.70	432.70		
08:45-09:00	Áras Chill Dara	14.31	14.31		
08:45-09:00	John Devoy Road North	222.41	222.41		
09:00-09:15	John Devoy Road South	353.30	353.30		
09:00-09:15	Áras Chill Dara	11.69	11.69		
09:00-09:15	John Devoy Road	181.59	181.59		



	North				
09:15-09:30	John Devoy Road South	295.87	295.87		
09:15-09:30	Áras Chill Dara	9.79	9.79		
09:15-09:30	John Devoy Road North	152.08	152.08		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	60.000	333.000
	B	6.000	0.000	7.000
	C	138.000	64.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.15	0.85
	B	0.46	0.00	0.54
	C	0.68	0.32	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	7.18	0.03	A	11.93	17.89	2.04	6.83	0.02	2.04	6.83
C-A	-	-	-	-	126.63	189.95	-	-	-	-	-
C-B	0.15	8.75	0.17	A	58.73	88.09	12.05	8.21	0.13	12.05	8.21
A-B	-	-	-	-	55.06	82.59	-	-	-	-	-
A-C	-	-	-	-	305.57	458.35	-	-	-	-	-

## (Default Analysis Set) - 2029 No Dev, PM

### Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029 No Dev, PM	2029 No Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.64	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	192	Stream B-AC

# Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	200.00	100.000
Áras Chill Dara	ONE HOUR	✓	96.00	100.000
John Devoy Road North	ONE HOUR	✓	212.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	150.57	150.57		
08:00-08:15	Áras Chill Dara	72.27	72.27		
08:00-08:15	John Devoy Road North	159.60	159.60		
08:15-08:30	John Devoy Road South	179.80	179.80		
08:15-08:30	Áras Chill Dara	86.30	86.30		
08:15-08:30	John Devoy Road North	190.58	190.58		
08:30-08:45	John Devoy Road South	220.20	220.20		
08:30-08:45	Áras Chill Dara	105.70	105.70		
08:30-08:45	John Devoy Road North	233.42	233.42		
08:45-09:00	John Devoy Road South	220.20	220.20		
08:45-09:00	Áras Chill Dara	105.70	105.70		
08:45-09:00	John Devoy Road North	233.42	233.42		
09:00-09:15	John Devoy Road South	179.80	179.80		
09:00-09:15	Áras Chill Dara	86.30	86.30		
09:00-09:15	John Devoy Road North	190.58	190.58		
09:15-09:30	John Devoy Road South	150.57	150.57		
09:15-09:30	Áras Chill Dara	72.27	72.27		
09:15-09:30	John Devoy Road North	159.60	159.60		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.000	1.000	199.000
	B	42.000	0.000	54.000
	C	206.000	6.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.01	1.00
	B	0.44	0.00	0.56
	C	0.97	0.03	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.18	7.68	0.22	A	88.09	132.14	15.87	7.20	0.18	15.87	7.20
C-A	-	-	-	-	189.03	283.54	-	-	-	-	-
C-B	0.01	6.91	0.01	A	5.51	8.26	0.93	6.77	0.01	0.93	6.77
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	182.61	273.91	-	-	-	-	-

## (Default Analysis Set) - 2029 With Dev, AM

### Data Errors and Warnings

*No errors or warnings*

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029 With Dev, AM	2029 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.65	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	179	Stream C-B

# Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	426.00	100.000
Áras Chill Dara	ONE HOUR	✓	13.00	100.000
John Devoy Road North	ONE HOUR	✓	213.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	320.72	320.72		
08:00-08:15	Áras Chill Dara	9.79	9.79		
08:00-08:15	John Devoy Road North	160.36	160.36		
08:15-08:30	John Devoy Road South	382.97	382.97		
08:15-08:30	Áras Chill Dara	11.69	11.69		
08:15-08:30	John Devoy Road North	191.48	191.48		
08:30-08:45	John Devoy Road South	469.03	469.03		
08:30-08:45	Áras Chill Dara	14.31	14.31		
08:30-08:45	John Devoy Road North	234.52	234.52		
08:45-09:00	John Devoy Road South	469.03	469.03		
08:45-09:00	Áras Chill Dara	14.31	14.31		
08:45-09:00	John Devoy Road North	234.52	234.52		
09:00-09:15	John Devoy Road South	382.97	382.97		
09:00-09:15	Áras Chill Dara	11.69	11.69		
09:00-09:15	John Devoy Road North	191.48	191.48		
09:15-09:30	John Devoy Road South	320.72	320.72		
09:15-09:30	Áras Chill Dara	9.79	9.79		
09:15-09:30	John Devoy Road North	160.36	160.36		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.000	60.000	366.000
	B	6.000	0.000	7.000
	C	149.000	64.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	0.00	0.14	0.86
	B	0.46	0.00	0.54
	C	0.70	0.30	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To		
	A	B	C
	A	0.000	0.000
	B	0.000	0.000
	C	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	7.34	0.03	A	11.93	17.89	2.07	6.95	0.02	2.07	6.95
C-A	-	-	-	-	136.73	205.09	-	-	-	-	-
C-B	0.15	8.92	0.17	A	58.73	88.09	12.24	8.33	0.14	12.24	8.34
A-B	-	-	-	-	55.06	82.59	-	-	-	-	-
A-C	-	-	-	-	335.85	503.77	-	-	-	-	-

## (Default Analysis Set) - 2029 With Dev, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029 With Dev, PM	2029 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.78	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	178	Stream B-AC

## Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor

John Devoy Road North	John Devoy Road North		Major
-----------------------	-----------------------	--	-------

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	220.00	100.000
Áras Chill Dara	ONE HOUR	✓	96.00	100.000
John Devoy Road North	ONE HOUR	✓	240.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	165.63	165.63		
08:00-08:15	Áras Chill Dara	72.27	72.27		
08:00-08:15	John Devoy Road North	180.68	180.68		



08:15-08:30	John Devoy Road South	197.78	197.78		
08:15-08:30	Áras Chill Dara	86.30	86.30		
08:15-08:30	John Devoy Road North	215.76	215.76		
08:30-08:45	John Devoy Road South	242.22	242.22		
08:30-08:45	Áras Chill Dara	105.70	105.70		
08:30-08:45	John Devoy Road North	264.24	264.24		
08:45-09:00	John Devoy Road South	242.22	242.22		
08:45-09:00	Áras Chill Dara	105.70	105.70		
08:45-09:00	John Devoy Road North	264.24	264.24		
09:00-09:15	John Devoy Road South	197.78	197.78		
09:00-09:15	Áras Chill Dara	86.30	86.30		
09:00-09:15	John Devoy Road North	215.76	215.76		
09:15-09:30	John Devoy Road South	165.63	165.63		
09:15-09:30	Áras Chill Dara	72.27	72.27		
09:15-09:30	John Devoy Road North	180.68	180.68		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	1.000	219.000
	B	42.000	0.000	54.000
	C	234.000	6.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.00	1.00
	B	0.44	0.00	0.56
	C	0.98	0.03	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.19	7.83	0.23	A	88.09	132.14	16.12	7.32	0.18	16.12	7.32

C-A	-	-	-	-	214.72	322.08	-	-	-	-	-
C-B	0.01	6.98	0.01	A	5.51	8.26	0.94	6.82	0.01	0.94	6.82
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	200.96	301.44	-	-	-	-	-

## (Default Analysis Set) - 2039 No Dev, AM

### Data Errors and Warnings

*No errors or warnings*

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 No Dev, AM	2039 No Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.65	A

### Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	176	Stream C-B

## Arms

### Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

### Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

### Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	409.00	100.000
Áras Chill Dara	ONE HOUR	✓	14.00	100.000
John Devoy Road North	ONE HOUR	✓	215.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	307.92	307.92		
08:00-08:15	Áras Chill Dara	10.54	10.54		
08:00-08:15	John Devoy Road North	161.86	161.86		
08:15-08:30	John Devoy Road South	367.68	367.68		
08:15-08:30	Áras Chill Dara	12.59	12.59		
08:15-08:30	John Devoy Road North	193.28	193.28		
08:30-08:45	John Devoy Road South	450.32	450.32		
08:30-08:45	Áras Chill Dara	15.41	15.41		
08:30-08:45	John Devoy Road North	236.72	236.72		
08:45-09:00	John Devoy Road South	450.32	450.32		
08:45-09:00	Áras Chill Dara	15.41	15.41		
08:45-09:00	John Devoy Road North	236.72	236.72		
09:00-09:15	John Devoy Road South	367.68	367.68		
09:00-09:15	Áras Chill Dara	12.59	12.59		
09:00-09:15	John Devoy Road	193.28	193.28		

	North				
09:15-09:30	John Devoy Road South	307.92	307.92		
09:15-09:30	Áras Chill Dara	10.54	10.54		
09:15-09:30	John Devoy Road North	161.86	161.86		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	64.000	345.000
	B	6.000	0.000	8.000
	C	146.000	69.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.16	0.84
	B	0.43	0.00	0.57
	C	0.68	0.32	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	7.19	0.03	A	12.85	19.27	2.19	6.83	0.02	2.19	6.83
C-A	-	-	-	-	133.97	200.96	-	-	-	-	-
C-B	0.16	8.95	0.19	A	63.32	94.97	13.23	8.36	0.15	13.23	8.36
A-B	-	-	-	-	58.73	88.09	-	-	-	-	-
A-C	-	-	-	-	316.58	474.87	-	-	-	-	-

## (Default Analysis Set) - 2039 No Dev, PM

### Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 No Dev, PM	2039 No Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.82	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	176	Stream B-AC

# Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	210.00	100.000
Áras Chill Dara	ONE HOUR	✓	103.00	100.000
John Devoy Road North	ONE HOUR	✓	219.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	158.10	158.10		
08:00-08:15	Áras Chill Dara	77.54	77.54		
08:00-08:15	John Devoy Road North	164.87	164.87		
08:15-08:30	John Devoy Road South	188.79	188.79		
08:15-08:30	Áras Chill Dara	92.59	92.59		
08:15-08:30	John Devoy Road North	196.88	196.88		
08:30-08:45	John Devoy Road South	231.21	231.21		
08:30-08:45	Áras Chill Dara	113.41	113.41		
08:30-08:45	John Devoy Road North	241.12	241.12		
08:45-09:00	John Devoy Road South	231.21	231.21		
08:45-09:00	Áras Chill Dara	113.41	113.41		
08:45-09:00	John Devoy Road North	241.12	241.12		
09:00-09:15	John Devoy Road South	188.79	188.79		
09:00-09:15	Áras Chill Dara	92.59	92.59		
09:00-09:15	John Devoy Road North	196.88	196.88		
09:15-09:30	John Devoy Road South	158.10	158.10		
09:15-09:30	Áras Chill Dara	77.54	77.54		
09:15-09:30	John Devoy Road North	164.87	164.87		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
	A	B	C	
	A	0.000	1.000	209.000
	B	45.000	0.000	58.000
	C	213.000	6.000	0.000

## Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.00	1.00
	B	0.44	0.00	0.56
	C	0.97	0.03	0.00

## Vehicle Mix

## Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.20	7.87	0.25	A	94.51	141.77	17.36	7.35	0.19	17.36	7.35
C-A	-	-	-	-	195.45	293.18	-	-	-	-	-
C-B	0.01	6.95	0.01	A	5.51	8.26	0.94	6.80	0.01	0.94	6.80
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	191.78	287.67	-	-	-	-	-

## (Default Analysis Set) - 2039 With Dev, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 With Dev, AM	2039 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		8.83	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	164	Stream C-B

# Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor
John Devoy Road North	John Devoy Road North		Major

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data



Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	442.00	100.000
Áras Chill Dara	ONE HOUR	✓	14.00	100.000
John Devoy Road North	ONE HOUR	✓	226.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	332.76	332.76		
08:00-08:15	Áras Chill Dara	10.54	10.54		
08:00-08:15	John Devoy Road North	170.14	170.14		
08:15-08:30	John Devoy Road South	397.35	397.35		
08:15-08:30	Áras Chill Dara	12.59	12.59		
08:15-08:30	John Devoy Road North	203.17	203.17		
08:30-08:45	John Devoy Road South	486.65	486.65		
08:30-08:45	Áras Chill Dara	15.41	15.41		
08:30-08:45	John Devoy Road North	248.83	248.83		
08:45-09:00	John Devoy Road South	486.65	486.65		
08:45-09:00	Áras Chill Dara	15.41	15.41		
08:45-09:00	John Devoy Road North	248.83	248.83		
09:00-09:15	John Devoy Road South	397.35	397.35		
09:00-09:15	Áras Chill Dara	12.59	12.59		
09:00-09:15	John Devoy Road North	203.17	203.17		
09:15-09:30	John Devoy Road South	332.76	332.76		
09:15-09:30	Áras Chill Dara	10.54	10.54		
09:15-09:30	John Devoy Road North	170.14	170.14		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	64.000	378.000
	B	6.000	0.000	8.000
	C	157.000	69.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.14	0.86
	B	0.43	0.00	0.57
	C	0.69	0.31	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To		
	A	B	C
	A	0.000	0.000
	B	0.000	0.000
	C	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	7.35	0.03	A	12.85	19.27	2.23	6.95	0.02	2.23	6.95
C-A	-	-	-	-	144.07	216.10	-	-	-	-	-
C-B	0.16	9.13	0.19	A	63.32	94.97	13.44	8.49	0.15	13.44	8.49
A-B	-	-	-	-	58.73	88.09	-	-	-	-	-
A-C	-	-	-	-	346.86	520.29	-	-	-	-	-

## (Default Analysis Set) - 2039 With Dev, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 With Dev, PM	2039 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

## Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Áras Chill Dara Access Junction	T-Junction	Two-way	A,B,C		7.97	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	163	Stream B-AC

## Arms

## Arms

Name	Name	Description	Arm Type
John Devoy Road South	John Devoy Road South		Major
Áras Chill Dara	Áras Chill Dara		Minor

John Devoy Road North	John Devoy Road North		Major
-----------------------	-----------------------	--	-------

## Major Arm Geometry

Name	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
John Devoy Road North	7.00		0.00		2.20	0.00		

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

## Minor Arm Geometry

Name	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
Áras Chill Dara	One lane	4.16										50	50

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road South	None
Áras Chill Dara	None
John Devoy Road North	None

## 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
2	B-A	578.724	0.101	0.255	0.160	0.364
2	B-C	731.530	0.107	0.271	-	-
2	C-B	573.963	0.213	0.213	-	-

*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 Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road South	ONE HOUR	✓	230.00	100.000
Áras Chill Dara	ONE HOUR	✓	103.00	100.000
John Devoy Road North	ONE HOUR	✓	247.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road South	173.16	173.16		
08:00-08:15	Áras Chill Dara	77.54	77.54		
08:00-08:15	John Devoy Road North	185.95	185.95		

08:15-08:30	John Devoy Road South	206.77	206.77		
08:15-08:30	Áras Chill Dara	92.59	92.59		
08:15-08:30	John Devoy Road North	222.05	222.05		
08:30-08:45	John Devoy Road South	253.23	253.23		
08:30-08:45	Áras Chill Dara	113.41	113.41		
08:30-08:45	John Devoy Road North	271.95	271.95		
08:45-09:00	John Devoy Road South	253.23	253.23		
08:45-09:00	Áras Chill Dara	113.41	113.41		
08:45-09:00	John Devoy Road North	271.95	271.95		
09:00-09:15	John Devoy Road South	206.77	206.77		
09:00-09:15	Áras Chill Dara	92.59	92.59		
09:00-09:15	John Devoy Road North	222.05	222.05		
09:15-09:30	John Devoy Road South	173.16	173.16		
09:15-09:30	Áras Chill Dara	77.54	77.54		
09:15-09:30	John Devoy Road North	185.95	185.95		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	1.000	229.000
	B	45.000	0.000	58.000
	C	241.000	6.000	0.000

### Turning Proportions (PCU) - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.00	0.00	1.00
	B	0.44	0.00	0.56
	C	0.98	0.02	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Áras Chill Dara Access Junction (for whole period)

From	To			
		A	B	C
	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## 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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.20	8.03	0.25	A	94.51	141.77	17.64	7.47	0.20	17.64	7.47

<b>C-A</b>	-	-	-	-	221.15	331.72	-	-	-	-	-
<b>C-B</b>	0.01	7.01	0.01	A	5.51	8.26	0.94	6.85	0.01	0.94	6.85
<b>A-B</b>	-	-	-	-	0.92	1.38	-	-	-	-	-
<b>A-C</b>	-	-	-	-	210.13	315.20	-	-	-	-	-



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.3.332 [14595,13/11/2013] © Copyright TRL Limited, 2022
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Filename: L086 Junction 4 ARCADY Model 20220314.arc8

Path: J:\L\_JOBS\Job-L086\B\_Documents\C\_Civil\A-Reports\Traffic\Traffic Modelling

Report generation date: 14/03/2022 11:46:00

## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	A1 - 2024 With Dev							
John Devoy Road North	0.23	5.31	0.19	144 % [John Devoy Road South]	0.51	6.51	0.34	157 % [John Devoy Road North]
John Devoy Road South	0.60	5.15	0.37		0.27	4.14	0.21	
Development Access	0.11	6.78	0.10		0.07	5.73	0.06	
	A1 - 2029 With Dev							
John Devoy Road North	0.25	5.40	0.20	132 % [John Devoy Road South]	0.54	6.67	0.35	145 % [John Devoy Road North]
John Devoy Road South	0.64	5.31	0.39		0.29	4.21	0.23	
Development Access	0.11	6.90	0.10		0.07	5.79	0.06	
	A1 - 2039 With Dev							
John Devoy Road North	0.27	5.47	0.21	123 % [John Devoy Road South]	0.58	6.81	0.37	137 % [John Devoy Road North]
John Devoy Road South	0.69	5.45	0.41		0.31	4.27	0.24	
Development Access	0.11	7.01	0.10		0.07	5.84	0.07	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

"D5 - 2024 With Dev, AM" model duration: 08:00 - 09:30

"D6 - 2024 With Dev, PM" model duration: 08:00 - 09:30

"D9 - 2029 With Dev, AM" model duration: 08:00 - 09:30

"D10 - 2029 With Dev, PM" model duration: 08:00 - 09:30

"D17 - 2039 With Dev, AM" model duration: 08:00 - 09:30

"D18 - 2039 With Dev, PM" model duration: 08:00 - 09:30

Run using Junctions 8.0.3.332 at 14/03/2022 11:45:58

## File summary

### File Description

Title	Devoy Barracks
Location	Naas, Co. Kildare
Site Number	4
Date	14/03/2022
Version	
Status	
Identifier	
Client	
Jobnumber	L086
Enumerator	GF
Description	

## Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75		✓	Delay	0.90	36.00	20.00

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

(Default Analysis Set) - 2024 With Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 With Dev, AM	2024 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.33	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	144	John Devoy Road South

Arms

Arms

Name	Name	Description
John Devoy Road North	John Devoy Road North	
John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

Pedestrian Crossings

--	--



Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

*The slope and intercept shown above include any corrections and adjustments.*

## Traffic Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	144.00	100.000
John Devoy Road South	ONE HOUR	✓	380.00	100.000
Development Access	ONE HOUR	✓	51.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	108.41	108.41		
08:00-08:15	John Devoy Road South	286.08	286.08		
08:00-08:15	Development Access	38.40	38.40		
08:15-08:30	John Devoy Road North	129.45	129.45		
08:15-08:30	John Devoy Road South	341.61	341.61		
08:15-08:30	Development Access	45.85	45.85		
08:30-08:45	John Devoy Road North	158.55	158.55		
08:30-08:45	John Devoy Road South	418.39	418.39		
08:30-08:45	Development Access	56.15	56.15		
08:45-09:00	John Devoy Road North	158.55	158.55		
08:45-09:00	John Devoy Road South	418.39	418.39		
08:45-09:00	Development Access	56.15	56.15		
09:00-09:15	John Devoy Road North	129.45	129.45		
09:00-09:15	John Devoy Road South	341.61	341.61		
09:00-09:15	Development Access	45.85	45.85		

09:15-09:30	John Devoy Road North	108.41	108.41		
09:15-09:30	John Devoy Road South	286.08	286.08		
09:15-09:30	Development Access	38.40	38.40		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To			
From		1	2	3
	1	0.000	133.000	11.000
	2	359.000	1.000	20.000
	3	33.000	18.000	0.000

### Turning Proportions (PCU) - Development Access (for whole period)

	To			
From		1	2	3
	1	0.00	0.92	0.08
	2	0.94	0.00	0.05
	3	0.65	0.35	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

	To			
From		1	2	3
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

### Heavy Vehicle Percentages - Development Access (for whole period)

	To			
From		1	2	3
	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

## Results

### Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.19	5.31	0.23	A	132.14	198.21	16.82	5.09	0.19	16.82	5.09
John Devoy Road South	0.37	5.15	0.60	A	348.69	523.04	41.10	4.71	0.46	41.10	4.71
Development Access	0.10	6.78	0.11	A	46.80	70.20	7.42	6.34	0.08	7.42	6.34

## (Default Analysis Set) - 2024 With Dev, PM

### Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2024 With Dev, PM	2024 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.45	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	157	John Devoy Road North

# Arms

## Arms

Name	Name	Description
John Devoy Road North	John Devoy Road North	
John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

## Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

## Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

The slope and intercept shown above include any corrections and adjustments.

## Traffic Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	256.00	100.000
John Devoy Road South	ONE HOUR	✓	214.00	100.000
Development Access	ONE HOUR	✓	39.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	192.73	192.73		
08:00-08:15	John Devoy Road South	161.11	161.11		
08:00-08:15	Development Access	29.36	29.36		
08:15-08:30	John Devoy Road North	230.14	230.14		
08:15-08:30	John Devoy Road South	192.38	192.38		
08:15-08:30	Development Access	35.06	35.06		
08:30-08:45	John Devoy Road North	281.86	281.86		
08:30-08:45	John Devoy Road South	235.62	235.62		
08:30-08:45	Development Access	42.94	42.94		
08:45-09:00	John Devoy Road North	281.86	281.86		
08:45-09:00	John Devoy Road South	235.62	235.62		
08:45-09:00	Development Access	42.94	42.94		
09:00-09:15	John Devoy Road North	230.14	230.14		
09:00-09:15	John Devoy Road South	192.38	192.38		
09:00-09:15	Development Access	35.06	35.06		
09:15-09:30	John Devoy Road North	192.73	192.73		
09:15-09:30	John Devoy Road South	161.11	161.11		
09:15-09:30	Development Access	29.36	29.36		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To			

From	To		
	1	2	3
	1	3.000	225.000
	2	181.000	3.000
	3	20.000	19.000

### Turning Proportions (PCU) - Development Access (for whole period)

From	To		
	1	2	3
	1	0.01	0.88
	2	0.85	0.01
	3	0.51	0.49

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

From	To		
	1	2	3
	1	1.000	1.000
	2	1.000	1.000
	3	1.000	1.000

### Heavy Vehicle Percentages - Development Access (for whole period)

From	To		
	1	2	3
	1	0.000	0.000
	2	0.000	0.000
	3	0.000	0.000

## Results

### Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.34	6.51	0.51	A	234.91	352.37	35.26	6.00	0.39	35.26	6.00
John Devoy Road South	0.21	4.14	0.27	A	196.37	294.56	19.41	3.95	0.22	19.41	3.95
Development Access	0.06	5.73	0.07	A	35.79	53.68	4.94	5.52	0.05	4.94	5.52

## (Default Analysis Set) - 2029 With Dev, AM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029														

With Dev, AM	2029 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		
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## Junction Network

### Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.47	A

### Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	132	John Devoy Road South

## Arms

### Arms

Name	Name	Description
John Devoy Road North	John Devoy Road North	
John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

### Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

### Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

### Pedestrian Crossings

Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

*The slope and intercept shown above include any corrections and adjustments.*

## Traffic Flows

### Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV	2.00					

		✓	✓	Percentages				✓	✓
--	--	---	---	-------------	--	--	--	---	---

## Entry Flows

### General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	154.00	100.000
John Devoy Road South	ONE HOUR	✓	399.00	100.000
Development Access	ONE HOUR	✓	51.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	115.94	115.94		
08:00-08:15	John Devoy Road South	300.39	300.39		
08:00-08:15	Development Access	38.40	38.40		
08:15-08:30	John Devoy Road North	138.44	138.44		
08:15-08:30	John Devoy Road South	358.69	358.69		
08:15-08:30	Development Access	45.85	45.85		
08:30-08:45	John Devoy Road North	169.56	169.56		
08:30-08:45	John Devoy Road South	439.31	439.31		
08:30-08:45	Development Access	56.15	56.15		
08:45-09:00	John Devoy Road North	169.56	169.56		
08:45-09:00	John Devoy Road South	439.31	439.31		
08:45-09:00	Development Access	56.15	56.15		
09:00-09:15	John Devoy Road North	138.44	138.44		
09:00-09:15	John Devoy Road South	358.69	358.69		
09:00-09:15	Development Access	45.85	45.85		
09:15-09:30	John Devoy Road North	115.94	115.94		
09:15-09:30	John Devoy Road South	300.39	300.39		
09:15-09:30	Development Access	38.40	38.40		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To		
	1	2	3
From	1	0.000	143.000
	2	378.000	1.000
	3	33.000	18.000

### Turning Proportions (PCU) - Development Access (for whole period)

	To		
	1	2	3
From	1	0.00	0.93
	2	0.95	0.00
	3	0.65	0.35

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

	To		
	1	2	3
From	1	1.000	1.000
	2	1.000	1.000
	3	1.000	1.000

### Heavy Vehicle Percentages - Development Access (for whole period)

	To		
	1	2	3
From	1	0.000	0.000
	2	0.000	0.000
	3	0.000	0.000

## Results

### Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.20	5.40	0.25	A	141.31	211.97	18.23	5.16	0.20	18.23	5.16
John Devoy Road South	0.39	5.31	0.64	A	366.13	549.19	44.21	4.83	0.49	44.21	4.83
Development Access	0.10	6.90	0.11	A	46.80	70.20	7.53	6.43	0.08	7.53	6.43

## (Default Analysis Set) - 2029 With Dev, PM

### Data Errors and Warnings

*No errors or warnings*

### Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

### Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2029 With Dev, PM	2029 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.56	A



## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	145	John Devoy Road North

# Arms

## Arms

Name	Name	Description
John Devoy Road North	John Devoy Road North	
John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

## Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

## Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	268.00	100.000
John Devoy Road South	ONE HOUR	✓	227.00	100.000
Development Access	ONE HOUR	✓	39.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	201.76	201.76		
08:00-08:15	John Devoy Road South	170.90	170.90		
08:00-08:15	Development Access	29.36	29.36		
08:15-08:30	John Devoy Road North	240.93	240.93		
08:15-08:30	John Devoy Road South	204.07	204.07		
08:15-08:30	Development Access	35.06	35.06		
08:30-08:45	John Devoy Road North	295.07	295.07		
08:30-08:45	John Devoy Road South	249.93	249.93		
08:30-08:45	Development Access	42.94	42.94		
08:45-09:00	John Devoy Road North	295.07	295.07		
08:45-09:00	John Devoy Road South	249.93	249.93		
08:45-09:00	Development Access	42.94	42.94		
09:00-09:15	John Devoy Road North	240.93	240.93		
09:00-09:15	John Devoy Road South	204.07	204.07		
09:00-09:15	Development Access	35.06	35.06		
09:15-09:30	John Devoy Road North	201.76	201.76		
09:15-09:30	John Devoy Road South	170.90	170.90		
09:15-09:30	Development Access	29.36	29.36		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To			
		1	2	3
From	1	4.000	236.000	28.000
	2	193.000	4.000	30.000
	3	20.000	19.000	0.000

### Turning Proportions (PCU) - Development Access (for whole period)

	To			
		1	2	3
From	1	0.01	0.88	0.10
	2	0.85	0.02	0.13
	3	0.51	0.49	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

	To			
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

## Heavy Vehicle Percentages - Development Access (for whole period)

	To			
From		1	2	3
	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

## Results

## Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.35	6.67	0.54	A	245.92	368.88	37.66	6.13	0.42	37.66	6.13
John Devoy Road South	0.23	4.21	0.29	A	208.30	312.45	20.88	4.01	0.23	20.88	4.01
Development Access	0.06	5.79	0.07	A	35.79	53.68	4.99	5.57	0.06	4.99	5.57

## (Default Analysis Set) - 2039 With Dev, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 With Dev, AM	2039 With Dev	AM		ONE HOUR	08:00	09:30	90	15				✓		

## Junction Network

## Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.58	A

## Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	123	John Devoy Road South

## Arms

## Arms

Name	Name	Description
John Devoy Road North	John Devoy Road North	

John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

## Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

## Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	162.00	100.000
John Devoy Road South	ONE HOUR	✓	415.00	100.000
Development Access	ONE HOUR	✓	51.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	121.96	121.96		
08:00-08:15	John Devoy Road South	312.43	312.43		
08:00-08:15	Development	38.40	38.40		

	Access				
08:15-08:30	John Devoy Road North	145.63	145.63		
08:15-08:30	John Devoy Road South	373.08	373.08		
08:15-08:30	Development Access	45.85	45.85		
08:30-08:45	John Devoy Road North	178.37	178.37		
08:30-08:45	John Devoy Road South	456.92	456.92		
08:30-08:45	Development Access	56.15	56.15		
08:45-09:00	John Devoy Road North	178.37	178.37		
08:45-09:00	John Devoy Road South	456.92	456.92		
08:45-09:00	Development Access	56.15	56.15		
09:00-09:15	John Devoy Road North	145.63	145.63		
09:00-09:15	John Devoy Road South	373.08	373.08		
09:00-09:15	Development Access	45.85	45.85		
09:15-09:30	John Devoy Road North	121.96	121.96		
09:15-09:30	John Devoy Road South	312.43	312.43		
09:15-09:30	Development Access	38.40	38.40		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To			
		1	2	3
	1	0.000	151.000	11.000
	2	394.000	1.000	20.000
	3	33.000	18.000	0.000

### Turning Proportions (PCU) - Development Access (for whole period)

	To			
		1	2	3
	1	0.00	0.93	0.07
	2	0.95	0.00	0.05
	3	0.65	0.35	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

	To			
		1	2	3
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

### Heavy Vehicle Percentages - Development Access (for whole period)

	To			
		1	2	3
	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

## Results

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.21	5.47	0.27	A	148.65	222.98	19.39	5.22	0.22	19.39	5.22
John Devoy Road South	0.41	5.45	0.69	A	380.81	571.22	46.94	4.93	0.52	46.95	4.93
Development Access	0.10	7.01	0.11	A	46.80	70.20	7.62	6.51	0.08	7.62	6.51

*No errors or warnings*

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2039 With Dev, PM	2039 With Dev	PM		ONE HOUR	08:00	09:30	90	15				✓		

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
Development Access	Roundabout	1,2,3				5.65	A

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	137	John Devoy Road North

Name	Name	Description
John Devoy Road North	John Devoy Road North	
John Devoy Road South	John Devoy Road South	
Development Access	Development Access	

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
John Devoy Road North	0.00	99999.00		0.00
John Devoy Road South	0.00	99999.00		0.00
Development Access	0.00	99999.00		0.00

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
John Devoy Road North	2.50	4.23	1.73	7.69	21.60	19.00	
John Devoy Road South	2.75	5.02	3.73	12.50	21.60	6.00	
Development Access	2.40	4.00	1.50	5.88	21.60	22.00	

## Pedestrian Crossings

Name	Crossing Type
John Devoy Road North	None
John Devoy Road South	None
Development Access	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
John Devoy Road North		(calculated)	(calculated)	0.475	846.632
John Devoy Road South		(calculated)	(calculated)	0.562	1124.103
Development Access		(calculated)	(calculated)	0.442	762.045

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

# Entry Flows

## General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
John Devoy Road North	ONE HOUR	✓	278.00	100.000
John Devoy Road South	ONE HOUR	✓	237.00	100.000
Development Access	ONE HOUR	✓	39.00	100.000

# Direct/Resultant Flows

## Direct Flows Data

Time Segment	Name	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	John Devoy Road North	209.29	209.29		
08:00-08:15	John Devoy Road South	178.43	178.43		
08:00-08:15	Development Access	29.36	29.36		
08:15-08:30	John Devoy Road North	249.92	249.92		
08:15-08:30	John Devoy Road South	213.06	213.06		
08:15-08:30	Development Access	35.06	35.06		
08:30-08:45	John Devoy Road North	306.08	306.08		
08:30-08:45	John Devoy Road South	260.94	260.94		
08:30-08:45	Development Access	42.94	42.94		
	John Devoy Road				

08:45-09:00	North	306.08	306.08		
08:45-09:00	John Devoy Road South	260.94	260.94		
08:45-09:00	Development Access	42.94	42.94		
09:00-09:15	John Devoy Road North	249.92	249.92		
09:00-09:15	John Devoy Road South	213.06	213.06		
09:00-09:15	Development Access	35.06	35.06		
09:15-09:30	John Devoy Road North	209.29	209.29		
09:15-09:30	John Devoy Road South	178.43	178.43		
09:15-09:30	Development Access	29.36	29.36		

## Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Development Access (for whole period)

	To			
		1	2	3
From	1	4.000	246.000	28.000
	2	203.000	4.000	30.000
	3	20.000	19.000	0.000

### Turning Proportions (PCU) - Development Access (for whole period)

	To			
		1	2	3
From	1	0.01	0.88	0.10
	2	0.86	0.02	0.13
	3	0.51	0.49	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Development Access (for whole period)

	To			
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

### Heavy Vehicle Percentages - Development Access (for whole period)

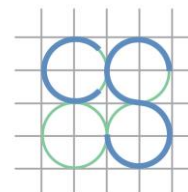
	To			
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

## Results

### Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
John Devoy Road North	0.37	6.81	0.58	A	255.10	382.65	39.71	6.23	0.44	39.72	6.23
John Devoy Road South	0.24	4.27	0.31	A	217.48	326.21	22.03	4.05	0.24	22.03	4.05
Development Access	0.07	5.84	0.07	A	35.79	53.68	5.02	5.61	0.06	5.02	5.61



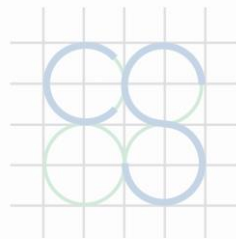


CS CONSULTING  
GROUP

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## Appendix E

### **Independent Quality Audit**



CS CONSULTING  
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**21023-02-001**

**Proposed Residential Development at  
Devoy Barracks, Naas**

**STAGE 1 QUALITY AUDIT  
(incorporating an access, cycling, walking  
and road safety audit)**

**for**

**CS Consulting**

**March 2022**



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## **1. INTRODUCTION**

- 1.1 Roadplan Consulting has been commissioned by CS Consulting to carry out a Quality Audit of proposed residential development at Devoy Barracks, Naas.
- 1.2 The proposed development site is located at Devoy Barracks, John Devoy Road, Naas, County Kildare. The site is located in the administrative jurisdiction of Kildare County Council and has a total gross area of approximately 4.14 ha.
- 1.3 The site is bounded to the north by existing residential properties and a commercial unit; to the east by Kildare County Council Offices and car park facility; to the southeast by the John Devoy Road; and to the west and south west by the existing Arconagh and Elsmore residential estates.
- 1.4 The proposed development is for the construction of 219 no. residential units, comprising of a mix of terraced houses (42 no. 3 bed units), and duplex / apartment units (177 no.: 64 no. 1 bed units; 105 no. 2 bed units and 8 no. 3 bed units), a 59-place childcare facility, public open spaces and all associated site works and infrastructure.
- 1.5 Vehicular access to the development will be via the existing roundabout on John Devoy Road.
- 1.6 The main pedestrian access to the development is provided via John Devoy Road and Arconagh residential estate.

## 2. QUALITY AUDIT

- 2.1 Quality Audit is a defined process, independent of, but involving, the design team that, through planning, design, construction and management stages of a project provides a check that high quality places are delivered and maintained by all relevant parties, for the benefit of all end users. Quality Audit is a process, applied to urban roads, traffic management or development schemes, which systematically reviews projects using a series of discrete but linked evaluations and ensures that the broad objectives of place, functionality, maintenance and safety are achieved.
- 2.2 Quality Audit was introduced in the publication *Design Manual for Urban Roads and Streets* following concerns that in the design of new streets provisions made for motor vehicles frequently led to a poorly-designed public realm. In an urban area there is a high level of competing demand from different classes of road users. A well-balanced street will have minimal visual clutter and obstacles; it will use durable materials and most importantly, will encourage a degree of negotiation between road users as they make their way through it.
- 2.3 Quality Audit involves various assessments of the impacts of a street scheme in terms of road safety, visual quality and the use of streets by the community. Access for disabled people, pedestrians, cyclists and drivers of motor vehicles is considered.
- 2.4 In the context of a Quality Audit, road safety assessment is considered to be an appropriate method of examining road safety issues as it incorporates both the hazard identification techniques used in road safety audit and formal risk assessment techniques. This allows the opportunity at an early stage for road safety issues to be considered in a more dynamic way within the design process, and to ensure that safety issues are considered as part of the design rather than after design work is completed.
- 2.5 The Quality Audit Team reports findings with suggestions for future action. It should be noted that, in a Quality Audit, it is not the intention that suggestions would be binding on the design team; they are offered for detailed consideration in the design process.

### 3. METHODOLOGY

3.1 The Audit Team was as follows:

- George Frisby Chartered Engineer MIEI
- Richard Frisby BSc AEng MIEI.

3.2 Road safety, non-motorised users, visual quality, access for disabled and functionality were considered in the Quality Audit. This exercise focused on issues such as:

- the design rationale as it related to vehicle, cycle and pedestrian movements;
- pedestrian desire lines both to and through the site;
- access requirements for all modes of transport;
- access requirements for disabled people and other vulnerable users;
- any road safety concerns associated with the scheme;
- the visual appearance of the scheme as it is experienced by those entering it and moving around within the street, including how this affects road user behaviour; and
- any other issues considered relevant to each constituent element of the Quality Audit process.

3.3 The documents provided for the audit were:

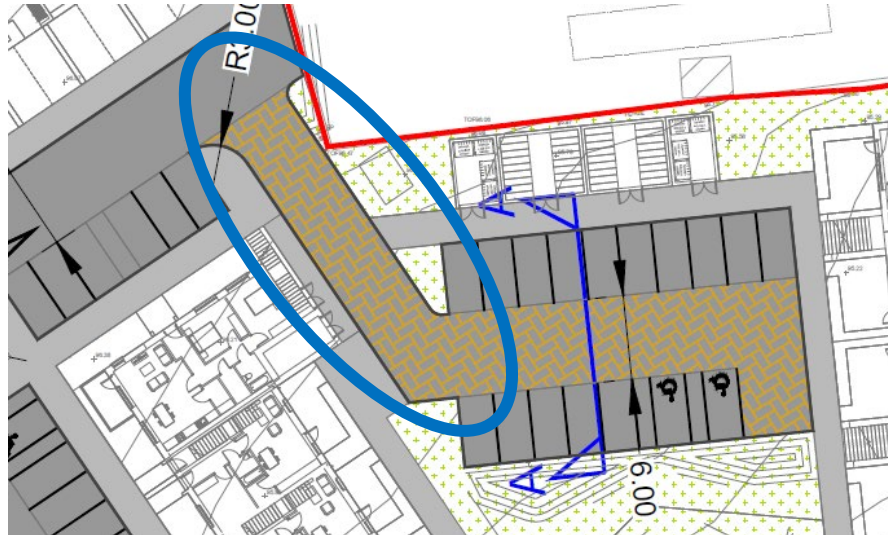
Drawing number	Rev	Drawing Title
DEV-CSC-00-XX-DR-C-0102	P08	Proposed Site Layout
DEV-CSC-00-XX-DR-C-0103	P09	Proposed Road Layout
DEV-CSC-00-XX-DR-C-0107	P08	Swept Path Analysis Fire Tender
DEV-CSC-00-XX-DR-C-0108	P08	Swept Path Analysis Refuse Truck
DEV-CSC-00-XX-DR-C-0116	P09	Proposed Road Markings & Signage
DEV-CSC-00-XX-DR-C-0160	P02	Undercroft Carpark Layout

Copies of these audited drawings are contained in Appendix A.

#### 4. KEY FINDINGS, SUGGESTED ACTIONS AND COMMENTS

##### 4.1 Issue:

It is unclear if the internal road at the north eastern corner of the development has adequate width. Two vehicles may have difficulty in passing one another along this section of road, particularly at the changes in direction of the road alignment, which may contribute to a collision at this location.

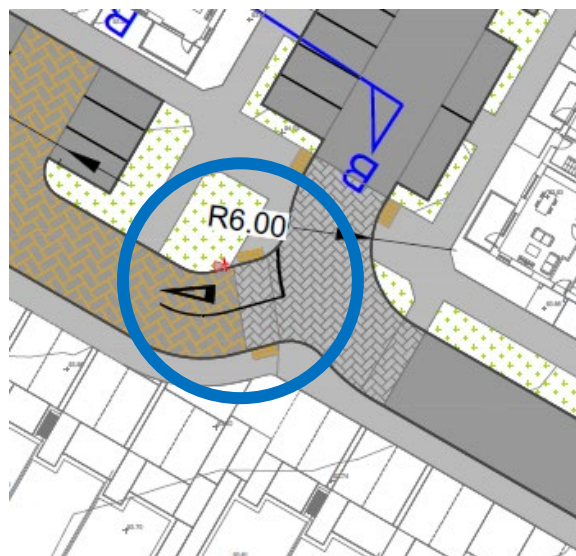


##### Suggestion:

Ensure that adequate two-way width is provided at this location to accommodate two-way flow of vehicles.

##### 4.2 Issue:

There is an abrupt change in the alignment at the junction shown in the image below which may result in drivers of vehicles tracking into the opposing lane resulting in a collision at the junction.



Suggestion:

Realign the junction to ensure drivers of vehicles do not track into the opposing lane.

4.3 Issue:

Throughout the development parking is provided adjacent to footpaths. However, at a number of locations a grass verge is provided between the parking bays and the footpath resulting in pedestrians requiring to transverse the grass verge in order to gain access to the footpath. This may result in pedestrian, particularly mobility impaired persons, travelling along the carriageway to gain access to the footpath where they would be at an increased risk of being hit by a passing vehicle.

Suggestion:

Remove the grass verge at these locations and ensure pedestrians can gain direct access to the footpath.

4.4 Issue:

There is a number of low radius bends proposed along the development access roads. Two vehicles may have difficulty in passing one another on these bends which may lead to a side swipe collision. Stopping sight distance at the bends may also be restricted by the proposed parking, planting and boundaries on the inside of the bends.



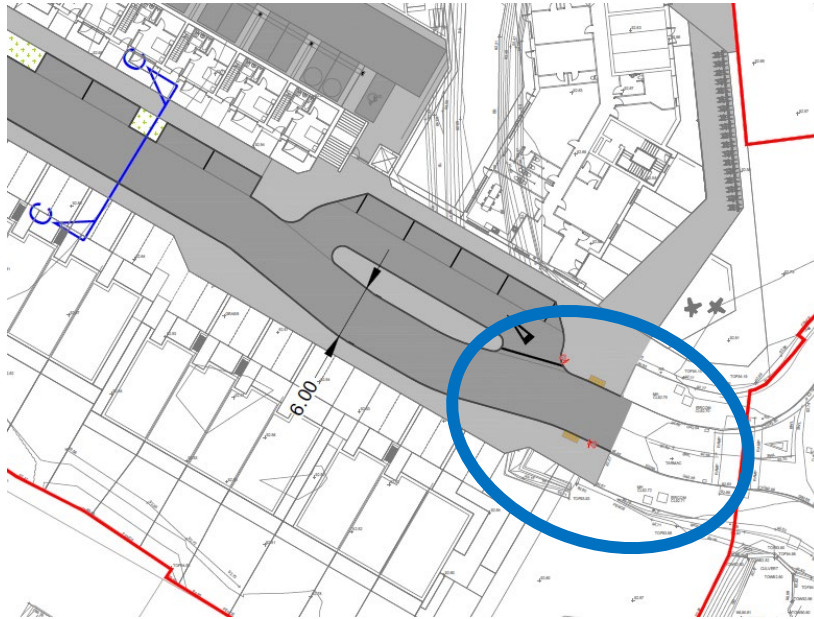


Suggestion:

Revise the layout at the bends to ensure that two vehicles can safely pass one-another, and that adequate stopping sight distance is provided.

4.5 Issue:

An existing cycle path/shared space is provided on either side of John Devoy Road. No cycle facilities are shown to be provided within the proposed development. No details are provided to indicate how a cyclist can safely access / egress the cycle path/shared facility John Devoy Road from the proposed development.

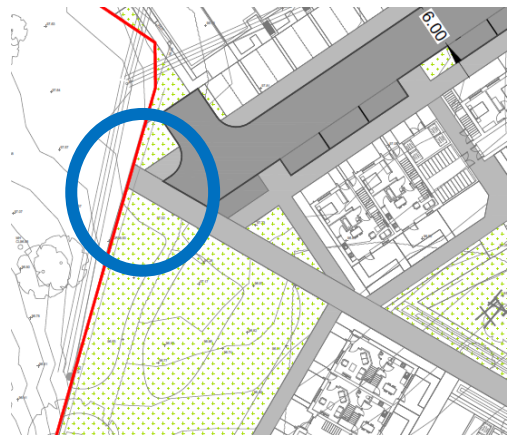


Suggestion:

Provide adequate dropped kerbs, tactile paving and signage to ensure cyclists can safely access / egress the existing cycle path/shared facility located on John Devoy Road.

4.6 Issue:

The proposed footpath within the development is shown to provide a link to the existing Arconagh housing estate which is located to the west of the proposed development. However, no details are provided to indicate how a pedestrian can safely access / egress the existing footpath within the Arconagh housing estate.



Suggestion:

Provide an adequate footpath link from the proposed footpath within the Arconagh housing estate.

**4.7 Issue:**

There are a number of locations where pedestrian crossing facilities such as dropped kerbs and tactile paving are not shown to be provided to cater for the desired route for pedestrians. A lack of pedestrian connectivity may increase collision risk within the proposed development.

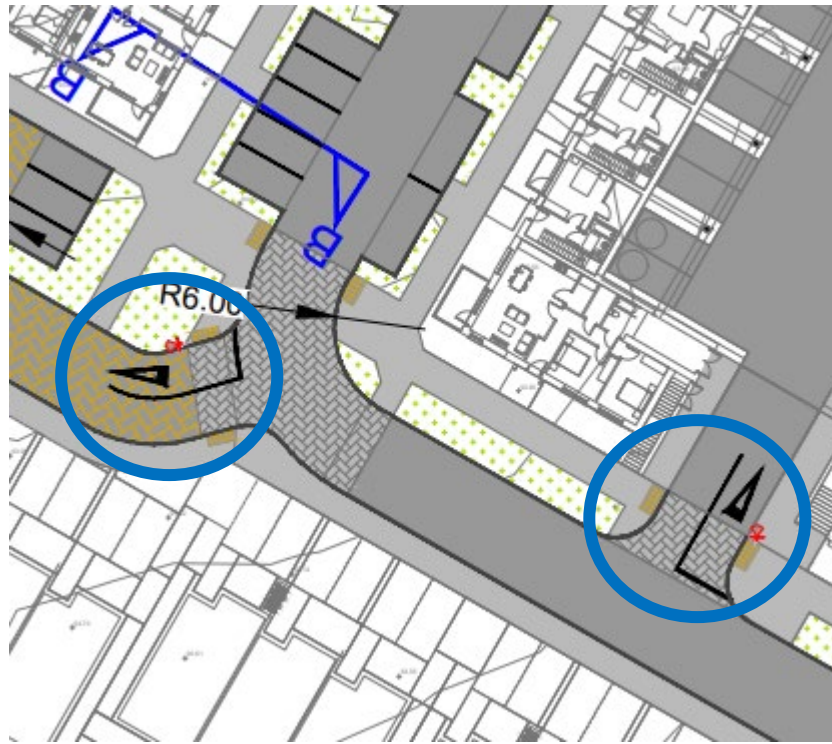
**Suggestion:**

Ensure adequate crossing facilities are provided to cater for the desired route for pedestrians throughout the proposed development.

**4.8 Issue:**

Throughout the development the yield road marking symbol is located in advance of pedestrian crossing locations. This may lead to collision between drivers of vehicles and pedestrians as priority at the crossing may be unclear.





Suggestion:

Advance the yield symbol to the back of the yield line at all internal junctions.

4.9 Issue:

Throughout the development pedestrian crossing facilities are provided within the proposed development. However, it is unclear whether adequate inter-visibility at a number of these crossings is provided between drivers of vehicles travelling along the internal access road and pedestrians stopped waiting to cross. The proposed parking spaces adjacent to the pedestrian crossing facilities may obstruct visibility splays.

Suggestion:

Ensure adequate inter-visibility splays between drivers of vehicles travelling along the internal access road and pedestrians stopped waiting to cross at the pedestrian crossings is provided.

4.10 Issue:

Pedestrian routes to and from stairwells / exits are not clearly defined within the undercroft carpark.

Suggestion:

Appropriate signs and markings should be provided to direct pedestrians to the nearest exit.

4.11 Issue:

Street lighting exists along the public road. However, street lighting is not shown to be provided within the proposed development. Road safety would be enhanced with the provision of street lighting.

Suggestion:

Provide adequate street within the proposed development.

4.12 Issue:

From the drawings provided it appears that no charging points for electric vehicles have been identified. Over the coming years electric vehicles will become the norm and provision should be made for this at this time. If there are very limited electric charging points on the site this could lead to driver frustration and risk taking, leading to injuries.

Suggestion:

Consideration should be given to providing charging points for a number of electric vehicles at this time and to ensure that nothing in the design prevents extending the number charging points for electric vehicles, as may be required in the future.

4.13 Issue:

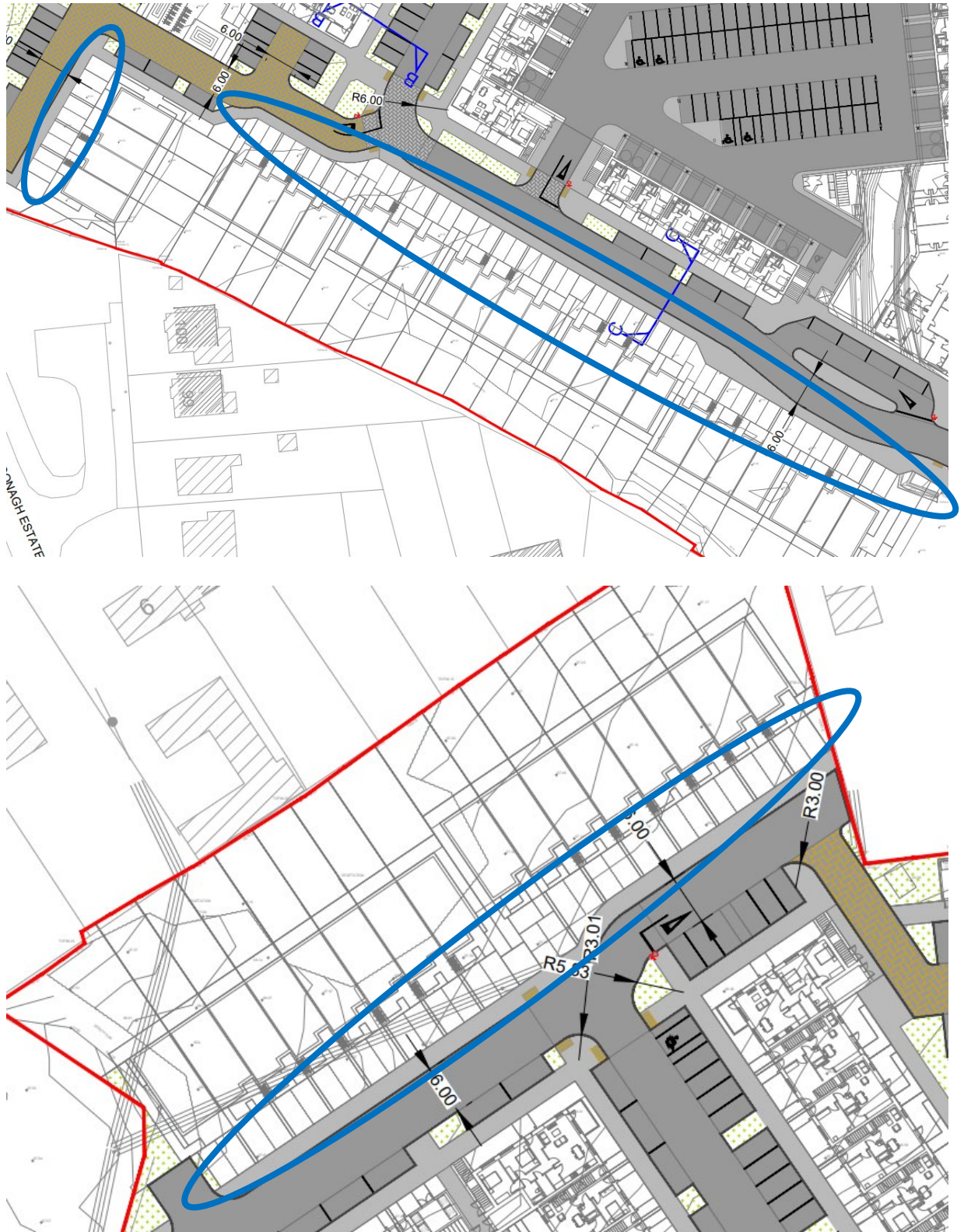
Visibility splays for drivers of vehicles at a number of junctions may be restricted by vehicles parked in adjacent car parking spaces. A lack of adequate visibility may contribute to a collision at these locations.

Suggestion:

Ensure that adequate visibility splays are provided at all junctions within the proposed development.

4.14 Issue:

There are a number of locations within the development where adequate width may not be provided between parked vehicles to allow pedestrians, in particular mobility impaired pedestrians, to access the dwelling units from the proposed footpath.



### Suggestion

Ensure adequate width is provided in all areas throughout the development to allow pedestrians, including mobility impaired pedestrians, to safely access the proposed dwellings.

**4.15 Issue:**

It is unclear from the drawings provided where bin storage spaces are located. A lack of an adequate refuse storage and collection plan may contribute to accessibility issues within the proposed development.

**Suggestion:**

Ensure that adequate bin storage areas are provided within the proposed development.

**4.16 Issue:**

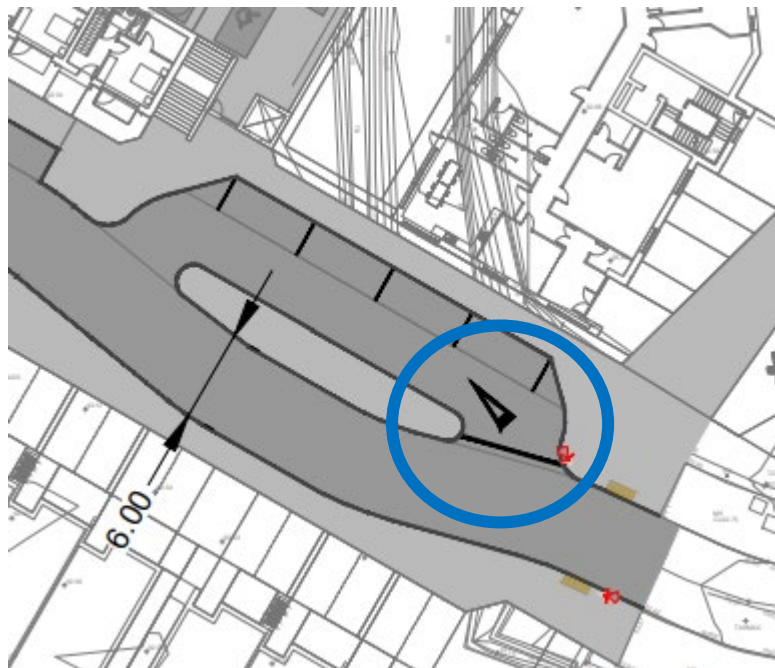
A number of disabled parking spaces are shown to be provided within the proposed development. However, it is unclear whether mobility impaired pedestrians can safely access these parking spaces.

**Suggestion:**

Provide appropriate dropped kerbs and tactile paving to allow mobility impaired pedestrians to safely access these parking spaces.

**4.17 Issue:**

A one-way circulating area is provided to a number of parking spaces near the entrance to the development. Drivers of vehicles entering the development may inadvertently enter the one-way system in the wrong direction.

**Suggestion:**

Provide appropriate signage to deter drivers from entering the one-way circulating area in the wrong direction.



**4.18 Issue:**

Priority at a number of internal junctions within the undercroft carpark may be unclear as no junction control is shown to be provided.

**Suggestion:**

Provide appropriate junction control at all the internal junctions within the undercroft carpark.

**4.19 Issue:**

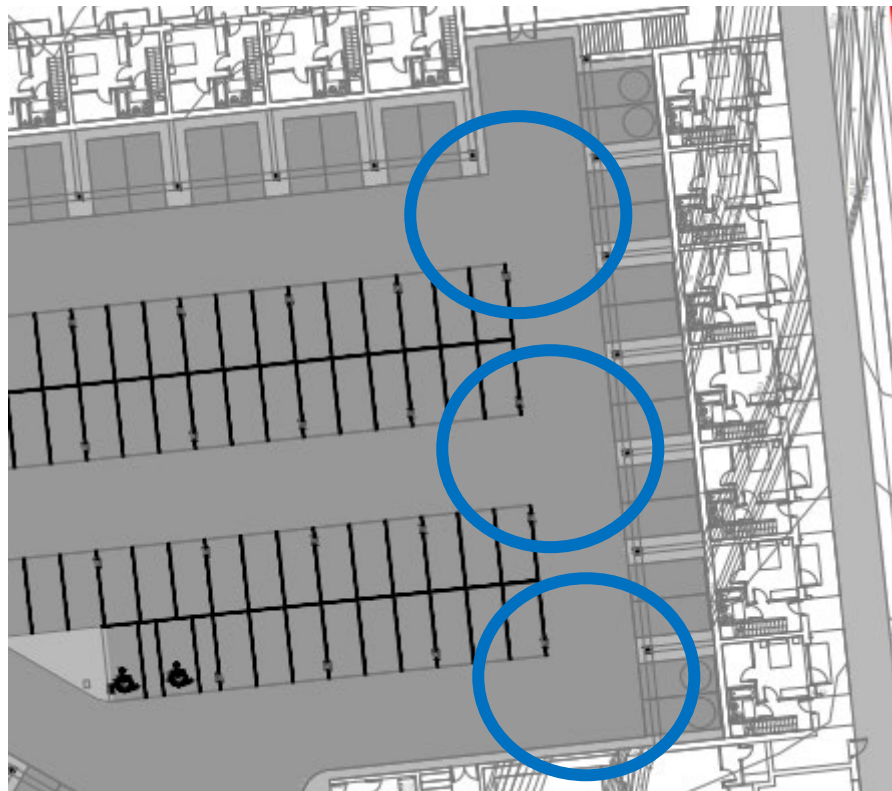
Visibility splays for drivers of vehicles at a number of internal junctions within the undercroft carpark may be restricted by vehicles parked in adjacent car parking spaces. A lack of adequate visibility may contribute to a collision at these locations.

**Suggestion:**

Ensure that adequate visibility splays are provided at all of the internal junctions within the undercroft carpark.

**4.20 Issue:**

Vehicles turning at the internal junctions/bends at the eastern side of the undercroft carpark may find it difficult to remain in lane due to the lack of junction radii at these locations. A lack of adequate junction radii will lead to vehicles tracking over into the opposing lane and as a result may increase collision risk with opposing vehicles at these locations.





Suggestion:

Provide an adequate layout at these locations to ensure that vehicles can remain in lane when turning.

## QUALITY AUDIT FEEDBACK FORM

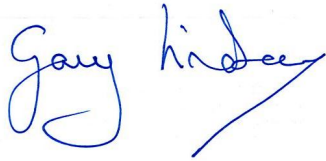
**Scheme:** Proposed Residential Development at Devoy Barracks, Naas

**Audit Reference No.:** 21023-02-001

**Date Audit Completed:** 2<sup>nd</sup> March 2022

Paragraph No. in Safety Audit Report	To Be Completed By Designer			To Be Completed by Audit Team Leader
	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Describe alternative measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted.	Alternative measures or reasons accepted by auditors (yes/no)
4.1	Yes	Yes	-	-
4.2	No	No	The Junction has been autotracked and two cars can safely pass each other with the current design layout.	Yes
4.3	Yes	Yes	-	-
4.4	Yes	Yes	-	-
4.5	Yes	No	Existing signage and tactile paving etc is already constructed on the roundabout arm that confirm the cycletrack facilities have ended.	Yes
4.6	Yes	No	The future link is outside lands in the ownership of the developer. Completion of this link shall be agreed with the Local Authority prior to commencement of the development following a favourable grant of planning.	Yes
4.7	Yes	Yes	-	-
4.8	Yes	Yes	-	-
4.9	Yes	Yes	-	-
4.10	Yes	Yes	-	-
4.11	Yes	Yes	-	-
4.12	Yes	Yes	-	-
4.13	Yes	Yes	-	-
4.14	Yes	Yes	-	-
4.15	Yes	Yes	-	-
4.16	Yes	Yes	-	-
4.17	Yes	Yes	-	-

4.18	Yes	Yes	-	-
4.19	Yes	Yes	-	-
4.20	Yes	Yes	-	-



**Signed**

**Design Team Leader**

**Date** 11/03/2022

**Print Name** Gary Lindsay

**Quality Audit**

**Signed off** ...  ..... **Audit Team Leader** **Date** ...16/3/22...

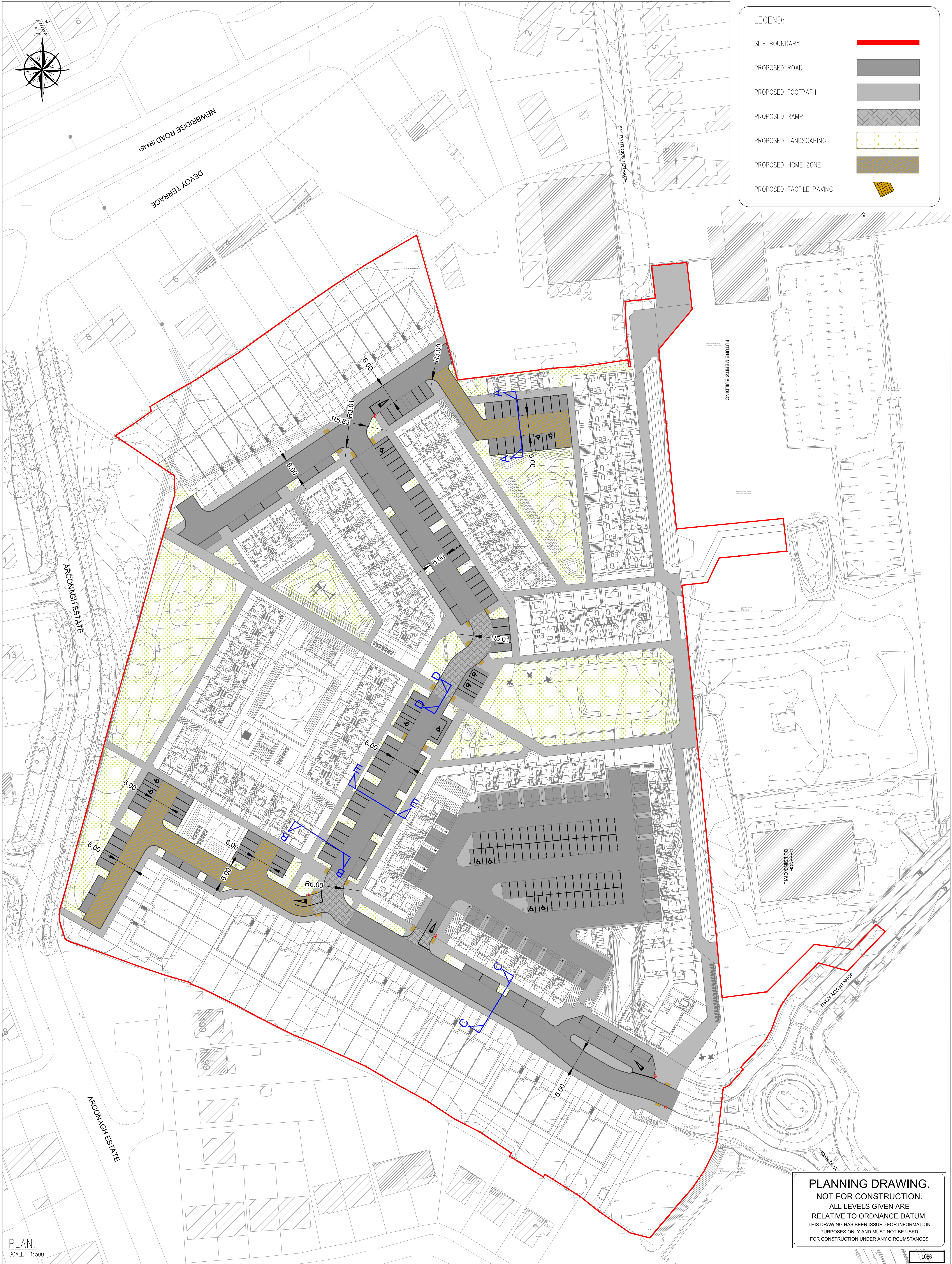
**Print Name** .....George Frisby.....

Please complete and return to:

Roadplan Consulting Ltd.  
7, Ormonde Road  
Kilkenny  
Email: info@roadplan.ie

## **Appendix A - Drawings**





LEGEND:

- SITE BOUNDARY
- PROPOSED ROAD
- PROPOSED FOOTPATH
- PROPOSED RAMP
- PROPOSED LANDSCAPING
- PROPOSED HOME ZONE
- PROPOSED TACTILE PAVING

PLAN.  
SCALE= 1:500

**PLANNING DRAWING.**  
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Rev. No.	Date	REVISION NOTE
S2 P01	17.02.2021	ARCHITECTS LAYOUT REVISED
P02	15.03.2021	DRAWING UPDATED TO LATEST ARCHITECTURAL LAYOUT
P03	28.03.2021	DRAWING UPDATED TO LATEST ARCHITECTURAL BACKGROUND, ISSUED FOR PLANNING
P04	06.04.2021	REVISED SITE LAYOUT
P05	07.07.2021	REVISED SITE LAYOUT
P06	23.08.2021	REVISED SITE LAYOUT
P07	20.09.2021	REVISED SITE LAYOUT
P08	03.02.2022	REVISED SITE LAYOUT
P09	16.02.2022	REVISED SITE LAYOUT

Dr. By	Chkd. By
IK	GL
AB	GL
AB	GL
AB	GL
AB	GL
AB	GL
AB	GL
AB	GL

Architect:	COADY ARCHITECTS				
Project:	DEVELOPMENT AT DEVLOY BARRACKS, NAAS				
Title:	Proposed Site Layout				
Dwg. No.:	DEV-CSC-00-XX-DR-C-0102				
Date	Dr. by	Chkd. by	Appr. by	Scale	Revision
SEPT '20	AB	GL	NB	1:500 @A1	<b>P09</b>

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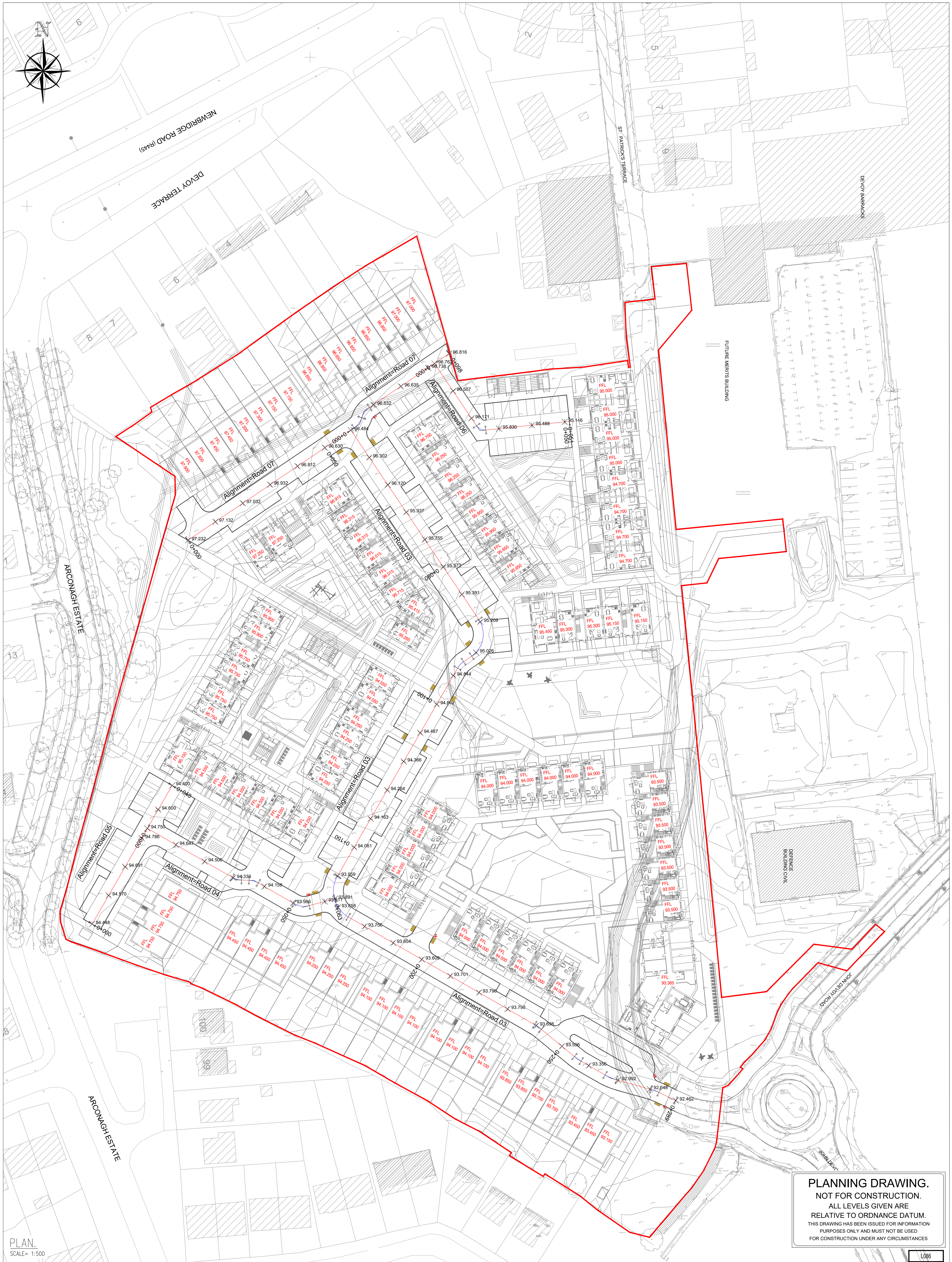
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OHSAS 18001:2007

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PLAN.  
SCALE= 1:500

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P01	17.02.2021	ARCHITECTS LAYOUT REVISED	IK	GL
P02	06.04.2021	REVISED SITE LAYOUT	AB	GL
P03	07.07.2021	REVISED SITE LAYOUT	AB	GL
P04	23.08.2021	REVISED SITE LAYOUT	AB	GL
P05	20.09.2021	REVISED LAYOUT	AB	GL
P06	2021.10.08	FFL'S REVISED AS CLOUDED	AB	GL
P07	2022.02.03	REVISED LAYOUT	AB	GL
P08	2022.02.16	REVISED SITE LAYOUT	AB	GL

Architect:	COADY ARCHITECTS			
Project:	DEVELOPMENT AT DEVLOY BARRACKS, NAAS			
Title:	Proposed Road Layout			
Dwg. No.	DEV-CSC-00-XX-DR-C-0103			
Date	Dr. by	Chk. by	Appr'd by	Scale
SEPT '20	AB	GL	NB	1:500 @A1

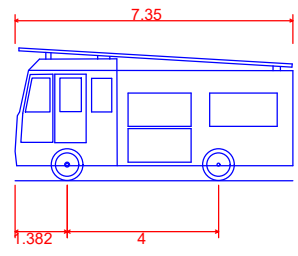
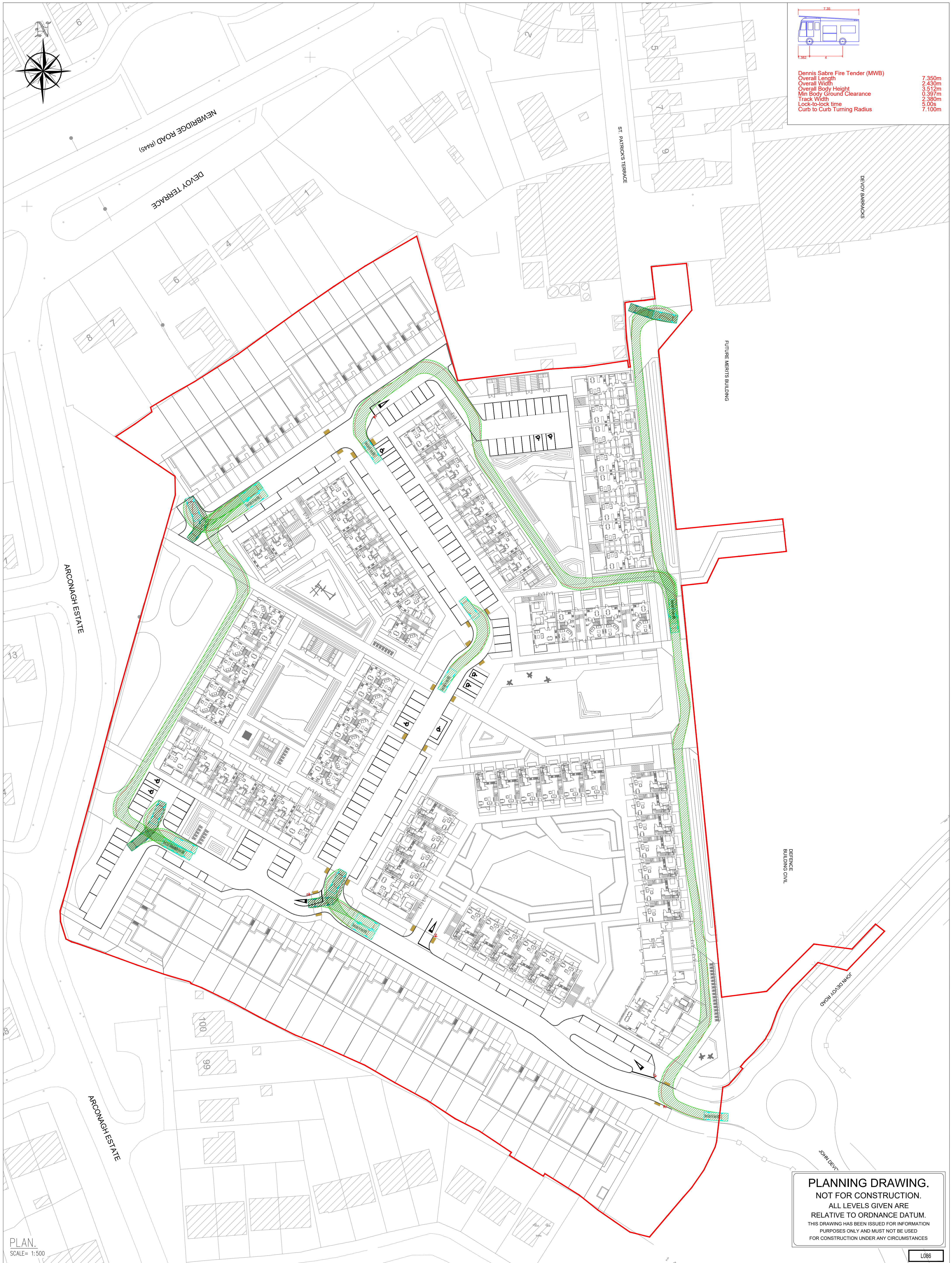
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I.S. EN ISO 14001:2004  
I.S. EN ISO 50001:2011  
OHSAS 18001:2007





Dennis Sabre Fire Tender (MWB)  
Overall Length 7.350m  
Overall Width 2.430m  
Overall Body Height 3.512m  
Min Body Ground Clearance 0.397m  
Track Width 2.380m  
Lock-to-lock time 5.00s  
Curb to Curb Turning Radius 7.100m

PLAN.  
SCALE= 1:500

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P01	15.03.2021	DRAWING UPDATED TO LATEST ARCHITECTS PLAN	AB	GL
P01	23.03.2021	ADDITIONAL FIRE TENDER SWEEP PATH	AB	GL
P03	28.03.2021	DRAWING UPDATED TO LATEST ARCHITECTURAL BACKGROUND, ISSUED FOR PLANNING	AB	GL
P04	06.04.2021	REVISED SITE LAYOUT	AB	GL
P05	07.07.2021	REVISED SITE LAYOUT	AB	GL
P06	19.08.2021	REVISED SITE LAYOUT	AB	GL
P07	20.09.2021	REVISED SITE LAYOUT	AB	GL
P07	03.02.2022	REVISED SITE LAYOUT	AB	GL
P08	16.02.2022	REVISED SITE LAYOUT	AB	GL

Architect:	COADY ARCHITECTS				
Project:	DEVELOPMENT AT DEVLOY BARRACKS, NAAS				
Title:	Swept Path Anylasis Fire Tender				
Dwg. No.	DEV-CSC-00-XX-DR-C-0107				
Date	Drw. by	Chkd. by	Appr'd by	Scale	Revision
SEPT '20	AB	GL	NB	1:500 @A1	<b>P08</b>

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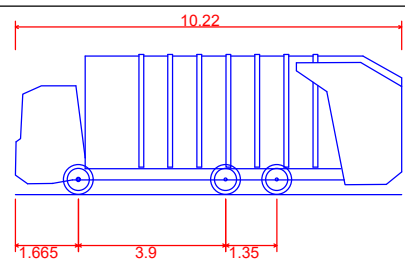
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I.S. EN ISO 50001:2011  
OHSAS 18001:2007

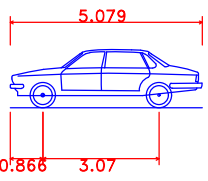




PLAN.  
SCALE= 1:500



Phoenix 2-17N (with Elite 2 6x2 RS chassis)  
Overall Length 10.220m  
Overall Width 2.250m  
Overall Body Height 3.707m  
Min Body Ground Clearance 0.260m  
Track Width 2.250m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 7.900m



bmw 7 series  
Overall Length 5.079m  
Overall Width 1.932m  
Overall Body Height 1.537m  
Min Body Ground Clearance 0.322m  
Track Width 1.900m  
Lock to Lock Time 4.00s  
Curb to Curb Turning Radius 6.000m



INTERNAL JUNCTION NO. 1.

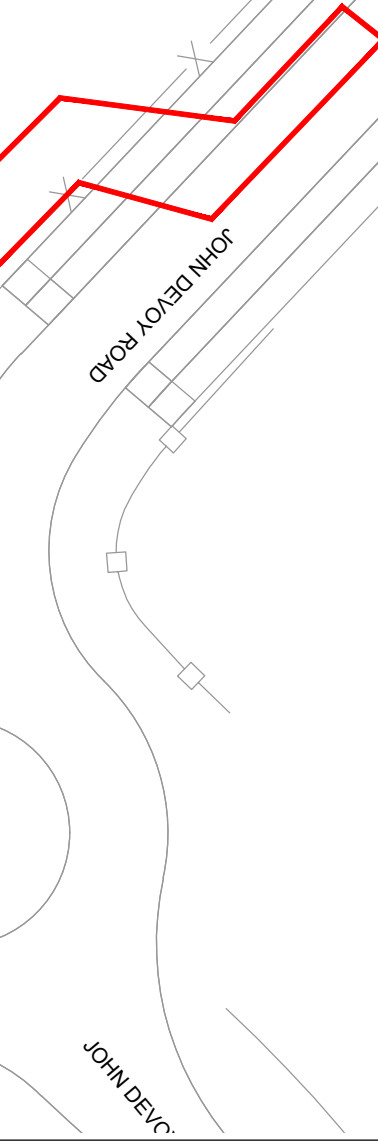
SCALE 1:250



INTERNAL JUNCTION NO. 2.

SCALE 1:250

DEFENCE  
BUILDING CIVIL



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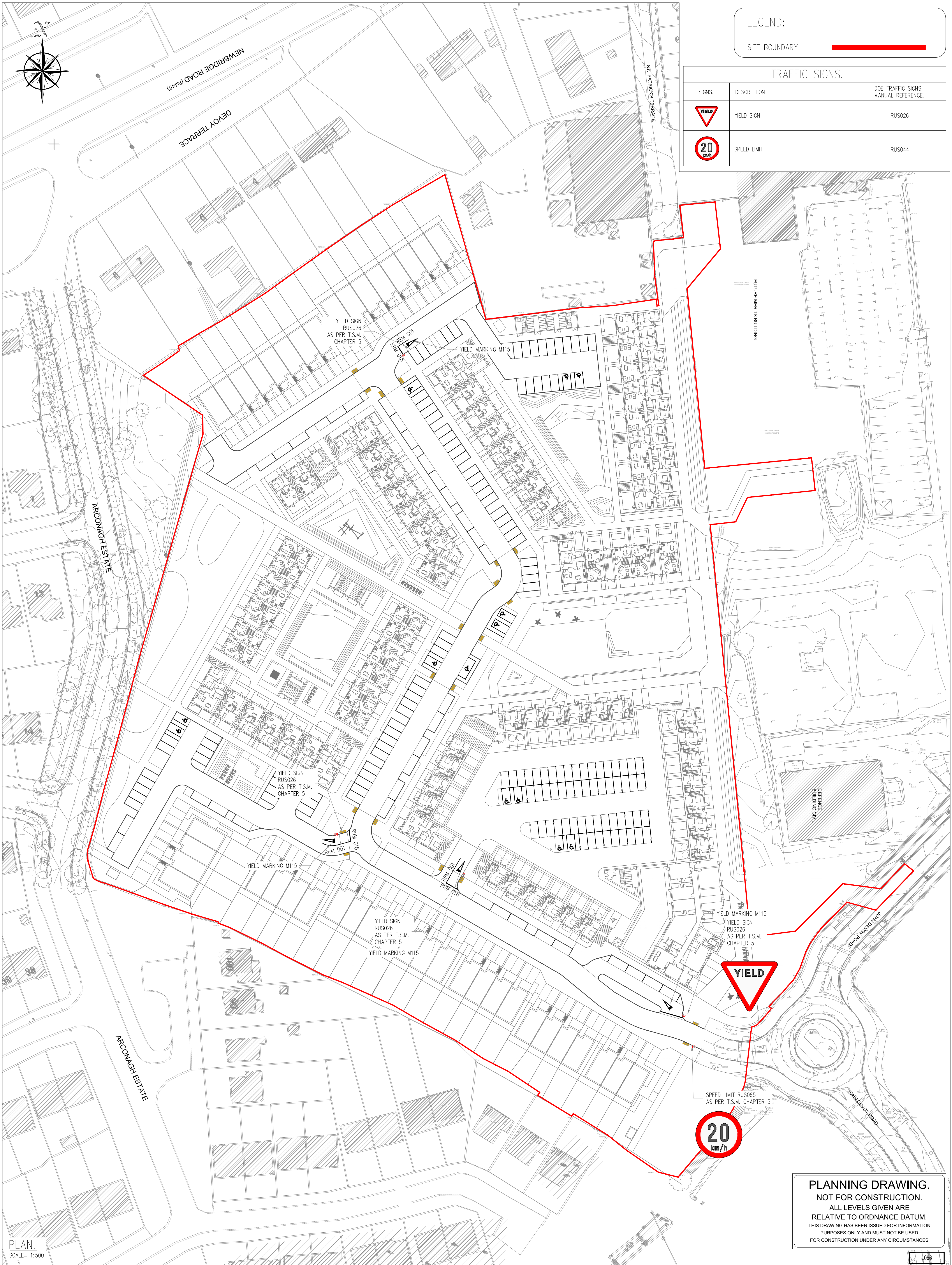
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P01	26.03.2021	DRAWING UPDATED TO LATEST ARCHITECTURAL BACKGROUND. ISSUED FOR PLANNING	AB	GL
P02	06.04.2021	REVISED SITE LAYOUT	AB	GL
P03	07.07.2021	REVISED SITE LAYOUT	AB	GL
P04	19.08.2021	REVISED SITE LAYOUT	AB	GL
P05	20.09.2021	REVISED SITE LAYOUT	AB	GL
P07	03.02.2022	REVISED SITE LAYOUT	AB	GL
P08	16.02.2022	REVISED SITE LAYOUT	AB	GL

Architect:	COADY ARCHITECTS			
Project:	DEVELOPMENT AT DEVOY BARRACKS, NAAS			
Title:	Swept Path Analysis Refuse Vehicle & Car DEV-CSC-00-XX-DR-C-0108			
Dwg. No.				
Date	Dim by	Chkd by	Appr by	Scale
SEPT '20	AB	GL	NB	1:500 @A1

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Quality Environment Energy Health & Safety	I.S. ISO 9001:2008 I.S. ISO 14001:2004 I.S. EN ISO 50001:2011 OHSAS 18001:2007





LEGEND:

SITE BOUNDARY

TRAFFIC SIGNS.

SIGNS.	DESCRIPTION	DOE TRAFFIC SIGNS MANUAL REFERENCE.
	YIELD SIGN	RUS026
	SPEED LIMIT	RUS044

PLAN.  
SCALE= 1:500

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- NOTES
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  - This drawing to be read in conjunction with all other Architectural and Engineering drawings and all other relevant drawings and Specifications.
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Rev. No.	Date	REVISION NOTE	Drn. By	Chkd. By
P01	17.02.2021	ARCHITECTS LAYOUT REVISED	IK	GL
P02	24.03.2021	REVISED LAYOUT	AB	GL
P03	26.03.2021	DRAWING UPDATED TO LATEST ARCHITECTURAL BACKGROUND. ISSUED FOR PLANNING	AB	GL
P04	06.04.2021	REVISED SITE LAYOUT	AB	GL
P05	07.07.2021	REVISED SITE LAYOUT	AB	GL
P06	23.08.2021	REVISED SITE LAYOUT	AB	GL
P07	20.09.2021	REVISED SITE LAYOUT	AB	GL
P08	03.02.2022	REVISED SITE LAYOUT	AB	GL
P09	16.02.2022	REVISED SITE LAYOUT	AB	GL

Architect:	COADY ARCHITECTS				
Project:	DEVELOPMENT AT DEVLOY BARRACKS, NAAS				
Title:	Proposed Road Markings And Signage				
Dwg. No.	DEV-CSC-00-XX-DR-C-0116				
Date	Drn by	Chkd by	Apprd by	Scale	Revision
SEPT '20	AB	GL	NB	1:500 @A1	P09

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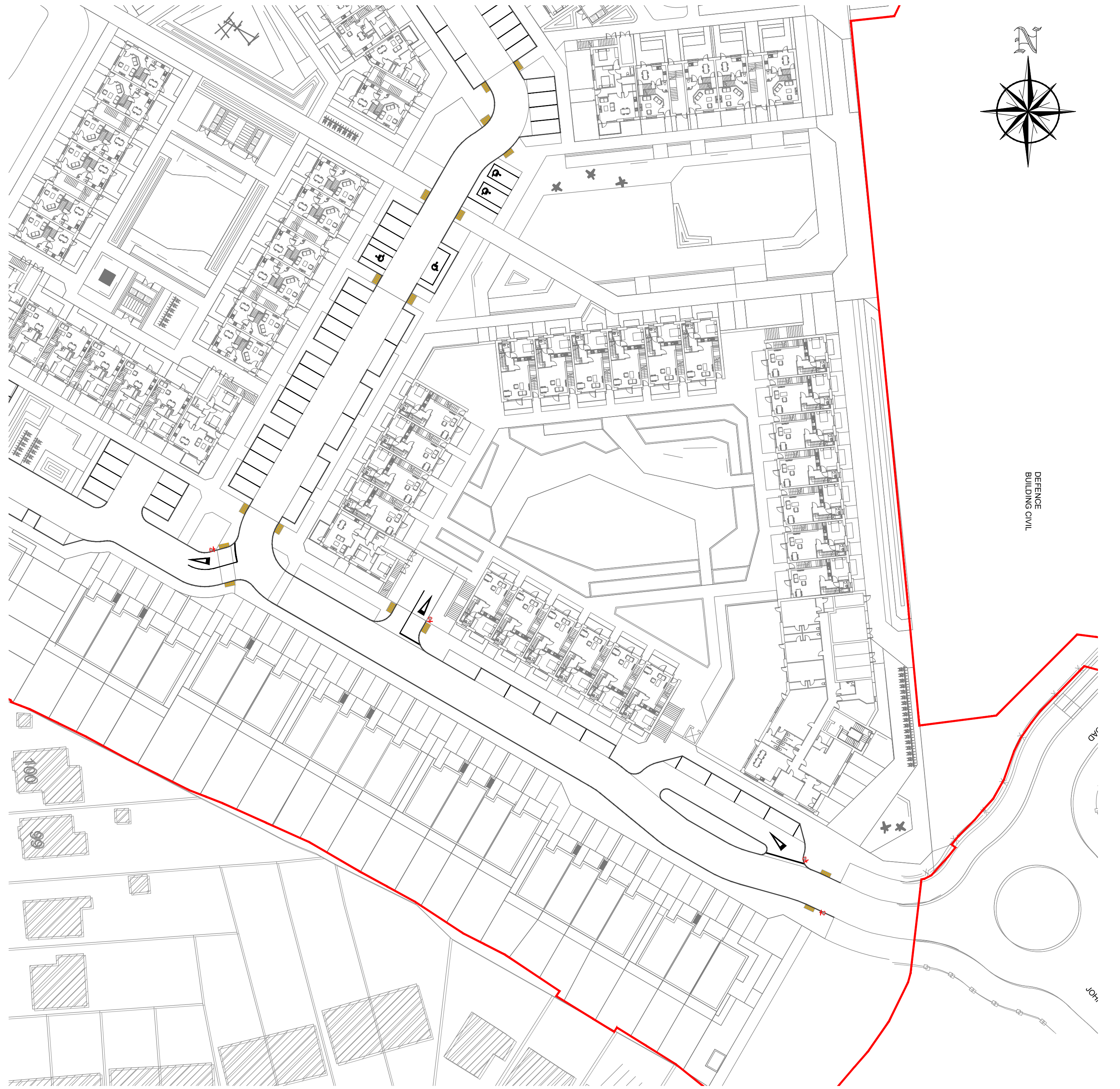
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Environment  
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I.S. EN ISO 14001:2004  
I.S. EN ISO 50001:2011  
OHSAS 18001:2007





Proposed Undercroft Plan.  
SCALE= 1:500



Proposed Ground Floor Plan.  
SCALE= 1:500

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Rev. No.	Date	REVISION NOTE	Dm. By	Chkd. By
P01	2022.02.03	REVISED SITE LAYOUT	AB	GL
P02	2022.02.16	REVISED SITE LAYOUT	AB	GL

Client	COADY ARCHITECTS			
Project	DEVELOPMENT AT DEVROY BARRACKS, NAAS			
Title	PROPOSED UNDERCROFT CAR PARK LAYOUT			
Dwg. No.	DEV-CSC-00-XX-DR-C-0160			
Date	Dm by	Chkd by	Aprvd by	Scale
SEPT '20	AB	GL	NB	AS SHOWN @A1
Revision				P02
NSAI Certified				
Quality Environment I.S. EN ISO 9001:2008				
Energy I.S. EN ISO 14001:2004				
Health & Safety OHSAS 18001:2007				