TRAFFIC IMPACT ASSESSMENT

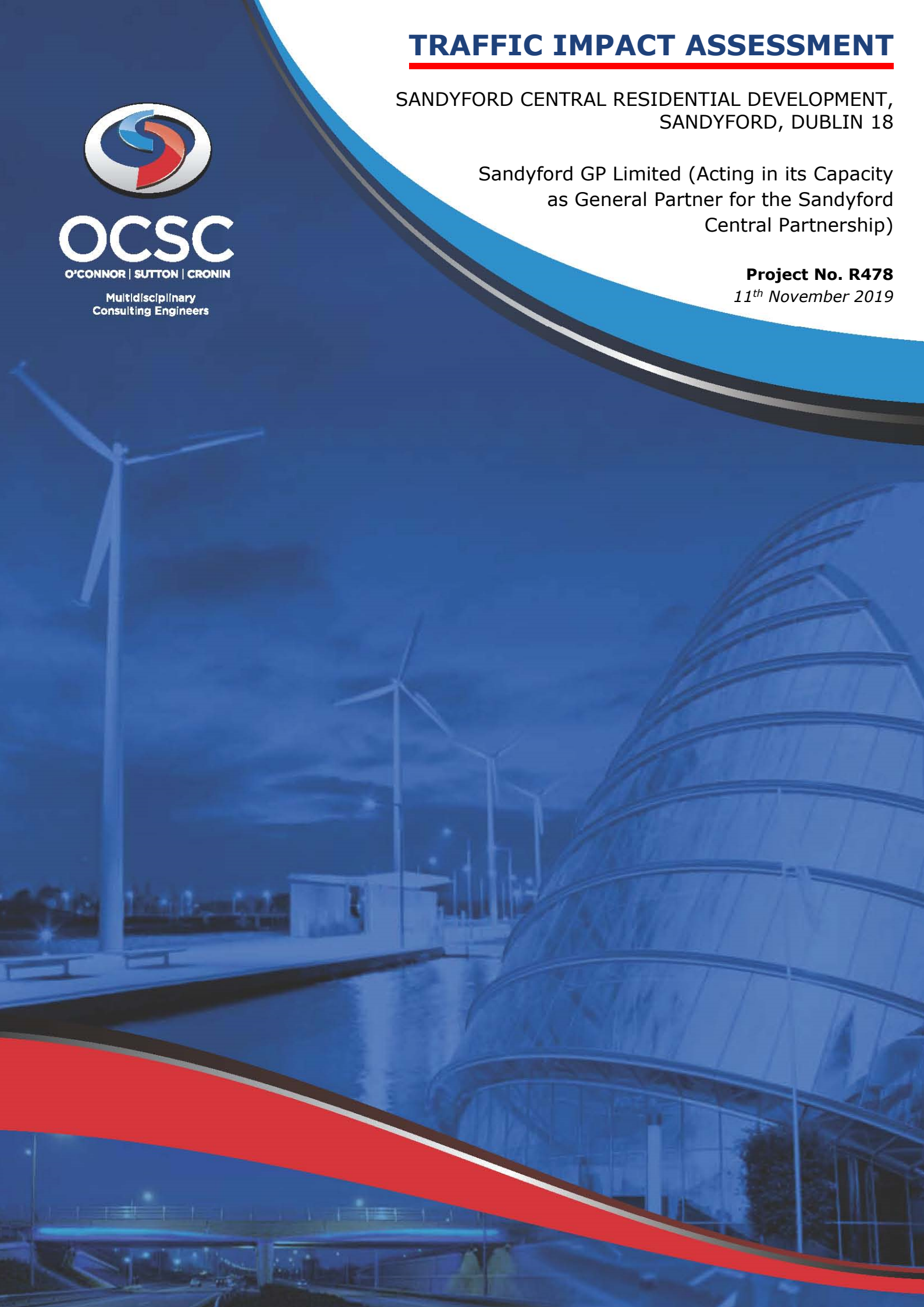
SANDYFORD CENTRAL RESIDENTIAL DEVELOPMENT,
SANDYFORD, DUBLIN 18

Sandyford GP Limited (Acting in its Capacity as General Partner for the Sandyford Central Partnership)

Project No. R478

11th November 2019

OCSC
O'CONNOR | SUTTON | CRONIN
Multidisciplinary
Consulting Engineers



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NOTICE

DOCUMENT CONTROL & HISTORY

OCSC Job No.: R478	Project Code	Originator	Zone Volume	Level	File Type	Role Type	Number	Status / Suitability Code	Revision
	SFC	OCSC	00	XX	RP	C	0003	A1	C03

Rev.	Status	Authors	Checked	Authorised	Issue Date
C03	A1	P. Raggett	A. Horan	M. McGrath	11.11.2019
C02	A1	P. Raggett	A. Horan	M. McGrath	04.11.2019
C01	A1	P. Raggett	A. Horan	M. McGrath	19.07.2019
P03	S3	P. Raggett	A. Horan	M. McGrath	08.07.2019
P02	S3	P. Raggett	A. Horan	M. McGrath	17.06.2019
P01	S3	P. Raggett	A. Horan	M. McGrath	14.06.2019

SANDYFORD CANTRAL RESIDENTIAL DEVELOPMENT,
SANDYFORD, DUBLIN 18

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1. INTRODUCTION

O'Connor Sutton Cronin & Associates (OCSC) have been commissioned to undertake this assessment with respect to the proposed residential development at the former Aldi Site, Carmanhall Road, Sandyford Business District, Dublin 18. The exact site location can be seen in *Figure 1* below.

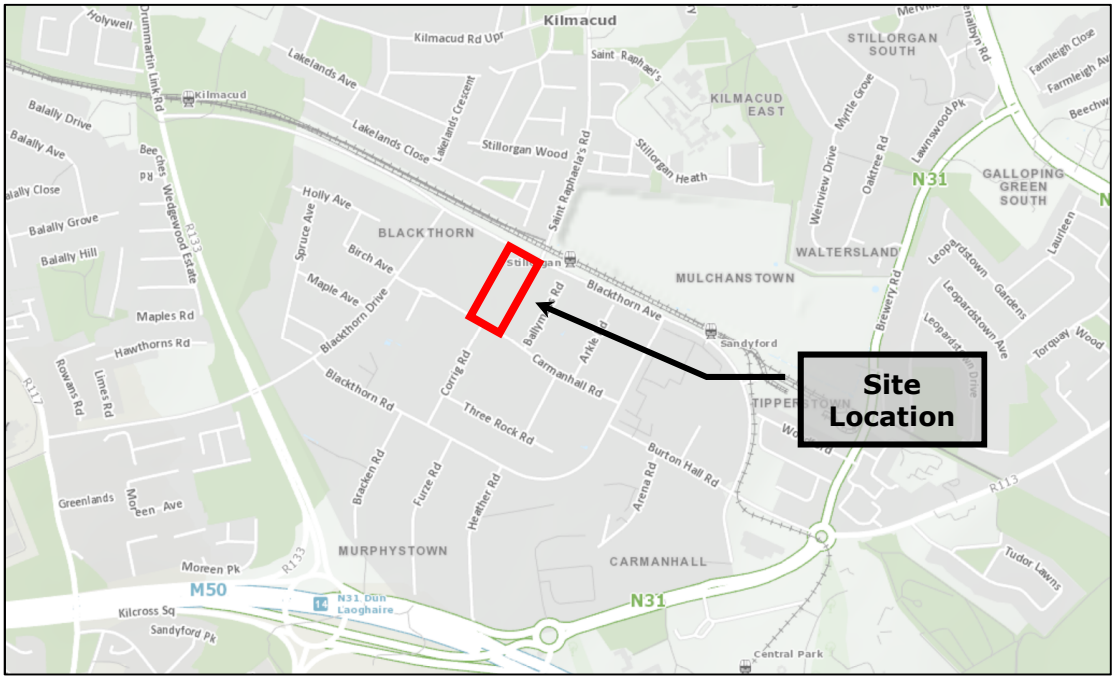


Figure 1: Site Location Map

The proposed development consists of 564 no. apartments, ranging in size from studio to 1 – 3 beds along with ancillary residential amenities, café and crèche facilities.

The purpose of this report is to provide a detailed and conservative assessment of the development with respect to:

- The potential traffic impact on the operation of the local road network;
- The rationale for parking proposals for the site.

In carrying out the above, this assessment has given due consideration to the relevant guidelines including:

- *Traffic & Transport Assessment Guidelines (2014)* as published by the former National Roads Authority (NRA) now Transport Infrastructure Ireland (TII);
- *Guidelines for Traffic Impact Assessment (1997)* as published by the Chartered Institute of Highways & Transportation;
- *Dun Laoghaire Rathdown County Development Plan 2016-2022*.

2. STUDY METHODOLOGY

In order to inform this assessment, a series of bespoke traffic surveys were commissioned at the following locations:

- *Junction 1*: Carmanhall Road/Blackthorn Drive Signalised Junction;
- *Junction 2*: Carmanhall Road/Corrig Road Priority Junction;
- *Junction 3*: Carmanhall Road/Blackthorn Road Priority Junction;
- *Junction 4*: Corrig Road/ Blackthorn Road Priority Junction;

The exact locations of these junctions can be seen in *Figure 2.*

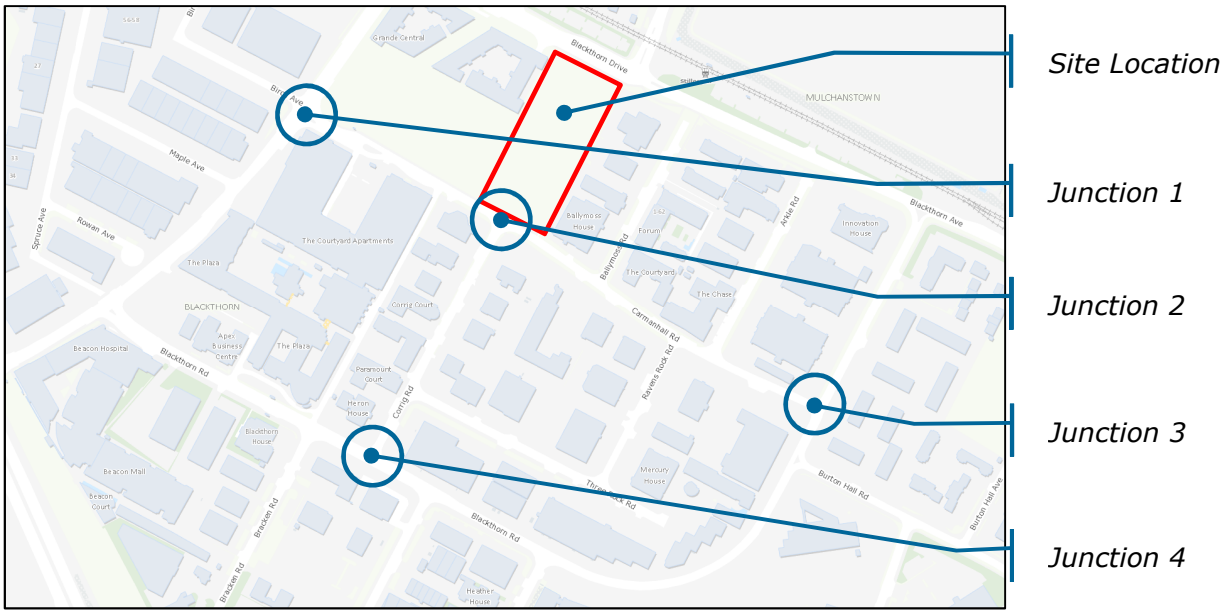


Figure 2: Traffic Counts Locations

The surveys took the form of 15 minute interval junction turning counts and were carried out on Thursday 11th April 2019 & Thursday 23rd May 2019 between the hours of 07:00 – 10:00 and 16:00 – 19:00. The following classification system was used for recorded results:

- Bicycle;
- Motorcycle;
- Car;
- Taxi;
- Light Goods Vehicle;

- Heavy Goods Vehicles;
- Bus (PSV).

In addition to the above, queue length surveys were commissioned, recording the maximum queue lengths observed on a per lane basis at every approach of each junction over 5 minute intervals. Pedestrian Crossing surveys were also carried out recording pedestrian movements at the respective junctions over 15 minute intervals. A full copy of the results of all traffic surveys can be found in *Appendix A*, to the rear of this report.

For the purposes of this assessment, the base year flows were then adjusted to the assumed Year of Opening for the development (2023) and the Design Year (2038) using medium range NRA growth factors[1].

The traffic generation potential of the development was assessed using data obtained from the EIAR of the proposed adjacent development known as *Rockbrook Phase II* (ABP Ref. ABP-304405-19) which included survey data at existing apartment developments in the local area which were used to develop accurate, site specific trip generation rates. The traffic generation of other third party developments in the local area which have either received planning approval or recently lodged and are awaiting a decision on same has also been allowed for, as taken from their respective traffic assessments.

The estimated additional traffic was assigned to the local road network and its impact on the operation of the local links and junctions was assessed using guidance from TII, CIHT, the *Design Manual for Roads and Bridges* (DMRB) and TRANSYT 15/Junctions 9 traffic modelling software. The assessment considered the following scenarios for each time period:

- Do Nothing – no development taking place in the local area and only allowance for natural background traffic growth;

[1] Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections, TII (October 2016)

- Do Something – natural background traffic growth and the additional traffic estimated to be generated by the proposed development;
- Do Maximum – natural background traffic growth, the additional traffic estimated to be generated by the proposed development and relevant but unrelated third party developments either approved or lodged for planning within the local area.

3. THE RECEIVING ENVIRONMENT

The receiving environment is urban in nature. The main transportation arteries in the study area are Carmanhall Road, Blackthorn Drive and Blackthorn Avenue which ultimately link to the major transport arteries outside of the study area i.e. the R133, R113 and M50. Outside of the study area, development generated traffic will dissipate and so is expected to have a negligible impact on the operation of the wider network. While there is likely to be substantial variation in the type of traffic travelling on the links locally, during the peak travel hours they would be expected to mainly carry commuter traffic.

As noted earlier, base traffic levels have been surveyed on the local network in 2019. By combining the traffic flow volumes surveyed with the traffic generation estimates for the proposed development, the following peak traffic hours were identified:

- A.M. Peak Hour: 08:00 – 09:00;
- P.M. Peak Hour: 16:15 – 17:15.

The recorded flows during the above peak hours are shown in the following:

–*Diagram 1: 2019 A.M. Peak Hour Base Flows (08:00 – 09:00);*
–*Diagram 2: 2019 P.M. Peak Hour Base Flows (16:15 – 17:15).*

The aforementioned diagrams and all others referenced in this text can be found in *Appendix B*, to the rear of this report. Any apparent discrepancy in flows between sites may be attributed to vehicles accessing developments and minor roads between surveyed junctions.

TA 79/99 "Traffic Capacity of Urban Roads" from the DMRB provides information on the capacity of urban roads based on classification and width. *Table 1* following shows the capacities of various road types based on this manual and using a 60:40 split in flow.

2 Way Single Carriageway – Busiest Direction of Flow (60/40 split)										
Carriageway Width (m)		*Total Number of lanes*								
		2				*2–3*	*3*	*3–4*	*4*	*4+*
		6.10	*6.75*	*7.30*	*9.0*	*10.0*		*12.3*	*13.5*	*18.0*
Road Type	UM	*Not Applicable*								
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700
	UAP3	900	1110	1300	1530	1620	*	*	*	*
	UAP4	750	900	1140	1320	1410	*	*	*	*

Table 1: Urban Road Capacities

The local links have been classified based on the associated definitions in the DMRB. Using the previous table, link capacities have been calculated and current Ratio of Flow to Capacity (RFC) values have been assessed for the key links bordering the site which gives an indication of the level each link is operating at in terms of capacity and the reserve capacity available i.e. 100% RFC indicates no reserve capacity. These are shown for the base year peak hours in *Table 2.*

It should be noted that given the variation in width across the links in question, an average width has been used which is rounded down to the nearest width shown in the above table, thus ensuring a conservative assessment of link capacity.

Link	Width (m)	Link Capacity (veh/hr)	A.M. Peak (veh/hr)	RFC (%)	P.M. Peak (veh/hr)	RFC (%)
Blackthorn Road	9.0	1,860	810	43.5	1,179	63.4
Carmanhall Road	6.1	1,020	478	46.9	558	54.7
Blackthorn Drive	10.0	2,010	600	29.9	635	31.6

Table 2: Base Year Link RFC Values for Local Network

As can be seen, all links are shown to be operating well within capacity in the base case.

In order to accurately assess the impact of the proposed development in the future, the base traffic flows for the local network have been expanded to the Year of Opening and the Design Year using the medium range TII growth factors detailed in *Table 3* following.

Year	**Growth Rates**	
	Light Vehicles	*Heavy vehicles*
2023	5.47%	9.82%
2038	19.33%	48.77%

Table 3: Background Traffic Growth Factors

The future year traffic flows without the proposed development can be seen in the following, contained within *Appendix B* of this report:

- *Diagram 3: 2023 A.M. Peak Hour Flows – Do Nothing;*
- *Diagram 4: 2023 P.M. Peak Hour Flows – Do Nothing.*

- *Diagram 5: 2038 A.M. Peak Hour Flows – Do Nothing;*
- *Diagram 6: 2038 P.M. Peak Hour Flows – Do Nothing.*

4. CHARACTERISTICS OF THE DEVELOPMENT

EXISTING SITE OVERVIEW

The site is largely undeveloped at present and houses a concrete slab from a previous warehouse development which is no longer present and an unoccupied structure to the south. The development site is bordered by Carmanhall Road to the south, Blackthorn Drive to the north and unrelated third party lands to the east and west. The existing site entrance is located on Carmanhall road in the south corner of the site.

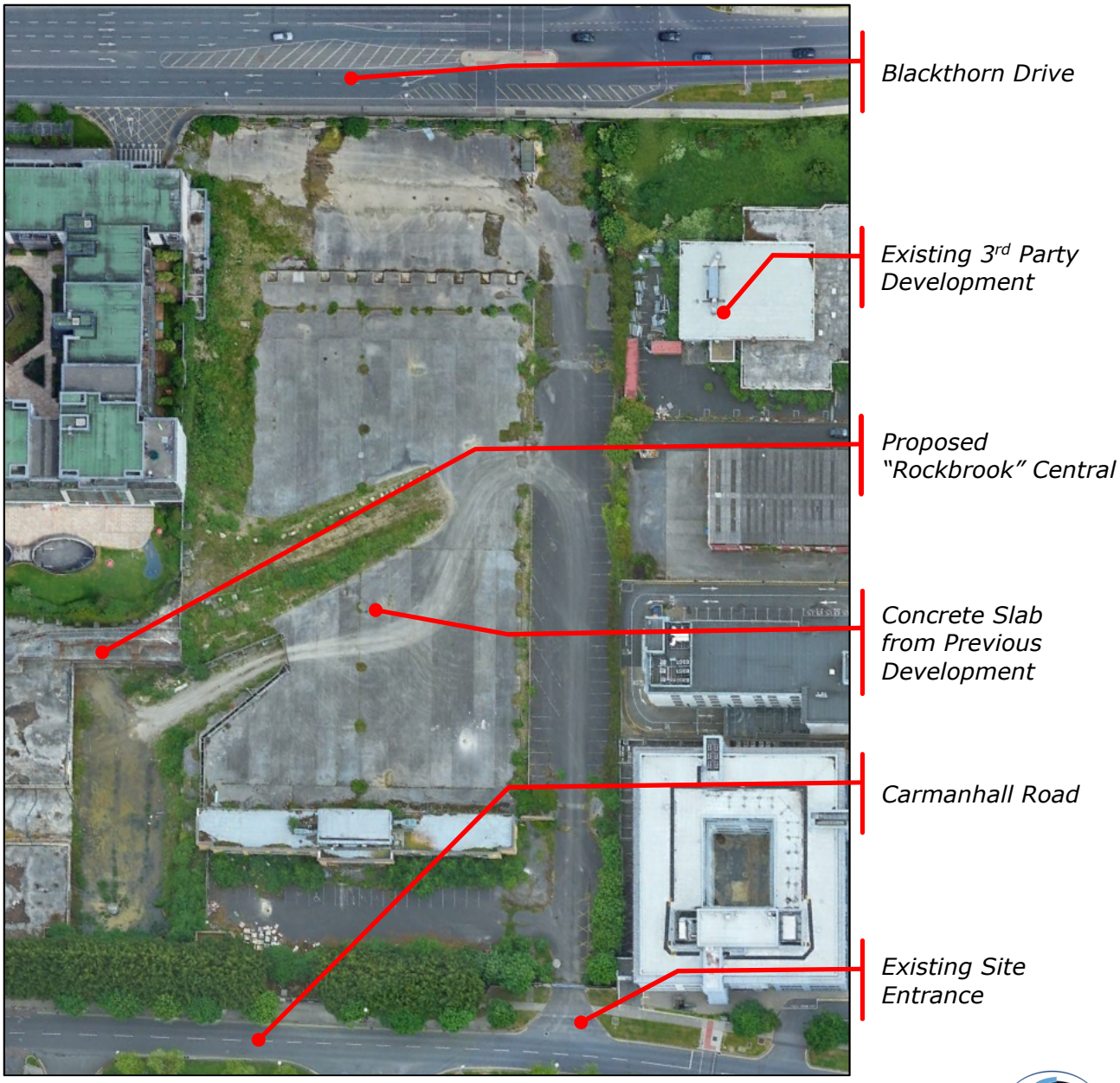


Figure 3: Existing Development Site

The topography of the local area and its development has resulted in a notable level difference between Carmanhall Road (c. +80.6mOD) and Blackthorn Drive (c. +84.2mOD).

It is noted that the site currently has an approved planning permission (ABP Ref. PL06D.301428) for a similar development to that proposed. It consisted of the following key elements:

- 460 no apartments comprising 93 no. 1 bed, 303 number 2 bed and 64 no. 3 bed units;
- Ancillary facilities including a 232m^2 crèche and additional residential amenities;
- 454 no car parking spaces and 516 no. cycle parking spaces;
- Vehicle entrances on Carmanhall Road;
- Pedestrian and cycle entrances from Blackthorn Drive and Carmanhall Road;
- Set down/servicing parking bays on Blackthorn Drive and Carmanhall Road.

PROPOSED DEVELOPMENT OVERVIEW

The development, which will have a Gross Floor Area of 49,342 sq m will principally consist of: the demolition of the existing structures on site and the provision of a Build-to-Rent residential development comprising 564 No. apartments (46 No. studio apartments, 205 No. one bed apartments, 295 No. two bed apartments and 18 No. three bed apartments) in 6 No. blocks as follows: Block A (144 No. apartments) is part 10 to part 11 No. storeys over basement; Block B (68 No. apartments) is 8 No. storeys over basement; Block C (33 No. apartments) is 5 No. storeys over lower ground; Block D (103 No. apartments) is part 16 to part 17 No. storeys over lower ground; Block E (48 No. apartments) is 10 No. storeys over semi-basement; and Block F (168 No. apartments) is 14 No. storeys over semi basement.

The development provides resident amenity spaces (1,095 sq m) in Blocks A, C and D including concierge, gymnasium, lounges, games room and a

panoramic function room at Roof Level of Block D; a creche (354 sq m); café (141 sq m); a pedestrian thoroughfare from Carmanhall Road to Blackthorn Drive also connecting into the boulevard at Rockbrook to the west; principal vehicular access off Carmanhall Road with servicing and bicycle access also provided off Blackthorn Drive; 285 No. car parking spaces (254 No. at basement level and 31 No. at ground level); 21 No. motorcycle spaces; set-down areas; bicycle parking; bin storage; boundary treatments; hard and soft landscaping; lighting; plant; ESB substations and switchrooms; sedum roofs; and all other associated site works above and below ground.

In terms of transportation, the key features of the proposed development are as follows:

- The majority of car parking (254 no. spaces) is to be provided under-development at Level 0 which will be accessed via an entrance point on Carmanhall Road, in the south corner of the site, replacing the existing site entrance;
- Some additional parking (31 no. spaces) is to be provided at Level 1 which will be accessed by an additional entrance on Carmanhall Road, just west of its junction with Corrig Road;
- Both vehicular entrances will operate under a simple uncontrolled layout designed in accordance with the Design Manual for Urban Roads and Streets (DMURS);
- A dedicated cycle parking access route to the Level 0 parking area is provided on Blackthorn Drive. This will also facilitate infrequent servicing access requirements including the movement of bins during collections periods. The Level 0 ramp access from Carmanhall Road also includes a segregated 2.0m wide cycle access ramp at a shallower 1:14 gradient;
- Set down and servicing parking areas are proposed on both Carmanhall Road and Blackthorn Drive which will facilitate activities such as creche drop off/collection, waste collection and other servicing needs. It is stressed that these areas are not proposed to serve as visitor parking or any long term parking usage;

- Pedestrian access is provided through the site via a north-south link providing a direct route to the Luas. Due to the topography of the site, stairs are provided at the northern end along with an internal lift which will be open to public use. Cyclists may also use this route through the site with manoeuvring of the steps facilitated by a bike channel;
- Access for fire tender and other emergency vehicles is also catered for via the north-south link with a swept path analysis having been carried out for such vehicles with drawings submitted separately in support of this application.

The proposed layout is shown in *Figure 4* following.

Figure 4: Site Layout & Access Arrangements

TRIP GENERATION

The primary trip generator is expected to be the residential element of the development. The ancillary creche and amenity elements are expected to serve residents at the development or, in the case of the former, those in the local area who will be already be on the local transport network as part of their daily commute. As a result, they are not expected to be independent trip generators and not been included in this assessment from a trip generation perspective.

In identifying the most accurate methodology for estimating the trip generation potential of the development, consideration was given to information available with respect to area specific trip generation information for similar development types. Specifically, the site immediately west of the development site has recently been granted planning permission for a proposed new residential development known as Rockbrook Phase II (ABP Ref. ABP-304405-19). The EIAR associated with this application included a comprehensive Traffic & Transportation section which sets out predicted traffic flows for the proposed apartments which were based on bespoke surveys carried out at the existing apartments on the Rockbrook site.

Given the proximity of the Rockbrook Phase II site, it was felt that the associated trip generation data represented the most accurate data to predict the trip generation potential of the proposed Sandyford Central development. Nevertheless, it is noted that the car parking provision at the Build-to-Sell Rockbrook Central development is notably higher than that proposed at the Build-to-Rent Sandyford Central development, at 1.1 spaces per unit and 0.5 spaces per unit respectively. Given that reduced car parking and, by extension, car ownership is expected to lead to reduced car based travel at the Sandyford Central site, the use of the Rockbrook Central trip rates is considered to be conservative which allows for a robust assessment.

Thus, based on the above, the trip rates used as the basis for this assessment and the overall conservatively estimated trip generation for the Sandyford Central development are shown in the tables following.

Time Period	Arrivals	Departures
A.M. Peak Hour	0.050	0.138
P.M. Peak Hour	0.091	0.041

Table 4: Apartment Trip Rates

Time Period	Arrivals	Departures
A.M. Peak Hour	28	77
P.M. Peak Hour	34	23

Table 5: Sandyford Central Estimated Trip Generation

The additional traffic outlined in *Table 5* was assigned to the study area based on existing traffic flows in the area combined with an assessment of the local network layout.

The assigned flows mentioned above are shown in the following, contained within *Appendix B* of this report:

- *Diagram 7: A.M. Peak Hour Trip Generation & Assignment;*
- *Diagram 8: P.M. Peak Hour Trip Generation & Assignment.*

In addition to the above, a number of additional third party development which have received planning approval have also been considered with respect to their traffic generation potential. The additional developments considered are as follows:

- RB Central – Carmanhall Road (Planning Reference: ABP-304405-19);
- Sandyford Student Accommodation – Carmanhall Road (Planning Reference: PL06D.303467);
- Beacon South Quarter Development – Junction of Blackthorn Drive and Blackthorn Road (Planning Reference D18A/0785);

- Modifications to Permitted Office Development – Arkle Road (Planning Reference: D18A/0212);
- Amendments to Approved Office Development – Blackthorn Avenue (Planning Reference: D17A/0496);
- Proposed Office Development – Burton Hall Road (Planning Reference: D16A/0076);
- Permitted Temporary School – Ballymoss Road (Planning Reference D18A/1210).

It is noted that the temporary school has only been considered for the Year of Opening analysis, later in this report on the basis that the temporary permission will have expired by the Design Year.

The trip generation potential for each of the above has been taken from their respective traffic assessments submitted at planning stage and added to the study area road network for both peak hours, as shown in the following, contained within *Appendix B* of this report:

- *Diagram 9: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2023;*
- *Diagram 10: 3rd Party Development P.M. Peak Hour Trip Generation & Assignment 2023;*
- *Diagram 11: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2038;*
- *Diagram 12: 3rd Party Development P.M. Peak Hour Trip Generation & Assignment 2038.*

SITE ACCESSIBILITY

The site is located directly adjacent a number of public transport options including rail and bus. To put this in context, the proximity of the site to both the Luas and Dublin Bus stops is highlighted following.

Figure 5: Local Public Transport Infrastructure

RAIL

The development site is located directly adjacent the Luas Green Line Stillorgan stop, which is c. 100m walk away. This stop provides access to regular rail services between Bride's Glen and Broombridge with intermediate stops including key locations such as Dundrum, St. Stephen's Green and O'Connell Street. The latter provides linkage with the Luas Red Line which in turn provides rail services between Tallaght/Saggart and the Point Village and includes stops at key transportation hubs including Houston Station, Connolly Station and Busáras. The overall Luas network map is shown overleaf.

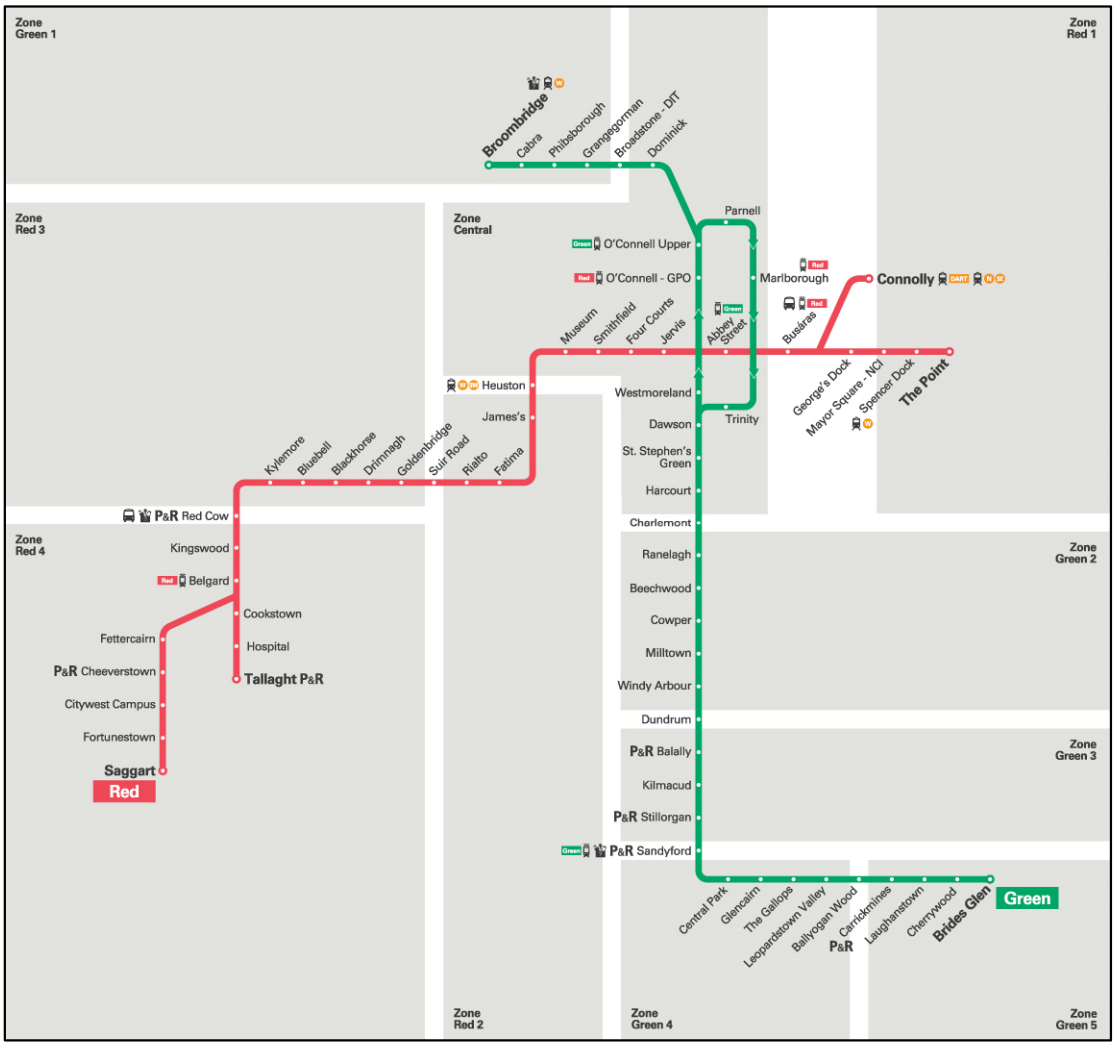


Figure 6: Luas Network Map

The Luas has an average peak frequency of every 4-5 minutes and operates from 05:30 – 00:18 on weekdays. The journey time between the Sandyford stop and St. Stephen's Green is estimated at approximately 25 minutes at peak times.

BUS

There are 3 no. Dublin Bus services operating within a 10 minute walking distance of the development site, with the closest stops located approximately 100m from the development site boundary. These services are summarised following.

Route No.	Description	Peak Frequency	Off-Peak Frequency
11	Wadelai Park – Sandyford Business District	10-20 mins	30 mins
47	Poolbeg Street – Belarmine	30 mins	Hourly
116	Parnell Square – Whitechurch	-	Daily

Table 6: Local Bus Services

It is also noted that the Dun Laoghaire Rathdown Development Plan proposes a new Quality Bus/Bus Priority Route along Blackthorn Avenue, directly adjacent the development site as per the following extract from the associated mapping.

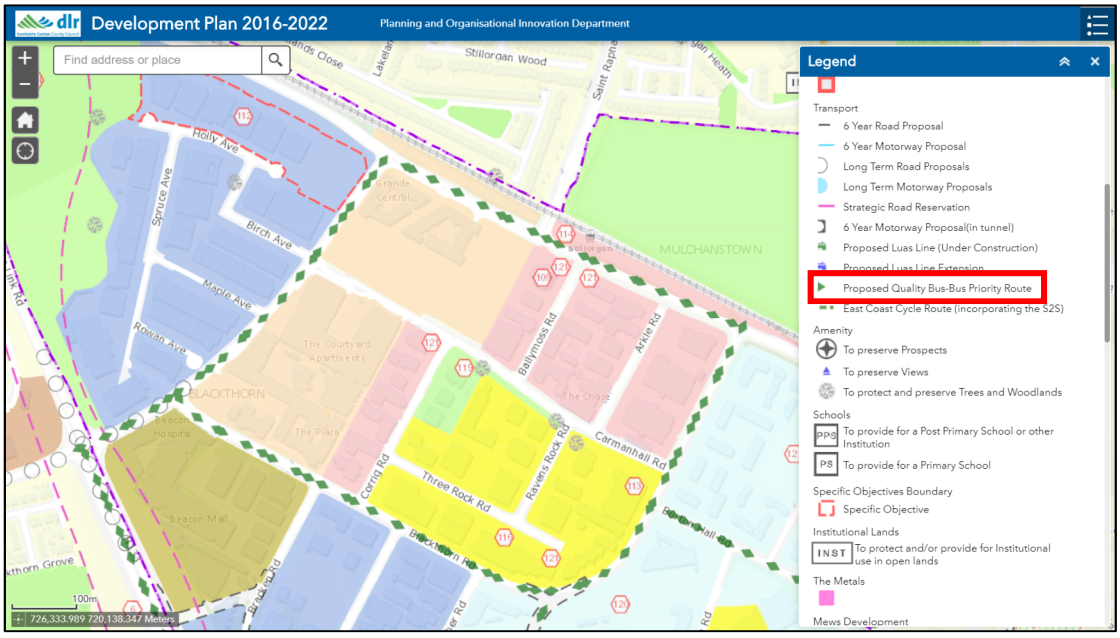


Figure 7: Development Plan Map Extract Highlighting Proposed Quality Bus-Bus Priority Route

CYCLE

The local cycle network includes a mixture of segregated and on-road facilities on the primary links adjacent the development site. This is indicated in the below extract from the existing facilities mapping taken from the National Transport Authority's *Greater Dublin Area Cycle Network Plan*, with the development site highlighted in red.

Figure 8: GDA Cycle Network Plan Map of Existing Cycle Facilities

Further improvements to this network are proposed under the *Greater Dublin Area Cycle Network Plan*, as highlighted in the following extract from the Plan's "proposed" mapping, with the development site again highlighted in red.

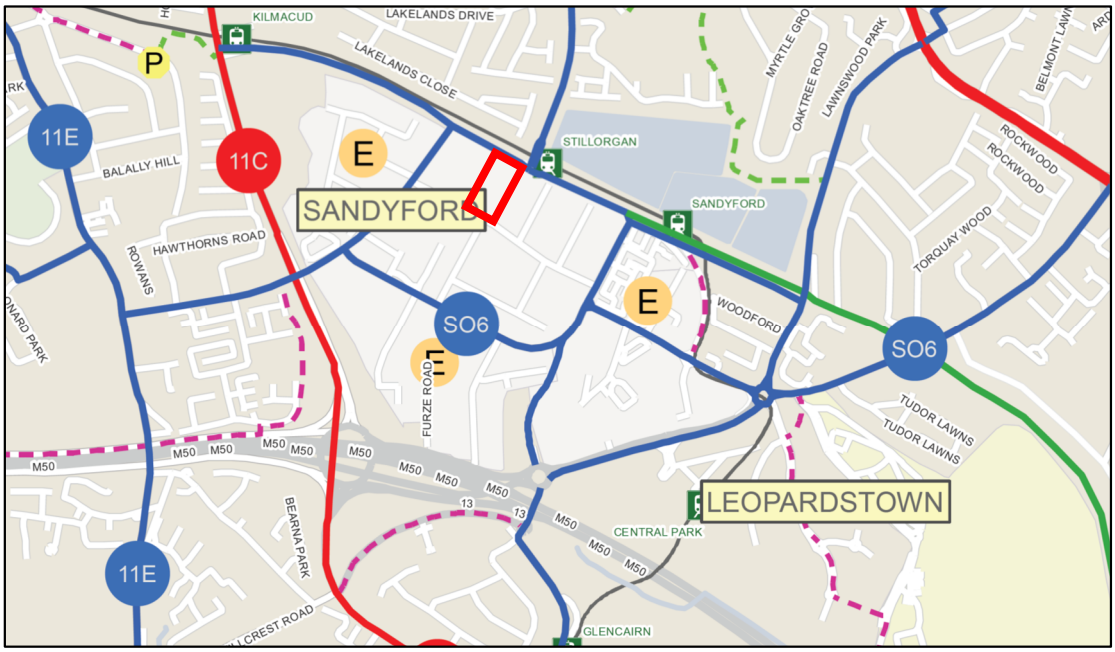


Figure 9: GDA Cycle Network Plan Map of Proposed Cycle Facilities

PEDESTRIAN

Pedestrian infrastructure locally is of a high quality and includes dedicated crossing facilities at all major junctions locally including on Blackthorn Avenue, providing direct access to the Luas and Bus services as outlined in *Figure 3* previously.

In addition, there are a variety of local amenities within a short walking distance. These are highlighted in the following figures, with the majority of amenities within and approximate 10 minutes walking distance and the development site bound in red in each.

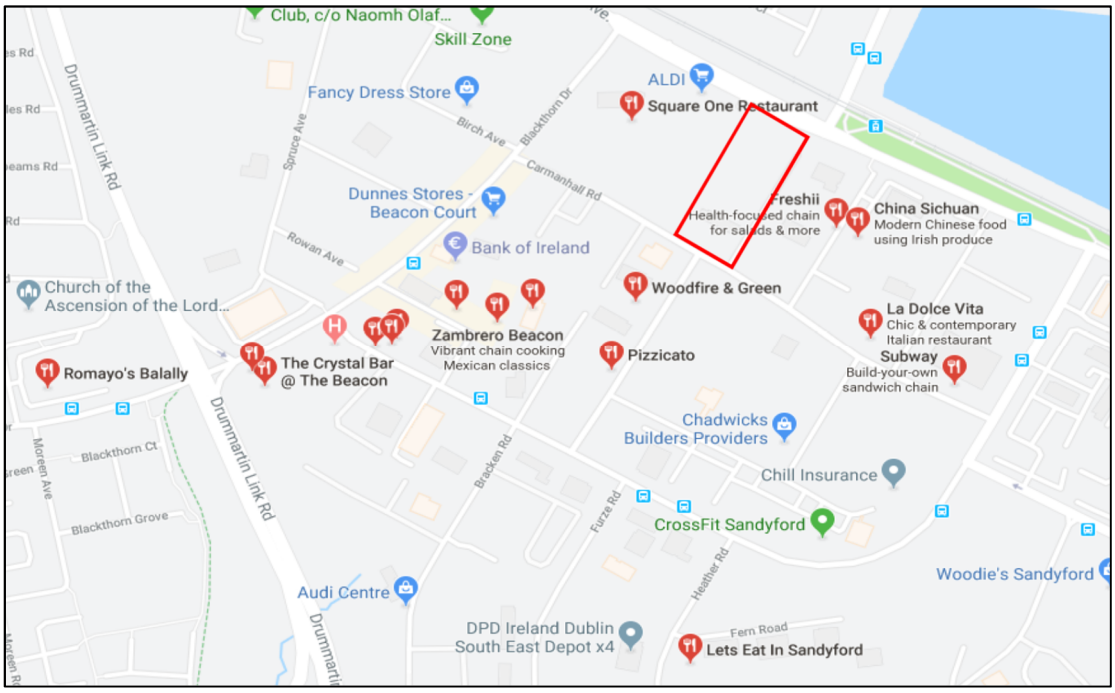


Figure 10: Local Restaurants

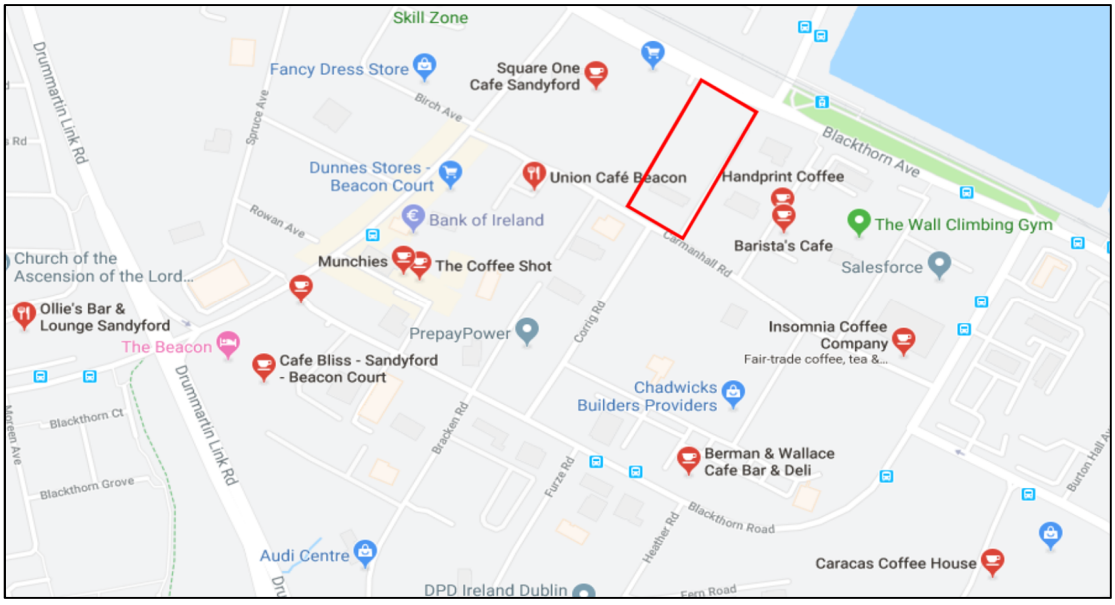


Figure 11: Local Cafes

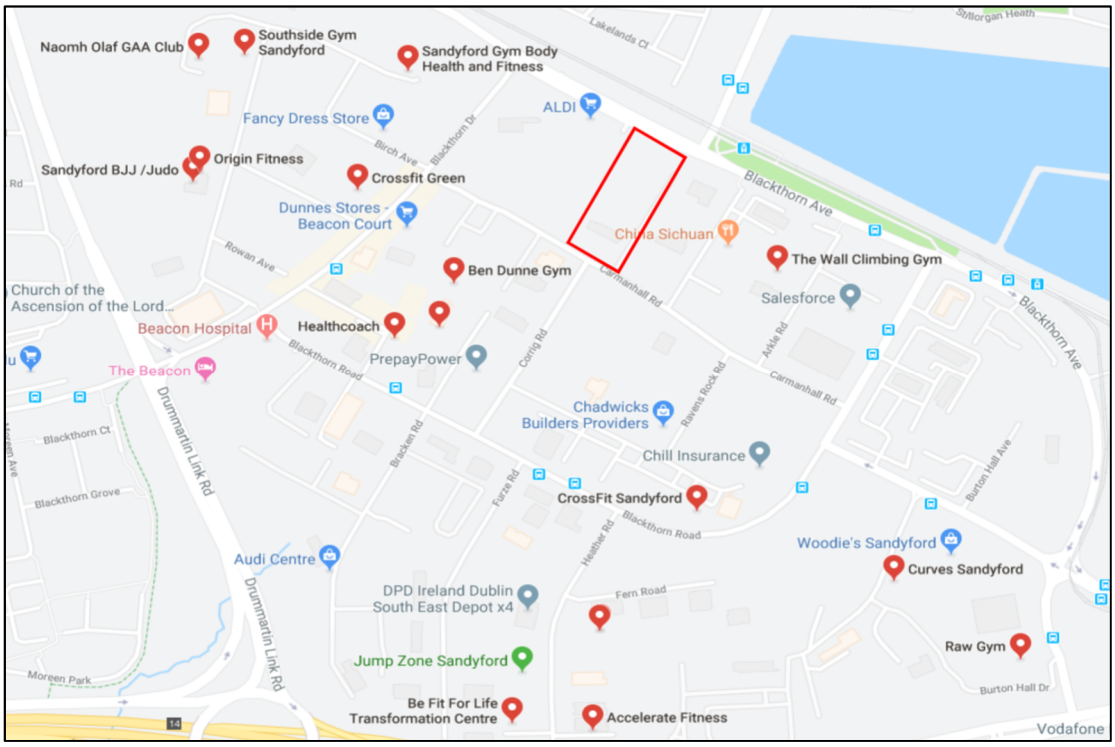


Figure 12: Local Leisure & Fitness

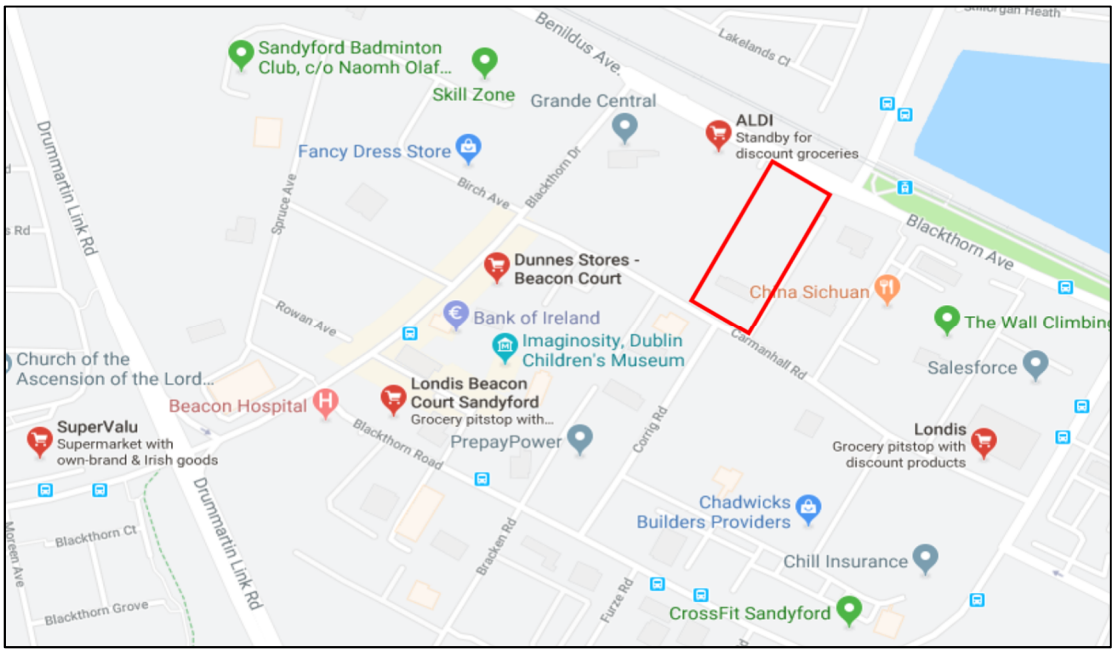


Figure 13: Local Supermarkets

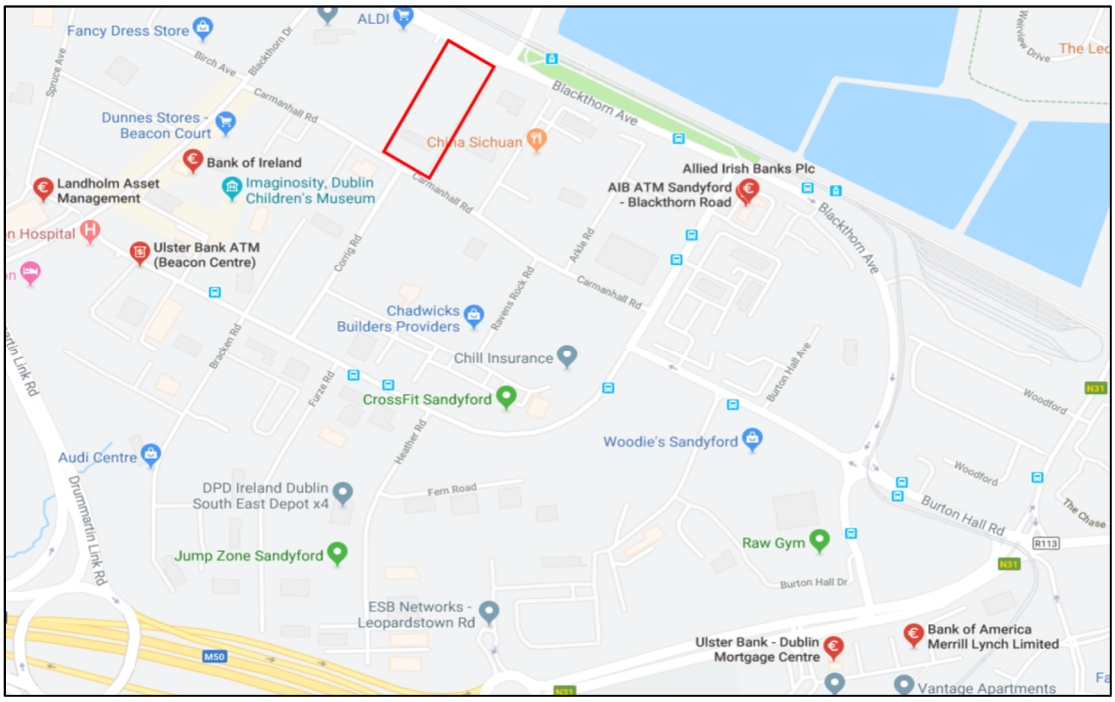


Figure 14: Local Banks

As can be seen, there are a large number of amenities within a short walking distance including a supermarket directly adjacent the development site meaning residents at the proposed development can access such facilities by foot, without the need to drive.

5. CAR PARKING STRATEGY

The proposed car parking strategy at the site has been developed taking into consideration a variety of factors to ensure the appropriate number of spaces are provided which is in line with current sustainable travel and development objectives. These are discussed following.

CAR PARKING STANDARDS

Section 8.2.4.5 of the *Dun Laoghaire Rathdown County Development 2016 – 2022* considers the parking requirements for various types of development. Specifically, *Table 8.2.3* sets out the parking standards for car parking at residential developments as shown following.

Table 8.2.3: Residential Land Use - Car Parking Standards

Land use	Standards
Residential Dwelling	1 space per 1-bed unit and per 2-bed unit 2 spaces per 3-bed unit+ (depending on design and location).
Apartments, Flats, Sheltered housing	1 space per 1-bed unit 1.5 spaces per 2-bed unit 2 spaces per 3-bed unit+ (depending on design and location)

Figure 15: Development Plan Car Parking Standards

However, Section 8.2.4.5 of the Development Plan also states that reduced car parking standards for any development (residential and non-residential) may be acceptable dependant on factors including:

- The location of the proposed development and specifically its proximity to Town Centres and District Centres and high density commercial/business areas;
- The proximity of the proposed development to public transport;
- The implementation of a Travel Plan for the proposed development where a significant modal shift towards sustainable travel modes can be achieved.

It is felt that all three of the factors listed above are applicable to the development site given the following:

- The site location in a developed, high density mixed use area;
- The highly accessible nature of the development site location as set out in the previous section;
- Direct access to the largest employment centre in the country (Dublin City) via the adjacent Luas;
- It is proposed to implement a Travel Plan at the development to facilitate and encourage a modal shift away from car based travel wherever possible;
- The proximity of local amenities including supermarkets and other retail, restaurants, cafes, bars, banks, gyms etc. as outlined previously.

Thus, taking the above into consideration, it is felt that there is clear scope for a reduced quantum of car parking provision in accordance with the Development Plan.

It is also noted that the updated *Guidelines for Planning Authorities, Design Standards for New Apartments (March 2018)* from the Department of Housing, Planning and Local Government are also applicable in this instance with respect to the residential car parking provision. Section 4 of these guidelines states:

"*In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity.*

These locations are most likely to be in cites, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes 10 minutes walking distance of DART,

commuter rail or Luas stops or within 5 minutes walking distance of high frequency (min 10 minute peak hour frequency) bus services"

As noted previously, the site is highly accessible by rail, bus, bicycle and on foot. Thus, it is clear that the development falls into this category meaning it is appropriate to provide a reduced quantum of car parking at the proposed development.

Furthermore, with respect to Build to Rent schemes in particular, Specific Planning Policy Requirement 8, Section (iii) states:

"*There shall be a default of minimal or significantly reduced car parking provision on the basis of BTR development being more suitable for central locations and/or proximity to public transport services. The requirement for a BTR scheme to have a strong central management regime is intended to contribute to the capacity to establish and operate shared mobility measures*"

The role of the central management regime is discussed further later in this section.

RESIDENTIAL CAR OWNERSHIP & USAGE

The provision of residential car parking is considered to be a balance between meeting an appropriate level of demand and associated car travel while also encouraging travel by more sustainable means and preventing overspill parking. While it is acknowledged that parking provision at destination, e.g. at work, is a critical factor, it cannot be denied that easier access to a private vehicle will make driving on a regular basis a more attractive option and must play a role in private car usage.

As a result, the parking provision at residential developments must also be given due consideration as per current national guidance. This is a critical consideration as part of the overall strategy proposed for this development which seeks to facilitate a cultural shift to more sustainable modes of travel.

As a starting point, and in order to establish the actual demand for residential car parking likely to be experienced by residents at the development, data from the 2016 Census has been interrogated. In this instance, the car ownership statistics have been obtained for the people currently living in areas highlighted in *Figure 16* following.

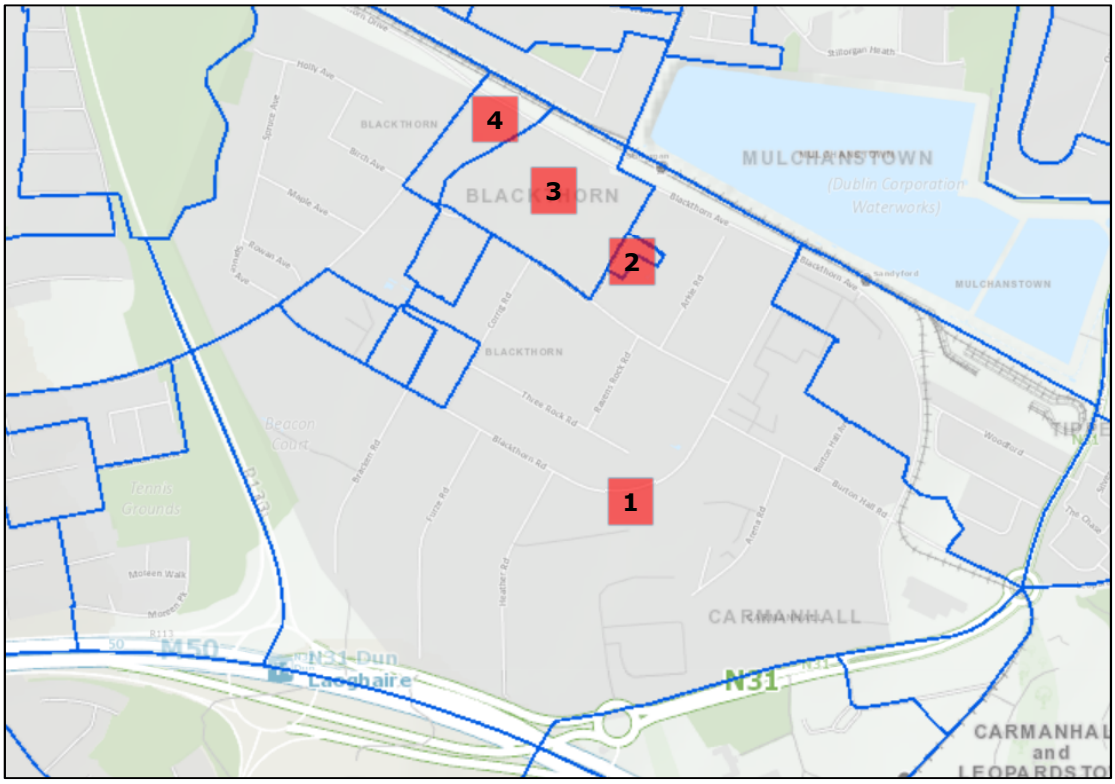


Figure 16: CSO Census 2016 Electoral Division Map (www.census.cso.ie)

The areas considered are defined as follows:

1. Small Area of 267078012;
2. Small Area of 267078022;
3. Small Area of 267078013/03;
4. Small Area of 267078013/02.

The data for households who do not own a car in each of these areas is presented in *Table 7.*

Area	No. Apartments	No. Houses	No. Households with No Car	% Households with No Car	Equivalent Rate of Parking Required (space/unit)
1	139	4	44	30.77%	0.69
2	74	0	22	29.73%	0.70
3	203	0	83	40.89%	0.59
4	181	0	66	36.46%	0.64

Table 7: CSO Census 2016 Car Ownership Data

As can be seen, the records show that the percentage of households that do not own a car and therefore have no demand for a car parking space ranges from a rate of 31% – 41%. In particular, it is noted that the areas selected are similar in nature to the proposed development as they consist almost entirely of apartments.

It should be stressed that these car ownership levels are without the benefit of any site specific measures such as those set out following nor specific restrictions on parking availability and so represent a worst case scenario.

It is also worth considering that, while many residents own a car, there is still a question as to how necessary that is. In other words, how many residents own a car that is used relatively infrequently. To gauge this, the Census data has again been interrogated, this time from a car usage point of view, specifically to identify the number of residents who drive for their daily commute, which is considered to represent the majority of people's day to day travel. The results are presented in *Table 8* following for workers.

Area	No. Workers	No. Workers that Drive	% Workers that Drive
1	233	78	33.48%
2	93	26	27.96%
3	271	66	24.35%
4	298	67	22.48%
5	895	237	26.48%
Total	233	78	33.48%

Table 8: CSO Census 2016 Car Usage Data – Workers

As can be seen, despite the level of car ownership noted previously, an average of just 33% of people in the locality currently drive for work.

Thus, based on the above, it is considered that a level of residential parking provision below the Development Plan maximum standard and in line with the *Guidelines for Planning Authorities, Design Standards for New Apartments* is wholly appropriate in this instance.

CAR CLUB

It must be stressed that simply reducing the level of car parking forms part of the overall sustainable travel strategy proposed for the development. A key aspect of this strategy is the provision of 10 no. dedicated car club parking spaces to serve the residents at the site.

Again, this is in line with the *Guidelines for Planning Authorities, Design Standards for New Apartments (March 2018)* which states:

"*As well as showing that a site is sufficiently well located in relation to employment, amenities and services, it is important that access to a car sharing club or other non-car based modes of transport are available and/or can be provided to meet the needs of residents, whether as part of the proposed development, or otherwise. 'Car free' development is permissible and if developed, must be fully communicated as part of subsequent apartment sales and marketing processes*"

As shown by the Census data, the majority of residents commuting in the local area do so by more sustainable means other than private car travel. When compared with the level of car ownership, this means that, for the majority of the time, many vehicles remain at home, unused. The rationale for this is generally the desire to maintain access to a car for more infrequent, one off trips, such as bulky shopping trips which could not be facilitated through public transport or weekend, off peak recreational trips.

To date, this has been addressed through the mandatory provision of one or more car parking spaces per residential unit constructed. This has facilitated increased car ownership which invariably leads to increased travel by car. In addition, this strategy is obviously a very inefficient use of space within an already restricted location and has associated cost implications for an already undersupplied housing market.

With this in mind, an alternative, more efficient model is proposed for the development which will see a car club set up on site and provide a number of dedicated car parking spaces to house car club vehicles for use by residents.

Car club services are very simple to use, with licensed and registered users able to book a vehicle through a convenient means such as a phone app. Fuel, tax, insurance, cleaning and maintenance costs are all included as part of the overall package which is a further incentive for users to switch from private car ownership as the overall cost of owning a car relative to the amount of use is not as attractive in many instances.

GoCar is an example of such an operator who are a well-established and experienced car club operator in Dublin. As one potential operator, GoCar have in the past confirmed that the potential for a car club base to be set up on site is indeed viable.

GoCar have carried out a survey of their existing users to show the effectiveness of such a service, with the key results summarised as follows:

- 86% of GoCar use was for personal use with 14% for business use;
- 59% of GoCar users have used the service to replace a personal vehicle;
- 69% of users cite convenience as the biggest advantage of GoCar;
- 30% of users cite insurance costs as the biggest issue with owning a car while 26% cite maintenance and fuel costs as the biggest issue;
- Each GoCar takes 14 cars off Dublin streets;
- Top uses of GoCar are:
    - Day trips;

  - Family taxi;
  - Big shopping trips.
- The average GoCar is used for just 1 hour a day.

Thus, such a facility would have numerous benefits over the current parking provision model, including:

- Reducing the need for car ownership and thereby reducing the potential for unnecessary travel by car;
- Maintaining access to travel by car to satisfy infrequent, unique trips as outlined previously;
- Reducing the space required for car parking provision and associated cost which has an associated positive impact on unit affordability;
- Reducing costs associated with car use as long term tax, insurance and maintenance costs associated with car ownership (estimated at €10,849.92 by AA Ireland) are replaced with significantly lower, short term costs consolidated into one payment;
- Facilitating more environmentally friendly car travel as 10% of the GoCar fleet consists of electric vehicles, with this share set to increase in the future.

Car clubs also have the added bonus of not contributing to long term commuting by car. As the vehicles must be returned from the point of origin, i.e. the development site, the cost associated with using them on a daily basis for commuting purposes means it would not be a realistic option. Where long term, non-commuting trips are required, alternatives such as car rental can be investigated.

Taking the above into consideration, it is felt that the implementation of a car club base at the development site provides a viable and attractive option which will not only facilitate a reduced quantum of parking at the site, but will help reduce car ownership and travel by car while also maintaining essential access to the use of a car for infrequent occasions where it is needed.

GoCar, as a potential operator, have provided a letter confirming the viability of a car club scheme at the site which can be found in *Appendix E* of this report.

MOBILITY MANAGEMENT PLAN

Overall, it is proposed to put in place a Mobility Management Plan as the core transport strategy at the development site to both encourage and facilitate travel by more sustainable means, thereby further reducing the demand for travel by car and, by association, car parking.

An outline plan is submitted as part of this application which will then be updated within 6 months of occupation and upon completion of detailed travel surveys to establish the travel patterns of residents. The initial measures will then be refined using this information to help facilitate a modal shift away from private car travel towards more sustainable means, further reducing the need for car ownership.

The plan will be a living document, continually updated in light of the experience gained through its operation in conjunction with residents and the Local Authority.

PARKING MANAGEMENT

A key aspect of the strategy will be the ongoing management of parking at the site. The car parking strategy will come into effect from initial contact with prospective tenants. It will be made very clear at the initial stage of communication as to what the parking availability is at the site and the lack of long term alternatives in the surrounding area. This is in line with Section 4.24 of the Design Standards for New Apartments.

Access to the car park will be restricted to authorised users only who have been allocated a parking space. A barrier system will be in place at the car park entrance/exit to facilitate this which will only permit access to approved personnel/vehicles.

Provision will be made for mistaken entry to prevent motorists having to reverse in an unsafe manner when denied access. A communication system will be provided at the barrier to the on-site Management Company personnel to this effect.

In order to prevent unauthorised car parking taking place, a clamping system will be in place at the site whereby any cars parked in an unapproved location or parking space will be clamped and the owner required to pay a fine for release. All tenants will be advised of this system as part of the initial consultation with appropriate signage also provided.

As the proposed development is a Build to Rent scheme, this affords an additional degree of flexibility with respect to car parking as spaces are not permanently assigned to a particular unit, as may be the case with more traditional build to sell arrangements where parking is sold with the unit. As a result, the management company will be able to reallocate parking spaces on a demand basis to ensure the most efficient use of parking at the site.

PLANNING PRECEDENT

Precedent with respect to parking provision at SHD schemes has been set through a number of approvals to date. These include the following:

Reference No.	Name of Scheme	No. of Units/ No. of Car Parking Spaces	Car-Parking Ratio	Build-to-Rent (BTR) or Build-to-Sell(BTS)
ABP-304068-19	Roselawn, Stillorgan Road, Foxrock, Dublin 18	142/91	0.64	BTR
ABP-303306-18	Belgard Gardens, Tallaght, Dublin 24	438/129	0.25	BTS
ABP-303358-18	Swiss Cottage, Santry, Dublin 9	112/34	0.3	BTR
ABP-303435-19	Dulux Factory Site, Davitt Road, Dublin 12	265/109	0.4	BTR
ABP-303803-19	Cookstown Second Avenue, Cookstown Industrial Estate, Tallaght, Dublin 24	196/67	0.3	BTR

As can be seen from the above, there are a number of schemes in similarly accessible locations with similar access to local amenities which have been granted permission by ABP for a rate of car parking in line with or below what is now proposed.

CAR PARKING PROVISION

Based on all the above factors, it is proposed to provide a total of 285 no. car parking spaces at the proposed development.

In accordance with the Development Plan requirements, a minimum 4% of these will be suitable for use by disabled persons. Motorcycle parking will also be provided in accordance with Development Plan standards.

Furthermore, in accordance with Section 8.2.4.12 of the Development Plan, it is proposed to provide a total of 30 no. electric vehicle charging points with provision made for the upgrade of all spaces to facilitate electric vehicle charging in the future.

CYCLE PARKING PROVISION

Cycle parking is proposed in accordance with the Design Standards for New Apartments Guidelines for Planning Authorities, with 1 space per bedroom being provided for residents and an additional 1 space per 2 residential units provided for visitors. This will result in 1,178 cycle parking spaces being provided.

This is considerably in excess of the standards set out in the Dun Laoghaire Rathdown County Council (DLRCC) *Standards for Cycle Parking and Associated Cycling Facilities for New Developments* of 1.2 cycle parking spaces per unit and will aid in promoting more sustainable modes of travel at the site. This is also considerably in excess of the current permission (ABP Ref. PL06D.301428) at the development site which proposed only 516 cycle parking spaces.

In order to achieve this level of cycle parking, it is proposed to provide user assisted stacked cycle parking spaces or similar approved for the majority (896 no.) of spaces. An example of such cycle parking is shown below.

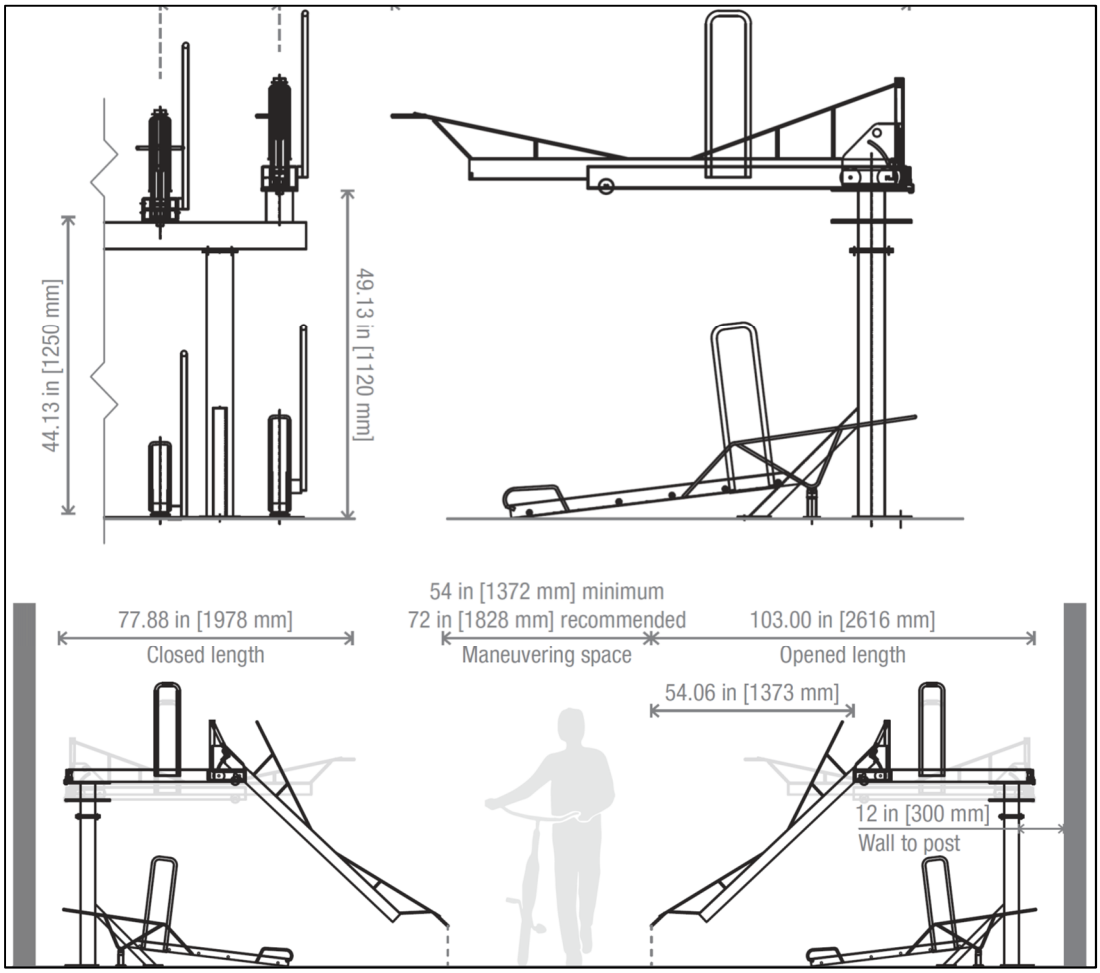


Figure 17: Stacked Cycle Parking Example – Urban Racks - Urban Double Stacker Rack

The stackers include a hydraulic lift assist mechanism as highlighted in the image above. The upper stand is simply pulled backwards and lowered to allow the bike to be wheeled into position. The hydraulic lift assist then aids with raising the stand back to a level position where it is slid back into place. As can be seen the stand also include a number of options to secure the bike with bars adjacent the wheel and a vertical looped bar adjacent the frame.

In discussions with DLRCC Transport Planning Section, it was requested that an exercise be carried out to assess how many sheffield style cycle parking

stands could be provided in the equivalent space being provided for the proposed stacked cycle parking. OCSC carried out this exercise using the criteria set out in the *Standards for Cycle Parking and Associated Cycling Facilities for New Developments*, with an extract from same shown following.

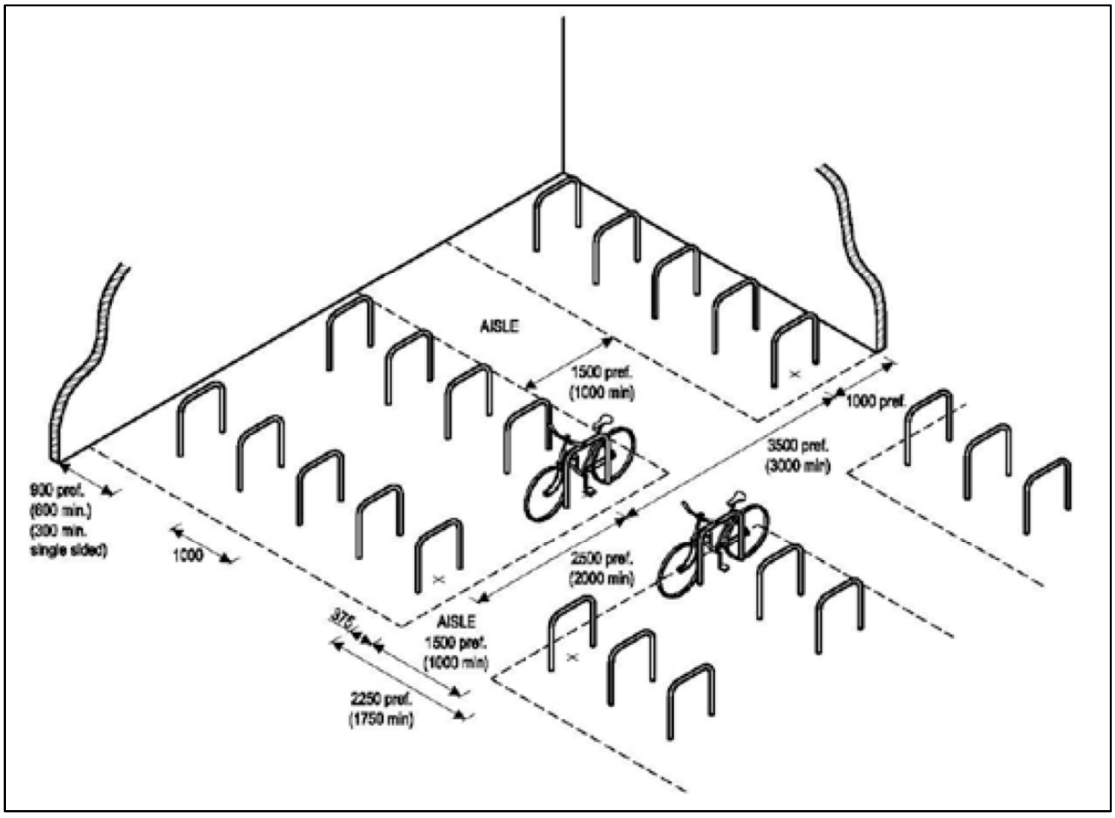


Figure 18: Extract of Figure 3 from DLRCC Standards for Cycle Parking and Associated Cycling Facilities for New Developments

This exercise found that c. 540 sheffield stands could be provided in the same space available. However, this is notably lower than the minimum DLRCC requirement of 677 cycle parking spaces based on Table 4.1 of *Standards for Cycle Parking and Associated Cycling Facilities for New Developments* (1 space per unit & 1 visitor space per 5 units).

It is again stressed that the proposed stacked parking will include a user assist mechanism to ensure ease of use of the higher level spaces, most likely in the form of a hydraulic mechanism which will facilitate use by all including children. It should also be noted that 50% of the stacked cycle parking are still at ground level which equates to over 558 spaces available

in the unlikely instance that any users had difficulty using the higher level spaces. Stacked cycle parking is considered to be a viable option in this regard and has been accepted by An Bord Pleanála on a variety of approved developments including:

- ABP-303804-19: St Teresa's House/Centre and St Teresa's Lodge, Temple Hill, Monkstown, Blackrock, Co. Dublin;
- ABP-303306-18: Belgard House, Belgard Square, and the former Uniphar factory located at the junction of Belgard Road and Belgard Square North, Tallaght, Dublin 24;
- ABP-303436-19: Site bounded by Mill Street, Sweeney's Terrace and Clarence Mangan Road, Dublin 8.

As a result, stacked cycle parking is considered to be the most appropriate option to meet the required level of provision while also facilitating residents at the development travelling by more sustainable means.

Nevertheless, a total of 132 no. sheffield style cycle parking spaces are proposed throughout the development.

6. POTENTIAL IMPACT OF DEVELOPMENT CONSTRUCTION

Relative to the operation stage, the construction period will be temporary in nature. Construction traffic is expected to consist of the following categories:

- Vehicles owned and driven by site construction staff and by full time site supervisory staff and occasional professional supervisory staff i.e. design team members and supervisory staff from utility companies;
- Materials delivery and removal vehicles.

It is difficult to assess the exact quantum of traffic that will be generated during the construction period. However, a number of preliminary estimates have been made based on the extent of excavation, type of development and estimated phasing. These are summarised as follows:

- 30 no. private vehicles per day from staff and site visitors i.e. 60 no. vehicle movements;
- 25 no. light goods vehicles per day from subcontract staff i.e. 50 no. vehicle movements;
- 60 no. heavy goods vehicles per day outside of the peak excavation periods i.e. 120 no. vehicle movements.

When estimating the potential impact of the construction stage, a number of factors have been taken into consideration as follows:

- The peak traffic hours have been defined as 08:00-09:00 and 17:15-18:15. The normal permitted construction working hours are 08:00 to 19:00 on a weekday. As a result, staff travelling in private vehicles will arrive and depart the site outside of the peak traffic hours;
- An appropriate amount of on-site parking will be provided to encourage staff to car share and to travel by the numerous public transport options serving the locality. However, the provision adequate to prevent overspill parking in the local area;

- Heavy vehicles will facilitate the movement of materials to and from the site including excavated material and deliveries. Given the current topography and proposed design, the amount of excavation will be relatively limited and the duration of such works will be very short term in nature. Furthermore, heavy vehicles travelling to and from the site will be spread across the course of the working day with efforts made to limit the number of arrivals and departures during the peak traffic hours where possible. However, for the purposes of this assessment a worst case scenario is assumed where no such restrictions are in place and 6 no. HGVs (12 HGV movements) are allowed for during the peak hours;
- The majority of contractor vehicles are expected to arrive and depart just before and after the site opening and closing hours respectively, with a small number spread across the course of the day. However, in the interest of a conservative assessment, all have been assumed to arrive in the A.M. peak hour and depart in the P.M. peak hour.

Taking the above into consideration, the estimated construction vehicle movements relative to the operational vehicle movements, as set out in *Table 5* previously, are summarised below. Please note that vehicle movements are a summation of arrivals and departures e.g. 10 no. vehicles arriving and 5 no. vehicles departing equates to 15 no. vehicle movements.

Time Period	Construction Stage	Operational Stage
08:00 – 09:00	37	105
17:15 – 18:15	37	57

Table 9: Construction vs. Operational Vehicle Movements

As can be seen, the peak hour vehicle movements for the construction phase are notably lower than that predicted for the operational stage, despite the conservative estimates for the latter. Thus, taking into consideration, along with the temporary nature of construction activity and the detailed analysis of the operational stage in the following section, bespoke detailed analysis of the construction stage has not been deemed necessary.

Nevertheless, a *Construction Management Plan* has been prepared and is submitted with the application. This plan will be revised as necessary prior to the commencement of construction, giving details on the following:

- Daily and weekly working hours;
- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Appropriate on-site parking arrangements for construction personnel to prevent overspill parking on the local road network;
- Temporary construction entrances to be provided;
- Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained;
- Any proposed traffic management measures such as temporary traffic lights and signage on any public roads.

7. POTENTIAL IMPACT OF DEVELOPMENT OPERATION

Before considering the impact of the proposed development in isolation, consideration should be given to its impact relative to the development which currently has planning approval at the site. A comparison of the respective estimated trips is shown following.

Time Period	Previous Approval		Proposed Development	
	Arrivals	Departures	Arrivals	Departures
A.M. Peak Hour	27	77	28	77
P.M. Peak Hour	73	37	34	23

Table 10: Comparison of Approved vs Proposed Development Trip Rates

It can be seen that the estimated trip generation for the proposed development is effectively equal with the A.M. peak estimates for the approved development but notably lower for the P.M. peak hour estimates. On this basis, the proposed development is considered to represent a nett improvement in traffic impact terms relative to what currently has permission. Furthermore, it is stressed that the above estimates for the proposed development trip generation don't take full account of the significantly reduced rate of parking provision at the development which would likely lead to a further reduction in car based trips.

Notwithstanding the above, in order to assess the actual impact of the operational development on the local road network, a number of different time periods have been analysed as follows:

- *Base Year (2018)* – The current performance of the local road network was initially assessed along with the impact of the proposed development to establish which junctions require more detailed analysis;
- *Year of Opening (2023)* – The performance of the local road network was then assessed for both peak hours at the assumed year of opening in order to show the true impact of the proposed development;

- *Design Year (2038)* – The local road network was re-assessed for design year, 15 years after the assumed year of opening to establish the potential impact into the future.

The junction analysis was carried out using TRANSYT and Junctions 9 while the link capacities for the Year of Opening and the Design Year were assessed based on the same methodology outlined earlier in this report.

BASE YEAR

In order to establish which junctions, require more detailed analysis, the impact of the proposed development relative to the existing traffic flows has been assessed. The criteria used for this scoping exercise is based on the guidance set out in the TII Traffic & Transport Assessment Guidelines (2014) which states that an assessment is required when:

"*Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road*"

or
"*Traffic to and from the Development exceeds 5% of the traffic flow on the adjoining road where congestion exists or the location is sensitive*"

With regard to the scope of the assessment, the guidelines state:

"*In general, the study area should include all road links and associated junctions where traffic to and from the development may be expected to exceed 10% of the existing traffic movements, or 5% in congested or other sensitive locations, including junctions with national roads. Where two or more of the supplementary criteria as indicated in Table 2.3 apply in relation to any of the adjoining links or junctions, then those links and junctions should also be considered for inclusion in the study area*"

The percentage increase in traffic as a result of the proposed development is shown in the following, contained within *Appendix B* of this report:

– *Diagram 13: % Impact of Development on A.M. Peak Traffic;*
– *Diagram 14: % Impact of Development on P.M. Peak Traffic.*

The referenced Table 2.3 contains a series of sub-thresholds for when a Traffic & Transport Assessment should take place. These are summarised as follows:

- The character and total number of trips in / out combined per day are such that as to cause concern;
- The site is not consistent with national guidance or local plan policy or accessibility criteria contained in the Development Plan;
- The development is part of incremental development that will have significant transport implications;
- The development may generate traffic at peak times in a heavily trafficked/ congested area or near a junction with a main traffic route;
- The development may generate traffic, particularly heavy vehicles in a residential area;
- There are concerns over the development's potential effects on road safety;
- The development is in a tourist area with potential to cause congestion;
- The planning authority considers that the proposal will result in a material change in trips patterns or raises other significant transport implications.

Given the nature and estimated traffic generation potential of the proposed development, it is determined that it does not meet any of the above thresholds which typically would indicate the impact of the development is considered to be negligible and further detailed analysis is not required. However, in order to consider the cumulative impact of the proposed development and the unrelated third party developments proposed in the local area, it is felt appropriate to include all junctions in the detailed analysis.

In order to ensure an accurate assessment, the models for each junction have first been calibrated by comparing the respective output results for

queues against those recorded on-site during the traffic surveys. This allows the model to be adjusted accordingly as part of an iterative process until an acceptable level of correlation is achieved. A summary of this process can be found in *Appendix C* of this report which shows the modelled queues are a good match for the on-site survey results meaning they are considered a good representation of the junctions and are fit for purpose.

YEAR OF OPENING

As noted previously, the assessment considers the Do Nothing, Do Something and Do Maximum scenarios. The Do Something is established by adding the traffic estimated to be generated by the proposed development to the local network, as shown in the following, contained within *Appendix B* of this report:

- *Diagram 15: 2023 A.M. Peak Hour Flows – Do Something;*
- *Diagram 16: 2023 P.M. Peak Hour Flows – Do Something;*

Similarly, the Do Maximum is established by adding the traffic estimated to be generated by the proposed development and additional 3rd party developments to the local network, as shown in the following, contained within *Appendix B* of this report:

- *Diagram 17: 2023 A.M. Peak Hour Flows – Do Maximum;*
- *Diagram 18: 2023 P.M. Peak Hour Flows – Do Maximum;*

Prior to the analysis of the individual junctions, the main links in the network have been assessed for the year of opening Do Something and Do Maximum scenarios, with the results shown following. As noted previously, an RFC value of 100% indicates the link is at full capacity with no reserve capacity available.

Link	Width (m)	Link Capacity (veh/hr)	A.M. Peak (veh/hr)	RFC (%)	P.M. Peak (veh/hr)	RFC (%)
Blackthorn Road	9.0	1,860	881	47.4	1,254	67.4
Carmanhall Road	6.1	1,020	515	50.5	599	58.7
Blackthorn Drive	10.0	2,010	652	32.4	675	33.6

Table 11: 2023 Do Something Scenario Link RFC Values

Link	Width (m)	Link Capacity (veh/hr)	A.M. Peak (veh/hr)	RFC (%)	P.M. Peak (veh/hr)	RFC (%)
Blackthorn Road	9.0	1,860	959	51.6	1639	88.1
Blackthorn Road	6.1	1,020	705	69.1	820	80.4
Carmanhall Road	10.0	2,010	684	34.0	789	39.2

Table 12: 2023 Do Maximum Scenario Link RFC Values

As can be seen, the local links continue to operate below normal capacity limits for the Do Something Scenario. Blackthorn Road link experiences the highest RFC value during the Do Maximum scenario though still operates within capacity.

Tables 13 – 27 following show the results of the Do Nothing, Do Something and Do Maximum analysis for the Year of Opening, thereby allowing for a direct comparison of all scenarios to highlight the true impact of the proposed development. These results includes the model outputs for RFC values and queue lengths. As with the link capacity assessment, RFC is a measure of the junction operation with respect to capacity.

When considering the results in *Tables 13-27*, the following should be taken into account:

- Unless otherwise stated, signalised junctions have been modelled based on the signal plan currently in operation based on the survey data;
- The development entrance has only been assessed for the Do Something and Do Maximum scenarios as it is not present in the Do Nothing;
- RFC values shown are a percentage and queue lengths are shown in PCUs;
- RFC is a measure of the operation at the junction. 100% indicates the junction is operating at absolute maximum capacity. Generally, it is preferred to limit priority junctions to 85% RFC and signalised junctions to 90% RFC;
- All values shown represent the maximum experienced by the respective arm;

- All modelling output files can be found in *Appendix D* of this report.

Junction 1

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	26	3.6	21	3.0
Carmanhall Road	35	3.3	57	5.6
Blackthorn Drive S	40	6.0	23	3.7
Birch Avenue	21	1.9	67	7.0

Table 13: Junction 1 – 2023 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	26	3.6	22	3.1
Carmanhall Road	42	4.0	58	5.7
Blackthorn Drive S	40	6.0	23	3.7
Birch Avenue	21	1.9	67	7.2

Table 14: Junction 1 – 2023 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	32	4.58	24	3.3
Carmanhall Road	49	6.3	111	72.0
Blackthorn Drive S	47	10.4	24	3.8
Birch Avenue	22	1.9	68	7.3

Table 15: Junction 1 – 2023 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development is negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

For the Do Maximum scenario, the junction is shown to operate above capacity in the P.M. peak hour. Junction 1 is a signalised junction and has been modelled on the basis of the existing signal plan in operation at the junction. It is expected that, through the normal operation of the junction and as traffic volumes grow and change as predicted, the signal plan will

adapt accordingly as is permitted by the existing control system and infrastructure e.g. induction loops, already in place at the junction. However, the above assessment has not allowed for this and has instead maintained the existing signal plan for all scenarios and time periods assessed. In order to simulate this optimisation process, TRANSYT has been allowed to optimise the signal plan for Junction 1 for the 2023 Do Maximum P.M. peak hour. The results are shown following.

Approach	P.M. Peak Hour	
	RFC	*Queue*
Blackthorn Drive N	31	4.0
Carmanhall Road	50	6.0
Blackthorn Drive S	33	5.1
Birch Avenue	39	5.3

Table 16: Junction 1 – 2023 P.M. Peak Hour Do Maximum Analysis Results – Optimised Signal Plan

The above results show that when the signal plan is simply optimised, the junction operates well within capacity again.

Junction 2

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road E	-	-	-	-
Corrig Road	16	0.2	30	0.5
Carmanhall Road W	23	0.5	12	0.2

Table 17: Junction 2 – 2023 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Development Entrance	2	0	0	0
Carmanhall Road E	-	-	-	-
Corrig Road	17	0.2	17	0.2
Carmanhall Road W	24	0.5	12	0.2

Table 18: Junction 2 – 2023 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Development Entrance	2	0	0	0
Carmanhall Road E	1	0	1	0
Corrig Road	21	0.3	31	0.5
Carmanhall Road W	31	0.7	12	0.2

Table 19: Junction 2 – 2023 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development, including the addition of the secondary development entrance, is negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

For the Do Maximum scenario, the impact is similarly low and the junction continues to operate well within capacity.

Junction 3

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	32	0.6	16	0.2
Carmanhall Road	40	0.7	86	5.5
Blackthorn Road S	-	-	-	-

Table 20: Junction 3 – 2023 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	32	0.7	16	0.2
Carmanhall Road	47	1.0	89	6.6
Blackthorn Road S	-	-	-	-

Table 21: Junction 3 – 2023 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	49	2.1	21	0.4
Carmanhall Road	60	1.6	198	179
Blackthorn Road S	-	-	-	-

Table 22: Junction 3 – 2023 Peak Hour Do Maximum Analysis Results

The results show that during the A.M. peak hour, the junction operates within capacity for all scenarios assessed and the impact of the proposed development is negligible.

In the P.M. peak hour, the junction is shown to operate above the normal capacity limit of 85% for the Do Nothing scenario, with an RFC value of 86%. The proposed development has a relatively minor impact in this regard, increasing the RFC value to 89% while queue lengths are seen to increase by just 1 vehicle. The Do Maximum scenario has a considerably larger impact as the overall increase in traffic causes the junction to operate significantly above capacity.

Junction 4

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	31	0.9	18	0.5
Corrig Road	18	0.2	21	0.3
Blackthorn Road W	-	-	-	-

Table 23: Junction 4 – 2023 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	31	0.9	18	0.5
Corrig Road	21	0.3	22	0.3
Blackthorn Road W	-	-	-	-

Table 24: Junction 4 – 2023 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	34	1.1	21	0.6
Corrig Road	25	0.4	24	0.4
Blackthorn Road W	-	-	-	-

Table 25: Junction 4 – 2023 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development is negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

For the Do Maximum scenario, the impact is similarly low and the junction continues to operate well within capacity.

Development Entrance

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road W	-	-	-	-
Development Entrance	18	0.2	4	0.1
Carmanhall Road E	4	0.1	4	0.1

Table 26: Development Entrance – 2023 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road W	-	-	-	-
Development Entrance	17	0.2	4	0.1
Carmanhall Road E	3	0.1	4	0.1

Table 27: Development Entrance – 2023 Peak Hour Do Maximum Analysis Results

The results show that the proposed primary development entrance operates well within capacity for all scenarios assessed during both peak hours, with no queuing and extremely low RFC values.

DESIGN YEAR

As before, the Do Something and Do Maximum traffic flows are established by adding the traffic estimated to be generated by the proposed developments to the local network at the design year, as shown in the following, contained within *Appendix B* of this report:

- *Diagram 19: 2038 A.M. Peak Hour Flows – Do Something;*
- *Diagram 20: 2038 P.M. Peak Hour Flows – Do Something;*

- *Diagram 21: 2038 A.M. Peak Hour Flows – Do Maximum;*
- *Diagram 22: 2038 P.M. Peak Hour Flows – Do Maximum;*

Prior to the analysis of the individual junctions, the main links in the network have been assessed for the year of opening Do Something and Do Maximum scenarios, with the results shown following.

Link	Width (m)	Link Capacity (veh/hr)	A.M. Peak (veh/hr)	RFC (%)	P.M. Peak (veh/hr)	RFC (%)
Blackthorn Road	9.0	1,860	1,005	54.0	1,427	76.7
Carmanhall Road	6.1	1,020	584	57.3	677	66.3
Blackthorn Drive	10.0	2,010	739	36.8	764	38.0

Table 28: 2038 Do Something Scenario Link RFC Values

Link	Width (m)	Link Capacity (veh/hr)	A.M. Peak (veh/hr)	RFC (%)	P.M. Peak (veh/hr)	RFC (%)
Blackthorn Road	9.0	1,860	1082	58.2	1806	97.1
Carmanhall Road	6.1	1,020	773	75.8	891	87.3
Blackthorn Drive	10.0	2,010	771	38.3	875	43.5

Table 29: 2038 Do Maximum Scenario Link RFC Values

As can be seen, the local links continue to operate below normal capacity limits for the Do Something Scenario. Blackthorn Road link continues to

experience the highest RFC value during the Do Maximum scenario, operating just below the maximum capacity limit.

Tables 30 – 44 following show the results of the Do Nothing, Do Something and Do Maximum analysis for the Design Year, thereby allowing for a direct comparison of all scenarios to highlight the true impact of the proposed development. Again, these results consist of RFC values and queue lengths predicted by the junction models. When considering the following results, the factors outlined for the year of opening analysis continue to apply.

Junction 1

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	29	4.1	24	3.4
Carmanhall Road	40	3.8	65	8.0
Blackthorn Drive S	48	6.1	26	4.2
Birch Avenue	25	2.3	75	8.5

Table 30: Junction 1 – 2038 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	30	4.1	25	3.4
Carmanhall Road	47	4.6	66	85
Blackthorn Drive S	48	6.4	26	4.2
Birch Avenue	25	2.3	76	8.7

Table 31: Junction 1 – 2038 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Drive N	43	6.5	27	3.7
Carmanhall Road	51	5.1	120	103.4
Blackthorn Drive S	56	14.0	27	4.5
Birch Avenue	25	2.3	76	8.7

Table 32: Junction 1 – 2038 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development continues to be negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

As before, the above analysis results are based on the existing signal plan in operation at the junction. To account for the optimisation of the signal plan in reaction to the revised traffic flows, TRANSYT has again been allowed to optimise this element with the results shown following.

Approach	P.M. Peak Hour	
	RFC	*Queue*
Blackthorn Drive N	35	4.7
Carmanhall Road	54	6.1
Blackthorn Drive S	39	5.9
Birch Avenue	42	6.1

Table 33: Junction 1 – 2038 P.M. Peak Hour Do Maximum Analysis Results – Optimised Signal Plan

The above results show that when the signal plan is simply optimised, the junction operates well within capacity again.

Junction 2

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road E	-	-	-	-
Corrig Road	19	0.3	35	0.6
Carmanhall Road W	27	0.6	14	0.2

Table 34: Junction 2 – 2038 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Development Entrance	2	0	0	0
Carmanhall Road E	1	0	1	0
Corrig Road	19	0.3	35	0.6
Carmanhall Road W	28	0.6	14	0.2

Table 35: Junction 2 – 2038 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Development Entrance	2	0	0	0
Carmanhall Road E	1	0	1	0
Corrig Road	23	0.3	36	0.6
Carmanhall Road W	35	0.9	14	0.2

Table 36: Junction 2 – 2038 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development, including the addition of the secondary development entrance, continues to be negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

For the Do Maximum scenario, the impact is again similarly low and the junction continues to operate well within capacity.

Junction 3

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	42	1.1	20	0.3
Carmanhall Road	52	1.1	111	28.8
Blackthorn Road S	-	-	-	-

Table 37: Junction 3 – 2038 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	43	1.1	21	0.3
Carmanhall Road	59	1.5	114	33.8
Blackthorn Road S	-	-	-	-

Table 38: Junction 3 – 2038 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road N	65	4.3	28	0.6
Carmanhall Road	73	2.7	261	287.2
Blackthorn Road S	-	-	-	-

Table 39: Junction 3 – 2038 Peak Hour Do Maximum Analysis Results

The results show that during the A.M. peak hour, the junction operates within capacity for all scenarios assessed and the impact of the proposed development is negligible.

For the P.M. peak hour, the junction is now shown to operate above capacity limit of 85% for the Do Nothing scenario, with an RFC value of 111%. The proposed development continues to have a relatively minor impact in this regard, increasing the RFC value to 114%. The Do Maximum scenario has a considerably larger impact as the overall increase in traffic causes the junction to operate significantly above capacity.

Junction 4

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	38	1.3	22	0.6
Corrig Road	21	0.3	24	0.4
Blackthorn Road W	-	-	-	-

Table 40: Junction 4 – 2038 Peak Hour Do Nothing Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	38	1.3	22	0.6
Corrig Road	25	0.4	25	0.4
Blackthorn Road W	-	-	-	-

Table 41: Junction 4 – 2038 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Blackthorn Road E	38	1.3	22	0.6
Corrig Road	25	0.4	25	0.4
Blackthorn Road W	-	-	-	-

Table 42: Junction 4 – 2038 Peak Hour Do Maximum Analysis Results

The results show that the impact of the proposed development continues to be negligible in both peak hours, with extremely low impacts to RFC values and queue lengths.

For the Do Maximum scenario, the impact is again similarly low and the junction continues to operate well within capacity.

Development Entrance

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road W	-	-	-	-
Development Entrance	17	0.2	4	0
Carmanhall Road E	3	0.1	3	0.1

Table 43: Development Entrance – 2038 Peak Hour Do Something Analysis Results

Approach	A.M. Peak Hour		P.M. Peak Hour	
	RFC	*Queue*	*RFC*	*Queue*
Carmanhall Road W	-	-	-	-
Development Entrance	18	0.2	4	0.1
Carmanhall Road E	4	0.1	4	0.1

Table 44: Development Entrance – 2038 Peak Hour Do Maximum Analysis Results

The results show that the proposed primary development entrance continues to operate well within capacity for all scenarios assessed during both peak hours, with no queuing and very low RFC values.

SUMMARY

The results of the overall assessment showed that the proposed development will have a negligible impact on the operation of the links and junctions in the local network with relatively minor to no impact on RFC values despite the conservative assessment with respect to trip generation estimates. Junction 3 has been shown to experience capacity issues irrespective of the proposed development but again, the relative impact of the proposed development is negligible.

The proposed development entrances have been shown to operate well within normal capacity limits and will have no negative impact on the operation of the local road network.

The Do Maximum scenario has highlighted a need for the optimisation of the signal plan at Junction 1. This is expected to occur naturally through the normal operation of the junction which is designed to react to changing traffic patterns and demands through the installed induction loops and controller.

The Do Maximum scenario has also been shown to have a significant impact on the operation of Junction 3. The operation of this junction should be monitored with respect to increasing traffic flows and, should the predicted

development and associated traffic flows materialise, consideration should be given to mitigation measures such as signalisation in the future.

In the context of the existing planning permission at the site, the proposed development will result in an increase in the overall number of units but a significant reduction in the level of car parking proposed along with additional measures to facilitate and encourage travel by sustainable means. In that regard, the impact of the proposed relative to the approved development is likely to be positive overall as residents opt to travel by means other than private car.

8. DO NOTHING SCENARIO

The do nothing scenario would involve leaving the subject site in its current underdeveloped state. This would have a negative impact on the overall development of the area while simultaneously showing no real benefit in transportation terms.

The local transport network has been shown to experience no notable negative impact as a result of a development of the type planned.

9. REMEDIAL/MITIGATION MEASURES

The assessment has shown that no mitigation measures are required to facilitate the proposed development.

Mitigation has been identified as potentially being required at Junction 3 to facilitate the Do Maximum scenario but this is not required to facilitate the proposed development as its relative impact is negligible.

10. MONITORING

While it has been demonstrated that the proposed development has little impact on the operation of the local network, it is nevertheless recommended that the local area should be monitored in terms of transportation efficiencies into the future with specific reference to:

- The optimisation of the signal plan at junction 1;
- The operation of Junction 3 with respect to the Do Maximum scenario.

Patrick Raggett B.E., CEng MIEI, MCIHT
Chartered Civil Engineer
O'Connor Sutton Cronin & Associates

Appendix A: Traffic Survey Data

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	A to D - Blackthorn Drive(N) to Carmanhall Road								Veh. Total	A to C - Blackthorn Drive(N) to Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	8	0	1	0	0	0	0	0	9	12	1	0	0	0	3	0	0	16
7:15	10	0	1	0	0	0	0	0	11	18	0	2	0	0	1	0	0	21
7:30	13	1	2	0	0	0	1	0	17	30	0	3	0	1	1	1	0	36
7:45	29	0	1	0	0	0	0	0	30	32	2	1	0	0	1	0	2	38
8:00	26	1	0	0	0	0	0	3	30	42	2	4	0	0	2	0	1	51
8:15	22	1	3	1	0	0	1	1	29	39	1	1	1	0	1	0	0	43
8:30	29	0	0	0	0	0	0	1	30	39	1	1	1	0	1	1	1	45
8:45	42	0	0	0	0	0	0	0	42	31	0	3	1	0	0	0	3	38
9:00	33	2	3	2	0	0	0	4	44	46	1	3	1	0	3	0	1	55
9:15	29	1	1	0	0	0	0	0	31	38	3	2	0	0	2	0	0	45
9:30	28	0	2	0	0	0	0	0	30	17	1	3	0	1	3	0	0	25
9:45	22	2	3	0	0	0	1	1	29	25	0	3	1	0	1	0	0	30
Total	291	8	17	3	0	0	3	10	332	369	12	26	5	2	19	2	8	443

Peak Hour 8:00 to 9:00

8:00	26	1	0	0	0	0	0	3	30	42	2	4	0	0	2	0	1	51
8:15	22	1	3	1	0	0	1	1	29	39	1	1	1	0	1	0	0	43
8:30	29	0	0	0	0	0	0	1	30	39	1	1	1	0	1	1	1	45
8:45	42	0	0	0	0	0	0	0	42	31	0	3	1	0	0	0	3	38
Total	119	2	3	1	0	0	1	5	131	151	4	9	3	0	4	1	5	177

Date Thursday 11 April 2019

Time	A to D - Blackthorn Drive(N) to Carmanhall Road								Veh. Total	A to C - Blackthorn Drive(N) to Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	19	1	1	0	0	0	0	0	21	57	1	6	2	0	2	0	0	68
16:15	22	1	1	0	0	0	0	0	24	46	0	6	0	0	0	0	0	52
16:30	24	0	1	0	0	0	0	0	25	45	0	4	1	0	0	0	2	52
16:45	15	0	3	0	0	0	0	1	19	38	2	4	0	0	0	0	2	46
17:00	20	0	0	0	0	0	0	0	20	29	1	3	0	0	3	0	1	37
17:15	18	0	1	0	0	0	1	1	21	44	2	3	0	0	1	0	1	51
17:30	16	0	0	0	0	0	1	0	17	52	1	4	1	0	1	0	1	60
17:45	17	1	0	0	0	0	1	0	19	53	2	1	0	0	1	1	1	59
18:00	20	0	1	0	0	0	0	1	22	52	0	2	0	0	1	2	2	59
18:15	24	2	1	0	0	0	0	1	28	49	0	3	0	0	1	0	3	56
18:30	12	2	1	0	0	0	0	0	15	59	4	0	0	0	2	0	0	65
18:45	15	1	0	0	0	0	0	0	16	60	2	1	0	1	1	1	2	68
Total	222	8	10	0	0	0	3	4	247	584	15	37	4	1	13	4	15	673

Peak Hour 17:00 to 18:00

17:00	20	0	0	0	0	0	0	0	20	29	1	3	0	0	3	0	1	37
17:15	18	0	1	0	0	0	1	1	21	44	2	3	0	0	1	0	1	51
17:30	16	0	0	0	0	0	1	0	17	52	1	4	1	0	1	0	1	60
17:45	17	1	0	0	0	0	1	0	19	53	2	1	0	0	1	1	1	59
Total	71	1	1	0	0	0	3	1	77	178	6	11	1	0	6	1	4	207

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	A to B - Blackthorn Drive(N) to Birch Avenue								Veh. Total	A to A - Blackthorn Drive(N) to Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
7:15	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
7:30	5	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
7:45	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
8:00	10	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
8:15	18	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0
8:30	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
8:45	21	0	3	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
9:00	24	0	2	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0
9:15	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
9:30	15	0	2	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0
9:45	9	0	2	1	0	0	0	0	12	0	0	0	0	0	0	0	0	0
Total	146	0	11	1	0	0	0	0	158	0	0	0	0	0	0	0	0	0

Peak Hour 8:00 to 9:00

8:00	10	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
8:15	18	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0
8:30	11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
8:45	21	0	3	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
Total	60	0	3	0	0	0	0	0	63	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	A to B - Blackthorn Drive(N) to Birch Avenue								Veh. Total	A to A - Blackthorn Drive(N) to Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	9	0	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
16:15	11	0	2	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
16:30	6	0	2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
16:45	9	0	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
17:00	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
17:15	5	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0
17:30	9	0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0
17:45	9	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	0	1
18:00	5	0	1	0	0	1	0	0	7	0	0	0	0	0	0	0	0	0
18:15	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
18:30	6	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
18:45	5	0	2	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0
Total	87	1	10	1	0	1	0	2	102	1	0	0	0	0	0	0	0	1

Peak Hour 17:00 to 18:00

17:00	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
17:15	5	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0
17:30	9	0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0
17:45	9	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	0	1
Total	31	0	0	1	0	0	0	1	33	1	0	0	0	0	0	0	0	1

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	B to A - Birch Avenue to Blackthorn Drive(N)								Veh. Total	B to D - Birch Avenue to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
7:15	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
7:30	7	0	4	0	0	0	0	1	12	4	0	1	0	0	0	0	0	5
7:45	2	0	2	1	0	0	1	0	6	0	0	0	0	0	0	0	0	0
8:00	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2
8:15	4	0	0	1	0	0	0	0	5	10	0	0	0	0	0	0	0	10
8:30	6	0	2	0	0	0	0	0	8	8	0	0	0	0	0	0	0	8
8:45	6	0	1	1	0	0	0	0	8	3	0	2	0	0	0	0	0	5
9:00	7	0	1	0	0	0	0	0	8	5	0	1	0	0	0	0	0	6
9:15	12	0	3	0	0	0	0	0	15	3	0	1	1	0	0	0	0	5
9:30	12	0	2	0	0	0	0	0	14	8	1	2	0	0	0	0	0	11
9:45	7	0	4	1	0	0	0	0	12	3	0	2	0	0	0	0	0	5
Total	70	0	20	4	0	0	1	1	96	46	1	9	1	0	0	0	0	57

Peak Hour 8:00 to 9:00

8:00	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2
8:15	4	0	0	1	0	0	0	0	5	10	0	0	0	0	0	0	0	10
8:30	6	0	2	0	0	0	0	0	8	8	0	0	0	0	0	0	0	8
8:45	6	0	1	1	0	0	0	0	8	3	0	2	0	0	0	0	0	5
Total	17	0	4	2	0	0	0	0	23	23	0	2	0	0	0	0	0	25

Date Thursday 11 April 2019

Time	B to A - Birch Avenue to Blackthorn Drive(N)								Veh. Total	B to D - Birch Avenue to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	14	0	0	0	0	0	0	0	14	4	0	2	1	0	0	0	0	7
16:15	19	0	3	1	0	0	0	0	23	5	0	1	0	0	0	0	0	6
16:30	22	0	1	0	0	0	0	0	23	6	0	1	0	0	0	1	0	8
16:45	19	0	1	0	0	0	1	0	21	6	0	0	0	0	0	0	0	6
17:00	40	0	2	0	0	0	1	0	43	6	0	0	0	0	0	0	0	6
17:15	32	0	3	0	0	0	1	0	36	7	0	0	0	0	0	0	0	7
17:30	37	0	0	0	0	0	0	0	37	14	0	0	0	0	0	0	0	14
17:45	24	0	0	0	0	0	0	0	24	4	0	1	0	0	0	1	0	6
18:00	16	0	0	0	0	0	0	0	16	11	0	2	0	0	0	0	0	13
18:15	15	0	0	0	0	0	0	0	15	3	0	0	0	0	0	0	0	3
18:30	13	0	4	0	0	0	0	0	17	9	0	0	0	0	0	0	0	9
18:45	8	0	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	5
Total	259	0	14	1	0	0	3	0	277	80	0	7	1	0	0	2	0	90

Peak Hour 17:00 to 18:00

17:00	40	0	2	0	0	0	1	0	43	6	0	0	0	0	0	0	0	6
17:15	32	0	3	0	0	0	1	0	36	7	0	0	0	0	0	0	0	7
17:30	37	0	0	0	0	0	0	0	37	14	0	0	0	0	0	0	0	14
17:45	24	0	0	0	0	0	0	0	24	4	0	1	0	0	0	1	0	6
Total	133	0	5	0	0	0	2	0	140	31	0	1	0	0	0	1	0	33

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	B to C - Birch Avenue to Blackthorn Drive(S)								Veh. Total	B to B - Birch Avenue to Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
7:15	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
7:30	4	0	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
7:45	2	0	2	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0
8:00	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
8:15	3	0	3	1	1	0	0	0	8	0	0	0	0	0	0	0	0	0
8:30	2	0	3	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
8:45	6	0	2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
9:00	4	0	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
9:15	7	0	3	1	2	0	0	0	13	0	0	0	0	0	0	0	0	0
9:30	9	0	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
9:45	8	1	8	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0
Total	52	1	28	2	4	0	0	0	87	0	0	0	0	0	0	0	0	0

Peak Hour 8:00 to 9:00

8:00	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
8:15	3	0	3	1	1	0	0	0	8	0	0	0	0	0	0	0	0	0
8:30	2	0	3	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
8:45	6	0	2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Total	14	0	8	1	1	0	0	0	24	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	B to C - Birch Avenue to Blackthorn Drive(S)								Veh. Total	B to B - Birch Avenue to Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	20	0	6	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0
16:15	23	0	1	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
16:30	23	0	2	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0
16:45	22	0	4	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0
17:00	26	0	1	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
17:15	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
17:30	26	0	3	1	0	0	0	0	30	0	0	0	0	0	0	0	0	0
17:45	19	0	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
18:00	17	0	0	0	0	1	0	0	18	0	0	0	0	0	0	0	0	0
18:15	22	0	3	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0
18:30	22	0	1	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0
18:45	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0
Total	246	0	23	1	0	1	0	0	271	0	0	0	0	0	0	0	0	0

Peak Hour 17:00 to 18:00

17:00	26	0	1	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
17:15	12	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
17:30	26	0	3	1	0	0	0	0	30	0	0	0	0	0	0	0	0	0
17:45	19	0	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
Total	83	0	6	1	0	0	0	0	90	0	0	0	0	0	0	0	0	0

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	C to B - Blackthorn Drive(S) to Birch Avenue								Veh. Total	C to A - Blackthorn Drive(S) to Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	9	0	1	0	0	0	0	0	10	51	3	6	2	1	0	1	4	68
7:15	16	0	2	0	0	0	1	1	20	85	0	10	2	1	1	0	2	101
7:30	20	0	3	0	0	0	0	0	23	130	4	5	1	0	1	0	2	143
7:45	17	0	1	0	0	0	1	0	19	161	3	10	1	0	0	0	1	176
8:00	24	0	3	0	0	0	0	0	27	158	2	9	4	0	0	1	6	180
8:15	28	0	8	0	0	0	0	1	37	127	0	8	0	0	1	0	5	141
8:30	30	0	4	0	0	0	0	0	34	95	2	6	2	1	1	1	3	111
8:45	21	0	6	1	1	0	0	1	30	92	5	4	3	0	0	1	5	110
9:00	21	1	6	0	0	0	0	0	28	67	3	8	1	0	0	0	0	79
9:15	30	0	5	0	0	0	0	1	36	57	2	7	2	1	1	0	2	72
9:30	18	0	8	0	0	0	0	0	26	68	4	12	2	0	1	1	0	88
9:45	19	0	5	0	0	0	0	0	24	69	4	14	0	0	1	0	0	88
Total	253	1	52	1	1	0	2	4	314	1160	32	99	20	4	7	5	30	1357

Peak Hour 8:00 to 9:00

8:00	24	0	3	0	0	0	0	0	27	158	2	9	4	0	0	1	6	180
8:15	28	0	8	0	0	0	0	1	37	127	0	8	0	0	1	0	5	141
8:30	30	0	4	0	0	0	0	0	34	95	2	6	2	1	1	1	3	111
8:45	21	0	6	1	1	0	0	1	30	92	5	4	3	0	0	1	5	110
Total	103	0	21	1	1	0	0	2	128	472	9	27	9	1	2	3	19	542

Date Thursday 11 April 2019

Time	C to B - Blackthorn Drive(S) to Birch Avenue								Veh. Total	C to A - Blackthorn Drive(S) to Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	12	0	3	1	0	0	0	0	16	48	0	4	1	0	0	0	1	54
16:15	13	0	3	0	0	0	0	0	16	63	0	3	1	0	0	1	1	69
16:30	11	0	0	1	0	0	0	0	12	67	0	3	2	0	0	0	3	75
16:45	8	0	0	0	0	0	0	0	8	72	0	6	0	0	0	1	0	79
17:00	8	1	0	0	0	0	0	0	9	84	2	2	0	0	1	2	1	92
17:15	6	0	0	0	0	0	0	0	6	79	2	5	1	0	0	3	0	90
17:30	5	0	1	0	0	0	0	0	6	75	1	2	0	0	0	0	2	80
17:45	3	0	1	0	0	0	0	0	4	74	2	6	0	0	0	0	2	84
18:00	8	0	3	0	0	0	0	0	11	60	1	1	1	0	0	0	1	64
18:15	7	0	1	0	0	0	0	0	8	71	2	5	0	0	1	1	2	82
18:30	3	0	0	0	0	0	0	0	3	54	2	5	0	0	0	0	2	63
18:45	6	0	0	0	0	0	0	0	6	59	1	0	0	0	0	0	0	60
Total	90	1	12	2	0	0	0	0	105	806	13	42	6	0	2	8	15	892

Peak Hour 17:00 to 18:00

17:00	8	1	0	0	0	0	0	0	9	84	2	2	0	0	1	2	1	92
17:15	6	0	0	0	0	0	0	0	6	79	2	5	1	0	0	3	0	90
17:30	5	0	1	0	0	0	0	0	6	75	1	2	0	0	0	0	2	80
17:45	3	0	1	0	0	0	0	0	4	74	2	6	0	0	0	0	2	84
Total	22	1	2	0	0	0	0	0	25	312	7	15	1	0	1	5	5	346

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	C to D - Blackthorn Drive(S) to Carmanhall Road								Veh. Total	C to C - Blackthorn Drive(S) to Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	24	0	3	0	1	0	0	2	30	1	0	0	0	0	0	0	0	1
7:15	36	1	4	0	0	0	0	3	44	0	0	0	0	0	0	0	0	0
7:30	46	0	1	2	0	0	0	2	51	0	0	0	0	0	0	0	0	0
7:45	36	0	5	1	0	0	0	3	45	0	0	0	0	0	0	0	0	0
8:00	50	0	0	1	0	0	3	2	56	0	0	0	0	0	0	0	0	0
8:15	74	1	1	0	0	0	1	1	78	0	0	0	0	0	0	0	0	0
8:30	54	2	5	2	0	0	0	4	67	0	0	0	0	0	0	0	0	0
8:45	70	0	4	0	0	0	1	4	79	0	0	0	0	0	0	0	0	0
9:00	69	1	3	0	0	0	0	0	73	0	0	0	0	0	0	0	0	0
9:15	59	0	6	6	0	0	0	0	71	0	0	0	0	0	0	0	0	0
9:30	45	1	4	2	0	0	0	1	53	0	0	0	0	0	0	0	0	0
9:45	54	1	4	1	0	0	1	0	61	0	0	0	0	0	0	0	0	0
Total	617	7	40	15	1	0	6	22	708	1	0	0	0	0	0	0	0	1

Peak Hour 8:00 to 9:00

8:00	50	0	0	1	0	0	3	2	56	0	0	0	0	0	0	0	0	0
8:15	74	1	1	0	0	0	1	1	78	0	0	0	0	0	0	0	0	0
8:30	54	2	5	2	0	0	0	4	67	0	0	0	0	0	0	0	0	0
8:45	70	0	4	0	0	0	1	4	79	0	0	0	0	0	0	0	0	0
Total	248	3	10	3	0	0	5	11	280	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	C to D - Blackthorn Drive(S) to Carmanhall Road								Veh. Total	C to C - Blackthorn Drive(S) to Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	27	1	8	0	0	0	0	1	37	0	0	0	0	0	0	0	0	0
16:15	26	3	5	0	1	0	0	0	35	0	0	0	0	0	0	0	0	0
16:30	22	1	1	0	0	0	0	1	25	0	0	0	0	0	0	0	0	0
16:45	26	0	1	1	0	0	1	0	29	0	0	0	0	0	0	0	0	0
17:00	20	1	2	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0
17:15	24	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
17:30	19	0	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
17:45	25	0	2	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
18:00	27	1	1	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0
18:15	19	2	1	0	0	0	0	0	22	1	0	0	0	0	0	0	0	1
18:30	32	1	1	0	0	0	1	0	35	0	0	0	0	0	0	0	0	0
18:45	30	3	1	0	0	0	1	0	35	1	0	0	0	0	0	0	0	1
Total	297	13	24	1	1	0	3	2	341	2	0	0	0	0	0	0	0	2

Peak Hour 17:00 to 18:00

17:00	20	1	2	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0
17:15	24	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0
17:30	19	0	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
17:45	25	0	2	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
Total	88	1	5	0	0	0	0	0	94	0	0	0	0	0	0	0	0	0

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	D to C - Carmanhall Road to Blackthorn Drive(S)								Veh. Total	D to B - Carmanhall Road to Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	10	1	0	0	0	0	2	0	13	5	0	1	0	0	0	0	0	6
7:15	12	0	2	0	0	0	0	1	15	8	0	1	0	0	0	0	0	9
7:30	11	1	2	1	1	0	0	0	16	10	0	2	0	0	0	0	1	13
7:45	12	1	1	1	0	0	0	0	15	9	0	0	1	0	0	1	0	11
8:00	13	0	1	0	0	0	0	0	14	16	0	0	0	0	0	0	0	16
8:15	21	0	0	1	0	0	0	0	22	14	0	0	0	0	0	1	0	15
8:30	15	0	2	2	0	0	0	2	21	19	0	3	0	0	0	0	0	22
8:45	10	1	3	5	0	0	0	1	20	21	0	3	0	0	0	0	0	24
9:00	21	2	6	1	0	0	0	2	32	15	0	2	1	0	0	0	0	18
9:15	17	0	10	0	0	0	1	0	28	16	1	6	0	0	0	0	0	23
9:30	20	1	8	2	0	0	0	0	31	3	0	3	1	0	0	0	0	7
9:45	22	1	6	2	0	1	1	0	33	9	0	1	0	0	0	0	0	10
Total	184	8	41	15	1	1	4	6	260	145	1	22	3	0	0	2	1	174

Peak Hour 8:00 to 9:00

8:00	13	0	1	0	0	0	0	0	14	16	0	0	0	0	0	0	0	16
8:15	21	0	0	1	0	0	0	0	22	14	0	0	0	0	0	1	0	15
8:30	15	0	2	2	0	0	0	2	21	19	0	3	0	0	0	0	0	22
8:45	10	1	3	5	0	0	0	1	20	21	0	3	0	0	0	0	0	24
Total	59	1	6	8	0	0	0	3	77	70	0	6	0	0	0	1	0	77

Date Thursday 11 April 2019

Time	D to C - Carmanhall Road to Blackthorn Drive(S)								Veh. Total	D to B - Carmanhall Road to Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	73	1	3	1	0	0	0	0	78	6	0	3	0	0	0	0	0	9
16:15	74	0	10	1	0	0	0	0	85	7	0	0	0	0	0	0	0	7
16:30	90	3	8	0	0	0	0	3	104	8	0	1	0	0	0	0	0	9
16:45	66	1	4	0	0	0	2	4	77	7	0	0	0	0	0	0	0	7
17:00	87	0	3	0	0	0	2	0	92	2	0	1	0	0	0	0	0	3
17:15	91	0	9	1	0	0	0	4	105	8	0	2	0	0	0	0	0	10
17:30	91	0	1	0	0	0	1	4	97	16	0	0	0	0	0	0	0	16
17:45	94	0	5	0	1	0	1	3	104	10	0	0	0	0	0	0	1	11
18:00	75	0	3	0	0	0	2	1	81	8	0	2	0	0	0	0	0	10
18:15	77	2	1	0	0	0	0	2	82	9	0	1	0	0	0	0	0	10
18:30	68	1	2	0	0	0	0	2	73	9	0	0	1	0	0	0	0	10
18:45	56	4	3	0	0	0	0	3	66	12	0	0	0	0	0	0	0	12
Total	942	12	52	3	1	0	8	26	1044	102	0	10	1	0	0	0	1	114

Peak Hour 17:00 to 18:00

17:00	87	0	3	0	0	0	2	0	92	2	0	1	0	0	0	0	0	3
17:15	91	0	9	1	0	0	0	4	105	8	0	2	0	0	0	0	0	10
17:30	91	0	1	0	0	0	1	4	97	16	0	0	0	0	0	0	0	16
17:45	94	0	5	0	1	0	1	3	104	10	0	0	0	0	0	0	1	11
Total	363	0	18	1	1	0	4	11	398	36	0	3	0	0	0	0	1	40

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	D to A - Carmanhall Road to Blackthorn Drive(N)								Veh. Total	D to D - Carmanhall Road to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	6	1	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
7:15	6	0	2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
7:30	19	1	2	0	0	0	0	1	23	0	0	0	0	0	0	0	0	0
7:45	15	0	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
8:00	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0
8:15	7	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
8:30	13	1	2	0	0	0	0	1	17	0	0	0	0	0	0	0	0	0
8:45	11	0	4	1	0	0	0	0	16	0	0	0	0	0	0	0	0	0
9:00	11	0	2	0	0	0	1	0	14	0	0	0	0	0	0	0	0	0
9:15	11	1	2	2	0	0	0	0	16	0	0	0	0	0	0	0	0	0
9:30	12	0	1	2	0	0	0	0	15	0	0	0	0	0	0	0	0	0
9:45	21	2	3	1	0	0	0	0	27	0	0	0	0	0	0	0	0	0
Total	147	6	20	6	0	0	1	2	182	0	0	0	0	0	0	0	0	0

Peak Hour 8:00 to 9:00

8:00	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0
8:15	7	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
8:30	13	1	2	0	0	0	0	1	17	0	0	0	0	0	0	0	0	0
8:45	11	0	4	1	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Total	46	1	6	1	0	0	0	1	55	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	D to A - Carmanhall Road to Blackthorn Drive(N)								Veh. Total	D to D - Carmanhall Road to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	27	1	1	1	0	0	0	0	30	0	0	0	0	0	0	0	0	0
16:15	33	0	5	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0
16:30	37	0	3	1	0	0	1	0	42	0	0	0	0	0	0	0	0	0
16:45	49	1	1	0	0	0	1	1	53	0	0	0	0	0	0	0	0	0
17:00	48	1	0	0	0	0	0	0	49	0	0	0	0	0	0	0	0	0
17:15	65	0	1	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0
17:30	51	1	1	0	0	0	0	2	55	0	0	0	0	0	0	0	0	0
17:45	55	1	1	0	0	0	0	1	58	0	0	0	0	0	0	0	0	0
18:00	34	2	1	0	0	0	0	2	39	0	0	0	0	0	0	0	0	0
18:15	27	0	1	0	0	0	2	2	32	0	0	0	0	0	0	0	0	0
18:30	36	0	1	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0
18:45	21	1	1	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0
Total	483	8	17	2	0	0	4	8	522	0	0	0	0	0	0	0	0	0

Peak Hour 17:00 to 18:00

17:00	48	1	0	0	0	0	0	0	49	0	0	0	0	0	0	0	0	0
17:15	65	0	1	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0
17:30	51	1	1	0	0	0	0	2	55	0	0	0	0	0	0	0	0	0
17:45	55	1	1	0	0	0	0	1	58	0	0	0	0	0	0	0	0	0
Total	219	3	3	0	0	0	0	3	228	0	0	0	0	0	0	0	0	0

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	To Arm A - Blackthorn Drive(N)								Veh. Total	From Arm A - Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	60	4	7	2	1	0	1	4	79	28	1	1	0	0	3	0	0	33
7:15	94	0	12	2	1	1	0	2	112	30	0	3	0	0	1	0	0	34
7:30	156	5	11	1	0	1	0	4	178	48	1	6	0	1	1	2	0	59
7:45	178	3	13	2	0	0	1	1	198	72	2	2	0	0	1	0	2	79
8:00	174	2	10	4	0	0	1	6	197	78	3	4	0	0	2	0	4	91
8:15	138	0	8	1	0	1	0	5	153	79	2	4	2	0	1	1	1	90
8:30	114	3	10	2	1	1	1	4	136	79	1	1	1	0	1	1	2	86
8:45	109	5	9	5	0	0	1	5	134	94	0	6	1	0	0	0	3	104
9:00	85	3	11	1	0	0	1	0	101	103	3	8	3	0	3	0	5	125
9:15	80	3	12	4	1	1	0	2	103	79	4	4	0	0	2	0	0	89
9:30	92	4	15	4	0	1	1	0	117	60	1	7	0	1	3	0	0	72
9:45	97	6	21	2	0	1	0	0	127	56	2	8	2	0	1	1	1	71
Total	1377	38	139	30	4	7	7	33	1635	806	20	54	9	2	19	5	18	933

Peak Hour 8:00 to 9:00

8:00	174	2	10	4	0	0	1	6	197	78	3	4	0	0	2	0	4	91
8:15	138	0	8	1	0	1	0	5	153	79	2	4	2	0	1	1	1	90
8:30	114	3	10	2	1	1	1	4	136	79	1	1	1	0	1	1	2	86
8:45	109	5	9	5	0	0	1	5	134	94	0	6	1	0	0	0	3	104
Total	535	10	37	12	1	2	3	20	620	330	6	15	4	0	4	2	10	371

Date Thursday 11 April 2019

Time	To Arm A - Blackthorn Drive(N)								Veh. Total	From Arm A - Blackthorn Drive(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	89	1	5	2	0	0	0	1	98	85	2	9	2	0	2	0	0	100
16:15	115	0	11	2	0	0	1	1	130	79	1	9	0	0	0	0	0	89
16:30	126	0	7	3	0	0	1	3	140	75	0	7	1	0	0	0	2	85
16:45	140	1	8	0	0	0	3	1	153	62	2	8	0	0	0	0	3	75
17:00	172	3	4	0	0	1	3	1	184	57	1	3	0	0	3	0	1	65
17:15	176	2	9	1	0	0	4	0	192	67	2	4	1	0	1	1	2	78
17:30	163	2	3	0	0	0	0	4	172	77	1	4	1	0	1	1	2	87
17:45	154	3	7	0	0	0	0	3	167	80	3	1	0	0	1	2	1	88
18:00	110	3	2	1	0	0	0	3	119	77	0	4	0	0	2	2	3	88
18:15	113	2	6	0	0	1	3	4	129	78	2	4	0	0	1	0	4	89
18:30	103	2	10	0	0	0	0	2	117	77	7	1	0	0	2	0	0	87
18:45	88	2	1	0	0	0	0	0	91	80	3	3	0	1	1	1	3	92
Total	1549	21	73	9	0	2	15	23	1692	894	24	57	5	1	14	7	21	1023

Peak Hour 17:00 to 18:00

17:00	172	3	4	0	0	1	3	1	184	57	1	3	0	0	3	0	1	65
17:15	176	2	9	1	0	0	4	0	192	67	2	4	1	0	1	1	2	78
17:30	163	2	3	0	0	0	0	4	172	77	1	4	1	0	1	1	2	87
17:45	154	3	7	0	0	0	0	3	167	80	3	1	0	0	1	2	1	88
Total	665	10	23	1	0	1	7	8	715	281	7	12	2	0	6	4	6	318

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	To Arm B - Birch Avenue								Veh. Total	From Arm B - Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	22	0	2	0	0	0	0	0	24	6	0	0	0	0	0	0	0	6
7:15	26	0	3	0	0	0	1	1	31	4	0	1	0	0	0	0	0	5
7:30	35	0	6	0	0	0	0	1	42	15	0	7	0	0	0	0	1	23
7:45	37	0	1	1	0	0	2	0	41	4	0	4	1	1	0	1	0	11
8:00	50	0	3	0	0	0	0	0	53	6	0	1	0	0	0	0	0	7
8:15	60	0	8	0	0	0	1	1	70	17	0	3	2	1	0	0	0	23
8:30	60	0	7	0	0	0	0	0	67	16	0	5	0	0	0	0	0	21
8:45	63	0	12	1	1	0	0	1	78	15	0	5	1	0	0	0	0	21
9:00	60	1	10	1	0	0	0	0	72	16	0	4	0	0	0	0	0	20
9:15	58	1	12	0	0	0	0	1	72	22	0	7	2	2	0	0	0	33
9:30	36	0	13	1	0	0	0	0	50	29	1	6	0	0	0	0	0	36
9:45	37	0	8	1	0	0	0	0	46	18	1	14	1	0	0	0	0	34
Total	544	2	85	5	1	0	4	5	646	168	2	57	7	4	0	1	1	240

Peak Hour 8:00 to 9:00

8:00	50	0	3	0	0	0	0	0	53	6	0	1	0	0	0	0	0	7
8:15	60	0	8	0	0	0	1	1	70	17	0	3	2	1	0	0	0	23
8:30	60	0	7	0	0	0	0	0	67	16	0	5	0	0	0	0	0	21
8:45	63	0	12	1	1	0	0	1	78	15	0	5	1	0	0	0	0	21
Total	233	0	30	1	1	0	1	2	268	54	0	14	3	1	0	0	0	72

Date Thursday 11 April 2019

Time	To Arm B - Birch Avenue								Veh. Total	From Arm B - Birch Avenue								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	27	0	8	1	0	0	0	0	36	38	0	8	1	0	0	0	0	47
16:15	31	0	5	0	0	0	0	0	36	47	0	5	1	0	0	0	0	53
16:30	25	0	3	1	0	0	0	0	29	51	0	4	0	0	0	1	0	56
16:45	24	0	1	0	0	0	0	0	25	47	0	5	0	0	0	1	0	53
17:00	18	1	1	0	0	0	0	0	20	72	0	3	0	0	0	1	0	76
17:15	19	0	2	1	0	0	0	0	22	51	0	4	0	0	0	1	0	56
17:30	30	0	1	0	0	0	0	1	32	77	0	3	1	0	0	0	0	81
17:45	22	0	1	0	0	0	0	1	24	47	0	2	0	0	0	1	0	50
18:00	21	0	6	0	0	1	0	0	28	44	0	2	0	0	1	0	0	47
18:15	21	0	2	0	0	0	0	0	23	40	0	3	0	0	0	0	0	43
18:30	18	1	0	1	0	0	0	0	20	44	0	5	0	0	0	0	0	49
18:45	23	0	2	0	0	0	0	1	26	27	0	0	0	0	0	0	0	27
Total	279	2	32	4	0	1	0	3	321	585	0	44	3	0	1	5	0	638

Peak Hour 17:00 to 18:00

17:00	18	1	1	0	0	0	0	0	20	72	0	3	0	0	0	1	0	76
17:15	19	0	2	1	0	0	0	0	22	51	0	4	0	0	0	1	0	56
17:30	30	0	1	0	0	0	0	1	32	77	0	3	1	0	0	0	0	81
17:45	22	0	1	0	0	0	0	1	24	47	0	2	0	0	0	1	0	50
Total	89	1	5	1	0	0	0	2	98	247	0	12	1	0	0	3	0	263

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	To Arm C - Blackthorn Drive(S)								Veh. Total	From Arm C - Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	26	2	0	0	0	3	2	0	33	85	3	10	2	2	0	1	6	109
7:15	31	0	5	0	0	1	0	1	38	137	1	16	2	1	1	1	6	165
7:30	45	1	7	1	2	1	1	0	58	196	4	9	3	0	1	0	4	217
7:45	46	3	4	1	1	1	0	2	58	214	3	16	2	0	0	1	4	240
8:00	58	2	5	0	0	2	0	1	68	232	2	12	5	0	0	4	8	263
8:15	63	1	4	3	1	1	0	0	73	229	1	17	0	0	1	1	7	256
8:30	56	1	6	3	0	1	1	3	71	179	4	15	4	1	1	1	7	212
8:45	47	1	8	6	0	0	0	4	66	183	5	14	4	1	0	2	10	219
9:00	71	3	11	2	0	3	0	3	93	157	5	17	1	0	0	0	0	180
9:15	62	3	15	1	2	2	1	0	86	146	2	18	8	1	1	0	3	179
9:30	46	2	13	2	1	3	0	0	67	131	5	24	4	0	1	1	1	167
9:45	55	2	17	3	0	2	1	0	80	142	5	23	1	0	1	1	0	173
Total	606	21	95	22	7	20	6	14	791	2031	40	191	36	6	7	13	56	2380

Peak Hour 8:00 to 9:00

8:00	58	2	5	0	0	2	0	1	68	232	2	12	5	0	0	4	8	263
8:15	63	1	4	3	1	1	0	0	73	229	1	17	0	0	1	1	7	256
8:30	56	1	6	3	0	1	1	3	71	179	4	15	4	1	1	1	7	212
8:45	47	1	8	6	0	0	0	4	66	183	5	14	4	1	0	2	10	219
Total	224	5	23	12	1	4	1	8	278	823	12	58	13	2	2	8	32	950

Date Thursday 11 April 2019

Time	To Arm C - Blackthorn Drive(S)								Veh. Total	From Arm C - Blackthorn Drive(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	150	2	15	3	0	2	0	0	172	87	1	15	2	0	0	0	2	107
16:15	143	0	17	1	0	0	0	0	161	102	3	11	1	1	0	1	1	120
16:30	158	3	14	1	0	0	0	5	181	100	1	4	3	0	0	0	4	112
16:45	126	3	12	0	0	0	2	6	149	106	0	7	1	0	0	2	0	116
17:00	142	1	7	0	0	3	2	1	156	112	4	4	0	0	1	2	1	124
17:15	147	2	13	1	0	1	0	5	169	109	2	5	1	0	0	3	0	120
17:30	169	1	8	2	0	1	1	5	187	99	1	4	0	0	0	0	2	106
17:45	166	2	7	0	1	1	2	4	183	102	2	9	0	0	0	0	2	115
18:00	144	0	5	0	0	2	4	3	158	95	2	5	1	0	0	0	1	104
18:15	149	2	7	0	0	1	0	5	164	98	4	7	0	0	1	1	2	113
18:30	149	5	3	0	0	2	0	2	161	89	3	6	0	0	0	1	2	101
18:45	131	6	4	0	1	1	1	5	149	96	4	1	0	0	0	1	0	102
Total	1774	27	112	8	2	14	12	41	1990	1195	27	78	9	1	2	11	17	1340

Peak Hour 17:00 to 18:00

17:00	142	1	7	0	0	3	2	1	156	112	4	4	0	0	1	2	1	124
17:15	147	2	13	1	0	1	0	5	169	109	2	5	1	0	0	3	0	120
17:30	169	1	8	2	0	1	1	5	187	99	1	4	0	0	0	0	2	106
17:45	166	2	7	0	1	1	2	4	183	102	2	9	0	0	0	0	2	115
Total	624	6	35	3	1	6	5	15	695	422	9	22	1	0	1	5	5	465

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	To Arm D - Carmanhall Road								Veh. Total	From Arm D - Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	32	0	4	0	1	0	0	2	39	21	2	2	0	0	0	2	0	27
7:15	46	1	5	0	0	0	0	3	55	26	0	5	0	0	0	0	1	32
7:30	63	1	4	2	0	0	1	2	73	40	2	6	1	1	0	0	2	52
7:45	65	0	6	1	0	0	0	3	75	36	1	2	2	0	0	1	0	42
8:00	78	1	0	1	0	0	3	5	88	44	0	1	0	0	0	0	0	45
8:15	106	2	4	1	0	0	2	2	117	42	0	0	1	0	0	1	0	44
8:30	91	2	5	2	0	0	0	5	105	47	1	7	2	0	0	0	3	60
8:45	115	0	6	0	0	0	1	4	126	42	1	10	6	0	0	0	1	60
9:00	107	3	7	2	0	0	0	4	123	47	2	10	2	0	0	1	2	64
9:15	91	1	8	7	0	0	0	0	107	44	2	18	2	0	0	1	0	67
9:30	81	2	8	2	0	0	0	1	94	35	1	12	5	0	0	0	0	53
9:45	79	3	9	1	0	0	2	1	95	52	3	10	3	0	1	1	0	70
Total	954	16	66	19	1	0	9	32	1097	476	15	83	24	1	1	7	9	616

Peak Hour 8:00 to 9:00

8:00	78	1	0	1	0	0	3	5	88	44	0	1	0	0	0	0	0	45
8:15	106	2	4	1	0	0	2	2	117	42	0	0	1	0	0	1	0	44
8:30	91	2	5	2	0	0	0	5	105	47	1	7	2	0	0	0	3	60
8:45	115	0	6	0	0	0	1	4	126	42	1	10	6	0	0	0	1	60
Total	390	5	15	4	0	0	6	16	436	175	2	18	9	0	0	1	4	209

Date Thursday 11 April 2019

Time	To Arm D - Carmanhall Road								Veh. Total	From Arm D - Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	50	2	11	1	0	0	0	1	65	106	2	7	2	0	0	0	0	117
16:15	53	4	7	0	1	0	0	0	65	114	0	15	1	0	0	0	0	130
16:30	52	1	3	0	0	0	1	1	58	135	3	12	1	0	0	1	3	155
16:45	47	0	4	1	0	0	1	1	54	122	2	5	0	0	0	3	5	137
17:00	46	1	2	0	0	0	0	0	49	137	1	4	0	0	0	2	0	144
17:15	49	0	1	0	0	0	1	1	52	164	0	12	1	0	0	0	4	181
17:30	49	0	1	0	0	0	1	0	51	158	1	2	0	0	0	1	6	168
17:45	46	1	3	0	0	0	2	0	52	159	1	6	0	1	0	1	5	173
18:00	58	1	4	0	0	0	0	1	64	117	2	6	0	0	0	2	3	130
18:15	46	4	2	0	0	0	0	1	53	113	2	3	0	0	0	2	4	124
18:30	53	3	2	0	0	0	1	0	59	113	1	3	1	0	0	0	2	120
18:45	50	4	1	0	0	0	1	0	56	89	5	4	0	0	0	0	3	101
Total	599	21	41	2	1	0	8	6	678	1527	20	79	6	1	0	12	35	1680

Peak Hour 17:00 to 18:00

17:00	46	1	2	0	0	0	0	0	49	137	1	4	0	0	0	2	0	144
17:15	49	0	1	0	0	0	1	1	52	164	0	12	1	0	0	0	4	181
17:30	49	0	1	0	0	0	1	0	51	158	1	2	0	0	0	1	6	168
17:45	46	1	3	0	0	0	2	0	52	159	1	6	0	1	0	1	5	173
Total	190	2	7	0	0	0	4	1	204	618	3	24	1	1	0	4	15	666

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	A to C - Carmanhall Road(W) to Carmanhall Road(E)								Veh. Total	A to B - Carmanhall Road(W) to Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	23	0	2	0	1	0	0	1	27	1	0	1	0	0	0	0	0	2
7:15	30	0	2	0	0	0	0	4	36	4	0	1	0	0	0	0	0	5
7:30	36	1	3	1	0	0	1	1	43	7	0	0	0	0	0	0	0	7
7:45	38	0	6	1	0	0	0	2	47	23	0	0	0	0	0	0	0	23
8:00	43	0	0	0	0	0	1	5	49	17	0	2	0	0	0	1	1	21
8:15	49	2	2	0	0	0	1	2	56	26	0	1	1	0	0	1	1	30
8:30	41	2	4	1	0	0	1	6	55	14	0	0	0	0	0	0	0	14
8:45	51	1	5	1	0	0	1	6	65	26	0	0	0	0	0	0	0	26
9:00	47	1	7	0	0	0	1	0	56	17	0	2	0	0	0	0	0	19
9:15	38	1	5	4	0	0	0	0	48	14	1	1	0	0	0	0	0	16
9:30	29	3	5	1	0	0	0	3	41	15	0	0	0	0	0	0	0	15
9:45	27	2	4	0	0	0	0	0	33	14	0	2	1	0	0	1	0	18
Total	452	13	45	9	1	0	6	30	556	178	1	10	2	0	0	3	2	196

Peak Hour 8:15 to 9:15

8:15	49	2	2	0	0	0	1	2	56	26	0	1	1	0	0	1	1	30
8:30	41	2	4	1	0	0	1	6	55	14	0	0	0	0	0	0	0	14
8:45	51	1	5	1	0	0	1	6	65	26	0	0	0	0	0	0	0	26
9:00	47	1	7	0	0	0	1	0	56	17	0	2	0	0	0	0	0	19
Total	188	6	18	2	0	0	4	14	232	83	0	3	1	0	0	1	1	89

Date Thursday 11 April 2019

Time	A to C - Carmanhall Road(W) to Carmanhall Road(E)								Veh. Total	A to B - Carmanhall Road(W) to Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	16	0	7	0	0	0	0	1	24	7	1	5	1	0	0	0	0	14
16:15	18	3	2	0	0	0	0	0	23	8	0	3	0	0	0	0	0	11
16:30	16	1	1	0	0	0	1	1	20	11	0	2	0	0	0	0	0	13
16:45	22	0	1	0	0	0	1	0	24	10	0	3	1	0	0	0	0	14
17:00	16	0	3	0	0	0	0	1	20	8	0	0	0	0	0	0	0	8
17:15	21	0	2	0	0	0	0	0	23	4	0	1	0	0	0	0	0	5
17:30	26	0	1	0	0	0	0	1	28	3	0	0	0	0	0	2	0	5
17:45	18	1	0	0	0	0	1	1	21	5	0	1	0	0	0	0	0	6
18:00	19	0	3	0	0	0	1	1	24	7	0	1	0	0	0	0	0	8
18:15	20	2	1	0	0	0	0	1	24	7	0	0	0	0	0	0	0	7
18:30	23	2	0	0	0	0	0	1	26	2	0	0	0	0	0	0	0	2
18:45	23	2	1	0	0	0	1	1	28	7	0	0	0	0	0	0	0	7
Total	238	11	22	0	0	0	5	9	285	79	1	16	2	0	0	2	0	100

Peak Hour 17:00 to 18:00

17:00	16	0	3	0	0	0	0	1	20	8	0	0	0	0	0	0	0	8
17:15	21	0	2	0	0	0	0	0	23	4	0	1	0	0	0	0	0	5
17:30	26	0	1	0	0	0	0	1	28	3	0	0	0	0	0	2	0	5
17:45	18	1	0	0	0	0	1	1	21	5	0	1	0	0	0	0	0	6
Total	81	1	6	0	0	0	1	3	92	20	0	2	0	0	0	2	0	24

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	A to A - Carmanhall Road(W) to Carmanhall Road(W)								Veh. Total	B to A - Corrig Road to Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	1	9
7:30	0	0	0	0	0	0	0	0	0	6	0	2	1	0	0	0	0	9
7:45	0	0	0	0	0	0	0	0	0	13	1	1	0	0	0	0	0	15
8:00	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	19
8:15	0	0	0	0	0	0	0	0	0	11	0	0	2	0	0	0	0	13
8:30	0	0	0	0	0	0	0	0	0	18	3	5	0	0	0	0	0	26
8:45	0	0	0	0	0	0	0	0	0	13	0	1	5	0	0	0	0	19
9:00	0	0	0	0	0	0	0	0	0	10	1	3	1	0	0	0	0	15
9:15	0	0	0	0	0	0	0	0	0	13	1	4	0	0	0	0	0	18
9:30	0	0	1	0	0	0	0	0	1	2	0	2	0	0	0	0	1	5
9:45	0	0	0	0	0	0	0	0	0	13	2	0	0	1	0	0	0	16
Total	0	0	1	0	0	0	0	0	1	127	8	18	9	1	0	0	2	165

Peak Hour 8:15 to 9:15

8:15	0	0	0	0	0	0	0	0	0	11	0	0	2	0	0	0	0	13
8:30	0	0	0	0	0	0	0	0	0	18	3	5	0	0	0	0	0	26
8:45	0	0	0	0	0	0	0	0	0	13	0	1	5	0	0	0	0	19
9:00	0	0	0	0	0	0	0	0	0	10	1	3	1	0	0	0	0	15
Total	0	0	0	0	0	0	0	0	0	52	4	9	8	0	0	0	0	73

Date Thursday 11 April 2019

Time	A to A - Carmanhall Road(W) to Carmanhall Road(W)								Veh. Total	B to A - Corrig Road to Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	1	0	0	0	0	0	0	0	1	23	0	0	1	0	0	0	0	24
16:15	0	0	0	0	0	0	0	0	0	29	0	2	0	0	0	0	0	31
16:30	1	0	0	0	0	0	0	0	1	32	0	2	0	0	0	0	0	34
16:45	0	0	0	0	0	0	0	0	0	36	1	3	0	0	0	2	0	42
17:00	0	0	0	0	0	0	0	0	0	49	0	3	1	0	0	1	1	55
17:15	0	0	0	0	0	0	0	0	0	43	0	4	0	0	0	0	0	47
17:30	1	0	0	0	0	0	0	0	1	47	1	2	0	0	0	1	3	54
17:45	0	0	0	0	0	0	0	0	0	34	1	1	0	0	0	1	0	37
18:00	0	0	0	0	0	0	0	0	0	27	0	1	0	0	0	1	0	29
18:15	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	1	0	18
18:30	1	0	0	0	0	0	0	0	1	26	0	1	0	0	0	0	0	27
18:45	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
Total	4	0	0	0	0	0	0	0	4	372	3	19	2	0	0	7	4	407

Peak Hour 17:00 to 18:00

17:00	0	0	0	0	0	0	0	0	0	49	0	3	1	0	0	1	1	55
17:15	0	0	0	0	0	0	0	0	0	43	0	4	0	0	0	0	0	47
17:30	1	0	0	0	0	0	0	0	1	47	1	2	0	0	0	1	3	54
17:45	0	0	0	0	0	0	0	0	0	34	1	1	0	0	0	1	0	37
Total	1	0	0	0	0	0	0	0	1	173	2	10	1	0	0	3	4	193

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	B to C - Corrig Road to Carmanhall Road(E)								Veh. Total	B to B - Corrig Road to Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	7	0	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
7:15	10	0	0	0	0	0	0	2	12	0	0	0	0	0	0	0	0	0
7:30	3	1	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
7:45	8	0	2	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
8:00	9	1	2	0	0	0	0	1	13	0	0	0	0	0	0	0	0	0
8:15	11	0	2	2	0	0	0	0	15	0	0	0	0	0	0	0	0	0
8:30	9	1	3	1	0	0	0	4	18	0	0	0	0	0	0	0	0	0
8:45	9	2	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0
9:00	15	1	0	1	0	0	0	1	18	0	0	0	0	0	0	0	0	0
9:15	13	1	2	1	0	0	1	1	19	0	0	0	0	0	0	0	0	0
9:30	9	0	3	2	0	0	0	1	15	0	0	0	0	0	0	0	0	0
9:45	9	0	4	0	0	0	1	0	14	0	0	0	0	0	0	0	0	0
Total	112	7	22	7	0	0	2	10	160	0	0	0	0	0	0	0	0	0

Peak Hour 8:15 to 9:15

8:15	11	0	2	2	0	0	0	0	15	0	0	0	0	0	0	0	0	0
8:30	9	1	3	1	0	0	0	4	18	0	0	0	0	0	0	0	0	0
8:45	9	2	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0
9:00	15	1	0	1	0	0	0	1	18	0	0	0	0	0	0	0	0	0
Total	44	4	6	4	0	0	0	5	63	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	B to C - Corrig Road to Carmanhall Road(E)								Veh. Total	B to B - Corrig Road to Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	7	1	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0	0
16:15	15	2	3	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
16:30	9	0	1	0	0	1	0	1	12	0	0	0	0	0	0	0	0	0
16:45	7	2	1	0	0	0	0	1	11	0	0	0	0	0	0	0	0	0
17:00	13	0	1	0	0	0	1	0	15	0	0	0	0	0	0	0	0	0
17:15	12	1	0	0	0	0	0	3	16	0	0	0	0	0	0	0	0	0
17:30	11	0	0	0	0	0	1	3	15	0	0	0	0	0	0	0	0	0
17:45	10	1	1	0	0	0	2	1	15	0	0	0	0	0	0	0	0	0
18:00	11	0	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0
18:15	5	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0
18:30	7	1	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
18:45	4	1	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0
Total	111	9	8	0	0	1	4	12	145	0	0	0	0	0	0	0	0	0

Peak Hour 17:00 to 18:00

17:00	13	0	1	0	0	0	1	0	15	0	0	0	0	0	0	0	0	0
17:15	12	1	0	0	0	0	0	3	16	0	0	0	0	0	0	0	0	0
17:30	11	0	0	0	0	0	1	3	15	0	0	0	0	0	0	0	0	0
17:45	10	1	1	0	0	0	2	1	15	0	0	0	0	0	0	0	0	0
Total	46	2	2	0	0	0	4	7	61	0	0	0	0	0	0	0	0	0

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	C to B - Carmanhall Road(E) to Corrig Road								Veh. Total	C to A - Carmanhall Road(E) to Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	2	0	0	0	0	0	0	0	2	15	1	2	0	0	0	2	0	20
7:15	5	0	0	0	0	0	0	1	6	14	0	4	0	0	0	1	0	19
7:30	3	0	0	1	0	0	0	0	4	26	1	4	1	1	0	0	2	35
7:45	3	0	1	0	0	0	1	1	6	19	0	3	2	0	0	1	0	25
8:00	4	0	0	0	0	0	0	2	6	26	0	1	0	0	0	0	0	27
8:15	11	0	3	0	0	0	0	2	16	37	0	1	0	0	0	1	1	40
8:30	9	1	2	0	0	0	0	0	12	35	0	6	1	0	0	0	2	44
8:45	5	1	0	0	0	0	0	1	7	29	1	6	1	0	0	0	0	37
9:00	8	1	1	0	0	0	0	2	12	37	1	7	1	0	0	1	1	48
9:15	5	1	0	0	0	0	0	0	6	32	2	13	3	0	0	1	2	53
9:30	6	0	1	0	0	0	0	0	7	22	1	11	2	0	0	0	0	36
9:45	3	0	4	0	0	0	0	0	7	31	1	9	1	0	0	1	0	43
Total	64	4	12	1	0	0	1	9	91	323	8	67	12	1	0	8	8	427

Peak Hour 8:15 to 9:15

8:15	11	0	3	0	0	0	0	2	16	37	0	1	0	0	0	1	1	40
8:30	9	1	2	0	0	0	0	0	12	35	0	6	1	0	0	0	2	44
8:45	5	1	0	0	0	0	0	1	7	29	1	6	1	0	0	0	0	37
9:00	8	1	1	0	0	0	0	2	12	37	1	7	1	0	0	1	1	48
Total	33	3	6	0	0	0	0	5	47	138	2	20	3	0	0	2	4	169

Date Thursday 11 April 2019

Time	C to B - Carmanhall Road(E) to Corrig Road								Veh. Total	C to A - Carmanhall Road(E) to Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	1	0	1	0	0	0	0	0	2	61	0	8	1	0	0	0	0	70
16:15	0	0	0	0	0	0	0	0	0	57	0	14	1	0	0	1	0	73
16:30	3	0	0	0	0	0	0	0	3	74	3	8	0	0	0	1	4	90
16:45	1	0	0	0	0	0	0	0	1	55	0	0	0	0	0	1	5	61
17:00	5	0	0	0	0	0	0	0	5	79	1	4	0	0	0	1	2	87
17:15	1	0	0	0	0	0	0	1	2	61	0	4	0	0	0	0	4	69
17:30	5	0	1	0	0	0	0	2	8	75	0	0	0	0	0	0	6	81
17:45	3	0	0	0	0	0	0	0	3	73	0	5	0	1	0	1	7	87
18:00	3	0	0	0	0	0	0	0	3	51	0	3	0	0	0	1	2	57
18:15	3	1	0	0	0	0	0	1	5	53	0	2	0	0	0	0	3	58
18:30	2	2	0	0	0	0	0	1	5	45	0	1	1	0	0	1	0	48
18:45	2	1	0	0	0	0	0	0	3	45	1	1	0	0	0	0	3	50
Total	29	4	2	0	0	0	0	5	40	729	5	50	3	1	0	7	36	831

Peak Hour 17:00 to 18:00

17:00	5	0	0	0	0	0	0	0	5	79	1	4	0	0	0	1	2	87
17:15	1	0	0	0	0	0	0	1	2	61	0	4	0	0	0	0	4	69
17:30	5	0	1	0	0	0	0	2	8	75	0	0	0	0	0	0	6	81
17:45	3	0	0	0	0	0	0	0	3	73	0	5	0	1	0	1	7	87
Total	14	0	1	0	0	0	0	3	18	288	1	13	0	1	0	2	19	324

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	C to C - Carmanhall Road(E) to Carmanhall Road(E)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0
7:45	0	0	1	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	1

Peak Hour 8:15 to 9:15

8:15	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	C to C - Carmanhall Road(E) to Carmanhall Road(E)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	0	0	0	0	0	0	0	0	0
16:15	0	1	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	2

Peak Hour 17:00 to 18:00

17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	To Arm A - Carmanhall Road(W)								Veh. Total	From Arm A - Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	16	1	2	0	0	0	2	0	21	24	0	3	0	1	0	0	1	29
7:15	22	0	4	0	0	0	1	1	28	34	0	3	0	0	0	0	4	41
7:30	32	1	6	2	1	0	0	2	44	43	1	3	1	0	0	1	1	50
7:45	32	1	4	2	0	0	1	0	40	61	0	6	1	0	0	0	2	70
8:00	45	0	1	0	0	0	0	0	46	60	0	2	0	0	0	2	6	70
8:15	48	0	1	2	0	0	1	1	53	75	2	3	1	0	0	2	3	86
8:30	53	3	11	1	0	0	0	2	70	55	2	4	1	0	0	1	6	69
8:45	42	1	7	6	0	0	0	0	56	77	1	5	1	0	0	1	6	91
9:00	47	2	10	2	0	0	1	1	63	64	1	9	0	0	0	1	0	75
9:15	45	3	17	3	0	0	1	2	71	52	2	6	4	0	0	0	0	64
9:30	24	1	14	2	0	0	0	1	42	44	3	6	1	0	0	0	3	57
9:45	44	3	9	1	1	0	1	0	59	41	2	6	1	0	0	1	0	51
Total	450	16	86	21	2	0	8	10	593	630	14	56	11	1	0	9	32	753

Peak Hour 8:15 to 9:15

8:15	48	0	1	2	0	0	1	1	53	75	2	3	1	0	0	2	3	86
8:30	53	3	11	1	0	0	0	2	70	55	2	4	1	0	0	1	6	69
8:45	42	1	7	6	0	0	0	0	56	77	1	5	1	0	0	1	6	91
9:00	47	2	10	2	0	0	1	1	63	64	1	9	0	0	0	1	0	75
Total	190	6	29	11	0	0	2	4	242	271	6	21	3	0	0	5	15	321

Date Thursday 11 April 2019

Time	To Arm A - Carmanhall Road(W)								Veh. Total	From Arm A - Carmanhall Road(W)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	85	0	8	2	0	0	0	0	95	24	1	12	1	0	0	0	1	39
16:15	86	0	16	1	0	0	1	0	104	26	3	5	0	0	0	0	0	34
16:30	107	3	10	0	0	0	1	4	125	28	1	3	0	0	0	1	1	34
16:45	91	1	3	0	0	0	3	5	103	32	0	4	1	0	0	1	0	38
17:00	128	1	7	1	0	0	2	3	142	24	0	3	0	0	0	0	1	28
17:15	104	0	8	0	0	0	0	4	116	25	0	3	0	0	0	0	0	28
17:30	123	1	2	0	0	0	1	9	136	30	0	1	0	0	0	2	1	34
17:45	107	1	6	0	1	0	2	7	124	23	1	1	0	0	0	1	1	27
18:00	78	0	4	0	0	0	2	2	86	26	0	4	0	0	0	1	1	32
18:15	70	0	2	0	0	0	1	3	76	27	2	1	0	0	0	0	1	31
18:30	72	0	2	1	0	0	1	0	76	26	2	0	0	0	0	0	1	29
18:45	54	1	1	0	0	0	0	3	59	30	2	1	0	0	0	1	1	35
Total	1105	8	69	5	1	0	14	40	1242	321	12	38	2	0	0	7	9	389

Peak Hour 17:00 to 18:00

17:00	128	1	7	1	0	0	2	3	142	24	0	3	0	0	0	0	1	28
17:15	104	0	8	0	0	0	0	4	116	25	0	3	0	0	0	0	0	28
17:30	123	1	2	0	0	0	1	9	136	30	0	1	0	0	0	2	1	34
17:45	107	1	6	0	1	0	2	7	124	23	1	1	0	0	0	1	1	27
Total	462	3	23	1	1	0	5	23	518	102	1	8	0	0	0	3	3	117

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	To Arm B - Corrig Road								Veh. Total	From Arm B - Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	3	0	1	0	0	0	0	0	4	8	0	1	0	0	0	0	0	9
7:15	9	0	1	0	0	0	0	1	11	18	0	0	0	0	0	0	3	21
7:30	10	0	0	1	0	0	0	0	11	9	1	4	1	0	0	0	0	15
7:45	26	0	1	0	0	0	1	1	29	21	1	3	0	0	0	0	0	25
8:00	21	0	2	0	0	0	1	3	27	28	1	2	0	0	0	0	1	32
8:15	37	0	4	1	0	0	1	3	46	22	0	2	4	0	0	0	0	28
8:30	23	1	2	0	0	0	0	0	26	27	4	8	1	0	0	0	4	44
8:45	31	1	0	0	0	0	0	1	33	22	2	2	5	0	0	0	0	31
9:00	25	1	3	0	0	0	0	2	31	25	2	3	2	0	0	0	1	33
9:15	19	2	1	0	0	0	0	0	22	26	2	6	1	0	0	1	1	37
9:30	21	0	1	0	0	0	0	0	22	11	0	5	2	0	0	0	2	20
9:45	17	0	6	1	0	0	1	0	25	22	2	4	0	1	0	1	0	30
Total	242	5	22	3	0	0	4	11	287	239	15	40	16	1	0	2	12	325

Peak Hour 8:15 to 9:15

8:15	37	0	4	1	0	0	1	3	46	22	0	2	4	0	0	0	0	28
8:30	23	1	2	0	0	0	0	0	26	27	4	8	1	0	0	0	4	44
8:45	31	1	0	0	0	0	0	1	33	22	2	2	5	0	0	0	0	31
9:00	25	1	3	0	0	0	0	2	31	25	2	3	2	0	0	0	1	33
Total	116	3	9	1	0	0	1	6	136	96	8	15	12	0	0	0	5	136

Date Thursday 11 April 2019

Time	To Arm B - Corrig Road								Veh. Total	From Arm B - Corrig Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	8	1	6	1	0	0	0	0	16	30	1	0	1	0	0	0	1	33
16:15	8	0	3	0	0	0	0	0	11	44	2	5	0	0	0	0	0	51
16:30	14	0	2	0	0	0	0	0	16	41	0	3	0	0	1	0	1	46
16:45	11	0	3	1	0	0	0	0	15	43	3	4	0	0	0	2	1	53
17:00	13	0	0	0	0	0	0	0	13	62	0	4	1	0	0	2	1	70
17:15	5	0	1	0	0	0	0	1	7	55	1	4	0	0	0	0	3	63
17:30	8	0	1	0	0	0	2	2	13	58	1	2	0	0	0	2	6	69
17:45	8	0	1	0	0	0	0	0	9	44	2	2	0	0	0	3	1	52
18:00	10	0	1	0	0	0	0	0	11	38	0	2	0	0	0	1	0	41
18:15	10	1	0	0	0	0	0	1	12	22	0	0	0	0	0	1	1	24
18:30	4	2	0	0	0	0	0	1	7	33	1	1	0	0	0	0	0	35
18:45	9	1	0	0	0	0	0	0	10	13	1	0	0	0	0	0	1	15
Total	108	5	18	2	0	0	2	5	140	483	12	27	2	0	1	11	16	552

Peak Hour 17:00 to 18:00

17:00	13	0	0	0	0	0	0	0	13	62	0	4	1	0	0	2	1	70
17:15	5	0	1	0	0	0	0	1	7	55	1	4	0	0	0	0	3	63
17:30	8	0	1	0	0	0	2	2	13	58	1	2	0	0	0	2	6	69
17:45	8	0	1	0	0	0	0	0	9	44	2	2	0	0	0	3	1	52
Total	34	0	3	0	0	0	2	3	42	219	4	12	1	0	0	7	11	254

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	To Arm C - Carmanhall Road(E)								Veh. Total	From Arm C - Carmanhall Road(E)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	30	0	3	0	1	0	0	1	35	17	1	2	0	0	0	2	0	22
7:15	40	0	2	0	0	0	0	6	48	19	0	4	0	0	0	1	1	25
7:30	39	2	5	1	0	0	1	1	49	29	1	4	2	1	0	0	2	39
7:45	46	0	9	1	0	0	0	2	58	22	0	5	2	0	0	2	1	32
8:00	52	1	2	0	0	0	1	6	62	30	0	1	0	0	0	0	2	33
8:15	60	2	4	2	0	0	1	2	71	48	0	4	0	0	0	1	3	56
8:30	50	3	7	2	0	0	1	10	73	44	1	8	1	0	0	0	2	56
8:45	60	3	6	1	0	0	1	6	77	34	2	6	1	0	0	0	1	44
9:00	62	2	7	1	0	0	1	1	74	45	2	8	1	0	0	1	3	60
9:15	51	2	7	5	0	0	1	1	67	37	3	13	3	0	0	1	2	59
9:30	38	3	8	3	0	0	0	4	56	28	1	12	2	0	0	0	0	43
9:45	36	2	8	0	0	0	1	0	47	34	1	13	1	0	0	1	0	50
Total	564	20	68	16	1	0	8	40	717	387	12	80	13	1	0	9	17	519

Peak Hour 8:15 to 9:15

8:15	60	2	4	2	0	0	1	2	71	48	0	4	0	0	0	1	3	56
8:30	50	3	7	2	0	0	1	10	73	44	1	8	1	0	0	0	2	56
8:45	60	3	6	1	0	0	1	6	77	34	2	6	1	0	0	0	1	44
9:00	62	2	7	1	0	0	1	1	74	45	2	8	1	0	0	1	3	60
Total	232	10	24	6	0	0	4	19	295	171	5	26	3	0	0	2	9	216

Date Thursday 11 April 2019

Time	To Arm C - Carmanhall Road(E)								Veh. Total	From Arm C - Carmanhall Road(E)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	23	1	7	0	0	0	0	2	33	62	0	9	1	0	0	0	0	72
16:15	33	6	5	0	0	0	0	0	44	57	1	14	1	0	0	1	0	74
16:30	25	1	2	0	0	1	1	2	32	77	3	8	0	0	0	1	4	93
16:45	29	3	2	0	0	0	1	1	36	56	1	0	0	0	0	1	5	63
17:00	29	0	4	0	0	0	1	1	35	84	1	4	0	0	0	1	2	92
17:15	33	1	2	0	0	0	0	3	39	62	0	4	0	0	0	0	5	71
17:30	37	0	1	0	0	0	1	4	43	80	0	1	0	0	0	0	8	89
17:45	28	2	1	0	0	0	3	2	36	76	0	5	0	1	0	1	7	90
18:00	30	0	4	0	0	0	1	1	36	54	0	3	0	0	0	1	2	60
18:15	25	2	1	0	0	0	0	2	30	56	1	2	0	0	0	0	4	63
18:30	30	3	0	0	0	0	0	1	34	47	2	1	1	0	0	1	1	53
18:45	27	3	1	0	0	0	1	2	34	47	2	1	0	0	0	0	3	53
Total	349	22	30	0	0	1	9	21	432	758	11	52	3	1	0	7	41	873

Peak Hour 17:00 to 18:00

17:00	29	0	4	0	0	0	1	1	35	84	1	4	0	0	0	1	2	92
17:15	33	1	2	0	0	0	0	3	39	62	0	4	0	0	0	0	5	71
17:30	37	0	1	0	0	0	1	4	43	80	0	1	0	0	0	0	8	89
17:45	28	2	1	0	0	0	3	2	36	76	0	5	0	1	0	1	7	90
Total	127	3	8	0	0	0	5	10	153	302	1	14	0	1	0	2	22	342

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	A to C - Blackthorn Road(N) to Blackthorn Road(S)								Veh. Total	A to B - Blackthorn Road(N) to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	1	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	4
7:15	7	0	0	1	0	0	0	0	8	4	0	2	0	0	0	0	0	6
7:30	5	1	1	0	0	0	0	0	7	12	1	1	0	0	0	0	0	14
7:45	11	0	0	0	0	0	0	1	12	10	0	0	0	0	0	1	1	12
8:00	19	0	1	0	0	0	0	3	23	15	0	1	0	0	0	1	0	17
8:15	16	1	2	1	0	0	0	2	22	16	0	2	0	0	0	0	1	19
8:30	21	0	1	1	0	0	0	3	26	21	2	1	1	0	0	0	0	25
8:45	18	0	3	1	0	0	0	0	22	16	0	0	0	0	0	0	0	16
9:00	15	0	1	1	0	0	0	1	18	16	0	3	0	0	0	0	0	19
9:15	9	0	0	0	0	0	0	2	11	8	0	1	0	0	0	0	0	9
9:30	5	0	1	0	0	0	0	0	6	9	0	0	0	0	0	0	0	9
9:45	6	0	1	0	0	0	0	0	7	6	0	4	0	0	0	0	0	10
Total	133	2	11	5	0	0	0	12	163	137	3	15	1	0	0	2	2	160
Peak Hour	8:00	to	9:00															
8:00	19	0	1	0	0	0	0	3	23	15	0	1	0	0	0	1	0	17
8:15	16	1	2	1	0	0	0	2	22	16	0	2	0	0	0	0	1	19
8:30	21	0	1	1	0	0	0	3	26	21	2	1	1	0	0	0	0	25
8:45	18	0	3	1	0	0	0	0	22	16	0	0	0	0	0	0	0	16
Total	74	1	7	3	0	0	0	8	93	68	2	4	1	0	0	1	1	77

Date Thursday 11 April 2019

Time	A to C - Blackthorn Road(N) to Blackthorn Road(S)								Veh. Total	A to B - Blackthorn Road(N) to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	17	0	4	0	0	0	0	0	21	9	1	3	1	0	0	0	0	14
16:15	5	0	2	0	0	0	0	0	7	9	0	3	0	0	0	0	0	12
16:30	6	0	0	0	0	0	0	0	6	14	0	1	0	0	0	0	0	15
16:45	12	1	1	0	0	0	0	0	14	8	0	1	0	0	0	1	0	10
17:00	4	0	0	0	0	0	0	1	5	4	0	1	0	0	0	0	0	5
17:15	5	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	4
17:30	7	0	0	0	0	0	0	2	9	12	0	1	0	0	0	0	1	14
17:45	2	0	1	0	0	0	0	0	3	3	0	0	0	0	0	0	0	3
18:00	3	0	1	0	0	0	0	0	4	8	0	0	0	0	0	1	0	9
18:15	6	0	0	0	0	0	0	1	7	2	1	0	0	0	0	0	0	3
18:30	3	0	0	0	0	1	0	0	4	4	1	0	0	0	0	0	0	5
18:45	1	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	5
Total	71	1	9	0	0	1	0	4	86	82	3	10	1	0	0	2	1	99
Peak Hour	16:30	to	17:30															
16:30	6	0	0	0	0	0	0	0	6	14	0	1	0	0	0	0	0	15
16:45	12	1	1	0	0	0	0	0	14	8	0	1	0	0	0	1	0	10
17:00	4	0	0	0	0	0	0	1	5	4	0	1	0	0	0	0	0	5
17:15	5	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	4
Total	27	1	1	0	0	0	0	1	30	30	0	3	0	0	0	1	0	34

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	A to A - Blackthorn Road(N) to Blackthorn Road(N)								Veh. Total	B to A - Carmanhall Road to Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	0	0	0	0	0	0	0	0	0	13	0	5	1	0	0	0	1	20
7:15	0	0	0	0	0	0	0	0	0	16	1	5	0	0	0	0	1	23
7:30	0	0	0	0	0	0	0	0	0	18	1	5	1	0	0	0	0	25
7:45	0	0	0	0	0	0	0	0	0	19	1	10	2	0	0	0	0	32
8:00	0	0	0	0	0	0	0	0	0	22	1	8	0	0	0	0	0	31
8:15	0	0	0	0	0	0	0	0	0	25	2	11	4	0	0	0	0	42
8:30	0	1	0	0	0	0	0	0	1	29	4	6	0	0	0	0	1	40
8:45	0	0	0	0	0	0	0	0	0	29	3	11	2	0	0	0	0	45
9:00	0	0	0	0	0	0	0	0	0	29	2	8	2	0	0	0	0	41
9:15	0	0	0	1	0	0	0	0	1	21	5	5	4	0	0	0	0	35
9:30	0	0	0	0	0	0	0	0	0	26	4	14	1	0	0	0	0	45
9:45	0	0	0	0	0	0	0	0	0	21	1	15	5	0	0	1	0	43
Total	0	1	0	1	0	0	0	0	2	268	25	103	22	0	0	1	3	422

Peak Hour 8:00 to 9:00

8:00	0	0	0	0	0	0	0	0	0	22	1	8	0	0	0	0	0	31
8:15	0	0	0	0	0	0	0	0	0	25	2	11	4	0	0	0	0	42
8:30	0	1	0	0	0	0	0	0	1	29	4	6	0	0	0	0	1	40
8:45	0	0	0	0	0	0	0	0	0	29	3	11	2	0	0	0	0	45
Total	0	1	0	0	0	0	0	0	1	105	10	36	6	0	0	0	1	158

Date Thursday 11 April 2019

Time	A to A - Blackthorn Road(N) to Blackthorn Road(N)								Veh. Total	B to A - Carmanhall Road to Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	0	0	0	0	0	0	0	0	0	70	4	11	3	1	0	0	1	90
16:15	1	0	0	0	0	0	0	0	1	56	3	7	1	0	0	0	1	68
16:30	0	0	0	0	0	0	0	0	0	72	3	8	0	0	1	1	0	85
16:45	0	0	0	0	0	0	0	0	0	63	6	3	1	0	0	3	0	76
17:00	0	0	0	0	0	0	0	0	0	86	0	7	0	1	0	2	0	96
17:15	0	0	0	0	0	0	0	0	0	76	0	3	0	0	0	0	3	82
17:30	0	0	0	0	0	0	0	0	0	63	1	3	0	0	0	3	1	71
17:45	0	0	0	0	0	0	0	0	0	73	2	3	0	0	0	5	0	83
18:00	0	0	0	0	0	0	0	0	0	75	1	2	0	0	0	2	0	80
18:15	0	0	0	0	0	0	0	0	0	65	3	0	0	0	0	1	1	70
18:30	0	0	0	0	0	0	0	0	0	52	3	0	0	0	0	1	0	56
18:45	0	0	0	0	0	0	0	0	0	35	2	1	0	0	0	1	0	39
Total	1	0	0	0	0	0	0	0	1	786	28	48	5	2	1	19	7	896

Peak Hour 16:30 to 17:30

16:30	0	0	0	0	0	0	0	0	0	72	3	8	0	0	1	1	0	85
16:45	0	0	0	0	0	0	0	0	0	63	6	3	1	0	0	3	0	76
17:00	0	0	0	0	0	0	0	0	0	86	0	7	0	1	0	2	0	96
17:15	0	0	0	0	0	0	0	0	0	76	0	3	0	0	0	0	3	82
Total	0	0	0	0	0	0	0	0	0	297	9	21	1	1	1	6	3	339

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	B to C - Carmanhall Road to Blackthorn Road(S)								Veh. Total	B to B - Carmanhall Road to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	1	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
8:30	1	0	1	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0
8:45	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
9:00	2	0	1	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0
9:15	2	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0
9:30	3	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0
9:45	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Total	11	1	5	3	0	0	0	6	26	0	0	0	0	0	0	0	0	0

Peak Hour 8:00 to 9:00

8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
8:30	1	0	1	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0
8:45	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
Total	3	0	1	0	0	0	0	4	8	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	B to C - Carmanhall Road to Blackthorn Road(S)								Veh. Total	B to B - Carmanhall Road to Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	4	0	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	0
16:15	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
16:30	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:15	1	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
17:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
18:00	2	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
18:45	2	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0
Total	20	0	0	0	0	0	0	9	29	0	0	0	0	0	0	0	0	0

Peak Hour 16:30 to 17:30

16:30	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
16:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:15	1	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0
Total	5	0	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0	0

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	C to B - Blackthorn Road(S) to Carmanhall Road								Veh. Total	C to A - Blackthorn Road(S) to Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	38	1	15	1	0	0	1	0	56	62	2	9	1	0	3	1	0	78
7:15	57	0	8	2	0	0	1	0	68	104	1	8	1	0	10	0	0	124
7:30	57	1	11	1	0	0	0	2	72	137	6	10	1	0	4	0	0	158
7:45	64	0	14	3	0	0	2	1	84	163	3	12	2	0	7	1	0	188
8:00	71	0	11	4	0	0	1	1	88	162	7	7	0	0	6	0	5	187
8:15	92	0	7	2	0	0	3	6	110	134	3	8	4	0	6	0	1	156
8:30	91	0	8	1	0	0	1	0	101	133	6	13	3	0	8	0	4	167
8:45	102	3	3	1	0	0	1	5	115	122	6	14	6	0	5	0	4	157
9:00	68	2	17	1	0	0	1	3	92	100	7	23	1	0	4	0	0	135
9:15	59	4	9	1	1	0	2	1	77	104	4	12	2	1	6	0	4	133
9:30	40	1	15	0	0	0	0	0	56	86	9	13	4	2	8	0	1	123
9:45	56	1	10	1	0	0	1	0	69	104	5	26	4	1	4	1	0	145
Total	795	13	128	18	1	0	14	19	988	1411	59	155	29	4	71	3	19	1751
Peak Hour	8:00	to	9:00															
8:00	71	0	11	4	0	0	1	1	88	162	7	7	0	0	6	0	5	187
8:15	92	0	7	2	0	0	3	6	110	134	3	8	4	0	6	0	1	156
8:30	91	0	8	1	0	0	1	0	101	133	6	13	3	0	8	0	4	167
8:45	102	3	3	1	0	0	1	5	115	122	6	14	6	0	5	0	4	157
Total	356	3	29	8	0	0	6	12	414	551	22	42	13	0	25	0	14	667

Date Thursday 11 April 2019

Time	C to B - Blackthorn Road(S) to Carmanhall Road								Veh. Total	C to A - Blackthorn Road(S) to Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	29	1	7	0	0	0	0	0	37	173	6	20	2	0	6	3	3	213
16:15	29	0	3	1	0	0	2	0	35	140	2	18	0	1	5	3	5	174
16:30	28	3	5	1	1	0	0	0	38	187	5	10	2	0	11	1	5	221
16:45	32	1	3	0	0	0	0	3	39	196	4	12	2	0	3	3	4	224
17:00	36	1	2	0	0	0	0	3	42	229	3	7	2	0	9	0	7	257
17:15	42	0	1	0	0	0	0	3	46	198	5	5	1	0	6	3	11	229
17:30	31	0	2	0	0	0	0	3	36	194	7	5	1	0	4	5	11	227
17:45	34	0	4	0	0	0	1	4	43	202	3	8	0	0	5	2	9	229
18:00	32	0	1	0	0	0	1	1	35	190	3	5	0	0	5	0	24	227
18:15	29	1	2	0	0	0	0	3	35	140	5	3	0	2	5	4	9	168
18:30	34	3	0	0	0	0	1	0	38	124	3	5	0	0	5	1	3	141
18:45	35	0	2	0	0	0	0	1	38	102	2	3	1	0	5	1	4	118
Total	391	10	32	2	1	0	5	21	462	2075	48	101	11	3	69	26	95	2428
Peak Hour	16:30	to	17:30															
16:30	28	3	5	1	1	0	0	0	38	187	5	10	2	0	11	1	5	221
16:45	32	1	3	0	0	0	0	3	39	196	4	12	2	0	3	3	4	224
17:00	36	1	2	0	0	0	0	3	42	229	3	7	2	0	9	0	7	257
17:15	42	0	1	0	0	0	0	3	46	198	5	5	1	0	6	3	11	229
Total	138	5	11	1	1	0	0	9	165	810	17	34	7	0	29	7	27	931

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	C to C - Blackthorn Road(S) to Blackthorn Road(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Peak Hour 8:00 to 9:00

8:00	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Date Thursday 11 April 2019

Time	C to C - Blackthorn Road(S) to Blackthorn Road(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Peak Hour 16:30 to 17:30

16:30	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	To Arm A - Blackthorn Road(N)								Veh. Total	From Arm A - Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	75	2	14	2	0	3	1	1	98	5	0	0	0	0	0	0	0	5
7:15	120	2	13	1	0	10	0	1	147	11	0	2	1	0	0	0	0	14
7:30	155	7	15	2	0	4	0	0	183	17	2	2	0	0	0	0	0	21
7:45	182	4	22	4	0	7	1	0	220	21	0	0	0	0	0	1	2	24
8:00	184	8	15	0	0	6	0	5	218	34	0	2	0	0	0	1	3	40
8:15	159	5	19	8	0	6	0	1	198	32	1	4	1	0	0	0	3	41
8:30	162	11	19	3	0	8	0	5	208	42	3	2	2	0	0	0	3	52
8:45	151	9	25	8	0	5	0	4	202	34	0	3	1	0	0	0	0	38
9:00	129	9	31	3	0	4	0	0	176	31	0	4	1	0	0	0	1	37
9:15	125	9	17	7	1	6	0	4	169	17	0	1	1	0	0	0	2	21
9:30	112	13	27	5	2	8	0	1	168	14	0	1	0	0	0	0	0	15
9:45	125	6	41	9	1	4	2	0	188	12	0	5	0	0	0	0	0	17
Total	1679	85	258	52	4	71	4	22	2175	270	6	26	7	0	0	2	14	325

Peak Hour 8:00 to 9:00

8:00	184	8	15	0	0	6	0	5	218	34	0	2	0	0	0	1	3	40
8:15	159	5	19	8	0	6	0	1	198	32	1	4	1	0	0	0	3	41
8:30	162	11	19	3	0	8	0	5	208	42	3	2	2	0	0	0	3	52
8:45	151	9	25	8	0	5	0	4	202	34	0	3	1	0	0	0	0	38
Total	656	33	78	19	0	25	0	15	826	142	4	11	4	0	0	1	9	171

Date Thursday 11 April 2019

Time	To Arm A - Blackthorn Road(N)								Veh. Total	From Arm A - Blackthorn Road(N)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	243	10	31	5	1	6	3	4	303	26	1	7	1	0	0	0	0	35
16:15	197	5	25	1	1	5	3	6	243	15	0	5	0	0	0	0	0	20
16:30	259	8	18	2	0	12	2	5	306	20	0	1	0	0	0	0	0	21
16:45	259	10	15	3	0	3	6	4	300	20	1	2	0	0	0	1	0	24
17:00	315	3	14	2	1	9	2	7	353	8	0	1	0	0	0	0	1	10
17:15	274	5	8	1	0	6	3	14	311	9	0	0	0	0	0	0	0	9
17:30	257	8	8	1	0	4	8	12	298	19	0	1	0	0	0	0	3	23
17:45	275	5	11	0	0	5	7	9	312	5	0	1	0	0	0	0	0	6
18:00	265	4	7	0	0	5	2	24	307	11	0	1	0	0	0	1	0	13
18:15	205	8	3	0	2	5	5	10	238	8	1	0	0	0	0	0	1	10
18:30	176	6	5	0	0	5	2	3	197	7	1	0	0	0	1	0	0	9
18:45	137	4	4	1	0	5	2	4	157	6	0	0	0	0	0	0	0	6
Total	2862	76	149	16	5	70	45	102	3325	154	4	19	1	0	1	2	5	186

Peak Hour 16:30 to 17:30

16:30	259	8	18	2	0	12	2	5	306	20	0	1	0	0	0	0	0	21
16:45	259	10	15	3	0	3	6	4	300	20	1	2	0	0	0	1	0	24
17:00	315	3	14	2	1	9	2	7	353	8	0	1	0	0	0	0	1	10
17:15	274	5	8	1	0	6	3	14	311	9	0	0	0	0	0	0	0	9
Total	1107	26	55	8	1	30	13	30	1270	57	1	4	0	0	0	1	1	64

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	To Arm B - Carmanhall Road								Veh. Total	From Arm B - Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	42	1	15	1	0	0	1	0	60	13	0	5	1	0	0	0	1	20
7:15	61	0	10	2	0	0	1	0	74	16	1	5	0	0	0	0	1	23
7:30	69	2	12	1	0	0	0	2	86	18	1	5	1	0	0	0	0	25
7:45	74	0	14	3	0	0	3	2	96	20	1	13	2	0	0	0	0	36
8:00	86	0	12	4	0	0	2	1	105	22	1	8	0	0	0	0	0	31
8:15	108	0	9	2	0	0	3	7	129	26	2	11	4	0	0	0	1	44
8:30	112	2	9	2	0	0	1	0	126	30	4	7	0	0	0	0	3	44
8:45	118	3	3	1	0	0	1	5	131	30	3	11	2	0	0	0	1	47
9:00	84	2	20	1	0	0	1	3	111	31	2	9	2	0	0	0	1	45
9:15	67	4	10	1	1	0	2	1	86	23	5	5	6	0	0	0	0	39
9:30	49	1	15	0	0	0	0	0	65	29	4	14	1	0	0	0	1	49
9:45	62	1	14	1	0	0	1	0	79	21	2	15	6	0	0	1	0	45
Total	932	16	143	19	1	0	16	21	1148	279	26	108	25	0	0	1	9	448

Peak Hour 8:00 to 9:00

8:00	86	0	12	4	0	0	2	1	105	22	1	8	0	0	0	0	0	31
8:15	108	0	9	2	0	0	3	7	129	26	2	11	4	0	0	0	1	44
8:30	112	2	9	2	0	0	1	0	126	30	4	7	0	0	0	0	3	44
8:45	118	3	3	1	0	0	1	5	131	30	3	11	2	0	0	0	1	47
Total	424	5	33	9	0	0	7	13	491	108	10	37	6	0	0	0	5	166

Date Thursday 11 April 2019

Time	To Arm B - Carmanhall Road								Veh. Total	From Arm B - Carmanhall Road								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	38	2	10	1	0	0	0	0	51	74	4	11	3	1	0	0	3	96
16:15	38	0	6	1	0	0	2	0	47	61	3	7	1	0	0	0	1	73
16:30	42	3	6	1	1	0	0	0	53	74	3	8	0	0	1	1	0	87
16:45	40	1	4	0	0	0	1	3	49	64	6	3	1	0	0	3	0	77
17:00	40	1	3	0	0	0	0	3	47	87	0	7	0	1	0	2	0	97
17:15	46	0	1	0	0	0	0	3	50	77	0	3	0	0	0	0	5	85
17:30	43	0	3	0	0	0	0	4	50	63	1	3	0	0	0	3	2	72
17:45	37	0	4	0	0	0	1	4	46	74	2	3	0	0	0	5	0	84
18:00	40	0	1	0	0	0	2	1	44	77	1	2	0	0	0	2	1	83
18:15	31	2	2	0	0	0	0	3	38	65	3	0	0	0	0	1	2	71
18:30	38	4	0	0	0	0	1	0	43	53	3	0	0	0	0	1	1	58
18:45	40	0	2	0	0	0	0	1	43	37	2	1	0	0	0	1	1	42
Total	473	13	42	3	1	0	7	22	561	806	28	48	5	2	1	19	16	925

Peak Hour 16:30 to 17:30

16:30	42	3	6	1	1	0	0	0	53	74	3	8	0	0	1	1	0	87
16:45	40	1	4	0	0	0	1	3	49	64	6	3	1	0	0	3	0	77
17:00	40	1	3	0	0	0	0	3	47	87	0	7	0	1	0	2	0	97
17:15	46	0	1	0	0	0	0	3	50	77	0	3	0	0	0	0	5	85
Total	168	5	14	1	1	0	1	9	199	302	9	21	1	1	1	6	5	346

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	To Arm C - Blackthorn Road(S)								Veh. Total	From Arm C - Blackthorn Road(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
7:00	1	0	0	0	0	0	0	0	1	100	3	24	2	0	3	2	0	134
7:15	7	0	0	1	0	0	0	0	8	161	1	16	3	0	10	1	0	192
7:30	5	1	1	0	0	0	0	0	7	194	7	21	2	0	4	0	2	230
7:45	12	0	3	0	0	0	0	1	16	227	3	26	5	0	7	3	1	272
8:00	19	0	1	0	0	0	0	3	23	233	7	18	4	0	6	1	6	275
8:15	17	1	2	1	0	0	0	3	24	226	3	15	6	0	6	3	7	266
8:30	22	0	2	1	0	0	0	5	30	224	6	21	4	0	8	1	4	268
8:45	19	0	3	1	0	0	0	1	24	224	9	17	7	0	5	1	9	272
9:00	17	0	2	1	0	0	0	2	22	168	9	40	2	0	4	1	3	227
9:15	11	0	0	2	0	0	0	2	15	163	8	21	3	2	6	2	5	210
9:30	8	0	1	0	0	0	0	1	10	126	10	28	4	2	8	0	1	179
9:45	6	1	1	1	0	0	0	0	9	160	6	36	5	1	4	2	0	214
Total	144	3	16	8	0	0	0	18	189	2206	72	283	47	5	71	17	38	2739

Peak Hour 8:00 to 9:00

8:00	19	0	1	0	0	0	0	3	23	233	7	18	4	0	6	1	6	275
8:15	17	1	2	1	0	0	0	3	24	226	3	15	6	0	6	3	7	266
8:30	22	0	2	1	0	0	0	5	30	224	6	21	4	0	8	1	4	268
8:45	19	0	3	1	0	0	0	1	24	224	9	17	7	0	5	1	9	272
Total	77	1	8	3	0	0	0	12	101	907	25	71	21	0	25	6	26	1081

Date Thursday 11 April 2019

Time	To Arm C - Blackthorn Road(S)								Veh. Total	From Arm C - Blackthorn Road(S)								Veh. Total
	CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	TAXI	LGV	OGV1	OGV2	PSV	M/C	P/C	
16:00	21	0	4	0	0	0	0	2	27	202	7	27	2	0	6	3	3	250
16:15	10	0	2	0	0	0	0	0	12	169	2	21	1	1	5	5	5	209
16:30	8	0	0	0	0	0	0	0	8	215	8	15	3	1	11	1	5	259
16:45	13	1	1	0	0	0	0	0	15	228	5	15	2	0	3	3	7	263
17:00	5	0	0	0	0	0	0	1	6	265	4	9	2	0	9	0	10	299
17:15	6	0	0	0	0	0	0	2	8	240	5	6	1	0	6	3	14	275
17:30	7	0	0	0	0	0	0	3	10	225	7	7	1	0	4	5	14	263
17:45	3	0	1	0	0	0	0	0	4	236	3	12	0	0	5	3	13	272
18:00	5	0	1	0	0	0	0	1	7	222	3	6	0	0	5	1	25	262
18:15	6	0	0	0	0	0	0	2	8	169	6	5	0	2	5	4	12	203
18:30	4	0	0	0	0	1	0	1	6	158	6	5	0	0	5	2	3	179
18:45	3	0	0	0	0	0	0	1	4	137	2	5	1	0	5	1	5	156
Total	91	1	9	0	0	1	0	13	115	2466	58	133	13	4	69	31	116	2890

Peak Hour 16:30 to 17:30

16:30	8	0	0	0	0	0	0	0	8	215	8	15	3	1	11	1	5	259
16:45	13	1	1	0	0	0	0	0	15	228	5	15	2	0	3	3	7	263
17:00	5	0	0	0	0	0	0	1	6	265	4	9	2	0	9	0	10	299
17:15	6	0	0	0	0	0	0	2	8	240	5	6	1	0	6	3	14	275
Total	32	1	1	0	0	0	0	3	37	948	22	45	8	1	29	7	36	1096

Site: 1
Location: Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date: Thursday 11 April 2019

	ARM A			ARM B
Time	Lane 1	Lane 2	Lane 3	Lane 1
7:00	3	1	1	2
7:05	1	1	1	1
7:10	2	1	1	0
7:15	2	1	0	0
7:20	2	1	1	1
7:25	1	1	1	2
7:30	2	2	1	2
7:35	6	2	1	2
7:40	5	2	1	3
7:45	6	2	1	1
7:50	5	2	1	0
7:55	3	1	4	2
8:00	6	3	1	3
8:05	5	2	1	1
8:10	4	1	1	2
8:15	3	1	3	3
8:20	11	3	2	4
8:25	9	8	8	4
8:30	4	5	2	2
8:35	7	0	5	3
8:40	6	4	1	3
8:45	5	2	2	3
8:50	6	2	3	3
8:55	7	4	4	2
9:00	15	4	4	1
9:05	10	2	2	2
9:10	10	3	2	4
9:15	5	4	7	4
9:20	11	2	5	4
9:25	6	2	2	5
9:30	9	1	2	2
9:35	5	2	1	4
9:40	4	2	1	4
9:45	2	5	3	2
9:50	5	2	3	6
9:55	6	0	1	6
Max Queue	15	8	8	6

	ARM A			ARM B
Time	Lane 1	Lane 2	Lane 3	Lane 1
16:00	10	6	2	4
16:05	8	3	1	6
16:10	7	4	2	6
16:15	5	4	2	5
16:20	6	7	1	8
16:25	5	5	3	9
16:30	5	5	1	8
16:35	6	5	3	6
16:40	7	5	2	6
16:45	4	2	0	5
16:50	4	1	1	3
16:55	6	5	3	3
17:00	6	2	1	14
17:05	2	1	2	14
17:10	8	4	1	6
17:15	7	5	1	8
17:20	4	2	3	6
17:25	7	3	1	9
17:30	5	3	2	9
17:35	13	3	1	13
17:40	9	6	1	8
17:45	8	7	1	4
17:50	8	2	2	7
17:55	3	3	1	5
18:00	5	7	1	7
18:05	4	2	3	3
18:10	3	6	1	10
18:15	7	3	1	8
18:20	6	2	1	5
18:25	7	3	1	4
18:30	9	11	1	7
18:35	6	3	1	10
18:40	4	2	0	5
18:45	10	8	1	3
18:50	3	3	2	4
18:55	4	4	4	4
Max Queue	13	11	4	14

Site: 1
Location: Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date: Thursday 11 April 2019

	ARM C		
Time	Lane 1	Lane 2	Lane 3
7:00	2	2	3
7:05	2	3	2
7:10	2	6	1
7:15	0	5	4
7:20	2	3	3
7:25	1	9	2
7:30	5	11	4
7:35	3	9	4
7:40	4	17	5
7:45	3	11	3
7:50	4	24	8
7:55	2	16	4
8:00	7	15	4
8:05	3	13	3
8:10	5	12	6
8:15	4	12	5
8:20	7	9	6
8:25	3	19	5
8:30	8	11	6
8:35	7	8	9
8:40	5	7	6
8:45	6	7	11
8:50	4	6	9
8:55	4	5	11
9:00	3	7	12
9:05	6	12	10
9:10	5	6	12
9:15	4	7	8
9:20	4	5	5
9:25	6	3	8
9:30	4	6	7
9:35	6	4	8
9:40	6	4	8
9:45	6	6	5
9:50	3	4	8
9:55	3	11	7
Max Queue	8	24	12

	ARM D	
Time	Lane 1	Lane 2
7:00	1	2
7:05	0	1
7:10	1	2
7:15	0	1
7:20	1	3
7:25	0	2
7:30	2	6
7:35	1	3
7:40	1	4
7:45	0	2
7:50	0	3
7:55	0	3
8:00	1	2
8:05	0	3
8:10	1	4
8:15	0	4
8:20	0	4
8:25	0	2
8:30	0	3
8:35	0	7
8:40	0	5
8:45	0	7
8:50	0	3
8:55	1	5
9:00	0	5
9:05	1	4
9:10	1	5
9:15	1	3
9:20	1	3
9:25	0	6
9:30	0	4
9:35	2	8
9:40	0	3
9:45	2	5
9:50	3	6
9:55	5	3
Max Queue	5	8

	ARM C		
Time	Lane 1	Lane 2	Lane 3
16:00	1	4	5
16:05	2	4	7
16:10	3	6	3
16:15	5	7	3
16:20	2	4	4
16:25	2	5	5
16:30	7	3	3
16:35	4	5	2
16:40	6	4	2
16:45	2	3	3
16:50	4	5	6
16:55	2	6	3
17:00	2	5	1
17:05	2	5	3
17:10	4	11	5
17:15	4	3	3
17:20	3	6	3
17:25	3	8	2
17:30	2	4	2
17:35	2	5	1
17:40	5	5	3
17:45	3	4	2
17:50	5	4	4
17:55	3	5	5
18:00	5	5	6
18:05	2	2	2
18:10	1	7	3
18:15	2	6	3
18:20	3	7	2
18:25	1	5	4
18:30	1	5	4
18:35	1	5	6
18:40	3	7	4
18:45	1	4	3
18:50	2	4	3
18:55	3	3	3
Max Queue	7	11	7

	ARM D	
Time	Lane 1	Lane 2
16:00	1	2
16:05	3	5
16:10	3	5
16:15	2	4
16:20	2	4
16:25	4	5
16:30	3	8
16:35	2	5
16:40	5	5
16:45	1	9
16:50	2	4
16:55	1	5
17:00	4	10
17:05	0	26
17:10	3	23
17:15	5	25
17:20	3	19
17:25	8	13
17:30	0	18
17:35	4	19
17:40	3	9
17:45	5	26
17:50	5	25
17:55	0	5
18:00	3	5
18:05	2	4
18:10	2	4
18:15	1	2
18:20	3	5
18:25	3	5
18:30	5	14
18:35	3	4
18:40	3	4
18:45	3	4
18:50	5	8
18:55	0	6
Max Queue	8	26

Site: 2
Location: Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date: Thursday 11 April 2019

	ARM A
Time	Lane 1
7:00	0
7:05	0
7:10	0
7:15	0
7:20	0
7:25	0
7:30	0
7:35	2
7:40	0
7:45	0
7:50	0
7:55	2
8:00	0
8:05	0
8:10	0
8:15	0
8:20	0
8:25	0
8:30	3
8:35	1
8:40	0
8:45	3
8:50	2
8:55	3
9:00	0
9:05	0
9:10	0
9:15	7
9:20	0
9:25	1
9:30	0
9:35	0
9:40	1
9:45	3
9:50	0
9:55	0
Max Queue	7

	ARM B	
Time	Lane 1	Lane 2
7:00	0	0
7:05	0	0
7:10	0	1
7:15	0	1
7:20	0	0
7:25	0	1
7:30	0	0
7:35	0	0
7:40	0	1
7:45	0	0
7:50	0	0
7:55	0	1
8:00	0	1
8:05	1	1
8:10	0	2
8:15	0	1
8:20	1	2
8:25	0	2
8:30	0	4
8:35	1	2
8:40	0	1
8:45	1	1
8:50	1	1
8:55	2	1
9:00	1	1
9:05	0	1
9:10	1	2
9:15	1	1
9:20	1	2
9:25	2	2
9:30	0	2
9:35	0	2
9:40	0	1
9:45	1	1
9:50	1	1
9:55	0	2
Max Queue	2	4

	ARM A
Time	Lane 1
16:00	0
16:05	0
16:10	0
16:15	1
16:20	3
16:25	0
16:30	1
16:35	2
16:40	0
16:45	3
16:50	0
16:55	0
17:00	0
17:05	1
17:10	0
17:15	0
17:20	0
17:25	0
17:30	0
17:35	1
17:40	0
17:45	0
17:50	0
17:55	0
18:00	0
18:05	0
18:10	1
18:15	0
18:20	0
18:25	0
18:30	0
18:35	0
18:40	0
18:45	0
18:50	0
18:55	1
Max Queue	3

	ARM B	
Time	Lane 1	Lane 2
16:00	0	1
16:05	2	1
16:10	2	1
16:15	2	4
16:20	1	2
16:25	0	2
16:30	1	3
16:35	2	1
16:40	0	0
16:45	2	1
16:50	0	1
16:55	1	1
17:00	1	0
17:05	13	1
17:10	14	1
17:15	9	1
17:20	1	1
17:25	0	1
17:30	3	2
17:35	0	1
17:40	1	1
17:45	5	0
17:50	1	3
17:55	0	1
18:00	1	1
18:05	1	1
18:10	1	0
18:15	1	1
18:20	1	0
18:25	1	0
18:30	1	1
18:35	1	0
18:40	1	1
18:45	0	0
18:50	1	1
18:55	0	1
Max Queue	14	4

Site: 2
Location: Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date: Thursday 11 April 2019

	ARM C
Time	Lane 1
7:00	0
7:05	0
7:10	0
7:15	0
7:20	0
7:25	0
7:30	0
7:35	0
7:40	0
7:45	0
7:50	0
7:55	0
8:00	0
8:05	0
8:10	0
8:15	0
8:20	0
8:25	0
8:30	0
8:35	0
8:40	0
8:45	0
8:50	0
8:55	0
9:00	0
9:05	0
9:10	0
9:15	0
9:20	0
9:25	0
9:30	0
9:35	0
9:40	0
9:45	0
9:50	0
9:55	0
Max Queue	0

	ARM C
Time	Lane 1
16:00	0
16:05	0
16:10	0
16:15	0
16:20	0
16:25	0
16:30	0
16:35	0
16:40	0
16:45	0
16:50	0
16:55	0
17:00	0
17:05	8
17:10	12
17:15	2
17:20	0
17:25	0
17:30	0
17:35	0
17:40	0
17:45	1
17:50	0
17:55	1
18:00	0
18:05	0
18:10	0
18:15	0
18:20	0
18:25	0
18:30	0
18:35	0
18:40	0
18:45	0
18:50	0
18:55	0
Max Queue	12

Site: 3
Location: Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date: Thursday 11 April 2019

	ARM A	
Time	Lane 1	Lane 2
7:00	0	0
7:05	0	0
7:10	0	1
7:15	0	1
7:20	0	1
7:25	0	0
7:30	0	1
7:35	0	2
7:40	0	0
7:45	0	2
7:50	1	3
7:55	0	1
8:00	0	3
8:05	0	5
8:10	0	2
8:15	0	5
8:20	0	2
8:25	0	4
8:30	0	6
8:35	0	10
8:40	0	2
8:45	0	2
8:50	0	2
8:55	0	4
9:00	0	3
9:05	0	2
9:10	0	1
9:15	0	2
9:20	0	1
9:25	0	0
9:30	0	0
9:35	0	1
9:40	0	1
9:45	0	0
9:50	0	0
9:55	0	1
Max Queue	1	10

	ARM B	
Time	Lane 1	Lane 2
7:00	1	0
7:05	1	0
7:10	1	0
7:15	2	0
7:20	2	0
7:25	1	0
7:30	2	0
7:35	2	0
7:40	2	0
7:45	2	0
7:50	2	0
7:55	4	0
8:00	3	0
8:05	3	0
8:10	5	0
8:15	2	0
8:20	2	0
8:25	6	0
8:30	2	0
8:35	3	0
8:40	6	0
8:45	6	0
8:50	2	1
8:55	4	0
9:00	2	0
9:05	3	0
9:10	2	0
9:15	3	0
9:20	4	0
9:25	6	0
9:30	8	0
9:35	4	0
9:40	2	0
9:45	5	0
9:50	3	0
9:55	9	0
Max Queue	9	1

	ARM A	
Time	Lane 1	Lane 2
16:00	0	1
16:05	0	2
16:10	0	2
16:15	0	3
16:20	0	0
16:25	0	0
16:30	0	3
16:35	0	0
16:40	0	1
16:45	0	1
16:50	0	1
16:55	0	1
17:00	0	2
17:05	0	1
17:10	0	1
17:15	0	0
17:20	0	0
17:25	0	1
17:30	0	1
17:35	0	1
17:40	0	4
17:45	0	1
17:50	0	0
17:55	0	0
18:00	0	2
18:05	0	0
18:10	0	1
18:15	0	0
18:20	0	1
18:25	0	0
18:30	0	1
18:35	0	0
18:40	0	0
18:45	0	0
18:50	0	0
18:55	0	1
Max Queue	0	4

	ARM B	
Time	Lane 1	Lane 2
16:00	5	0
16:05	16	0
16:10	17	0
16:15	3	0
16:20	9	0
16:25	7	0
16:30	8	0
16:35	13	0
16:40	16	0
16:45	5	0
16:50	5	0
16:55	4	0
17:00	11	0
17:05	18	0
17:10	22	0
17:15	15	0
17:20	6	0
17:25	7	1
17:30	6	0
17:35	18	0
17:40	22	0
17:45	24	0
17:50	16	0
17:55	4	0
18:00	12	0
18:05	9	0
18:10	5	0
18:15	4	0
18:20	2	1
18:25	5	0
18:30	4	0
18:35	2	0
18:40	1	0
18:45	3	0
18:50	3	0
18:55	1	0
Max Queue	24	1

Site: 3
Location: Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date: Thursday 11 April 2019

	ARM C	
Time	Lane 1	Lane 2
7:00	0	0
7:05	0	0
7:10	0	0
7:15	0	0
7:20	2	0
7:25	0	0
7:30	7	0
7:35	0	0
7:40	0	0
7:45	0	0
7:50	0	0
7:55	0	0
8:00	0	0
8:05	0	0
8:10	0	0
8:15	0	0
8:20	0	0
8:25	0	0
8:30	0	0
8:35	0	0
8:40	0	0
8:45	0	0
8:50	0	0
8:55	0	0
9:00	0	0
9:05	0	0
9:10	0	0
9:15	0	0
9:20	1	0
9:25	0	0
9:30	0	0
9:35	0	0
9:40	0	0
9:45	0	0
9:50	0	0
9:55	0	0
Max Queue	7	0

	ARM C	
Time	Lane 1	Lane 2
16:00	0	0
16:05	9	0
16:10	0	0
16:15	0	0
16:20	0	0
16:25	0	0
16:30	0	0
16:35	0	0
16:40	0	0
16:45	0	0
16:50	0	0
16:55	0	0
17:00	0	0
17:05	3	0
17:10	0	0
17:15	0	0
17:20	0	0
17:25	0	0
17:30	0	0
17:35	8	2
17:40	7	0
17:45	7	0
17:50	0	0
17:55	1	0
18:00	0	0
18:05	0	0
18:10	0	0
18:15	0	0
18:20	0	0
18:25	2	0
18:30	0	0
18:35	0	0
18:40	0	0
18:45	0	0
18:50	0	0
18:55	0	0
Max Queue	9	2

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
7:00	1	0	1	2	1	3
7:15	0	0	0	0	1	1
7:30	3	3	6	4	2	6
7:45	0	4	4	7	1	8
8:00	3	3	6	3	1	4
8:15	5	6	11	7	4	11
8:30	4	9	13	4	3	7
8:45	5	7	12	5	2	7
9:00	4	5	9	4	5	9
9:15	1	3	4	0	10	10
9:30	2	3	5	4	3	7
9:45	3	3	6	2	0	2
Total	31	46	77	42	33	75

Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
16:00	3	5	8	1	6	7
16:15	4	0	4	0	3	3
16:30	13	3	16	0	4	4
16:45	7	2	9	3	3	6
17:00	10	2	12	2	9	11
17:15	10	2	12	3	2	5
17:30	6	3	9	3	11	14
17:45	10	3	13	1	2	3
18:00	3	3	6	2	7	9
18:15	5	2	7	1	2	3
18:30	7	2	9	15	0	15
18:45	6	10	16	0	6	6
Total	84	37	121	31	55	86

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

Time	ARM C		Ped. Total	ARM D		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
7:00	3	0	3	11	5	16
7:15	1	0	1	10	5	15
7:30	1	0	1	16	7	23
7:45	0	0	0	11	12	23
8:00	0	0	0	14	17	31
8:15	0	1	1	18	24	42
8:30	1	2	3	25	18	43
8:45	2	1	3	13	12	25
9:00	0	2	2	5	16	21
9:15	0	0	0	9	8	17
9:30	0	0	0	9	11	20
9:45	0	0	0	4	13	17
Total	8	6	14	145	148	293

Date Thursday 11 April 2019

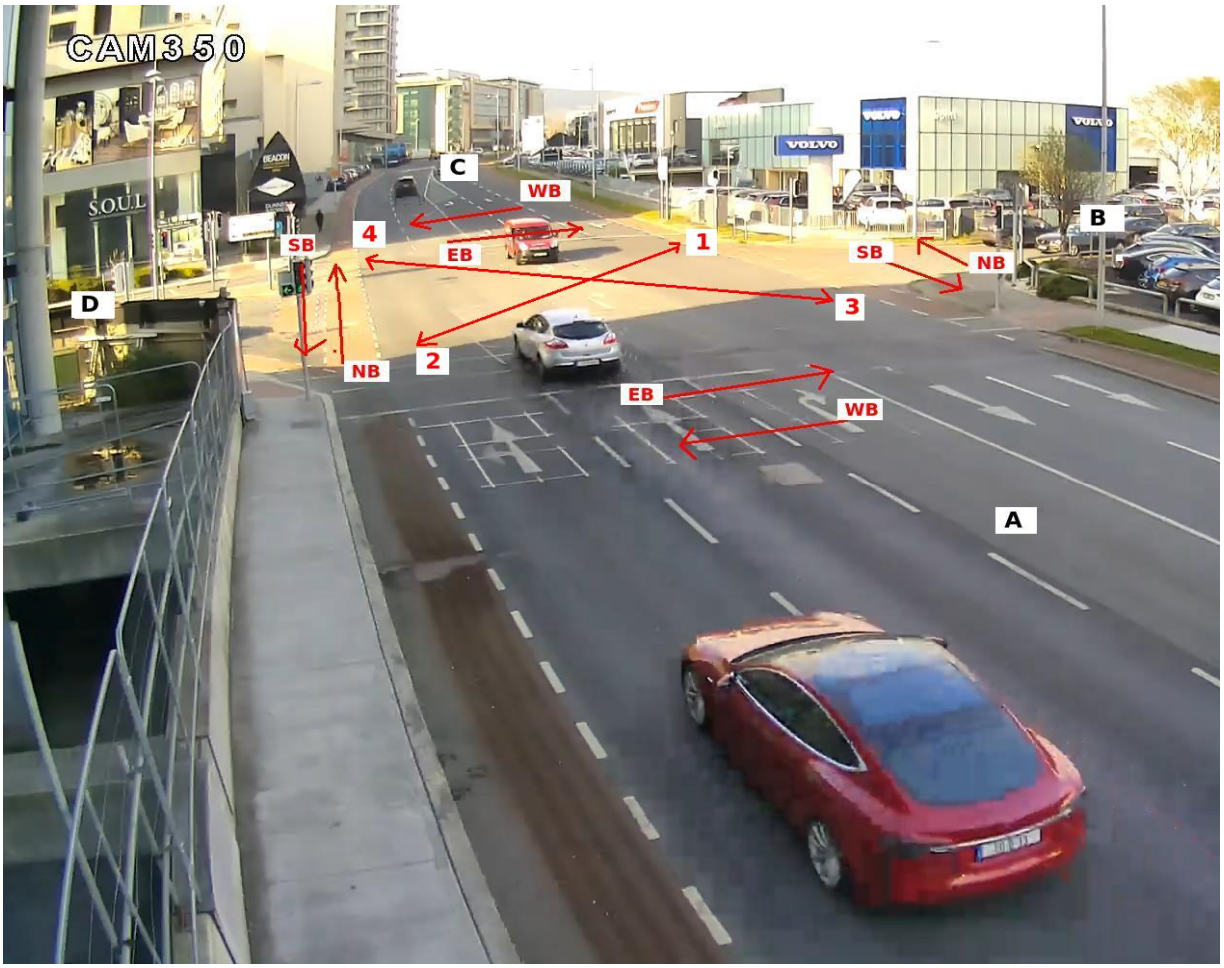
Time	ARM C		Ped. Total	ARM D		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
16:00	1	1	2	5	15	20
16:15	0	3	3	4	12	16
16:30	2	0	2	5	16	21
16:45	1	0	1	2	13	15
17:00	0	1	1	8	25	33
17:15	0	1	1	10	15	25
17:30	2	4	6	8	22	30
17:45	1	1	2	4	5	9
18:00	0	1	1	4	7	11
18:15	0	0	0	6	11	17
18:30	0	0	0	9	18	27
18:45	2	0	2	10	3	13
Total	9	12	21	75	162	237

Site No. 1
Location Blackthorn Drive(N) / Birch Avenue / Blackthorn Drive(S) / Carmanhall Road
Date Thursday 11 April 2019

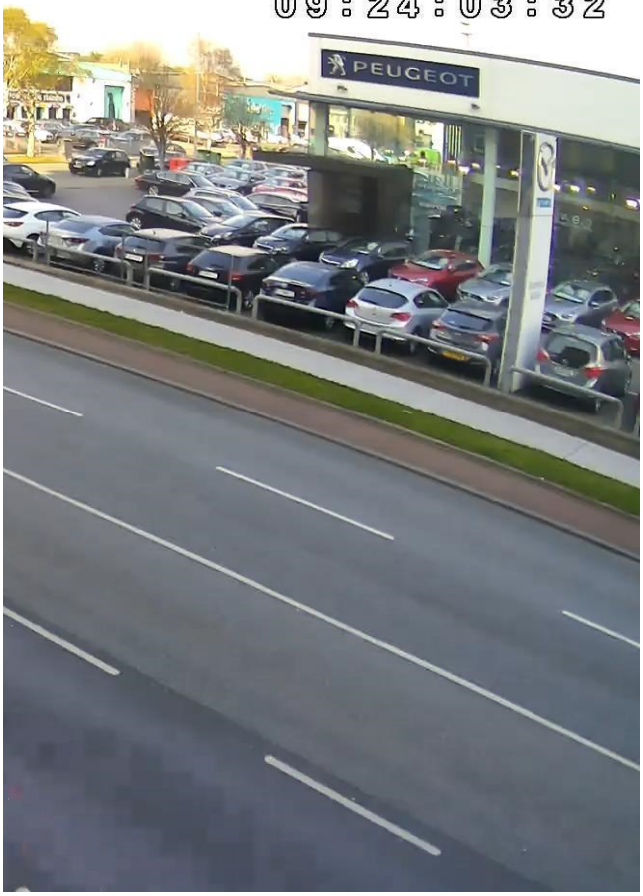
Time	Zig Zag		Ped. Total	Zig Zag		Ped. Total
	1 to 2	2 to 1		3 to 4	4 to 3	
7:00	0	0	0	0	0	0
7:15	0	0	0	0	0	0
7:30	0	0	0	0	0	0
7:45	0	0	0	2	0	2
8:00	0	0	0	0	0	0
8:15	0	2	2	0	0	0
8:30	0	21	21	2	0	2
8:45	0	3	3	0	0	0
9:00	5	0	5	0	0	0
9:15	2	0	2	0	0	0
9:30	0	1	1	0	0	0
9:45	0	1	1	0	0	0
Total	7	28	35	4	0	4

Date

Time	Zig Zag		Ped. Total	Zig Zag		Ped. Total
	1 to 2	2 to 1		3 to 4	4 to 3	
16:00	0	0	0	0	0	0
16:15	0	0	0	0	0	0
16:30	0	0	0	1	0	1
16:45	0	1	1	0	1	1
17:00	1	0	1	0	0	0
17:15	0	0	0	0	0	0
17:30	2	3	5	1	3	4
17:45	0	4	4	0	0	0
18:00	0	0	0	0	0	0
18:15	0	1	1	0	0	0
18:30	2	0	2	0	0	0
18:45	0	0	0	0	0	0
Total	5	9	14	2	4	6


CAM350
S.O.U.L
VOLVO
C
WB
4
SB
EB
1
SB
NB
B
D
3
NB
2
EB
WB
A

2019-04-11
09:24:03:32



Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Northbound	Southbound		Eastbound	Westbound	
7:00	2	0	2	4	1	5
7:15	6	0	6	2	1	3
7:30	0	2	2	13	8	21
7:45	3	3	6	18	4	22
8:00	4	1	5	18	9	27
8:15	5	3	8	26	9	35
8:30	3	4	7	31	15	46
8:45	3	2	5	29	10	39
9:00	3	1	4	24	15	39
9:15	2	2	4	9	10	19
9:30	0	0	0	12	7	19
9:45	1	4	5	13	8	21
Total	32	22	54	199	97	296

Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Northbound	Southbound		Eastbound	Westbound	
16:00	3	2	5	7	3	10
16:15	1	1	2	3	18	21
16:30	0	5	5	6	15	21
16:45	2	8	10	3	12	15
17:00	3	9	12	5	37	42
17:15	0	11	11	11	23	34
17:30	10	7	17	13	33	46
17:45	2	7	9	7	32	39
18:00	3	4	7	8	17	25
18:15	6	3	9	11	21	32
18:30	1	6	7	13	10	23
18:45	0	6	6	1	15	16
Total	31	69	100	88	236	324

Site No. 2
Location Carmanhall Road(W) / Corrig Road / Carmanhall Road(E)
Date Thursday 11 April 2019

Time	ARM C		Ped. Total
	Northbound	Southbound	
7:00	2	0	2
7:15	2	0	2
7:30	2	1	3
7:45	1	0	1
8:00	6	0	6
8:15	3	3	6
8:30	2	0	2
8:45	2	1	3
9:00	5	2	7
9:15	2	0	2
9:30	1	1	2
9:45	3	1	4
Total	31	9	40

Date Thursday 11 April 2019

Time	ARM C		Ped. Total
	Northbound	Southbound	
16:00	3	0	3
16:15	3	1	4
16:30	8	1	9
16:45	2	1	3
17:00	23	0	23
17:15	8	0	8
17:30	12	1	13
17:45	12	1	13
18:00	10	0	10
18:15	6	0	6
18:30	2	0	2
18:45	5	2	7
Total	94	7	101

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
7:00	0	1	1	1	3	4
7:15	1	0	1	5	3	8
7:30	1	1	2	1	4	5
7:45	0	0	0	3	8	11
8:00	1	0	1	2	3	5
8:15	2	0	2	10	16	26
8:30	4	2	6	4	8	12
8:45	2	2	4	9	12	21
9:00	1	0	1	14	9	23
9:15	0	3	3	10	9	19
9:30	1	1	2	5	5	10
9:45	0	0	0	4	7	11
Total	13	10	23	68	87	155

Date Thursday 11 April 2019

Time	ARM A		Ped. Total	ARM B		Ped. Total
	Eastbound	Westbound		Northbound	Southbound	
16:00	0	4	4	8	2	10
16:15	5	4	9	7	2	9
16:30	0	0	0	2	6	8
16:45	2	0	2	8	4	12
17:00	1	3	4	4	12	16
17:15	0	1	1	9	8	17
17:30	2	1	3	10	9	19
17:45	1	0	1	9	11	20
18:00	0	0	0	12	12	24
18:15	1	1	2	7	5	12
18:30	0	0	0	10	6	16
18:45	0	0	0	16	4	20
Total	12	14	26	102	81	183

Site No. 3
Location Blackthorn Road(N) / Carmanhall Road / Blackthorn Road(S)
Date Thursday 11 April 2019

Time	ARM C		Ped. Total
	Eastbound	Westbound	
7:00	0	0	0
7:15	0	0	0
7:30	2	0	2
7:45	3	1	4
8:00	4	1	5
8:15	7	0	7
8:30	2	0	2
8:45	2	0	2
9:00	0	1	1
9:15	0	0	0
9:30	0	1	1
9:45	3	1	4
Total	23	5	28

Date Thursday 11 April 2019

Time	ARM C		Ped. Total
	Eastbound	Westbound	
16:00	0	0	0
16:15	0	1	1
16:30	0	0	0
16:45	0	2	2
17:00	0	3	3
17:15	1	3	4
17:30	1	2	3
17:45	0	5	5
18:00	1	0	1
18:15	2	2	4
18:30	1	0	1
18:45	0	0	0
Total	6	18	24

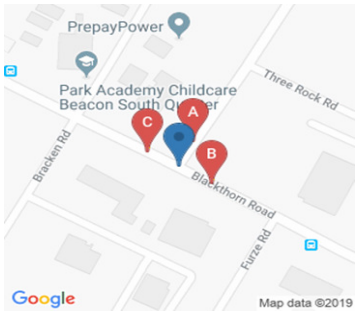
IDASO

Survey Name: 109 19151 Sandyford
Site: Site4
Location: Corrig Road/Blackthorn Road
Date: 23-May-2019

	A => A									A => B									A => C								
TIME	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	0	0	5	0	3	0	0	8	8
07:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	5	0	3	1	0	9	10.3
07:30	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	0	0	12	0	6	1	0	19	20.3
07:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	1	0	9	0	5	1	0	16	16.5
H/TOT	0	0	0	0	0	0	0	0	0	0	0	11	0	2	0	0	13	13	1	0	31	0	17	3	0	52	55.1
08:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	8	0	4	1	0	13	14.3
08:15	0	0	0	0	0	0	0	0	0	4	0	6	0	2	2	0	14	13.4	1	0	8	2	10	1	0	22	22.5
08:30	0	0	0	0	0	0	0	0	0	0	0	9	1	2	1	0	13	14.3	0	0	4	0	5	1	0	10	11.3
08:45	0	0	0	0	0	0	0	0	0	0	0	9	0	1	3	0	13	16.9	0	0	10	3	7	0	0	20	20
H/TOT	0	0	0	0	0	0	0	0	0	4	0	28	1	5	6	0	44	48.6	1	0	30	5	26	3	0	65	68.1
09:00	0	0	0	0	0	0	0	0	0	2	0	8	0	5	0	0	15	13.4	1	0	8	1	5	0	0	15	14.2
09:15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	0	7	0	4	0	0	12	11.2
09:30	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	1	1	6	0	4	0	0	12	10.6
09:45	0	0	0	0	0	0	0	0	0	0	0	10	0	2	0	0	12	12	0	0	11	2	6	1	0	20	21.3
H/TOT	0	0	0	0	0	0	0	0	0	2	0	24	0	9	0	0	35	33.4	3	1	32	3	19	1	0	59	57.3
10:00	0	0	0	0	0	0	0	0	0	0	0	4	0	3	0	0	7	7	0	0	8	0	6	0	0	14	14
10:15	0	0	0	0	0	0	0	0	0	0	0	6	0	3	1	0	10	11.3	0	0	6	2	5	4	0	17	22.2
10:30	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	0	0	6	1	5	0	1	13	14
10:45	0	0	0	0	0	0	0	0	0	0	0	6	0	2	1	0	9	10.3	0	0	8	4	9	1	0	22	23.3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	18	0	10	2	0	30	32.6	0	0	28	7	25	5	1	66	73.5
11:00	0	0	0	0	0	0	0	0	0	0	0	6	0	3	0	0	9	9	0	0	7	0	5	1	0	13	14.3
11:15	0	0	0	0	0	0	0	0	0	0	0	9	1	3	1	0	14	15.3	0	0	12	1	5	0	0	18	18
11:30	0	0	0	0	0	0	0	0	0	0	0	5	0	2	0	0	7	7	0	0	13	0	6	4	0	23	28.2
11:45	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	5	5	0	0	13	1	7	0	0	21	21
H/TOT	0	0	0	0	0	0	0	0	0	0	0	24	1	9	1	0	35	36.3	0	0	45	2	23	5	0	75	81.5
12:00	0	0	0	0	0	0	0	0	0	0	0	5	0	2	1	0	8	9.3	0	0	12	2	2	1	0	17	18.3
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0	0	10	0	6	2	0	18	20.6
12:30	0	0	0	0	0	0	0	0	0	0	0	9	0	2	0	0	11	11	0	0	9	1	1	1	0	12	13.3
12:45	0	0	0	0	0	0	0	0	0	0	0	8	0	2	0	0	10	10	0	0	20	0	6	2	0	28	30.6
H/TOT	0	0	0	0	0	0	0	0	0	0	0	22	0	9	1	0	32	33.3	0	0	51	3	15	6	0	75	82.8
13:00	0	0	0	0	0	0	0	0	0	0	0	7	0	4	0	0	11	11	0	1	13	0	5	0	0	19	18.4
13:15	0	0	0	0	0	0	0	0	0	0	1	9	0	1	0	0	11	10.4	0	0	9	0	2	0	0	11	11
13:30	0	0	0	0	0	0	0	0	0	0	0	7	0	4	1	0	12	13.3	0	0	14	0	6	1	0	21	22.3
13:45	0	0	0	0	0	0	0	0	0	0	0	11	0	3	2	0	16	18.6	0	0	15	1	7	1	0	24	25.3
H/TOT	0	0	0	0	0	0	0	0	0	0	1	34	0	12	3	0	50	53.3	0	1	51	1	20	2	0	75	77
14:00	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	5	5	0	0	11	0	4	0	0	15	15
14:15	0	0	0	0	0	0	0	0	0	0	0	5	1	3	0	0	9	9	0	0	14	2	4	2	0	22	24.6
14:30	0	0	0	0	0	0	0	0	0	0	0	7	0	4	0	0	11	11	1	0	12	0	8	1	0	22	22.5
14:45	0	0	0	0	0	0	0	0	0	0	0	8	0	1	2	0	11	13.6	0	0	19	1	8	1	0	29	30.3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	24	1	9	2	0	36	38.6	1	0	56	3	24	4	0	88	92.4
15:00	0	0	0	0	0	0	0	0	0	0	0	6	1	3	2	0	12	14.6	0	1	19	1	5	1	0	27	27.7
15:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	5.3	0	1	9	0	6	0	0	16	15.4
15:30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	6	7.3	1	0	17	0	5	0	0	23	22.2
15:45	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	9	9	1	0	13	0	8	0	0	22	21.2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	22	1	4	4	0	31	36.2	2	2	58	1	24	1	0	88	86.5
16:00	0	0	0	0	0	0	0	0	0	0	0	8	0	3	1	0	12	13.3	2	0	18	0	1	1	0	22	21.7
16:15	0	0	0	0	0	0	0	0	0	0	0	6	0	2	1	0	9	10.3	0	1	13	1	3	1	0	19	19.7
16:30	0	0	0	0	0	0	0	0	0	1	0	7	0	0	1	0	9	9.5	1	1	25	3	2	1	0	33	32.9
16:45	0	0	0	0	0	0	0	0	0	0	0	4	1	1	1	0	7	8.3	0	0	16	0	0	0	0	16	16
H/TOT	0	0	0	0	0	0	0	0	0	1	0	25	1	6	4	0	37	41.4	3	2	72	4	6	3	0	90	90.3
17:00	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	1	0	20	1	2	0	0	24	23.2
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	24	0	2	0	0	28	26.4
17:30	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	7	7	4	0	12	0	1	0	0	17	13.8
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	5	0	17	0	0	0	0	22	18
H/TOT	0	0	0	0	0	0	0	0	0	0	0	17	0	1	0	0	18	18	12	0	73	1	5	0	0	91	81.4
18:00	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	1	0	20	0	0	0	0	21	20.2
18:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	11	0	0	0	0	11	11
18:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	1	0	23	0	1	0	0	25	24.2
18:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	0	11	1	1	0	0	14	13.2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	0	11	11	3	0	65	1	2	0	0	71	68.6
12 TOT	0	0	0	0	0	0	0	0	0	7	1	258	7	76	23	0	372	395.7	26	6	592	31	206	33	1	895	914.5

B => A									B => B									B => C								
P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU
0	0	3	0	1	0	0	4	4	0	0	0	0	0	0	0	0	0	2	0	22	3	6	2	2	37	40
0	0	4	0	1	0	0	5	5	0	0	0	0	0	0	0	0	0	2	0	29	1	9	0	0	41	39.4
0	0	2	0	1	0	0	3	3	0	0	0	0	0	0	0	0	0	2	0	38	1	6	2	0	49	50
0	0	6	0	3	0	0	9	9	0	0	1	0	0	0	0	1	1	3	1	46	3	9	0	0	62	59
0	0	15	0	6	0	0	21	21	0	0	1	0	0	0	0	1	1	9	1	135	8	30	4	2	189	188.4
0	0	15	0	3	0	0	18	18	0	0	0	0	0	0	0	0	0	2	0	61	3	6	4	0	76	79.6
0	1	16	1	5	1	0	24	24.7	0	0	0	0	0	0	0	0	0	2	2	72	2	9	3	2	92	95.1
0	1	19	3	1	1	0	25	25.7	0	0	0	0	0	0	0	0	0	2	0	92	2	10	4	0	110	113.6
0	0	24	1	2	1	0	28	29.3	0	0	0	0	0	0	0	0	0	1	2	94	7	9	5	1	119	124.5
0	2	74	5	11	3	0	95	97.7	0	0	0	0	0	0	0	0	0	7	4	319	14	34	16	3	397	412.8
0	1	7	0	7	1	0	16	16.7	0	0	0	0	0	0	0	0	0	3	0	78	6	6	4	2	99	103.8
0	0	7	1	3	0	0	11	11	0	0	0	0	0	0	0	0	0	3	0	55	6	11	1	1	77	76.9
0	0	7	1	2	0	0	10	10	0	0	0	0	0	0	0	0	0	3	0	75	2	14	2	0	96	96.2
0	0	4	2	2	1	0	9	10.3	0	0	0	0	0	0	0	0	0	0	1	60	3	9	6	0	79	86.2
0	1	25	4	14	2	0	46	48	0	0	0	0	0	0	0	0	0	9	1	268	17	40	13	3	351	363.1
0	0	7	0	4	1	0	12	13.3	0	0	0	0	0	0	0	0	0	0	1	76	6	17	5	5	110	120.9
0	0	5	1	2	0	0	8	8	0	0	0	0	0	0	0	0	0	0	1	67	4	15	5	0	92	97.9
0	0	7	0	4	2	0	13	15.6	0	0	0	0	0	0	0	0	0	0	0	61	4	13	1	1	80	82.3
0	0	5	0	5	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	73	3	7	5	0	88	94.5
0	0	24	1	15	3	0	43	46.9	0	0	0	0	0	0	0	0	0	0	2	277	17	52	16	6	370	395.6
0	0	6	3	3	1	0	13	14.3	0	0	0	0	0	0	0	0	0	0	0	69	6	16	1	1	93	95.3
0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	3	81	4	19	2	0	109	109.8
0	0	9	1	5	1	0	16	17.3	0	0	0	0	0	0	0	0	0	0	2	75	3	13	5	0	98	103.3
0	0	7	1	3	1	0	12	13.3	0	0	0	0	0	0	0	0	0	0	1	73	6	15	2	0	97	99
0	0	27	5	11	3	0	46	49.9	0	0	0	0	0	0	0	0	0	0	6	298	19	63	10	1	397	407.4
0	0	10	0	2	0	0	12	12	0	0	0	0	0	0	0	0	0	0	1	86	6	21	3	2	119	124.3
0	0	7	0	8	0	0	15	15	0	0	1	0	0	0	0	1	1	2	0	72	3	16	4	0	97	100.6
0	0	13	0	3	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	85	5	13	0	0	103	103
0	0	11	0	5	1	0	17	18.3	0	0	1	0	0	0	0	1	1	1	0	95	9	12	0	1	118	118.2
0	0	41	0	18	1	0	60	61.3	0	0	2	0	0	0	0	2	2	3	1	338	23	62	7	3	437	446.1
1	1	18	0	3	3	0	26	28.5	0	0	0	0	0	0	0	0	0	1	0	99	7	16	3	1	127	131.1
1	0	10	0	0	1	0	12	12.5	0	0	0	0	0	0	0	0	0	3	1	85	2	15	3	0	109	109.9
0	0	8	1	5	2	0	16	18.6	0	0	0	0	0	0	0	0	0	0	0	95	6	11	4	0	116	121.2
0	1	9	0	1	0	0	11	10.4	0	0	0	0	0	0	0	0	0	1	0	98	6	14	4	0	123	127.4
2	2	45	1	9	6	0	65	70	0	0	0	0	0	0	0	0	0	5	1	377	21	56	14	1	475	489.6
0	1	7	0	5	0	0	13	12.4	0	0	0	0	0	0	0	0	0	3	2	107	3	14	5	1	135	138.9
0	0	7	2	5	0	0	14	14	0	0	1	0	0	0	0	1	1	0	4	66	2	19	4	0	95	97.8
0	0	9	0	1	2	0	12	14.6	0	0	0	0	0	0	0	0	0	1	1	85	0	14	5	0	106	111.1
0	0	6	1	3	0	0	10	10	0	0	0	0	0	0	0	0	0	1	0	60	5	8	4	0	78	82.4
0	1	29	3	14	2	0	49	51	0	0	1	0	0	0	0	1	1	5	7	318	10	55	18	1	414	430.2
1	1	12	1	5	0	0	20	18.6	0	0	0	0	0	0	0	0	0	3	0	83	3	23	4	1	117	120.8
0	0	11	0	1	1	0	13	14.3	0	0	0	0	0	0	0	0	0	0	1	74	3	19	3	0	100	103.3
0	1	8	0	0	1	0	10	10.7	0	0	0	0	0	0	0	0	0	0	0	84	3	20	2	0	109	111.6
0	0	8	0	0	2	0	10	12.6	0	0	0	0	0	0	0	0	0	4	2	93	2	12	3	1	117	117.5
1	2	39	1	6	4	0	53	56.2	0	0	0	0	0	0	0	0	0	7	3	334	11	74	12	2	443	453.2
0	0	8	0	11	0	0	19	19	0	0	0	0	0	0	0	0	0	2	0	94	1	13	4	3	117	123.6
0	1	3	1	0	1	0	6	6.7	0	0	0	0	0	0	0	0	0	3	2	68	3	12	1	1	90	88.7
2	2	9	1	2	0	0	16	13.2	0	0	0	0	0	0	0	0	0	4	1	89	1	4	0	1	100	97.2
1	0	15	1	1	0	0	18	17.2	0	0	0	0	0	0	0	0	0	13	2	96	2	6	1	0	120	109.7
3	3	35	3	14	1	0	59	56.1	0	0	0	0	0	0	0	0	0	22	5	347	7	35	6	5	427	419.2
0	0	21	0	3	1	0	25	26.3	0	0	0	0	0	0	0	0	0	24	3	106	0	8	1	1	143	124.3
0	0	17	1	5	0	0	23	23	0	0	0	0	0	0	0	0	0	13	1	72	0	4	0	1	91	81
2	0	22	0	0	0	0	24	22.4	0	0	0	0	0	0	0	0	0	16	1	94	2	4	0	0	117	103.6
0	0	10	1	2	0	0	13	13	0	0	0	0	0	0	0	0	0	12	1	66	1	1	0	0	81	70.8
2	0	70	2	10	1	0	85	84.7	0	0	0	0	0	0	0	0	0	65	6	338	3	17	1	2	432	379.7
1	0	11	0	0	0	0	12	11.2	0	0	0	0	0	0	0	0	0	6	1	61	1	3	1	1	74	70.9
0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4	1	72	2	0	1	1	81	79.5
1	0	3	0	0	0	0	4	3.2	0	0	0	0	0	0	0	0	0	10	0	55	0	5	1	1	72	66.3
1	0	5	0	0	0	0	6	5.2	0	0	1	0	0	0	0	1	1	7	1	57	3	8	1	0	77	72.1
3	0	21	0	0	0	0	24	21.6	0	0	1	0	0	0	0	1	1	27	3	245	6	16	4	3	304	288.8
11	11	445	25	128	26	0	646	664.4	0	0	5	0	0	0	0	5	5	159	40	3594	156	534	121	32	4636	4674

C => A									C => B									C => C								
P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU	P/C	M/C	CAR	TAXI	LGV	HGV	PSV	TOT	PCU
1	0	22	0	9	2	0	34	35.8	3	0	51	1	6	0	3	64	64.6	0	0	0	0	0	0	0	0	0
1	0	37	1	5	1	0	45	45.5	6	0	49	1	11	2	2	71	70.8	0	0	0	0	0	0	0	0	0
1	0	43	0	4	1	0	49	49.5	5	0	49	2	6	2	2	66	66.6	0	0	0	0	0	0	0	0	0
0	0	27	0	2	1	0	30	31.3	7	0	66	2	5	2	2	84	83	0	0	0	0	0	0	0	0	0
3	0	129	1	20	5	0	158	162.1	21	0	215	6	28	6	9	285	285	0	0	0	0	0	0	0	0	0
3	1	46	1	4	1	0	56	54.3	5	0	71	1	6	0	3	86	85	0	0	0	0	0	0	0	0	0
1	0	45	1	5	1	0	53	53.5	12	0	62	4	8	1	1	88	80.7	0	0	0	0	0	0	0	0	0
2	0	40	2	4	1	0	49	48.7	11	2	83	4	2	0	3	105	98	0	0	0	0	0	0	0	0	0
2	1	37	2	8	1	0	51	50.1	14	0	77	3	1	3	1	99	92.7	0	0	0	0	0	0	0	0	0
8	2	168	6	21	4	0	209	206.6	42	2	293	12	17	4	8	378	356.4	0	0	0	0	0	0	0	0	0
0	0	22	1	2	0	1	26	27	2	2	59	6	12	3	2	86	89.1	0	0	1	0	0	0	0	1	1
2	0	24	2	5	0	1	34	33.4	2	1	70	2	10	2	1	88	89.4	0	0	0	0	0	0	0	0	0
1	0	25	0	3	0	2	31	32.2	1	2	59	3	5	1	2	73	74.3	0	0	0	0	0	0	0	0	0
0	0	18	3	9	2	0	32	34.6	3	0	53	2	9	5	1	73	78.1	0	0	0	0	0	0	0	0	0
3	0	89	6	19	2	4	123	127.2	8	5	241	13	36	11	6	320	330.9	0	0	1	0	0	0	0	1	1
1	0	16	0	8	2	0	27	28.8	2	1	41	2	7	3	1	57	59.7	0	0	0	0	0	0	0	0	0
0	0	16	4	8	2	0	30	32.6	1	0	34	4	5	1	2	47	49.5	0	0	0	0	1	0	0	1	1
0	0	10	1	5	0	0	16	16	1	1	50	4	9	0	2	67	67.6	0	0	0	0	0	0	0	0	0
0	0	18	1	5	2	2	28	32.6	0	0	42	5	11	1	2	61	64.3	0	0	0	0	0	0	0	0	0
1	0	60	6	26	6	2	101	110	4	2	167	15	32	5	7	232	241.1	0	0	0	0	1	0	0	1	1
1	0	16	3	6	0	1	27	27.2	0	1	51	4	11	2	0	69	71	0	0	0	0	0	0	0	0	0
0	0	21	2	9	0	2	34	36	1	1	38	4	11	2	1	58	60.2	0	0	0	0	0	0	0	0	0
0	0	14	1	7	5	0	27	33.5	0	1	42	1	18	2	2	66	70	0	0	0	0	0	0	0	0	0
0	1	14	1	5	1	0	22	22.7	0	1	36	2	9	1	1	50	51.7	0	0	0	0	0	0	0	0	0
1	1	65	7	27	6	3	110	119.4	1	4	167	11	49	7	4	243	252.9	0	0	0	0	0	0	0	0	0
0	0	22	0	6	2	0	30	32.6	0	0	42	2	19	1	0	64	65.3	0	0	0	0	0	0	0	0	0
0	0	15	2	3	2	0	22	24.6	0	0	44	2	7	1	2	56	59.3	0	0	0	0	0	0	0	0	0
0	0	24	3	8	3	0	38	41.9	1	0	44	1	11	0	1	58	58.2	0	0	0	0	0	0	0	0	0
1	0	13	1	11	1	0	27	27.5	0	1	52	7	8	4	1	73	78.6	0	0	0	0	0	0	0	0	0
1	0	74	6	28	8	0	117	126.6	1	1	182	12	45	6	4	251	261.4	0	0	0	0	0	0	0	0	0
0	0	16	0	8	0	0	24	24	1	0	47	0	10	0	0	58	57.2	0	0	0	0	0	0	0	0	0
0	0	18	2	4	1	1	26	28.3	0	1	52	3	8	1	2	67	69.7	0	0	0	0	0	0	0	0	0
0	0	16	1	3	1	1	22	24.3	0	1	55	0	6	3	2	67	72.3	0	0	0	0	0	0	0	0	0
0	0	30	2	1	2	0	35	37.6	1	2	67	4	11	2	1	88	89.6	0	0	0	0	0	0	0	0	0
0	0	80	5	16	4	2	107	114.2	2	4	221	7	35	6	5	280	288.8	0	0	0	0	0	0	0	0	0
1	1	17	2	6	1	0	28	27.9	2	0	71	2	12	0	0	87	85.4	0	0	0	0	0	0	0	0	0
0	0	22	1	6	2	0	31	33.6	1	1	38	2	9	2	1	54	56.2	0	0	0	0	0	0	0	0	0
0	0	20	0	11	0	0	31	31	0	0	45	3	12	1	1	62	64.3	0	0	0	0	0	0	0	0	0
0	0	16	2	4	0	0	22	22	1	0	44	2	13	2	1	63	65.8	0	0	0	0	0	0	0	0	0
1	1	75	5	27	3	0	112	114.5	4	1	198	9	46	5	3	266	271.7	0	0	0	0	0	0	0	0	0
0	1	14	1	6	1	0	23	23.7	0	0	44	1	10	2	1	58	61.6	0	0	0	0	0	0	0	0	0
0	0	12	2	2	0	0	16	16	3	0	44	4	8	0	1	60	58.6	0	0	0	0	0	0	0	0	0
0	0	11	0	6	0	0	17	17	0	1	46	1	6	3	2	59	64.3	0	0	0	0	0	0	0	0	0
1	0	13	1	1	0	0	16	15.2	2	0	40	6	5	1	2	56	57.7	0	0	0	0	0	0	0	0	0
1	1	50	4	15	1	0	72	71.9	5	1	174	12	29	6	6	233	242.2	0	0	0	0	0	0	0	0	0
0	1	18	1	4	3	0	27	30.3	1	0	42	2	7	0	1	53	53.2	0	0	0	0	0	0	0	0	0
2	1	12	1	6	1	0	23	22.1	0	0	32	1	4	0	1	38	39	0	0	0	0	0	0	0	0	0
0	0	14	0	1	1	0	16	17.3	0	1	46	2	3	2	5	59	66	0	0	0	0	0	0	0	0	0
1	0	33	1	2	0	0	37	36.2	0	2	42	0	3	2	0	49	50.4	0	0	0	0	0	0	0	0	0
3	2	77	3	13	5	0	103	105.9	1	3	162	5	17	4	7	199	208.6	0	0	0	0	0	0	0	0	0
1	0	29	1	3	0	0	34	33.2	5	2	44	2	2	0	2	57	53.8	0	0	0	0	0	0	0	0	0
0	1	23	1	0	0	0	25	24.4	0	1	48	1	3	2	1	56	59	0	0	0	0	0	0	0	0	0
3	0	22	1	2	0	0	28	25.6	3	0	46	2	2	0	2	55	54.6	0	0	0	0	0	0	0	0	0
1	0	19	2	1	0	0	23	22.2	1	1	38	3	0	0	1	44	43.6	0	0	0	0	0	0	0	0	0
5	1	93	5	6	0	0	110	105.4	9	4	176	8	7	2	6	212	211	0	0	0	0	0	0	0	0	0
1	0	24	0	1	0	0	26	25.2	1	0	32	1	0	0	2	36	37.2	0	0	0	0	0	0	0	0	0
0	0	19	1	0	0	0	20	20	0	0	34	1	6	0	1	42	43	0	0	0	0	0	0	0	0	0
0	0	8	0	0	2	0	10	12.6	1	0	17	1	0	1	1	21	22.5	0	0	0	0	0	0	0	0	0
1	0	8	0	1	0	0	10	9.2	0	0	42	1	0	0	2	45	47	0	0	0	0	0	0	0	0	0
2	0	59	1	2	2	0	66	67	2	0	125	4	6	1	6	144	149.7	0	0	0	0	0	0	0	0	0
29	8	1019	55	220	46	11	1388	1431	100	27	2321	114	347	63	71	3043	3100	0	0	1	0	1	0	0	2	2



IDASO

Survey Name: 109 19151 Sandyford
Site: Site4
Location: Corrig Road/Blackthorn Road
Date: 23-May-2019

TIME	A1	A2	B1	B2	C1	C2
7:00	0	5	0	0	5	0
7:05	0	0	0	0	5	0
7:10	0	5	0	0	5	0
7:15	0	10	0	0	15	0
7:20	0	5	0	0	25	5
7:25	5	5	0	0	10	10
7:30	0	20	0	0	15	0
7:35	5	5	0	5	20	0
7:40	0	5	0	0	10	0
7:45	0	5	0	0	15	15
7:50	5	5	0	5	20	0
7:55	0	0	0	0	20	5
8:00	0	5	0	10	25	15
8:05	0	10	0	5	35	5
8:10	5	10	0	5	20	15
8:15	5	10	0	0	15	10
8:20	0	10	0	5	20	5
8:25	5	10	0	5	20	15
8:30	10	5	0	5	20	0
8:35	5	10	0	5	15	15
8:40	10	5	0	5	20	10
8:45	10	10	0	15	20	5
8:50	10	10	0	5	25	10
8:55	5	10	5	5	15	10
9:00	0	5	20	5	20	10
9:05	0	5	0	5	25	15
9:10	0	30	0	0	15	0
9:15	0	5	0	5	15	5
9:20	0	5	0	0	10	15
9:25	5	5	0	5	5	15
9:30	0	5	0	0	10	15
9:35	5	5	0	0	5	10
9:40	0	0	0	0	5	15
9:45	0	30	0	5	5	10
9:50	0	10	0	0	5	5
9:55	5	5	0	0	5	5

TIME	A1	A2	B1	B2	C1	C2
10:00	0	5	0	0	10	5
10:05	0	15	0	5	10	5
10:10	0	5	0	5	0	5
10:15	5	10	0	5	20	10
10:20	0	10	0	0	15	0
10:25	0	15	0	0	0	0
10:30	0	10	0	0	20	10
10:35	0	15	0	10	5	5
10:40	0	5	0	5	10	0
10:45	5	10	0	0	20	15
10:50	0	10	0	5	0	0
10:55	5	5	0	0	0	10
11:00	5	5	0	0	0	20
11:05	5	5	0	0	0	0
11:10	5	5	0	10	5	0
11:15	5	15	0	0	0	0
11:20	0	10	0	0	0	0
11:25	5	10	0	5	15	0
11:30	5	10	5	0	15	15
11:35	0	15	0	0	0	0
11:40	5	15	5	5	5	0
11:45	5	10	0	0	15	5
11:50	0	5	0	5	0	0
11:55	0	15	0	0	15	0
12:00	10	5	0	0	10	10
12:05	0	20	0	0	10	5
12:10	0	5	0	5	15	10
12:15	10	5	0	0	15	5
12:20	5	5	0	0	5	0
12:25	0	10	0	0	15	15
12:30	5	5	0	0	10	10
12:35	5	10	0	0	25	5
12:40	0	15	0	0	20	5
12:45	5	5	0	0	15	5
12:50	5	10	0	0	25	5
12:55	5	20	0	10	15	20

Queue's are measured in meters

	Cannot be seen from camera
+	Signifies queue stretches to a minimum length of x and beyond the view of the camera
#	Signifies queue stretches to the next significant junction
*	Indicates an estimated queue length due to obscured vision.
M	Indicates that the lane ends and the vehicles queing merged into another lane to queue.

Queue lengths are compiled from CCTV observations and are therefore subject to the limitations of the camera view.

TIME	A1	A2	B1	B2	C1	C2
13:00	5	20	0	5	15	0
13:05	0	10	0	5	10	5
13:10	5	10	0	5	15	0
13:15	0	5	0	0	20	15
13:20	5	5	0	0	15	15
13:25	0	5	0	0	15	10
13:30	5	5	0	0	15	15
13:35	0	0	0	0	10	10
13:40	0	20	0	5	15	0
13:45	5	15	0	5	20	15
13:50	5	10	0	0	20	0
13:55	10	5	0	0	10	15
14:00	5	5	0	0	20	10
14:05	5	15	0	5	15	10
14:10	0	10	5	0	10	5
14:15	5	15	0	0	15	0
14:20	0	10	0	0	10	5
14:25	5	10	0	0	25	5
14:30	5	15	0	5	10	0
14:35	5	5	0	0	15	15
14:40	0	10	0	0	0	5
14:45	0	5	0	0	10	0
14:50	10	20	0	0	5	0
14:55	5	5	0	0	10	0
15:00	10	5	0	5	20	5
15:05	0	15	0	0	0	0
15:10	5	10	0	0	10	0
15:15	0	5	0	5	15	5
15:20	0	10	0	0	5	0
15:25	0	5	0	5	10	5
15:30	0	5	0	0	5	5
15:35	5	5	0	0	0	0
15:40	0	10	0	0	0	0
15:45	5	15	0	0	20	5
15:50	0	10	0	5	0	0
15:55	0	10	0	0	0	0

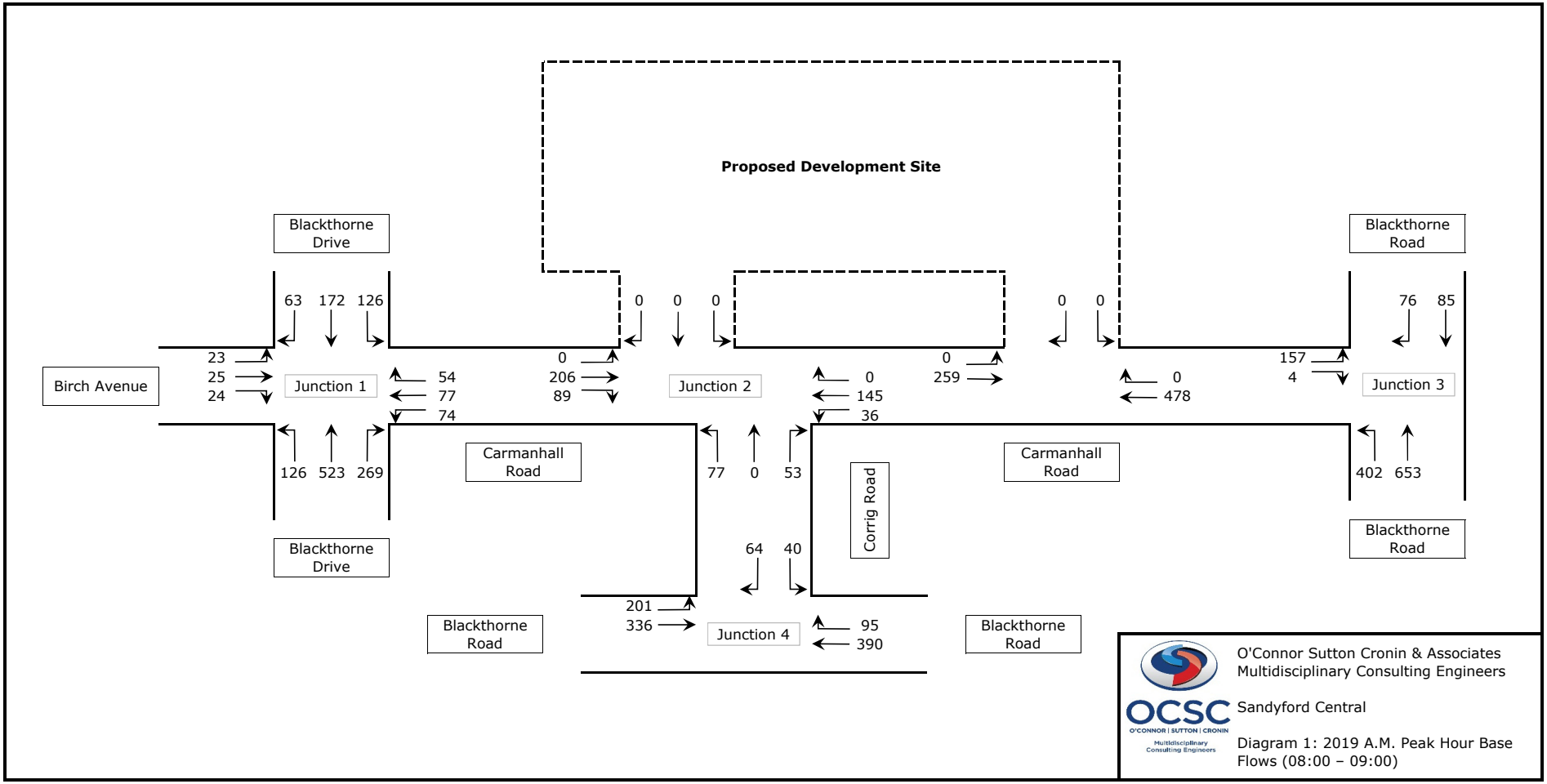
TIME	A1	A2	B1	B2	C1	C2
16:00	0	10	0	0	10	0
16:05	5	5	0	5	15	5
16:10	5	10	10	15	20	0
16:15	0	5	0	0	0	0
16:20	5	5	0	0	10	0
16:25	0	5	0	0	5	0
16:30	5	10	0	0	0	0
16:35	0	15	0	0	35	20
16:40	0	10	5	5	15	5
16:45	0	10	0	10	5	5
16:50	5	0	0	15	15	5
16:55	0	10	0	5	15	5
17:00	5	15	0	5	20	0
17:05	5	15	0	0	20	0
17:10	5	0	0	10	20	5
17:15	0	5	0	0	15	0
17:20	5	10	0	5	15	0
17:25	0	15	0	5	10	0
17:30	5	5	0	0	15	5
17:35	5	5	0	0	20	5
17:40	5	5	0	15	20	10
17:45	0	5	0	0	15	0
17:50	5	5	0	0	15	10
17:55	0	10	0	0	5	10
18:00	0	5	0	0	15	0
18:05	0	10	0	0	15	5
18:10	0	5	0	0	15	0
18:15	5	5	0	5	5	0
18:20	0	5	0	0	10	0
18:25	0	5	0	0	15	0
18:30	0	10	0	0	0	0
18:35	0	5	0	0	20	0
18:40	0	5	0	0	10	0
18:45	0	10	0	0	0	0
18:50	0	5	0	0	0	0
18:55	0	5	0	0	0	0

IDASO

Survey Name: 109 19151 Sandyford
Site: Site4
Location: Corrig Rd / Blackthorn Rd
Date: 23-May-2019

	A => B			B => A			C => D			D => C			E => F			F => E		
TIME	Adult	Child	TOT	Adult	Child	TOT	Adult	Child	TOT	Adult	Child	TOT	Adult	Child	TOT	Adult	Child	TOT
07:00	2	0	2	0	0	0	1	0	1	1	0	1	8	0	8	4	0	4
07:15	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	11	0	11
07:30	2	0	2	2	0	2	1	0	1	1	0	1	4	0	4	11	0	11
07:45	2	0	2	1	0	1	1	0	1	0	0	0	1	0	1	34	0	34
H/TOT	7	0	7	3	0	3	4	0	4	2	0	2	13	0	13	60	0	60
08:00	3	0	3	2	0	2	2	0	2	1	0	1	8	0	8	26	1	27
08:15	3	0	3	1	0	1	7	0	7	0	0	0	6	0	6	27	2	29
08:30	2	0	2	1	0	1	3	0	3	1	0	1	3	0	3	33	0	33
08:45	3	0	3	4	0	4	5	0	5	0	0	0	4	0	4	60	1	61
H/TOT	11	0	11	8	0	8	17	0	17	2	0	2	21	0	21	146	4	150
09:00	2	0	2	0	0	0	2	0	2	0	0	0	4	0	4	25	1	26
09:15	4	0	4	0	0	0	1	0	1	0	0	0	5	0	5	14	0	14
09:30	2	0	2	1	0	1	1	0	1	0	0	0	2	0	2	17	0	17
09:45	0	0	0	0	0	0	3	0	3	1	0	1	18	0	18	12	0	12
H/TOT	8	0	8	1	0	1	7	0	7	1	0	1	29	0	29	68	1	69
10:00	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	2	0	2
10:15	0	0	0	1	0	1	1	0	1	0	0	0	3	0	3	3	0	3
10:30	0	0	0	0	0	0	1	0	1	1	0	1	10	0	10	4	0	4
10:45	0	0	0	2	0	2	1	0	1	1	0	1	7	1	8	3	0	3
H/TOT	1	0	1	3	0	3	3	0	3	3	0	3	21	1	22	12	0	12
11:00	1	0	1	1	0	1	1	0	1	0	0	0	0	0	0	6	0	6
11:15	3	0	3	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
11:30	1	0	1	3	0	3	4	0	4	0	0	0	4	0	4	3	0	3
11:45	0	0	0	1	0	1	0	0	0	0	0	0	3	0	3	7	0	7
H/TOT	5	0	5	5	0	5	5	0	5	2	0	2	7	0	7	16	0	16
12:00	0	0	0	2	0	2	0	0	0	0	0	0	22	0	22	1	0	1
12:15	1	0	1	3	0	3	1	0	1	5	0	5	14	0	14	9	0	9
12:30	3	0	3	2	0	2	0	0	0	9	0	9	33	0	33	13	0	13
12:45	7	0	7	3	0	3	7	0	7	13	0	13	31	0	31	16	0	16
H/TOT	11	0	11	10	0	10	8	0	8	27	0	27	100	0	100	39	0	39
13:00	1	0	1	3	0	3	5	0	5	2	0	2	21	0	21	7	0	7
13:15	9	0	9	6	0	6	7	0	7	5	0	5	13	0	13	18	0	18
13:30	3	0	3	8	0	8	1	0	1	5	0	5	19	0	19	33	0	33
13:45	2	0	2	5	0	5	8	0	8	0	0	0	11	0	11	20	0	20
H/TOT	15	0	15	22	0	22	21	0	21	12	0	12	64	0	64	78	0	78
14:00	3	0	3	1	0	1	11	0	11	0	0	0	5	0	5	12	0	12
14:15	0	0	0	2	0	2	3	0	3	0	0	0	0	0	0	9	0	9
14:30	1	0	1	0	0	0	0	0	0	1	0	1	8	0	8	14	0	14
14:45	1	0	1	0	0	0	1	0	1	0	0	0	7	1	8	7	0	7
H/TOT	5	0	5	3	0	3	15	0	15	1	0	1	20	1	21	42	0	42
15:00	0	0	0	1	0	1	0	0	0	3	0	3	6	0	6	3	0	3
15:15	2	0	2	0	0	0	1	0	1	1	0	1	1	0	1	4	0	4
15:30	1	0	1	2	0	2	1	0	1	2	0	2	2	0	2	1	0	1
15:45	2	0	2	0	0	0	1	0	1	0	0	0	3	0	3	4	0	4
H/TOT	5	0	5	3	0	3	3	0	3	6	0	6	12	0	12	12	0	12
16:00	0	0	0	1	0	1	1	0	1	1	0	1	9	0	9	1	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	1	0	1
16:30	0	0	0	1	0	1	2	0	2	2	0	2	12	0	12	3	0	3
16:45	2	0	2	1	0	1	1	0	1	3	0	3	9	0	9	3	0	3
H/TOT	2	0	2	3	0	3	4	0	4	6	0	6	38	0	38	8	0	8
17:00	3	0	3	4	0	4	0	0	0	8	0	8	35	0	35	6	0	6
17:15	2	0	2	4	0	4	1	0	1	3	0	3	28	0	28	4	0	4
17:30	2	0	2	1	0	1	1	0	1	8	0	8	43	1	44	3	0	3
17:45	1	0	1	0	0	0	0	0	0	7	0	7	29	0	29	2	0	2
H/TOT	8	0	8	9	0	9	2	0	2	26	0	26	135	1	136	15	0	15
18:00	4	0	4	1	0	1	0	0	0	2	0	2	37	0	37	2	0	2
18:15	0	0	0	0	0	0	0	0	0	1	0	1	12	0	12	2	0	2
18:30	4	0	4	0	0	0	0	0	0	1	0	1	15	0	15	1	0	1
18:45	2	0	2	0	0	0	1	0	1	0	0	0	3	0	3	0	0	0
H/TOT	10	0	10	1	0	1	1	0	1	4	0	4	67	0	67	5	0	5
12 TOT	88	0	88	71	0	71	90	0	90	92	0	92	527	3	530	501	5	506

APPENDIX B: TRAFFIC FLOW DIAGRAMS



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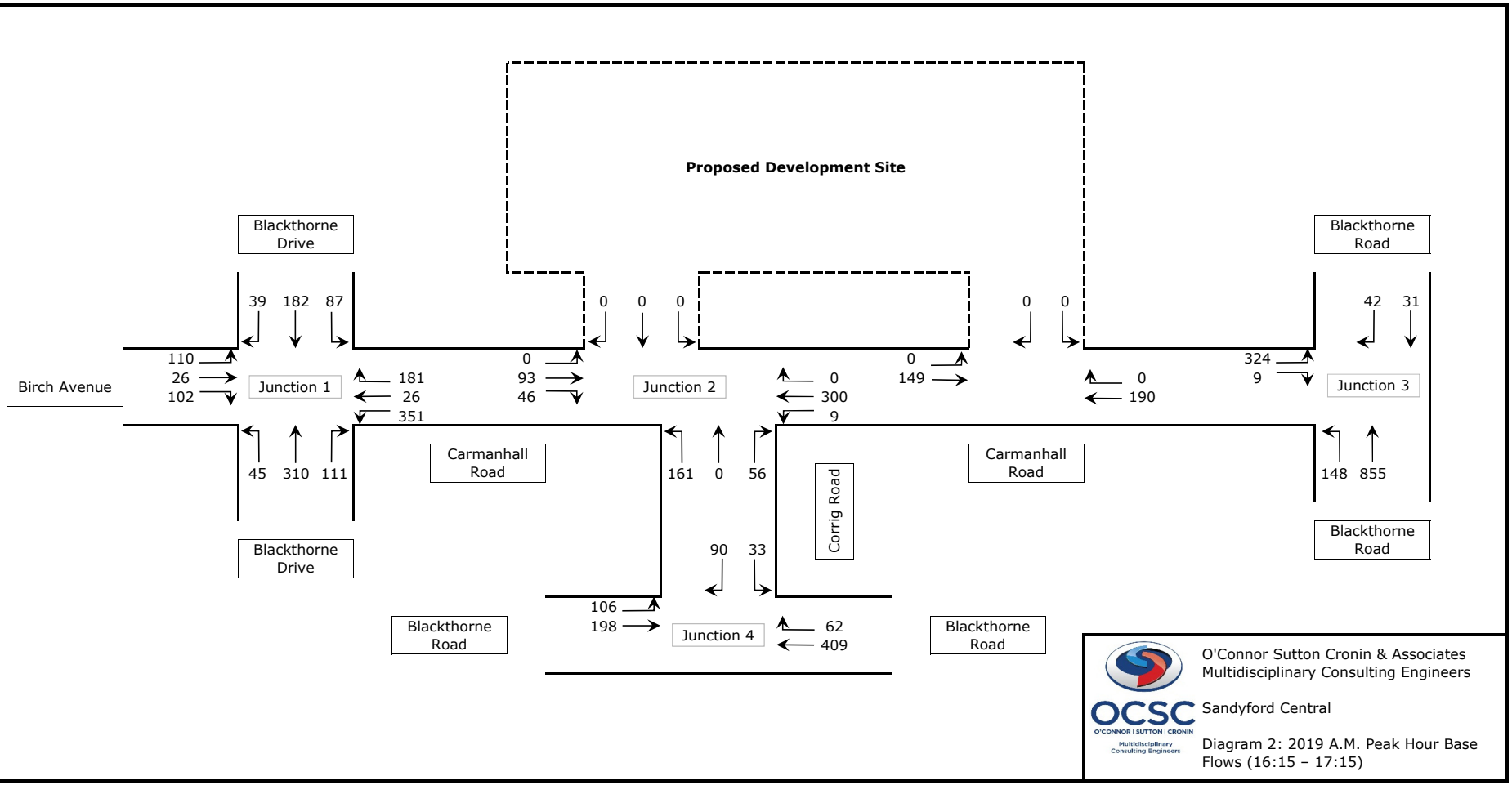
Sandyford Central

Diagram 1: 2019 A.M. Peak Hour Base Flows (08:00 – 09:00)



O'Connor Sutton Cronin & Associates
Multidisciplinary Consulting Engineers

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Diagram 2: 2019 A.M. Peak Hour Base Flows (16:15 – 17:15)

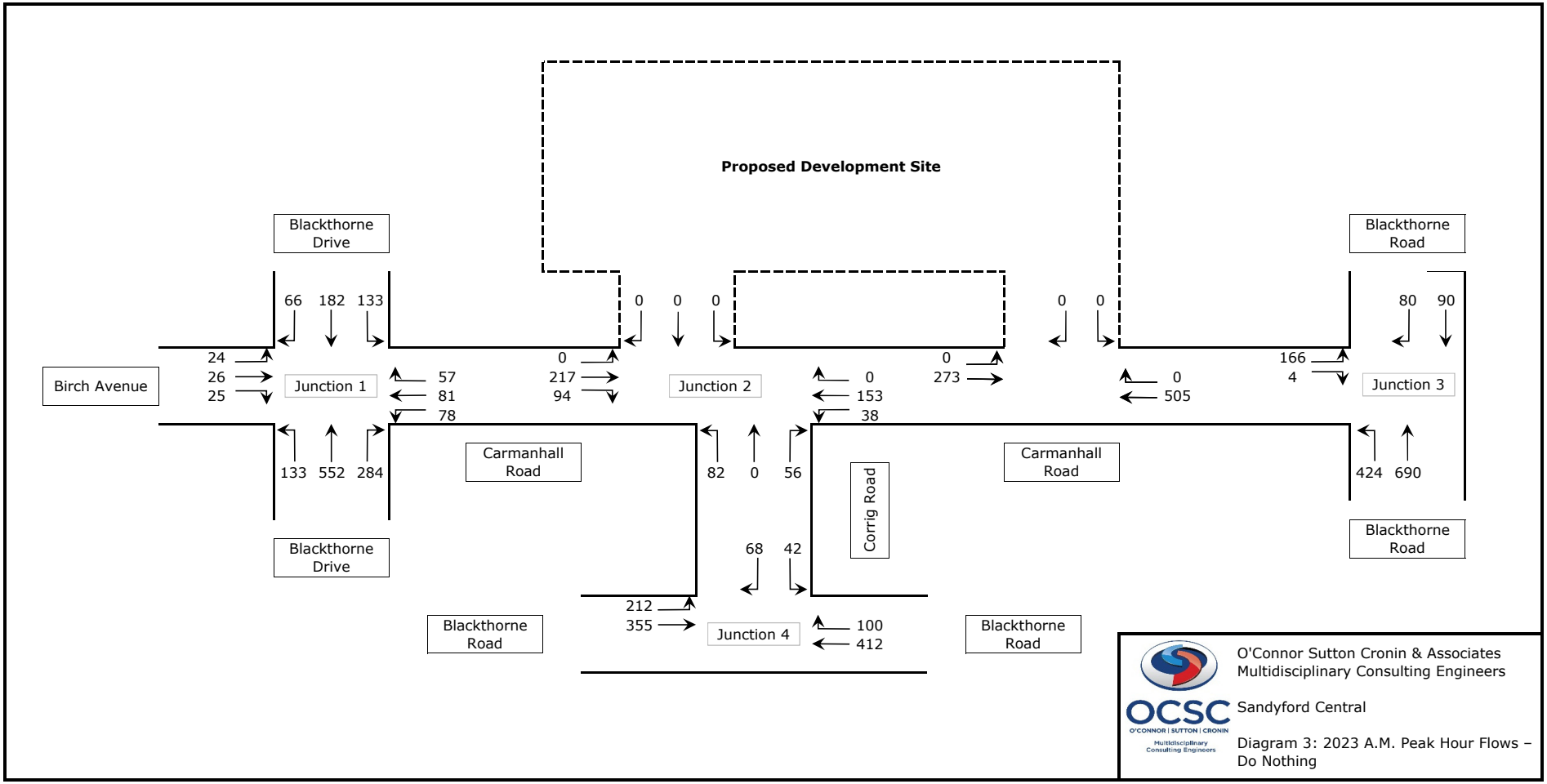

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Diagram 3: 2023 A.M. Peak Hour Flows – Do Nothing

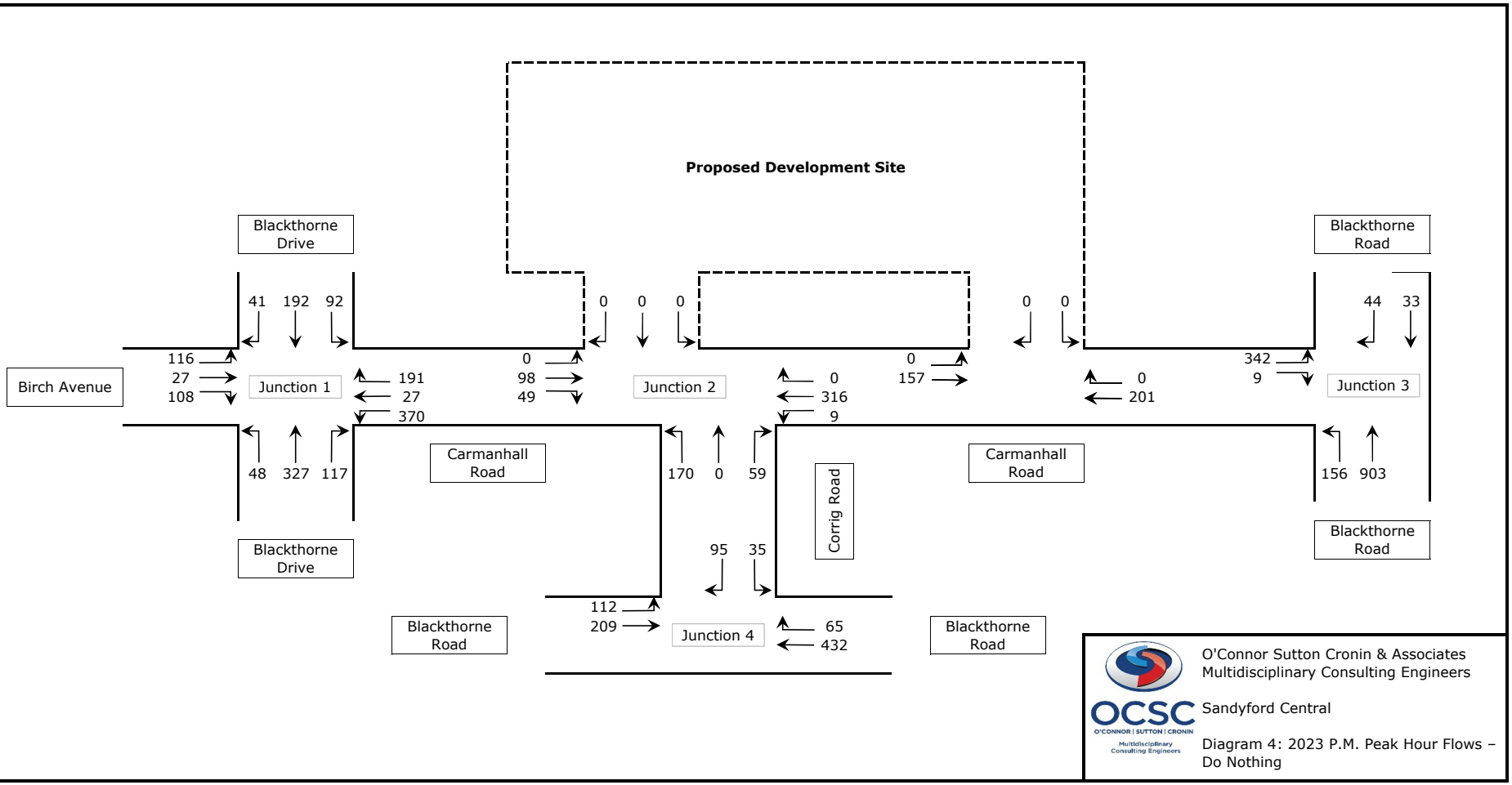

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Diagram 4: 2023 P.M. Peak Hour Flows – Do Nothing

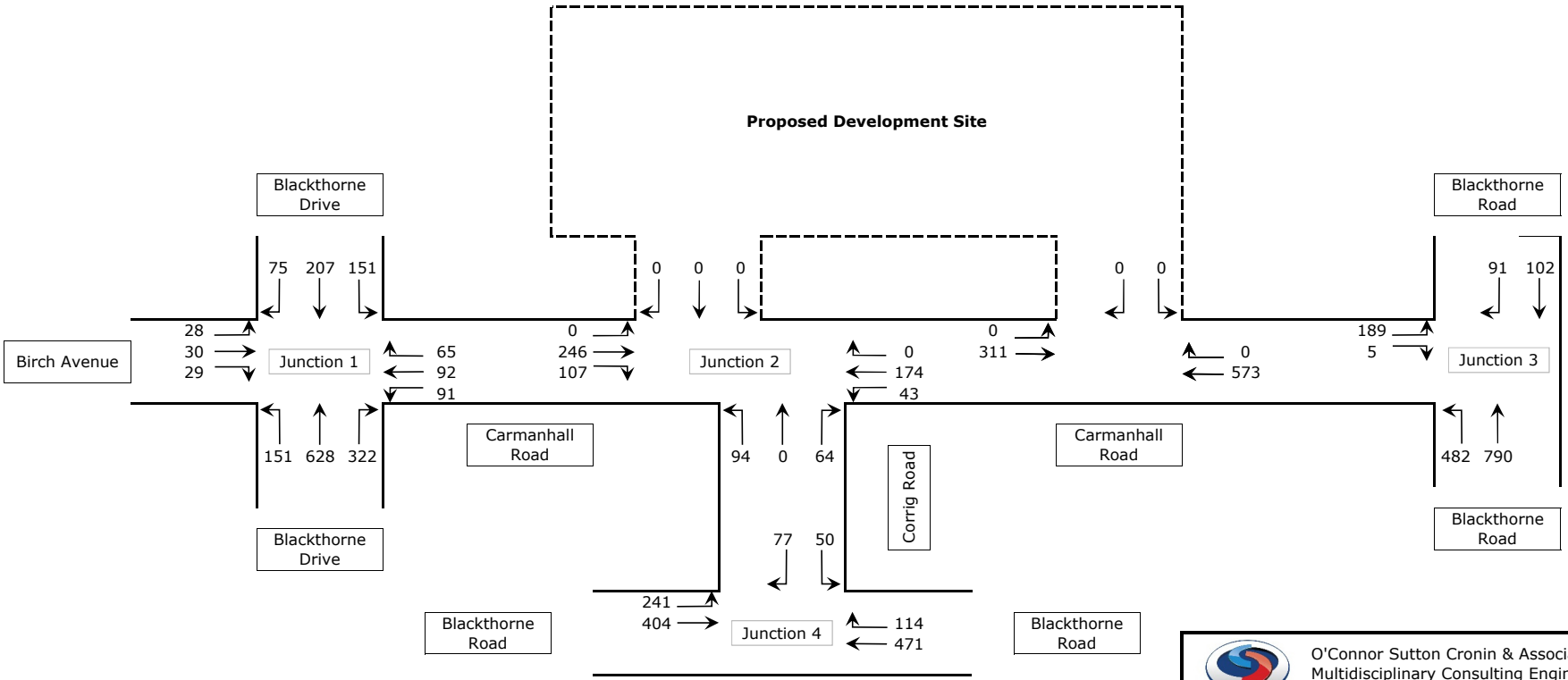

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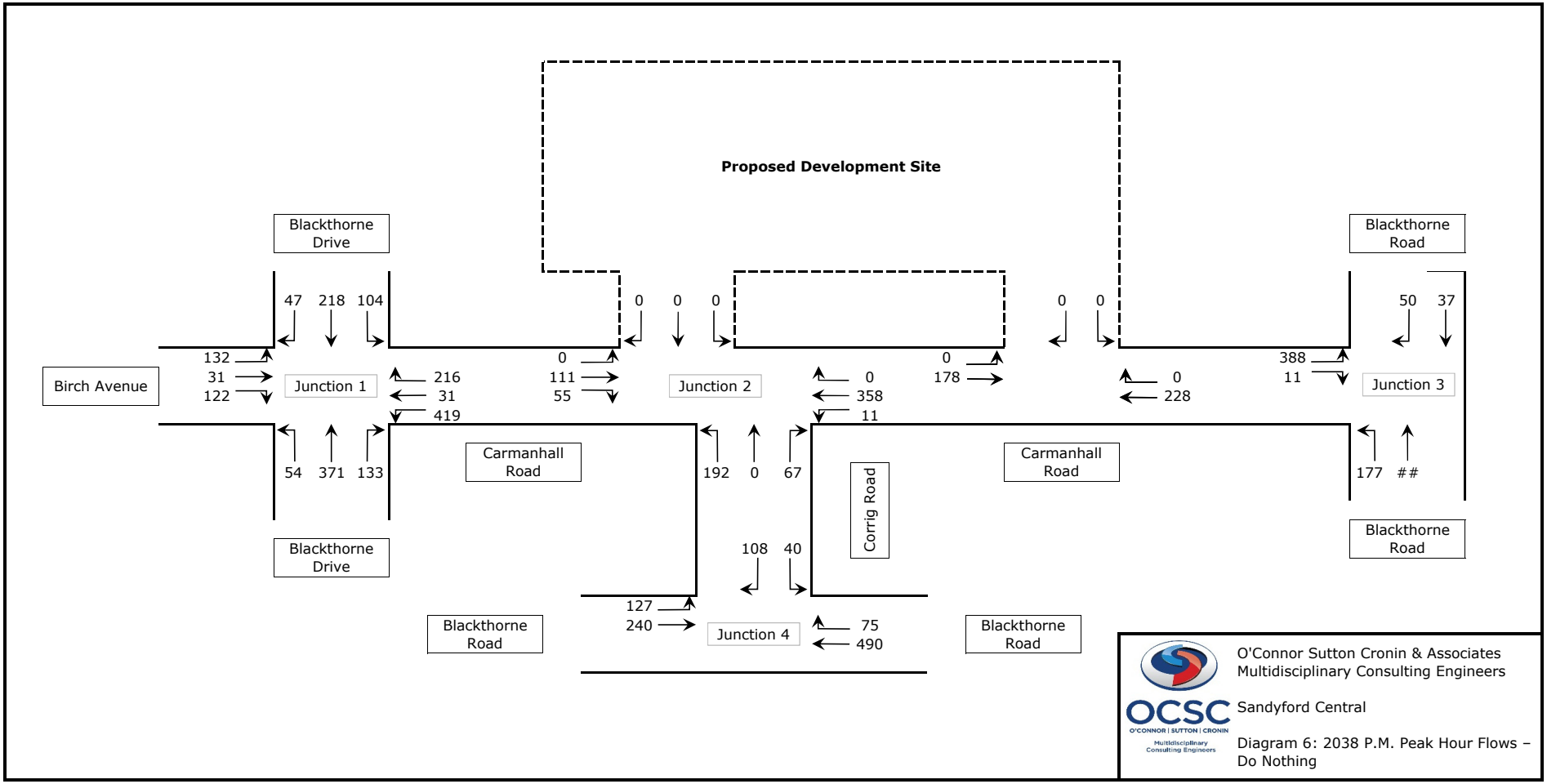
Diagram 5: 2038 A.M. Peak Hour Flows – Do Nothing



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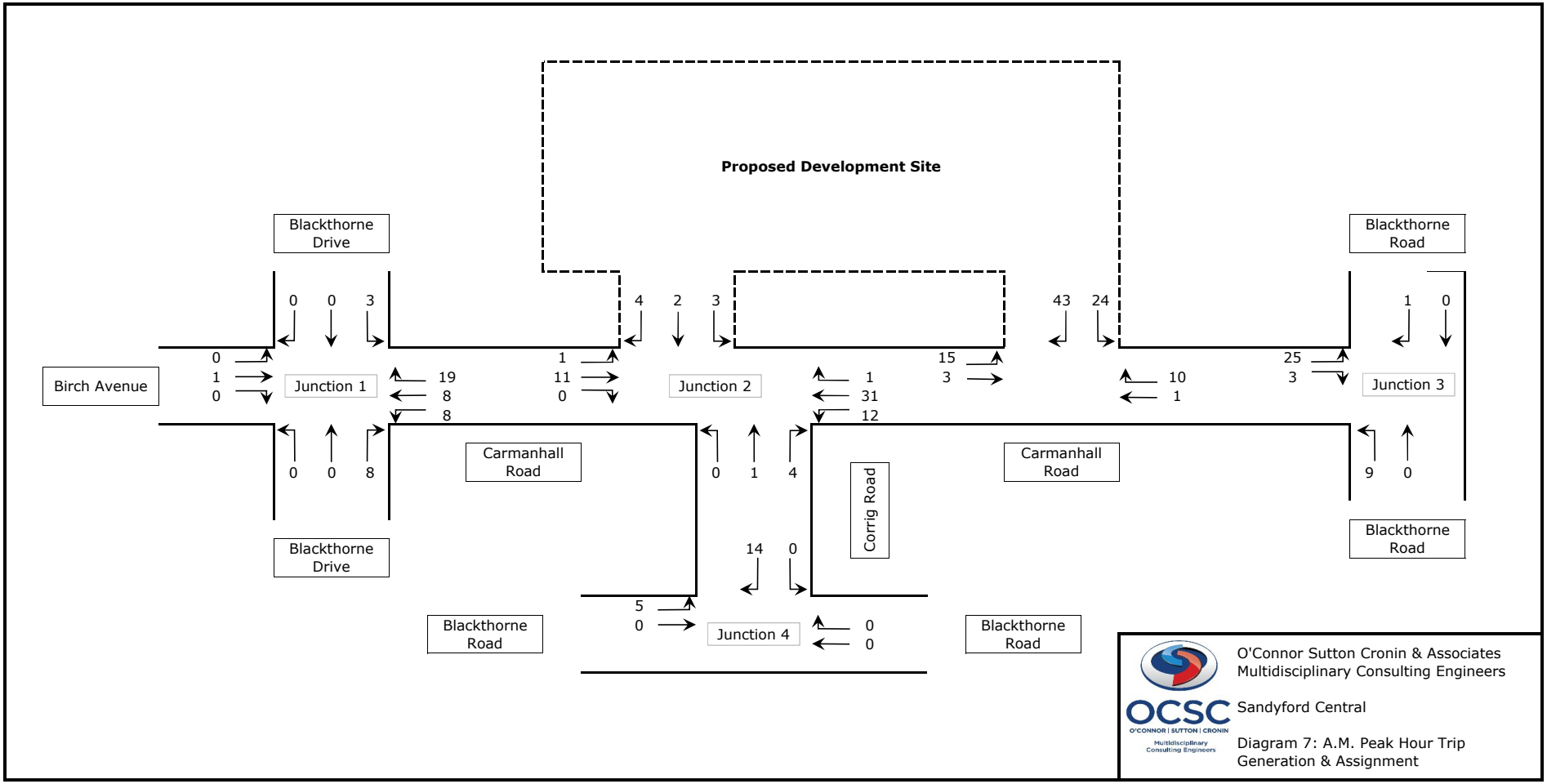
Multidisciplinary Consulting Engineers

Sandyford Central

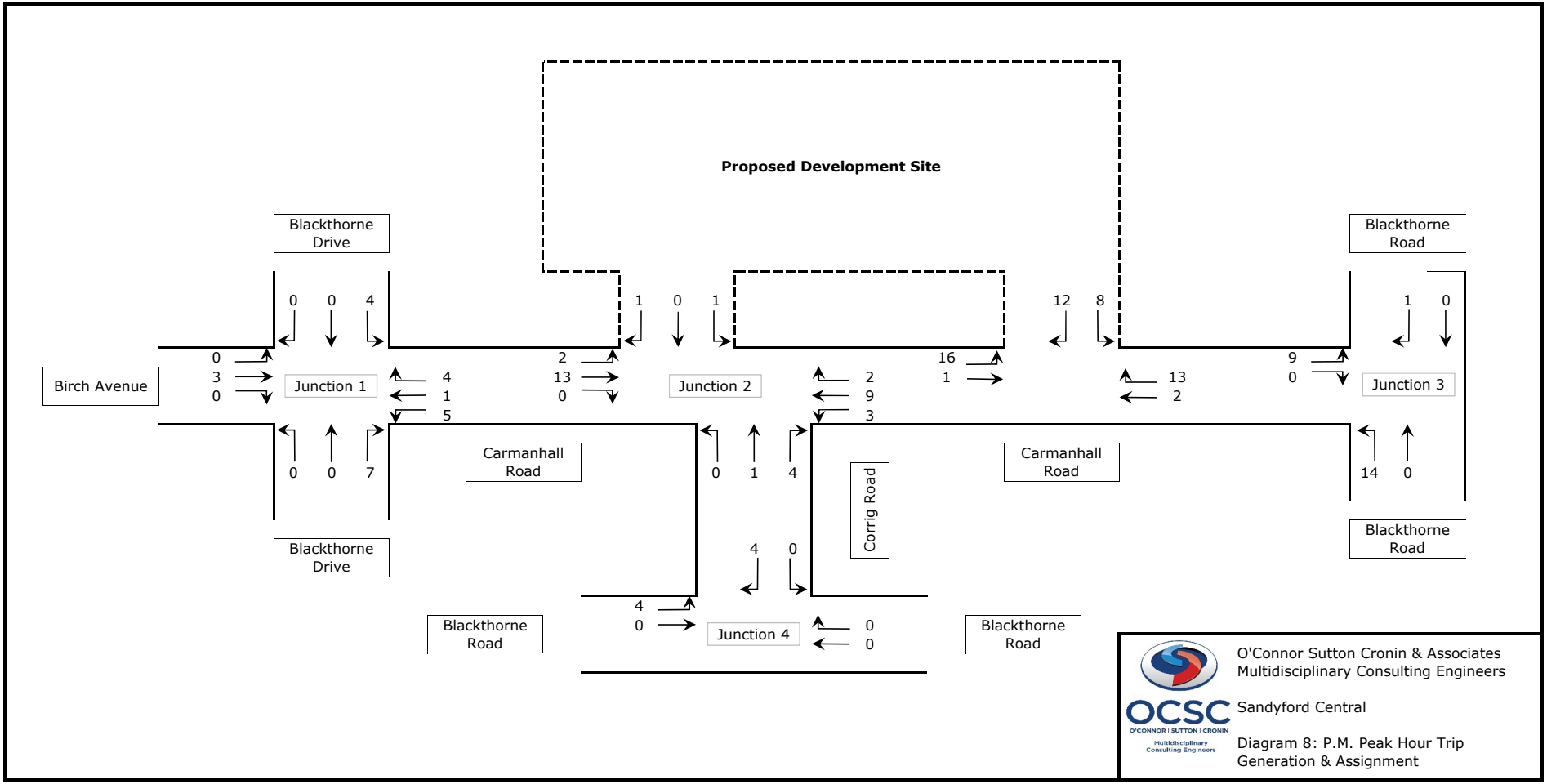
Diagram 6: 2038 P.M. Peak Hour Flows – Do Nothing



O'Connor Sutton Cronin & Associates
Multidisciplinary Consulting Engineers

Sandyford Central

Diagram 7: A.M. Peak Hour Trip Generation & Assignment


Proposed Development Site
Blackthorne Drive
Blackthorne Road
Birch Avenue
Junction 1
Junction 2
Junction 3
Junction 4
Carmanhall Road
Carmanhall Road
Corrig Road
Blackthorne Drive
Blackthorne Road
Blackthorne Road
0 0 4
1 0 1
12 8
1 0
0 3 0
2 13 0
16 1
13 2
9 0
4 1 5
2 9 3
0 0 7
0 1 4
14 0
4 0
4 0
0 0
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Multidisciplinary Consulting Engineers
Sandyford Central
Diagram 8: P.M. Peak Hour Trip Generation & Assignment

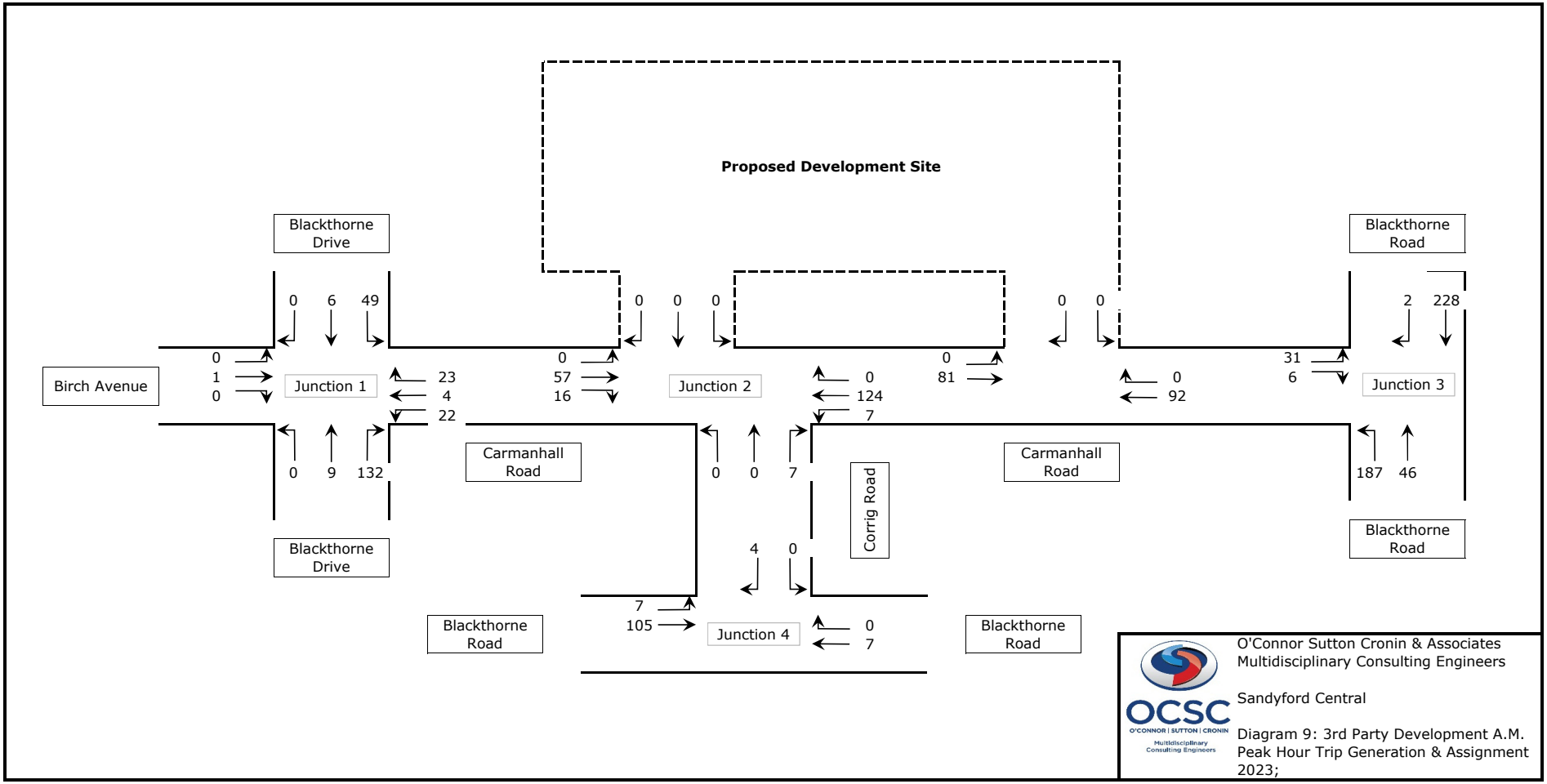

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Diagram 9: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2023;

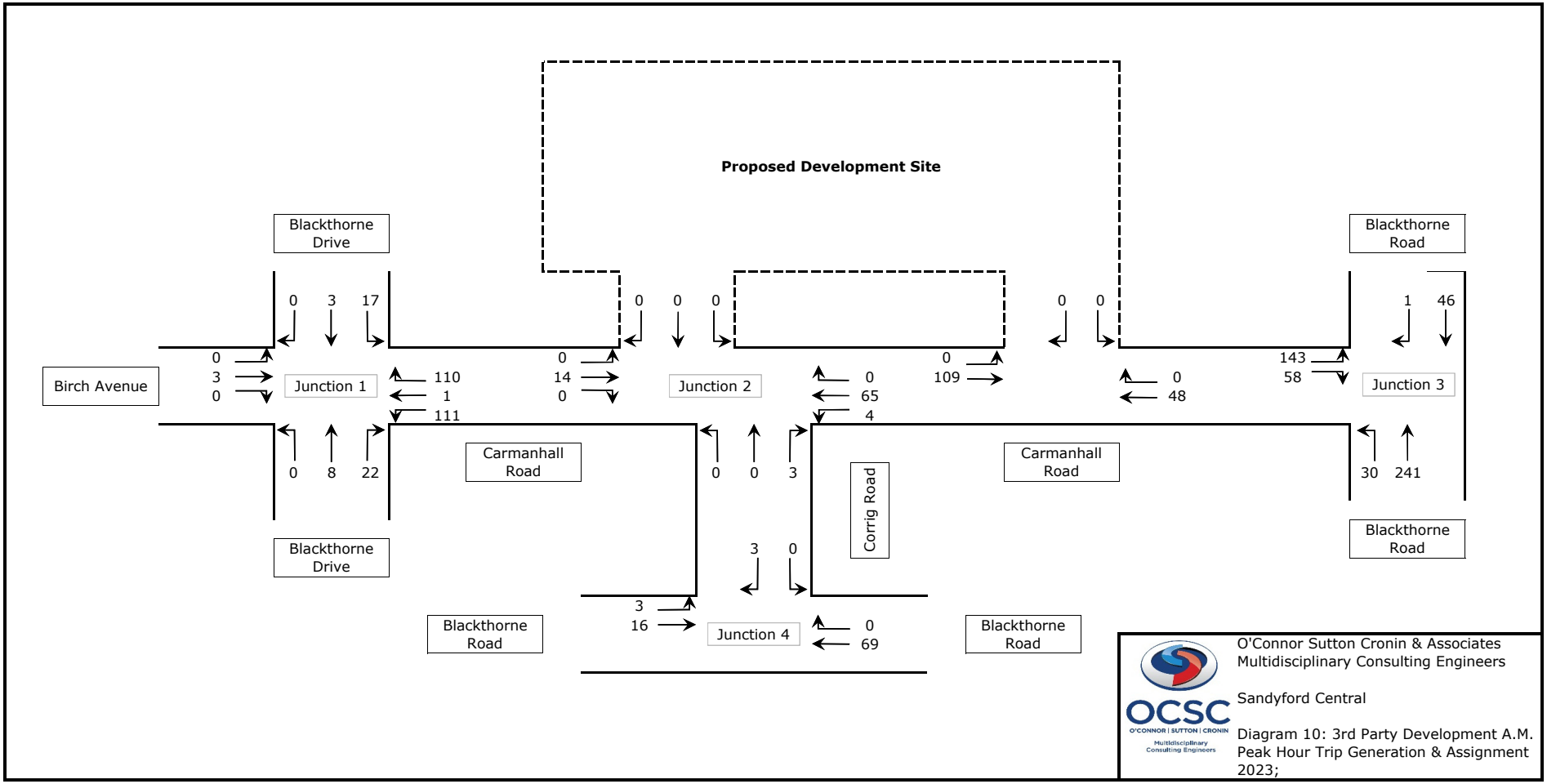

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Diagram 10: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2023;

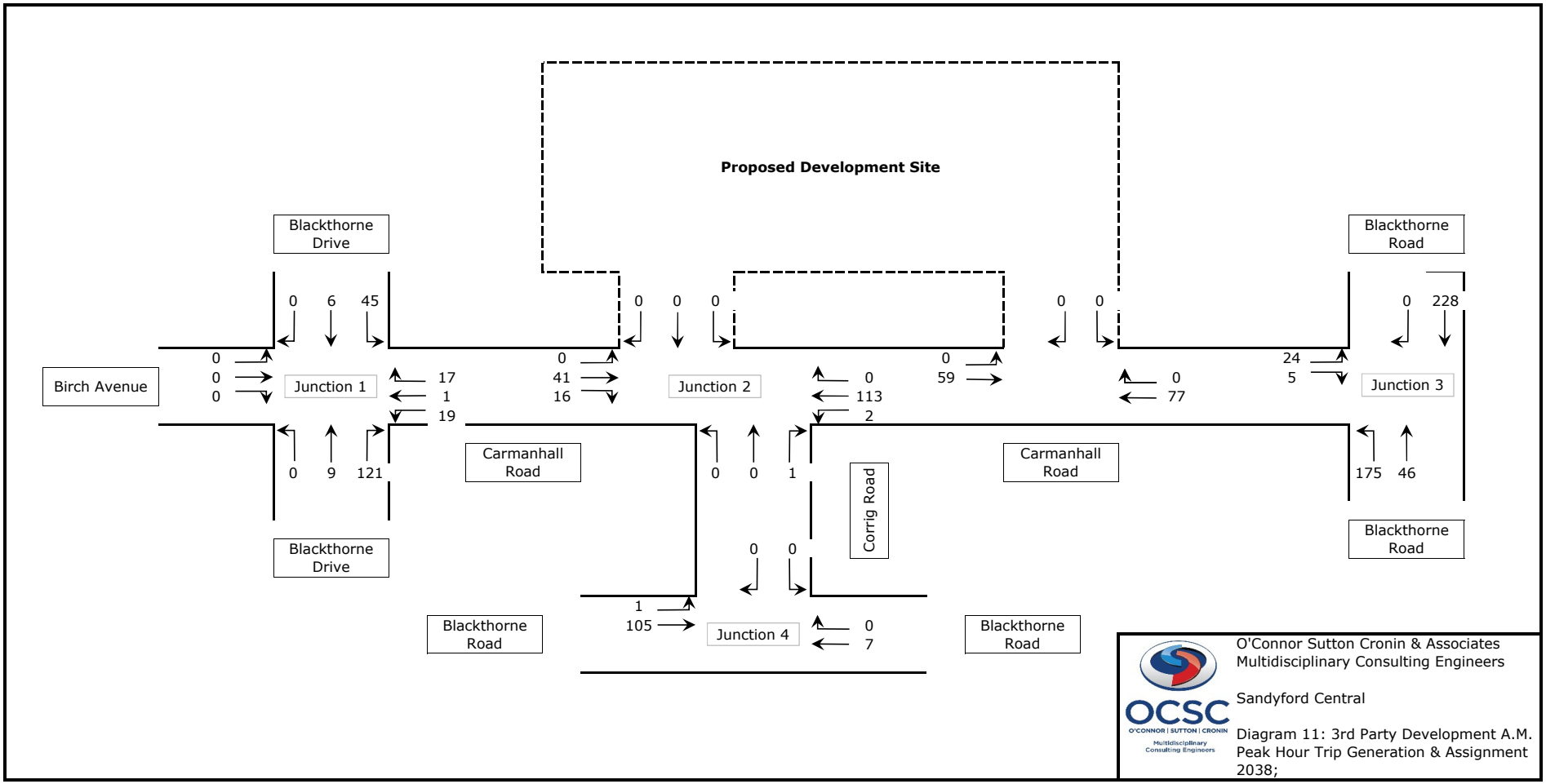

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Diagram 11: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2038;

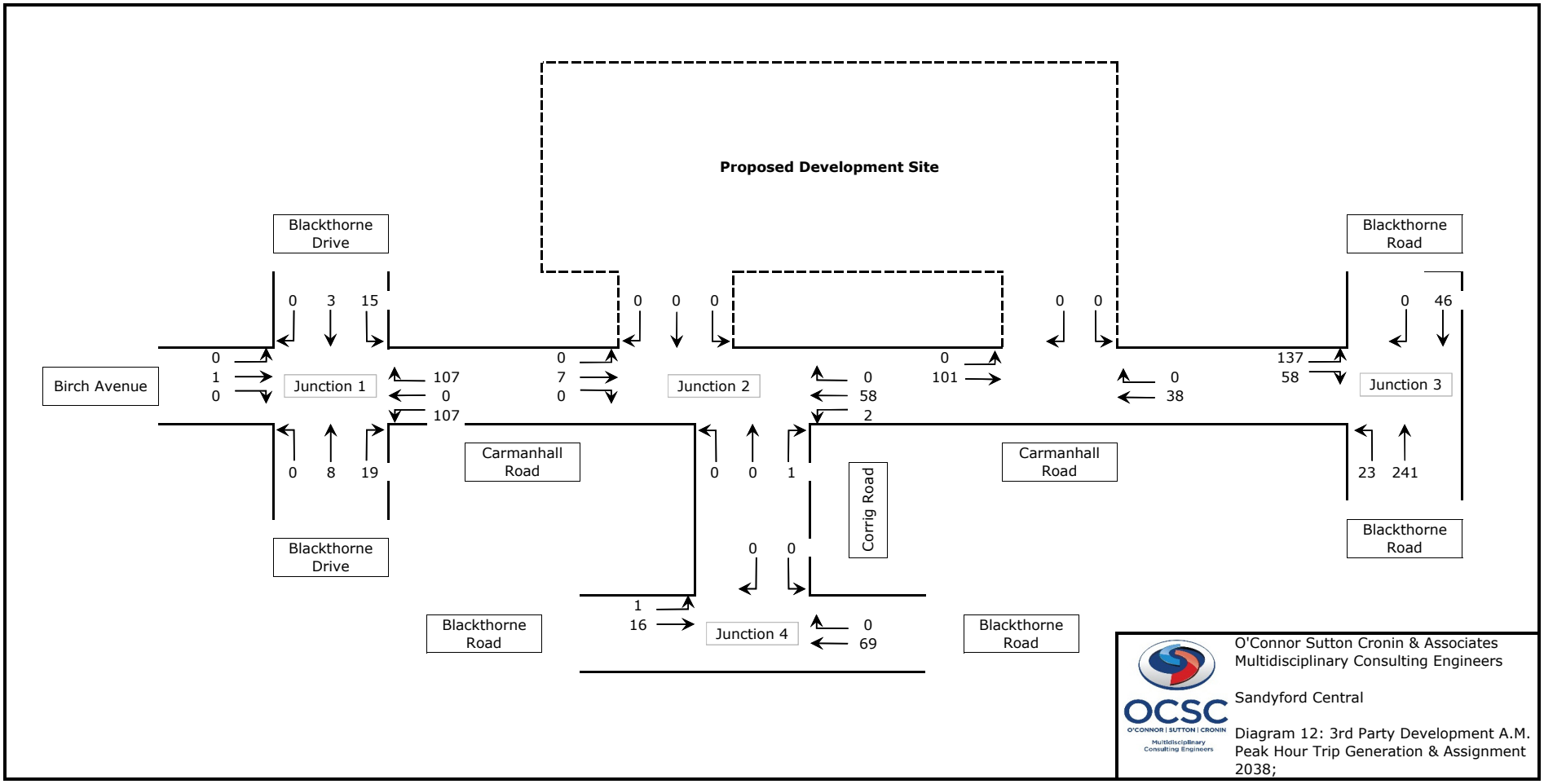

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Diagram 12: 3rd Party Development A.M. Peak Hour Trip Generation & Assignment 2038;

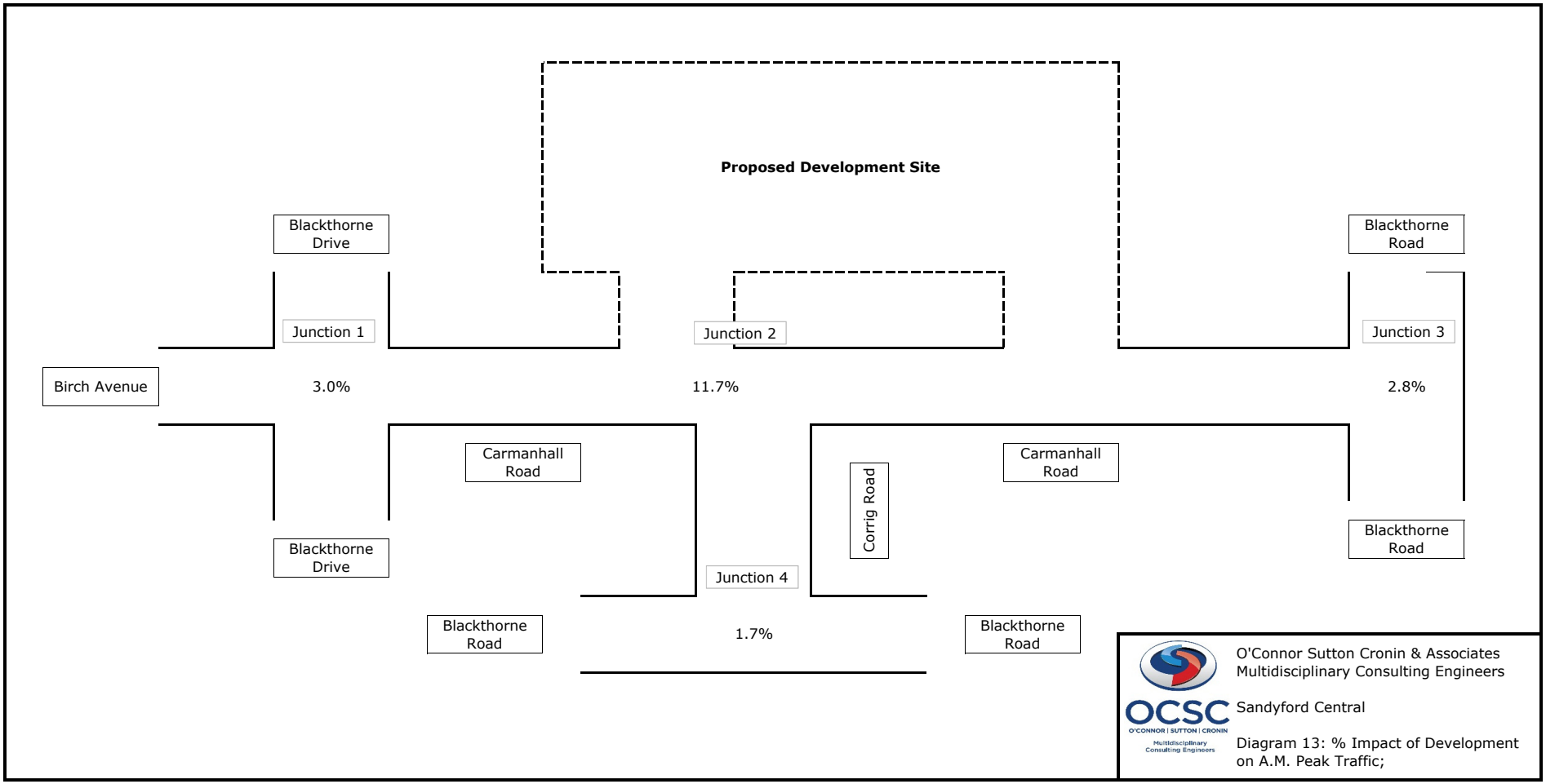

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Diagram 13: % Impact of Development on A.M. Peak Traffic;

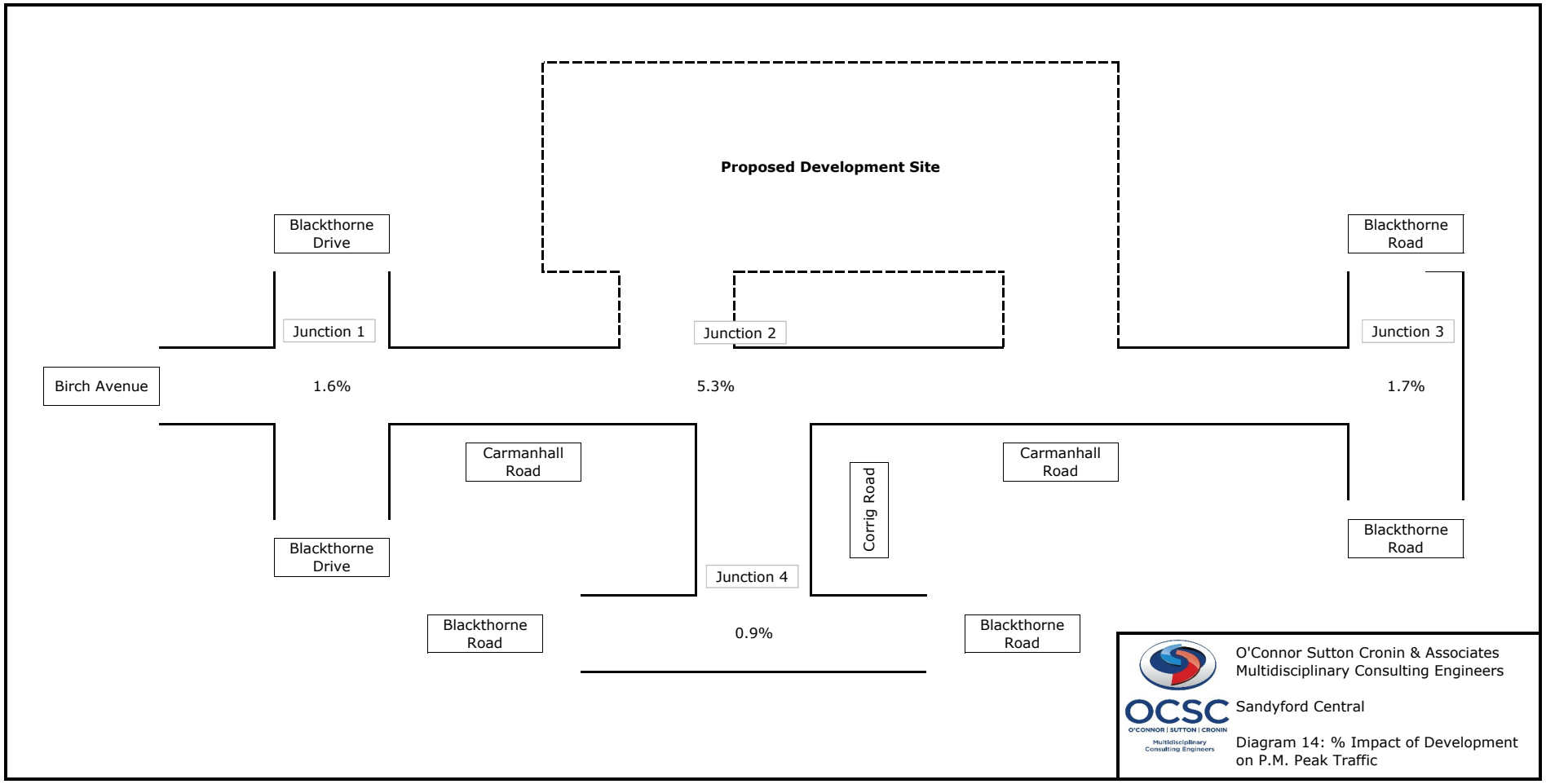

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Diagram 14: % Impact of Development on P.M. Peak Traffic

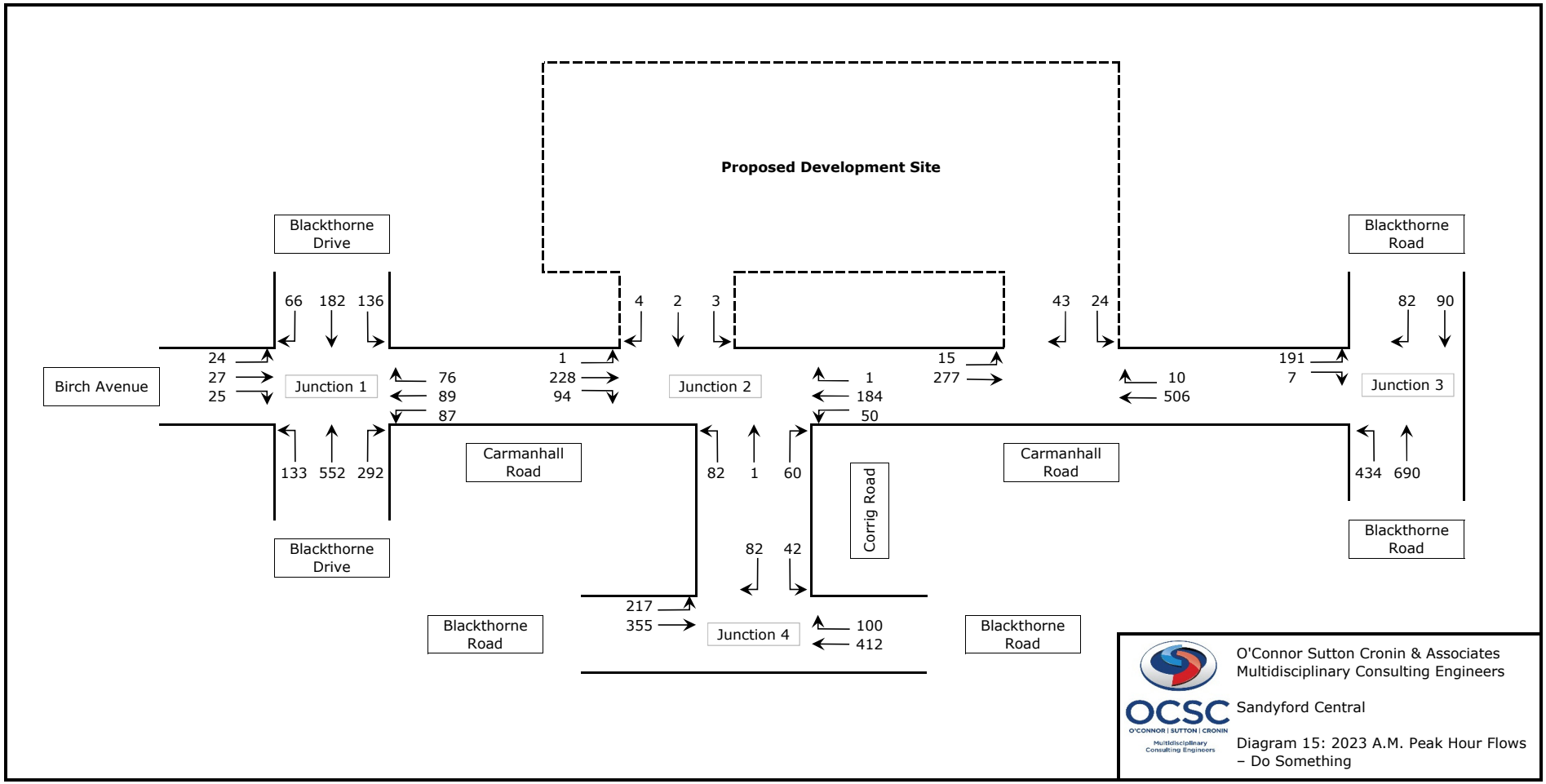

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Diagram 15: 2023 A.M. Peak Hour Flows – Do Something

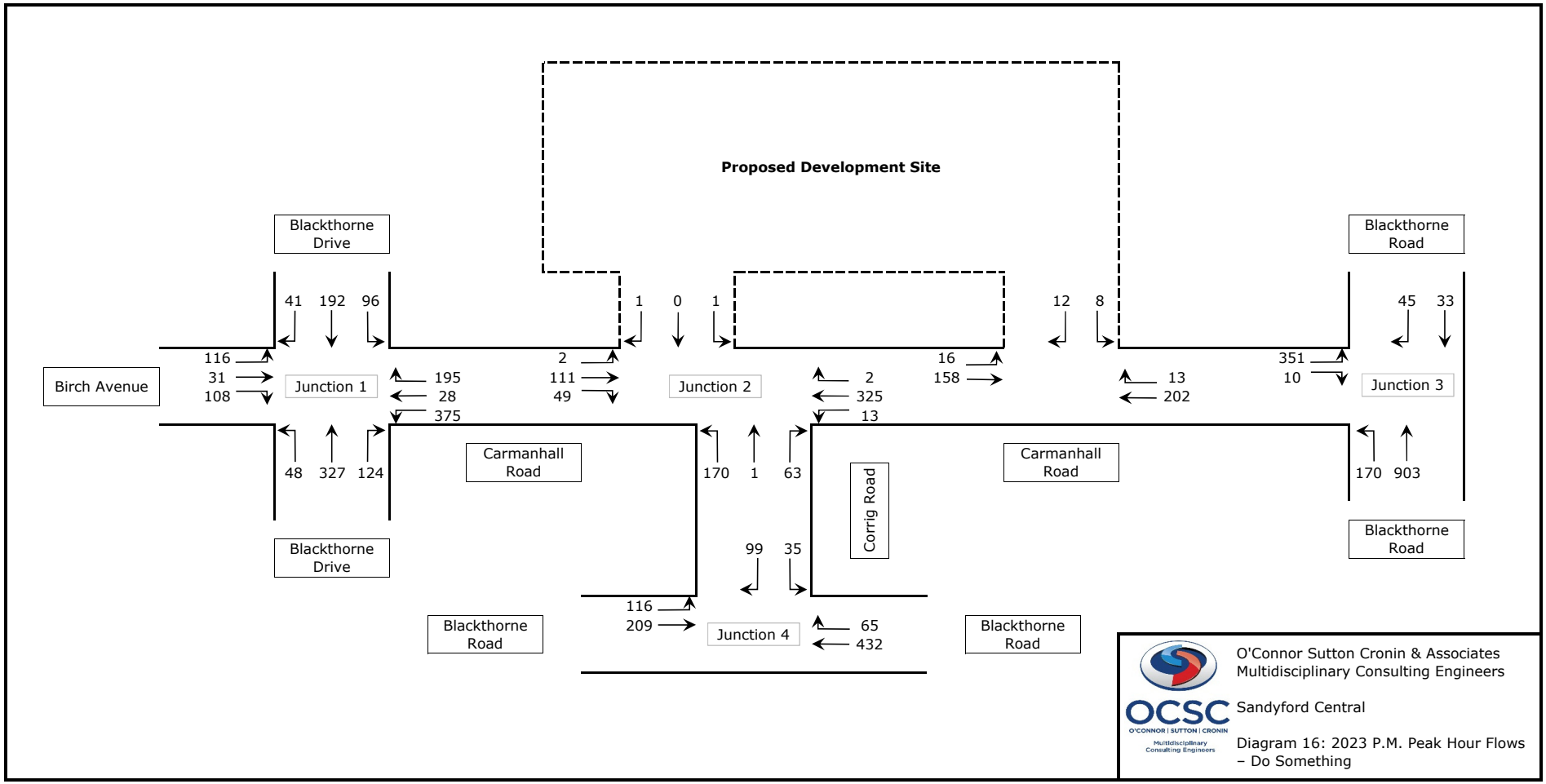

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Diagram 16: 2023 P.M. Peak Hour Flows – Do Something

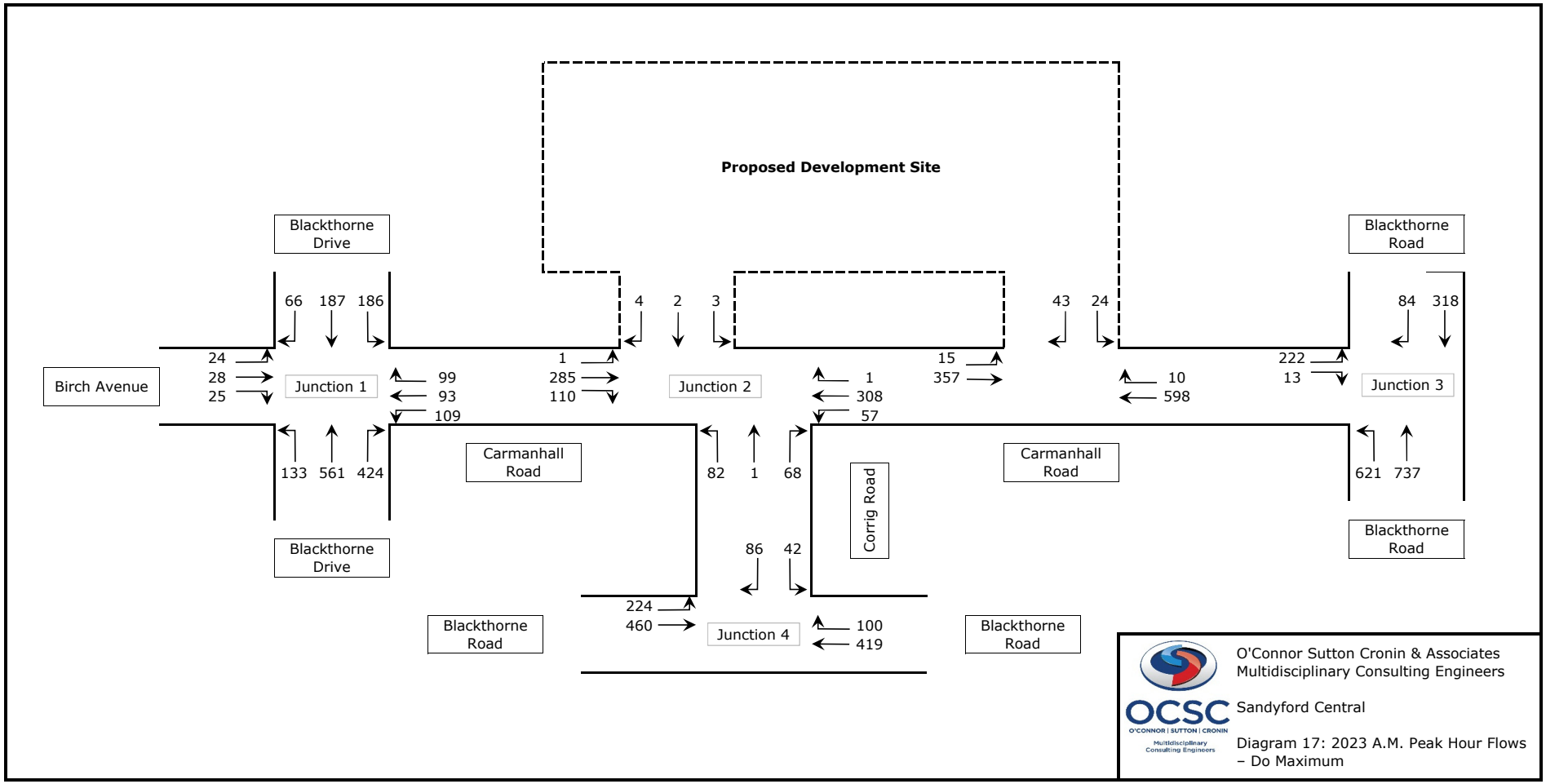

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Diagram 17: 2023 A.M. Peak Hour Flows – Do Maximum

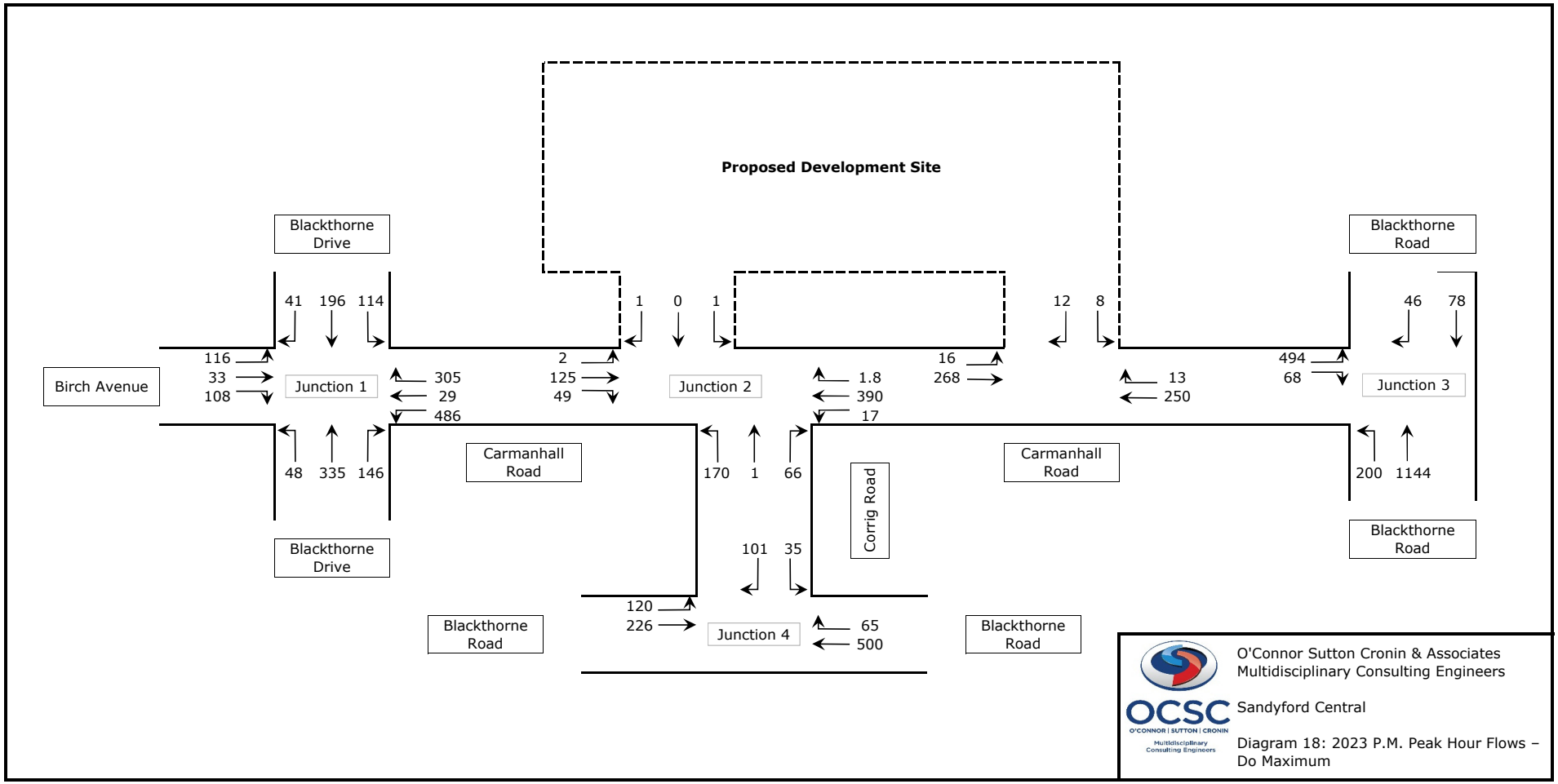

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Diagram 18: 2023 P.M. Peak Hour Flows – Do Maximum

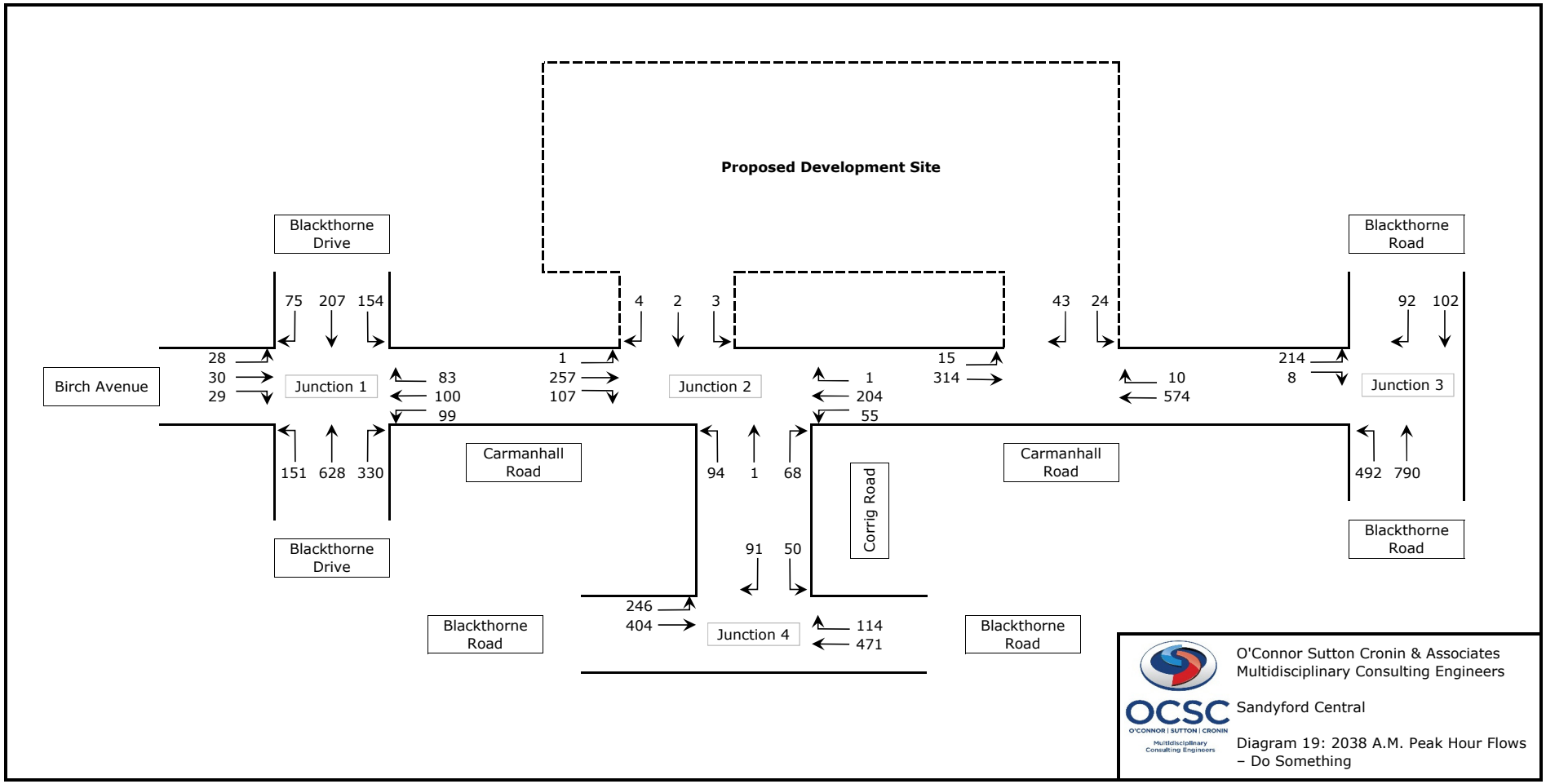
Proposed Development Site
Blackthorne Drive
Blackthorne Road
Birch Avenue
Junction 1
Junction 2
Junction 3
Junction 4
Carmanhall Road
Carmanhall Road
Corrig Road
Blackthorne Drive
Blackthorne Road
Blackthorne Road
75 207 154
4 2 3
43 24
92 102
28
30
29
83
100
99
1
257
107
15
314
1
204
55
10
574
214
8
151 628 330
94 1 68
492 790
91 50
246
404
114
471
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Diagram 19: 2038 A.M. Peak Hour Flows – Do Something

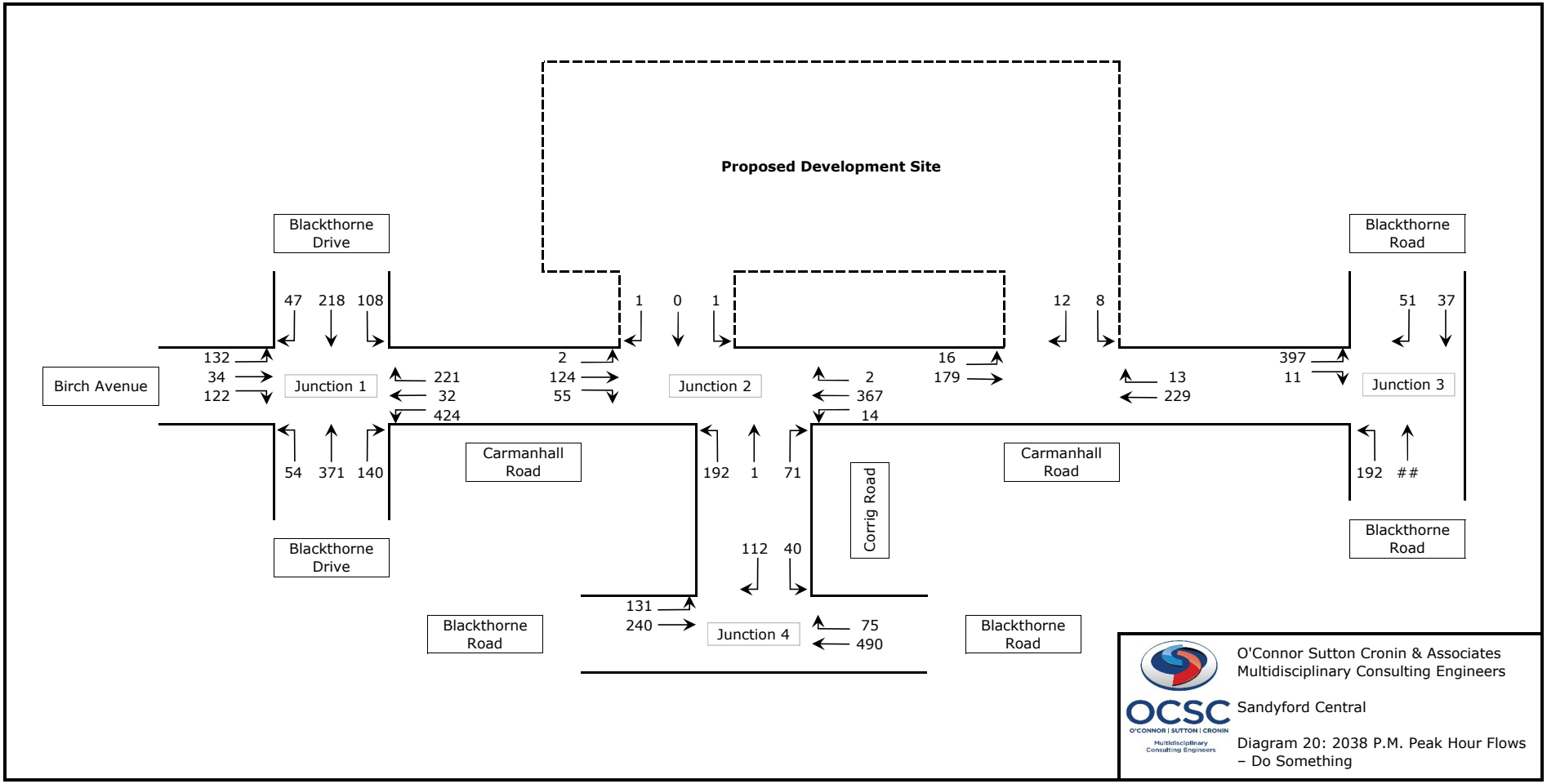

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Diagram 20: 2038 P.M. Peak Hour Flows – Do Something

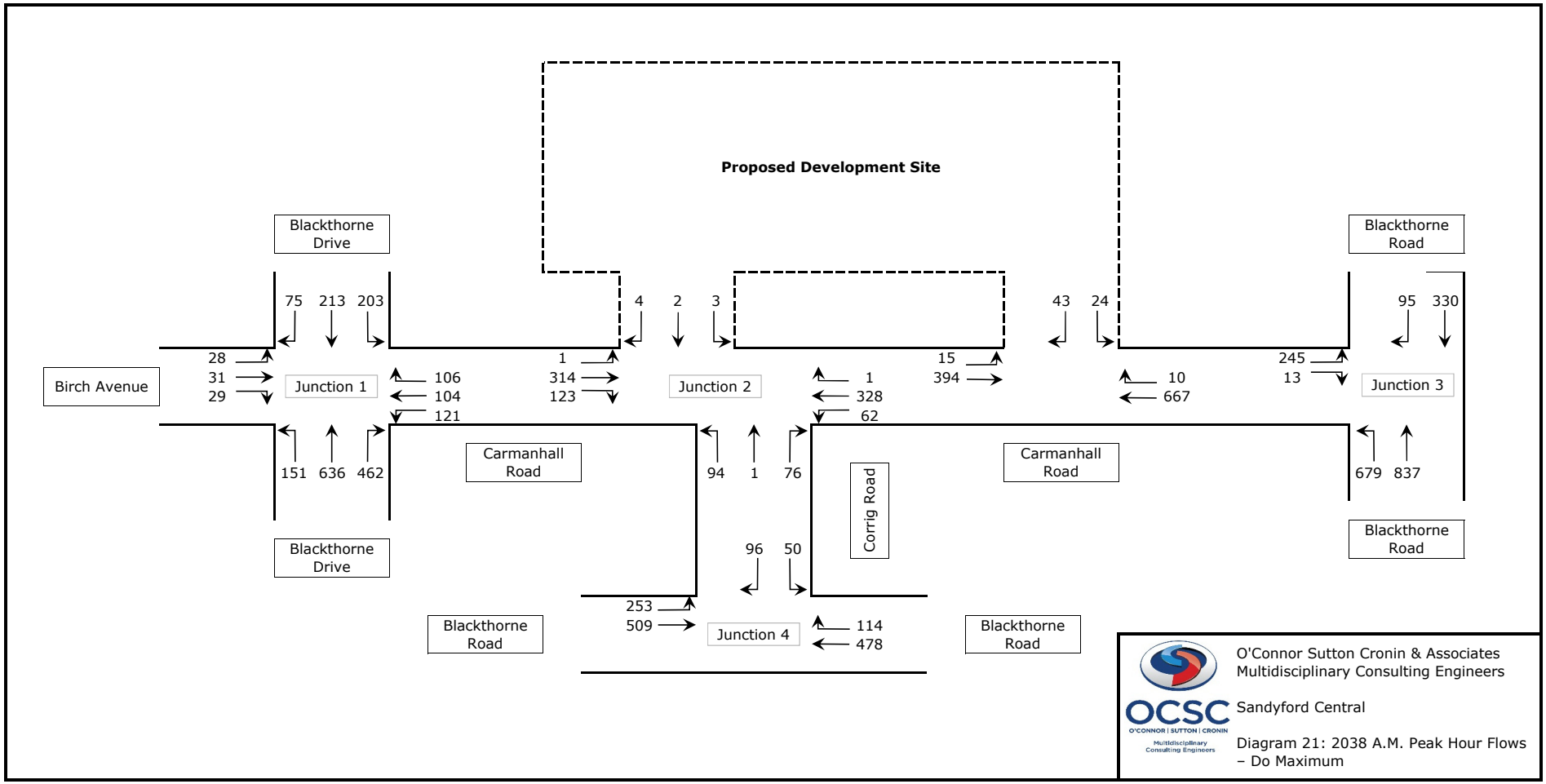

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Diagram 21: 2038 A.M. Peak Hour Flows – Do Maximum

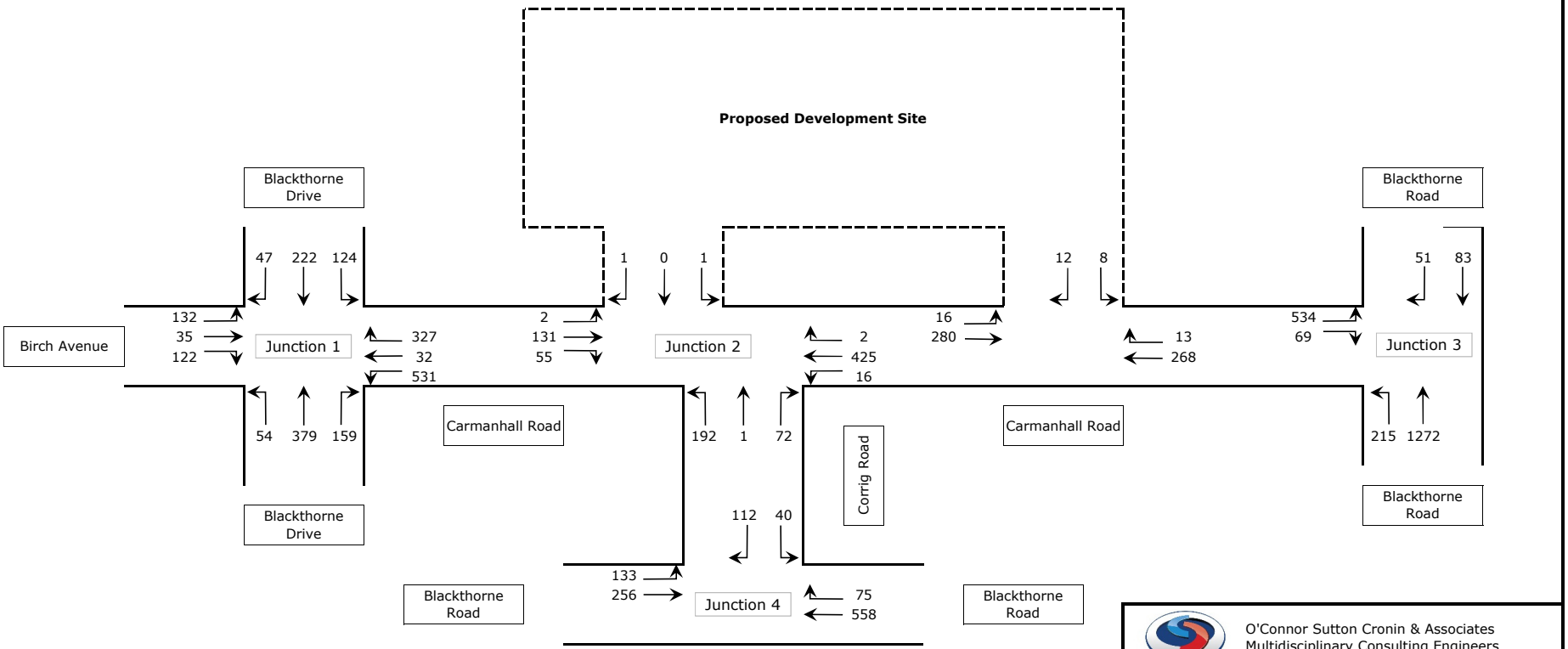

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Diagram 22: 2038 P.M. Peak Hour Flows – Do Maximum

APPENDIX C: MODEL CALIBRATION SUMMARY

Site 1		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Drive N	6.1	3.4
	2.9	1.5
	2.8	1.5
Birch Avenue	2.8	1.8
	-	
Blackthorn Drive S	5.3	3.3
	10.3	8.1
	6.8	3.7
Carmanhall Road	0.3	0.1
	4.1	3.1

Site 1		
P.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Drive N	5.3	2.7
	3.8	1.5
	1.7	1.5
Birch Avenue	7.3	6.5
	-	
Blackthorn Drive S	3.5	1.5
	5.3	3.5
	3.3	1.5
Carmanhall Road	2.4	1.5
	9.0	5.3

Site 2		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Carmanhall Road W	1.0	0.4
Corrig Road	0.6	0.2
	1.6	0.2
Carmanhall Road E	0.0	0.0

Site 2		
P.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Carmanhall Road W	0.9	0.2
Corrig Road	3.1	0.4
	1.4	0.2
Carmanhall Road E	1.7	0.0

Site 3		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Road N	3.9	0.5
Carmanhall Road	3.7	0.6
Blackthorn Road S	0.0	0.0

Site 3		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Road N	1.2	0.1
Carmanhall Road	10.1	3.6
Blackthorn Road S	0.3	0.0

Site 4		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Road W	4.2	0.0
	1.9	0.0
Corrig Road	1.1	0.1
	1.8	0.2
Blackthorn Road E	0.1	0.0
	1.2	0.8

Site 4		
A.M. Peak Hour Model Calibration Summary		
	Average Queue	Modelled Queue
Blackthorn Road W	2.7	0.0
	0.8	0.0
Corrig Road	0.5	0.1
	1.7	0.3
Blackthorn Road E	0.1	0.0
	0.8	0.4

Appendix D: Model Output Files

TRANSYT 15

Filename: Junction 1 2023 DM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:48:53

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DM
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

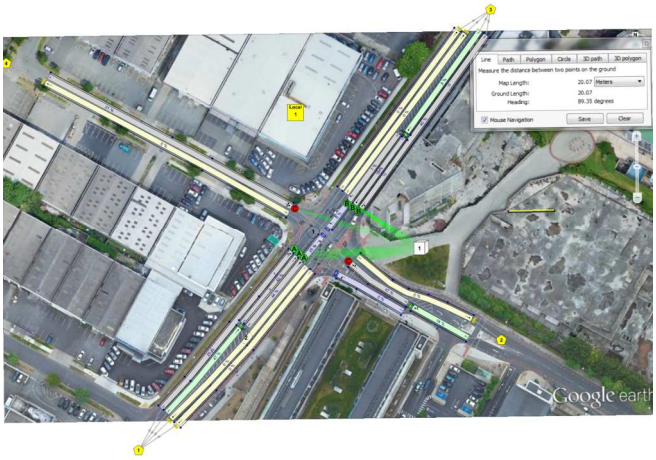
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2023 DM
Cyclelime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/07/2019 13:48:48	08/07/2019 13:48:49	08:00	100	159.99	10.13	46.78	10/1	0	0	10/1	4/1	10/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1873	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1786	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1828			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	61	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	51	21.54	✓	1873
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	72	12.57	✓	1786
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	67	16.38	✓	1828
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	251	1791	54	0.00	25	253	24.41	12.41	49.62	3.46	
2	1		1	1	A	460	2080	54	0.00	40	124	18.52	13.72	46.42	5.93	
3	1		1	1	A	414	2080	54	9.74	44	105	20.14	15.34	56.65	5.39	
4	1		2			874	2080	100	10.11	47	93	7.59	1.59	14.39	4.33	
5	1					171	Unrestricted	100	13.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					171	Unrestricted	100	13.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			414	1476	100	45.00	28	221	3.18	1.50	7.40	1.50	
8	1		3			302	1914	100	0.00	16	470	3.78	0.18	0.00	0.01	
9	1		1			118	1287	100	0.00	9	881	4.37	0.17	2.14	1.45	
10	1		1	1	C	184	1873	20	0.00	47	92	42.85	38.65	87.40	4.57	
11	1					691	Unrestricted	100	29.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	348	1786	48	0.00	40	126	29.51	17.51	58.69	5.84	
13	1		1	1	B	98	2080	48	0.00	10	836	18.06	13.86	51.54	1.46	
14	1		1	1	B	66	2027	48	0.11	7	1251	17.84	13.64	51.13	1.45	
15	1		4			164	2080	100	0.00	8	1041	6.07	0.07	0.00	0.00	
16	1					534	Unrestricted	100	17.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					162	Unrestricted	100	22.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	82	1828	20	0.00	21	321	45.96	33.96	82.08	1.90	
19	1					292	Unrestricted	100	17.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1079	100	51.00	6	1371	7.09	5.41	53.69	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	396.55	23.35	16.98	10.13	143.90	16.09	0.00	159.99
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	396.55	23.35	16.98	10.13	143.90	16.09	0.00	159.99

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2023 DM OPTIM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:49:55

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DM
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2023 DM
Cycletime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor ove PR
1	08/07/2019 13:49:46	08/07/2019 13:49:46	08:00	100	141.52	8.97	65.49	10/1	0	0	10/1	4/1	10/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Extended - Offsets And Green Splits	✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1, -15, -5, -1, 15, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1873	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1786	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1828			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	61	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	51	21.54	✓	1873
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	72	12.57	✓	1786
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	67	16.38	✓	1828
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	84	1	1	1
	2	✓	2	A,B	84	43	59	1	7
	3	✓	3	C	49	63	14	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1	1	A	251	1791	60	0.00	23	292	21.34	9.34	42.91	3.04	
2	1		1	1	A	460	2080	60	0.00	36	148	15.54	10.74	45.52	5.82	
3	1		1	1	A	414	2080	60	8.58	38	137	17.51	12.71	52.63	5.26	
4	1		2			874	2080	100	4.12	44	105	6.80	0.80	4.25	1.87	
5	1					171	Unrestricted	100	6.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					171	Unrestricted	100	6.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			414	1468	100	39.00	28	219	3.08	1.40	7.40	1.50	
8	1		3			302	1914	100	0.00	16	470	3.78	0.18	0.00	0.01	
9	1		1			118	1286	100	0.00	9	881	4.37	0.17	2.06	1.45	
10	1		1	1	C	184	1873	14	0.00	65	37	56.17	51.97	102.49	5.26	
11	1					691	Unrestricted	100	23.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	348	1786	59	0.00	32	177	22.75	10.75	46.18	4.56	
13	1		1	1	B	98	2080	59	0.00	8	1046	12.72	8.52	40.12	1.45	
14	1		1	1	B	66	2027	59	0.11	5	1555	12.62	8.42	40.09	1.45	
15	1		4			164	2080	100	0.00	8	1041	6.07	0.07	0.00	0.00	
16	1					534	Unrestricted	100	14.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					162	Unrestricted	100	18.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	82	1828	14	0.00	30	201	52.61	40.61	89.59	2.07	
19	1					292	Unrestricted	100	14.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1051	100	40.00	6	1333	7.26	5.58	46.72	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	396.55	22.19	17.87	8.97	127.42	14.10	0.00	141.52
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	396.55	22.19	17.87	8.97	127.42	14.10	0.00	141.52

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Version: 15.5.2.7994

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

Filename: Junction 1 2023 DM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:48:53

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DM
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2023 DM
Cyclotime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/07/2019 13:48:48	08/07/2019 13:48:49	08:00	100	159.99	10.13	46.78	10/1	0	0	10/1	4/1	10/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1873	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1786	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1828			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	61	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	51	21.54	✓	1873
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	72	12.57	✓	1786
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	67	16.38	✓	1828
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/Hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	251	1791	54	0.00	25	253	24.41	12.41	49.62	3.46	
2	1		1	1	A	460	2080	54	0.00	40	124	18.52	13.72	46.42	5.93	
3	1		1	1	A	414	2080	54	9.74	44	105	20.14	15.34	56.65	5.39	
4	1		2			874	2080	100	10.11	47	93	7.59	1.59	14.39	4.33	
5	1					171	Unrestricted	100	13.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					171	Unrestricted	100	13.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			414	1476	100	45.00	28	221	3.18	1.50	7.40	1.50	
8	1		3			302	1914	100	0.00	16	470	3.78	0.18	0.00	0.01	
9	1		1			118	1287	100	0.00	9	881	4.37	0.17	2.14	1.45	
10	1		1	1	C	184	1873	20	0.00	47	92	42.85	38.65	87.40	4.57	
11	1					691	Unrestricted	100	29.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	348	1786	48	0.00	40	126	29.51	17.51	58.69	5.94	
13	1		1	1	B	98	2080	48	0.00	10	836	18.06	13.86	51.54	1.46	
14	1		1	1	B	66	2027	48	0.11	7	1251	17.84	13.64	51.13	1.45	
15	1		4			164	2080	100	0.00	8	1041	6.07	0.07	0.00	0.00	
16	1					534	Unrestricted	100	17.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					162	Unrestricted	100	22.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	82	1828	20	0.00	21	321	45.96	33.96	82.08	1.90	
19	1					292	Unrestricted	100	17.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1079	100	51.00	6	1371	7.09	5.41	53.69	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	396.55	23.35	16.98	10.13	143.90	16.09	0.00	159.99
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	396.55	23.35	16.98	10.13	143.90	16.09	0.00	159.99

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2023 DN.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:42:07

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DN
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

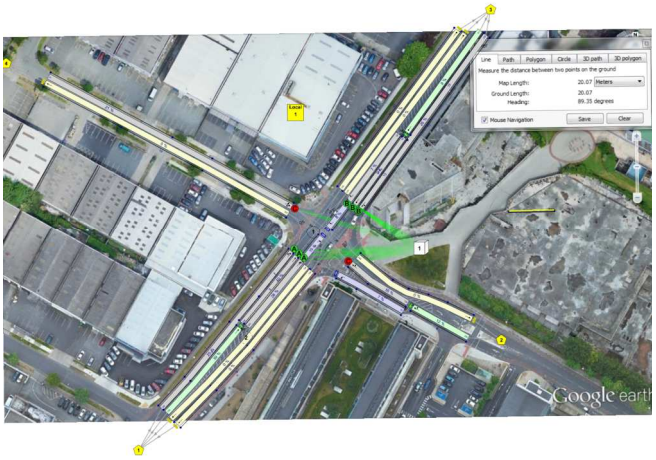
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2023 DN
Cyclelime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Re wit wor over PR
1	08/07/2019 13:41:59	08/07/2019 13:42:00	08:00	100	123.64	7.80	39.69	2/1	0	0	2/1	4/1	2/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1788	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1885	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1812	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	55	9.71	✓	1788
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	61	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	42	21.54	✓	1885
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	59	12.57	✓	1812
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	249	1788	54	0.00	25	255	24.39	12.39	49.61	3.43	
2	1		1	1	A	454	2080	54	0.00	40	127	18.54	13.74	46.99	5.93	
3	1		1	1	A	285	2080	54	2.33	26	246	17.22	12.42	47.14	3.68	
4	1		2			739	2080	100	9.65	39	129	7.24	1.24	12.20	3.00	
5	1					154	Unrestricted	100	25.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					154	Unrestricted	100	25.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			285	1485	100	45.00	19	369	2.90	1.22	12.62	1.47	
8	1		3			229	1914	100	0.00	12	652	3.73	0.13	0.00	0.01	
9	1		1			90	1296	100	0.00	7	1196	4.33	0.13	2.10	0.05	
10	1		1	1	C	139	1885	20	0.00	35	156	40.37	36.17	85.43	3.30	
11	1					445	Unrestricted	100	30.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	229	1812	48	0.00	26	249	27.60	15.60	55.70	3.54	
13	1		1	1	B	95	2080	48	0.00	9	866	18.03	13.83	51.18	1.45	
14	1		1	1	B	66	2027	48	0.11	7	1251	17.84	13.64	51.13	1.45	
15	1		4			161	2080	100	0.00	8	1063	6.07	0.07	0.00	0.00	
16	1					510	Unrestricted	100	19.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					142	Unrestricted	100	27.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	81	1826	20	0.00	21	326	45.93	33.93	82.07	1.87	
19	1					283	Unrestricted	100	18.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1089	100	51.00	6	1385	6.68	5.00	54.00	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	334.68	18.95	17.66	7.80	110.73	12.92	0.00	123.64
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	334.68	18.95	17.66	7.80	110.73	12.92	0.00	123.64

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2023 DN.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:45:16

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DN
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

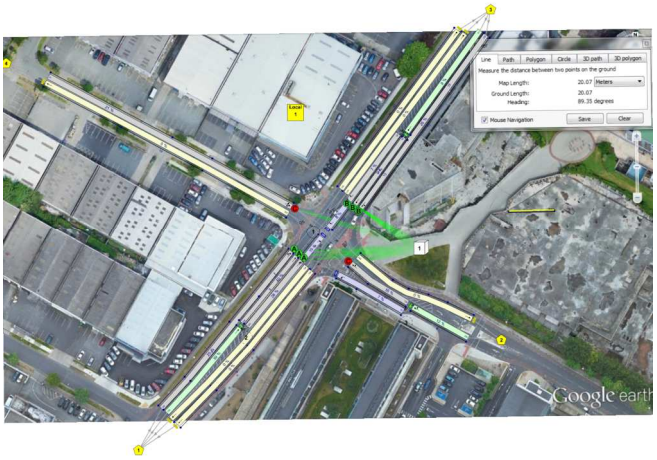
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2023 DN
Cyclelime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/07/2019 13:45:13	08/07/2019 13:45:14	08:00	100	123.64	7.80	39.69	2/1	0	0	2/1	4/1	2/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1788	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1885	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1812	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	55	9.71	✓	1788
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	61	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	42	21.54	✓	1885
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	59	12.57	✓	1812
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	249	1788	54	0.00	25	255	24.39	12.39	49.61	3.43	
2	1		1	1	A	454	2080	54	0.00	40	127	18.54	13.74	46.99	5.93	
3	1		1	1	A	285	2080	54	2.33	26	246	17.22	12.42	47.14	3.68	
4	1		2			739	2080	100	9.65	39	129	7.24	1.24	12.20	3.00	
5	1					154	Unrestricted	100	25.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					154	Unrestricted	100	25.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			285	1485	100	45.00	19	369	2.90	1.22	12.62	1.47	
8	1		3			229	1914	100	0.00	12	652	3.73	0.13	0.00	0.01	
9	1		1			90	1296	100	0.00	7	1196	4.33	0.13	2.10	0.05	
10	1		1	1	C	139	1885	20	0.00	35	156	40.37	36.17	85.43	3.30	
11	1					445	Unrestricted	100	30.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	229	1812	48	0.00	26	249	27.60	15.60	55.70	3.54	
13	1		1	1	B	95	2080	48	0.00	9	866	18.03	13.83	51.18	1.45	
14	1		1	1	B	66	2027	48	0.11	7	1251	17.84	13.64	51.13	1.45	
15	1		4			161	2080	100	0.00	8	1063	6.07	0.07	0.00	0.00	
16	1					510	Unrestricted	100	19.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					142	Unrestricted	100	27.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	81	1826	20	0.00	21	326	45.93	33.93	82.07	1.87	
19	1					283	Unrestricted	100	18.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1089	100	51.00	6	1385	6.68	5.00	54.00	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	334.68	18.95	17.66	7.80	110.73	12.92	0.00	123.64
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	334.68	18.95	17.66	7.80	110.73	12.92	0.00	123.64

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2023 DS.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:46:31

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DS
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2023 DS
Cycletime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor ove PR
1	08/07/2019 13:46:25	08/07/2019 13:46:25	08:00	100	130.20	8.23	42.30	10/1	0	0	10/1	4/1	10/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1788	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1913					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1880	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1812	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1828			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	55	9.71	✓	1788
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	63	66.82	✓	1913
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	46	21.54	✓	1880
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	59	12.57	✓	1812
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	67	16.38	✓	1828
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	249	1788	54	0.00	25	255	24.39	12.39	49.61	3.43	
2	1		1	1	A	454	2080	54	0.00	40	127	18.54	13.74	46.99	5.93	
3	1		1	1	A	293	2080	54	3.65	27	228	17.36	12.56	48.05	3.79	
4	1		2			747	2080	100	9.63	40	126	7.25	1.25	12.25	3.24	
5	1					158	Unrestricted	100	23.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					158	Unrestricted	100	23.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			293	1485	100	45.00	20	356	2.98	1.30	12.25	1.47	
8	1		3			265	1913	100	0.00	14	550	3.75	0.15	0.00	0.01	
9	1		1			98	1296	100	0.00	8	1090	4.34	0.14	2.11	0.06	
10	1		1	1	C	167	1880	20	0.00	42	113	41.81	37.61	86.30	4.00	
11	1					457	Unrestricted	100	29.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	232	1812	48	0.00	26	244	27.64	15.64	55.71	3.59	
13	1		1	1	B	95	2080	48	0.00	9	866	18.03	13.83	51.18	1.45	
14	1		1	1	B	66	2027	48	0.11	7	1251	17.84	13.64	51.13	1.45	
15	1		4			161	2080	100	0.00	8	1063	6.07	0.07	0.00	0.00	
16	1					520	Unrestricted	100	18.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					152	Unrestricted	100	23.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	82	1828	20	0.00	21	321	45.96	33.96	82.08	1.90	
19	1					291	Unrestricted	100	17.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			66	1089	100	51.00	6	1385	6.69	5.01	54.00	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	343.38	19.67	17.45	8.23	116.84	13.36	0.00	130.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	343.38	19.67	17.45	8.23	116.84	13.36	0.00	130.20

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Version: 15.5.2.7994

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

Filename: Junction 1 2023 DS.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:47:03

»Network Diagrams
«A2 - PM PEAK : D2 - PM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2023 DS
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

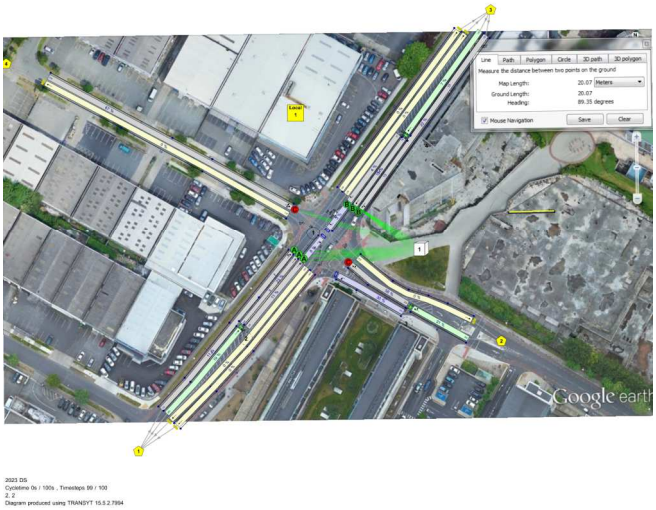
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2023 DS
Cyclotime 0s / 100s , Timesteps 99 / 100
2, 2
Diagram produced using TRANSYT 15.5.2.7994

A2 - PM PEAK
D2 - PM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/07/2019 13:46:58	08/07/2019 13:46:58	08:00	100	139.61	9.03	67.38	18/1	0	0	18/1	8/1	18/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM PEAK		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1819	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1924					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1828	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1833	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1795			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	43	9.71	✓	1819
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	37	66.82	✓	1924
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	21.54	✓	1828
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	49	12.57	✓	1833
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	16.38	✓	1795
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	115	1819	54	0.00	11	683	23.04	11.04	46.73	1.51	
2	1		1	1	A	264	2080	54	0.00	23	290	16.97	12.17	49.47	3.63	
3	1		1	1	A	126	2080	54	0.44	11	711	15.91	11.11	47.17	1.65	
4	1		2			390	2080	100	0.00	19	380	6.20	0.20	0.00	0.02	
5	1					340	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					340	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			126	1488	100	45.00	8	963	1.85	0.17	2.78	1.45	
8	1		3			598	1924	100	0.00	31	190	4.02	0.42	0.00	0.07	
9	1		1			374	1248	100	0.00	30	200	4.93	0.73	3.02	1.51	
10	1		1	1	C	224	1828	20	0.00	58	54	46.28	42.08	91.39	5.69	
11	1					252	Unrestricted	100	24.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	195	1833	48	0.00	22	315	27.11	15.11	55.00	3.02	
13	1		1	1	B	99	2080	48	0.00	10	827	18.07	13.87	51.87	1.47	
14	1		1	1	B	41	2027	48	47.11	4	2075	17.62	13.42	51.08	1.45	
15	1		4			140	2080	100	0.00	7	1237	6.06	0.06	0.00	0.00	
16	1					478	Unrestricted	100	11.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					164	Unrestricted	100	20.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	254	1795	20	0.00	67	34	58.00	46.00	99.28	7.17	
19	1					118	Unrestricted	100	26.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			41	1337	100	97.00	3	2834	2.06	0.38	27.34	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	332.57	20.12	16.53	9.03	128.24	11.36	0.00	139.61
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	332.57	20.12	16.53	9.03	128.24	11.36	0.00	139.61

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2038 DM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:57:20

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DMax
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

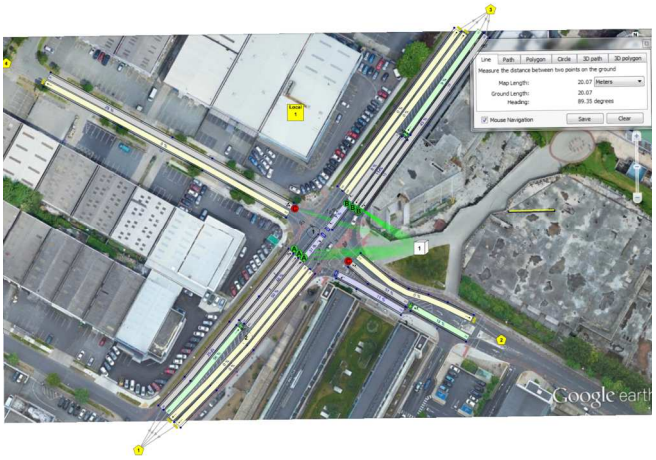
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2036 DMax
Cyclelime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Be wit wor over PR
1	08/07/2019 13:57:14	08/07/2019 13:57:14	08:00	100	190.79	12.09	55.90	4/1	0	0	10/1	4/1	4/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1875	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1788	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	60	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	50	21.54	✓	1875
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	71	12.57	✓	1788
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	286	1791	54	0.00	29	210	24.80	12.80	49.75	3.95	
2	1		1	1	A	525	2080	54	0.00	46	96	18.35	13.55	41.08	5.99	
3	1		1	1	A	453	2080	54	11.71	50	79	20.41	15.61	52.20	5.26	
4	1		2			978	2080	100	15.89	56	61	9.41	3.41	26.63	8.23	
5	1					196	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					196	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			453	1458	100	45.00	31	190	3.37	1.69	7.12	1.52	
8	1		3			336	1914	100	0.00	18	413	3.80	0.20	0.00	0.02	
9	1		1			134	1267	100	0.00	11	751	4.42	0.22	2.83	1.46	
10	1		1	1	C	202	1875	20	0.00	51	75	44.01	39.81	89.71	5.04	
11	1					752	Unrestricted	100	28.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	380	1788	48	0.00	43	108	30.09	18.09	61.11	6.46	
13	1		1	1	B	112	2080	48	0.00	11	719	18.17	13.97	53.20	1.66	
14	1		1	1	B	75	2027	48	0.22	8	1086	17.94	13.74	51.15	1.45	
15	1		4			187	2080	100	0.00	9	901	6.09	0.09	0.00	0.00	
16	1					608	Unrestricted	100	16.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					182	Unrestricted	100	20.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	97	1826	20	0.00	25	256	46.56	34.56	83.39	2.28	
19	1					330	Unrestricted	100	16.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			75	1002	100	51.00	7	1103	9.68	8.00	54.92	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	444.83	26.92	16.53	12.09	171.68	19.11	0.00	190.79
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	444.83	26.92	16.53	12.09	171.68	19.11	0.00	190.79

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2038 DM OPTIM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:58:19

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DM OPTIM
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

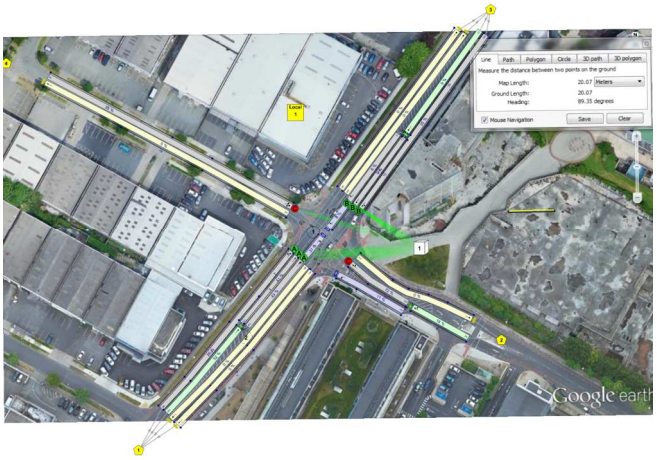
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2038 DM OPTIM
Cycletime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	08/07/2019 13:58:15	08/07/2019 13:58:15	08:00	100	169.89	10.78	71.82	10/1	0	0	10/1	4/1	10/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Extended - Offsets And Green Splits	✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1, -15, -5, -1, 15, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1875	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1788	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	60	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	50	21.54	✓	1875
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	71	12.57	✓	1788
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	84	1	1	1
	2	✓	2	A,B	84	43	59	1	7
	3	✓	3	C	49	63	14	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1	1	A	286	1791	60	0.00	26	244	21.64	9.64	43.57	3.46	
2	1		1	1	A	525	2080	60	0.00	41	118	15.63	10.83	40.74	5.94	
3	1		1	1	A	453	2080	60	10.41	43	109	18.02	13.22	49.15	5.16	
4	1		2			978	2080	100	9.89	52	72	7.80	1.80	15.10	5.17	
5	1					196	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					196	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			453	1451	100	39.00	31	188	3.25	1.57	7.12	1.52	
8	1		3			336	1914	100	0.00	18	413	3.80	0.20	0.00	0.02	
9	1		1			134	1267	100	0.00	11	751	4.40	0.20	2.17	0.08	
10	1		1	1	C	202	1875	14	0.00	72	25	60.45	56.25	106.08	5.99	
11	1					752	Unrestricted	100	22.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	380	1788	59	0.00	35	154	23.08	11.08	47.18	4.99	
13	1		1	1	B	112	2080	59	0.00	9	903	12.82	6.62	40.14	1.45	
14	1		1	1	B	75	2027	59	0.11	6	1357	12.67	8.47	40.10	1.45	
15	1		4			187	2080	100	0.00	9	901	6.09	0.09	0.00	0.00	
16	1					608	Unrestricted	100	13.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					182	Unrestricted	100	16.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	97	1826	14	0.00	35	154	53.75	41.75	91.37	2.49	
19	1					330	Unrestricted	100	13.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			75	971	100	40.00	8	1065	9.44	7.76	48.34	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	444.83	25.61	17.37	10.78	153.12	16.77	0.00	169.89
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	444.83	25.61	17.37	10.78	153.12	16.77	0.00	169.89

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2038 DM OPTIM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:58:43

»Network Diagrams
«A2 - PM PEAK : D2 - PM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DM OPTIM
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2038 DM OPTIM
Cycletime 0s / 100s , Timesteps 99 / 100
2, 2
Diagram produced using TRANSYT 15.5.2.7994

A2 - PM PEAK
D2 - PM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor ove PR
2	08/07/2019 13:58:39	08/07/2019 13:58:40	08:00	100	192.33	12.25	53.77	8/1	0	0	10/1	8/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM PEAK		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Extended - Offsets And Green Splits	✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1, -15, -5, -1, 15, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1822	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1923					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1824	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1827	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1795			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	42	9.71	✓	1822
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	40	66.82	✓	1923
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	91	21.54	✓	1824
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	52	12.57	✓	1827
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	16.38	✓	1795
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	84	1	1	1
	2	✓	2	A,B	84	20	36	1	7
	3	✓	3	C	26	63	37	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	133	1822	37	0.00	19	369	33.36	21.36	64.62	2.39	
2	1		1	1	A	306	2080	37	0.00	39	132	29.05	24.25	69.06	5.87	
3	1		1	1	A	162	2080	37	8.57	26	240	29.13	24.33	81.31	3.02	
4	1		2			468	2080	100	4.68	24	281	6.36	0.36	3.23	0.82	
5	1					440	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					440	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			162	1477	100	62.00	11	720	4.51	2.83	25.27	1.46	
8	1		3			890 <	1923	100	13.92	54	67	6.53	2.93	23.37	6.49 +	
9	1		1			530	1208	100	10.00	44	105	5.74	1.54	7.31	1.62	
10	1		1	1	C	360	1824	37	0.00	52	73	29.55	25.35	60.74	6.08	
11	1					321	Unrestricted	100	40.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	238	1827	36	0.00	35	156	36.28	24.28	70.29	4.66	
13	1		1	1	B	114	2080	36	0.00	15	508	25.62	21.42	65.41	2.07	
14	1		1	1	B	47	2027	36	35.11	6	1332	24.78	20.58	63.16	1.45	
15	1		4			161	2080	100	0.00	8	1063	6.07	0.07	0.00	0.00	
16	1					602	Unrestricted	100	12.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					241	Unrestricted	100	19.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	289	1795	37	0.00	42	112	36.85	24.85	73.66	6.02	
19	1					135	Unrestricted	100	37.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			47	1333	100	86.00	4	2452	8.87	7.19	66.02	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	425.15	26.42	16.09	12.25	173.95	18.38	0.00	192.33
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	425.15	26.42	16.09	12.25	173.95	18.38	0.00	192.33

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Version: 15.5.2.7994

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

Filename: Junction 1 2038 DM.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:57:45

»Network Diagrams
«A2 - PM PEAK : D2 - PM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DMax
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2038 DMax
Cyclotime 0s / 100s , Timesteps 99 / 100
2, 2
Diagram produced using TRANSYT 15.5.2.7994

A2 - PM PEAK
D2 - PM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/07/2019 13:57:42	08/07/2019 13:57:42	08:00	100	1396.81	95.48	119.75	8/1	1	5	10/1	8/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM PEAK		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1822	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1923					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1824	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1827	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1795			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	42	9.71	✓	1822
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	40	66.82	✓	1923
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	91	21.54	✓	1824
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	52	12.57	✓	1827
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	16.38	✓	1795
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

			SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1	1	A	133	1822	54	0.00	13	578	23.21	11.21	47.27	1.75	
2	1		1	1	A	306	2080	54	0.00	27	236	17.39	12.59	49.97	4.43	
3	1		1	1	A	162	2080	54	0.62	14	528	16.22	11.42	47.27	2.13	
4	1		2			468	2080	100	0.00	23	300	6.25	0.25	0.00	0.03	
5	1					396	Unrestricted	100	3.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					396	Unrestricted	100	3.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			162	1467	100	45.00	11	715	1.90	0.22	2.42	1.46	
8	1		3			890 <	1923	100	61.35	120	-25	335.04	331.44	287.19	96.25 +	
9	1		1			443	1219	100	54.00	36	148	5.46	1.26	9.43	1.55	
10	1		1	1	C	301 <	1824	20	0.00	78	15	70.13	65.93	85.07	7.16 +	
11	1					320	Unrestricted	100	20.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	238	1827	48	0.00	27	239	27.69	15.69	55.73	3.68	
13	1		1	1	B	114	2080	48	0.00	11	705	18.18	13.98	53.21	1.69	
14	1		1	1	B	47	2027	48	47.11	5	1798	17.69	13.49	51.09	1.45	
15	1		4			161	2080	100	0.00	8	1063	6.07	0.07	0.00	0.00	
16	1					575	Unrestricted	100	8.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					214	Unrestricted	100	15.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	288	1795	20	0.00	76	18	63.98	51.98	106.33	8.71	
19	1					130	Unrestricted	100	21.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			47	1286	100	95.00	4	2363	2.85	1.17	48.67	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	402.72	108.90	3.70	95.48	1355.75	41.06	0.00	1396.81
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	402.72	108.90	3.70	95.48	1355.75	41.06	0.00	1396.81

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2038 DN.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:52:02

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DN
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

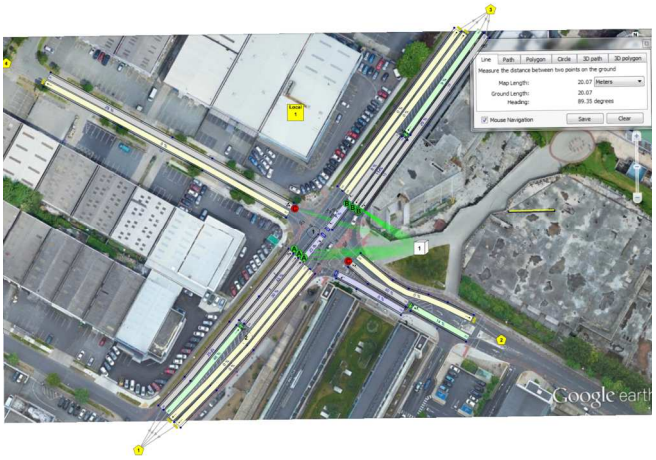
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2036 DN
Cyclelime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Be wit wor over PR
1	08/07/2019 13:51:56	08/07/2019 13:51:56	08:00	100	149.60	9.45	47.89	4/1	0	0	2/1	4/1	4/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1914					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1885	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1814	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	60	66.82	✓	1914
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	42	21.54	✓	1885
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	58	12.57	✓	1814
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

From \ To	1	2	3	4
1	0	0	5	0
2	0	0	6	0
3	6	6	0	0
4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	285	1791	54	0.00	29	211	24.79	12.79	49.74	3.94	
2	1		1	1	A	518	2080	54	0.00	45	99	18.38	13.58	41.58	5.98	
3	1		1	1	A	324	2080	54	3.17	30	199	17.05	12.25	42.41	3.69	
4	1		2			842	2080	100	15.48	48	88	8.75	2.75	23.11	6.07	
5	1					179	Unrestricted	100	21.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					179	Unrestricted	100	21.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			324	1468	100	45.00	22	308	3.03	1.35	12.08	1.48	
8	1		3			265	1914	100	0.00	14	550	3.75	0.15	0.00	0.01	
9	1		1			106	1277	100	0.00	8	985	4.38	0.18	2.32	1.45	
10	1		1	1	C	159	1885	20	0.00	40	124	41.36	37.16	86.02	3.80	
11	1					506	Unrestricted	100	28.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	261	1814	48	0.00	29	207	28.04	16.04	55.84	4.05	
13	1		1	1	B	109	2080	48	0.00	11	742	18.15	13.95	53.18	1.61	
14	1		1	1	B	75	2027	48	0.22	8	1086	17.94	13.74	51.15	1.45	
15	1		4			184	2080	100	0.00	9	917	6.08	0.08	0.00	0.00	
16	1					584	Unrestricted	100	18.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					164	Unrestricted	100	24.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	96	1826	20	0.00	25	259	46.52	34.52	83.36	2.26	
19	1					321	Unrestricted	100	17.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			75	1015	100	51.00	7	1118	9.40	7.72	56.37	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	383.34	22.23	17.25	9.45	134.16	15.44	0.00	149.60
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	383.34	22.23	17.25	9.45	134.16	15.44	0.00	149.60

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Filename: Junction 1 2038 DN.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:52:56

»Network Diagrams
«A2 - PM PEAK : D2 - PM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DN
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

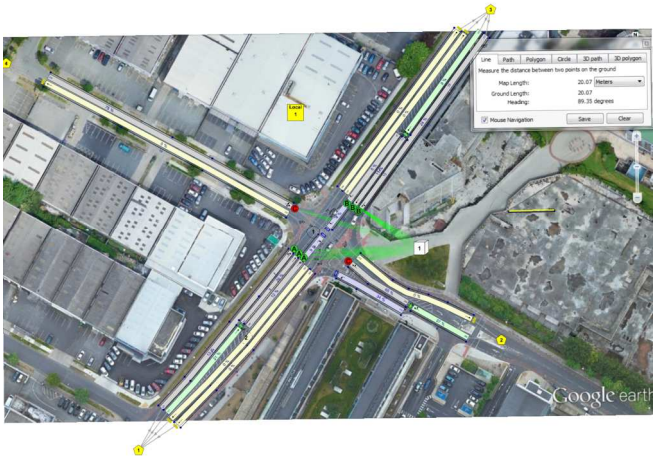
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



2038 DN
Cyclatime 0s / 100s , Timesteps 99 / 100
2, 2
Diagram produced using TRANSYT 15.5.2.7994

A2 - PM PEAK
D2 - PM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/07/2019 13:52:51	08/07/2019 13:52:52	08:00	100	167.53	10.83	75.38	18/1	0	0	18/1	8/1	18/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM PEAK		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.80	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1819	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1924					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1828	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1835	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1794			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	43	9.71	✓	1819
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	37	66.82	✓	1924
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	21.54	✓	1828
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	48	12.57	✓	1835
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	89	16.38	✓	1794
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1	1	A	131	1819	54	0.00	13	587	23.20	11.20	47.26	1.72	
2	1		1	1	A	301	2080	54	0.00	26	242	17.34	12.54	49.56	4.14	
3	1		1	1	A	136	2080	54	0.44	12	651	15.99	11.19	47.21	1.78	
4	1		2			437	2080	100	0.00	21	328	6.23	0.23	0.00	0.03	
5	1					383	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					383	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			136	1472	100	45.00	9	874	1.86	0.18	2.60	1.45	
8	1		3			667	1924	100	5.61	37	145	4.33	0.73	5.33	1.59	
9	1		1			418	1223	100	2.00	34	163	5.16	0.96	5.49	1.54	
10	1		1	1	C	249 <	1828	20	0.00	65	39	48.71	44.51	91.94	6.37 +	
11	1					270	Unrestricted	100	21.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	217	1835	48	0.00	24	273	27.39	15.39	55.63	3.35	
13	1		1	1	B	113	2080	48	0.00	11	712	18.18	13.98	53.21	1.67	
14	1		1	1	B	47	2027	48	47.11	5	1798	17.69	13.49	51.09	1.45	
15	1		4			160	2080	100	0.00	8	1070	6.07	0.07	0.00	0.00	
16	1					542	Unrestricted	100	10.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					184	Unrestricted	100	18.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	284	1794	20	0.00	75	19	63.14	51.14	105.31	8.45	
19	1					134	Unrestricted	100	24.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			47	1292	100	96.00	4	2373	2.79	1.11	46.03	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	373.06	23.27	16.03	10.83	153.84	13.69	0.00	167.53
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	373.06	23.27	16.03	10.83	153.84	13.69	0.00	167.53

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

Network Diagrams

2038 DS
Cycletime 0s / 100s , Timesteps 99 / 100
1, 1
Diagram produced using TRANSYT 15.5.2.7994

A1 - AM PEAK
D1 - AM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor ove PR
1	08/07/2019 13:54:40	08/07/2019 13:54:40	08:00	100	156.19	9.88	48.34	4/1	0	0	10/1	4/1	4/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM PEAK		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

TRANSYT 15

Version: 15.5.2.7994

Filename: Junction 1 2038 DS.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:54:44

»Network Diagrams
«A1 - AM PEAK : D1 - AM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DS
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1791	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1913					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1880	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1812	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1826			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	54	9.71	✓	1791
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	62	66.82	✓	1913
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	46	21.54	✓	1880
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	59	12.57	✓	1812
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	68	16.38	✓	1826
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D wei mu
1	1		1	1	A	285	1791	54	0.00	29	211	24.79	12.79	49.74	3.94	
2	1		1	1	A	518	2080	54	0.00	45	99	18.37	13.57	41.58	5.98	
3	1		1	1	A	332	2080	54	4.89	32	183	17.21	12.41	43.52	3.79	
4	1		2			850	2080	100	15.45	48	86	8.77	2.77	23.28	6.36	
5	1					182	Unrestricted	100	17.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					182	Unrestricted	100	17.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			332	1469	100	45.00	23	298	3.10	1.42	11.81	1.48	
8	1		3			299	1913	100	0.00	16	476	3.77	0.17	0.00	0.01	
9	1		1			114	1278	100	0.00	9	909	4.39	0.19	2.26	1.45	
10	1		1	1	C	185	1880	20	0.00	47	92	42.86	38.66	87.71	4.59	
11	1					518	Unrestricted	100	28.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	263	1812	48	0.00	30	204	28.07	16.07	55.85	4.08	
13	1		1	1	B	108	2080	48	0.00	11	749	18.14	13.94	53.16	1.60	
14	1		1	1	B	75	2027	48	0.22	8	1086	17.94	13.74	51.15	1.45	
15	1		4			183	2080	100	0.00	9	923	6.08	0.08	0.00	0.00	
16	1					593	Unrestricted	100	17.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					173	Unrestricted	100	21.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	97	1826	20	0.00	25	256	46.56	34.56	83.39	2.28	
19	1					329	Unrestricted	100	16.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			75	1014	100	51.00	7	1117	9.43	7.75	55.37	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	391.25	22.92	17.07	9.88	140.28	15.91	0.00	156.19
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	391.25	22.92	17.07	9.88	140.28	15.91	0.00	156.19

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

TRANSYT 15

Version: 15.5.2.7994

For sales and distribution information, program advice and maintenance, contact TRL.
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junction 1 2038 DS.t15
Path: C:\Users\shane.mcgivney\Desktop
Report generation date: 08/07/2019 13:55:08

»Network Diagrams
«A2 - PM PEAK : D2 - PM PEAK* :
»Summary
»Network Options
»Arms and Traffic Streams
»Signal Timings
»Final Prediction Table

File summary

File description

File title	2038 DS
Location	
Site number	
UTCRegion	
Driving side	Left
Date	11/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams

2038 DS
Cyclotime 0s / 100s , Timesteps 99 / 100
2, 2
Diagram produced using TRANSYT 15.5.2.7994

A2 - PM PEAK
D2 - PM PEAK*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	08/07/2019 13:55:04	08/07/2019 13:55:04	08:00	100	172.32	11.14	76.40	18/1	0	0	18/1	8/1	18/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM PEAK		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM PEAK				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
	✓		✓

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
				✓				Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			2
5			
6			
7			1
8			3
9			1
10			1
11			
12			1
13			1
14			1
15			4
16			
17			
18			1
19			
20			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				100.00	✓	Sum of lanes	1819	✓	1800	✓		Normal	
2	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
3	1				40.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
4	1				50.00	✓	Sum of lanes	2080					Normal	
5	1			✓	115.49								Normal	
6	1			✓	115.59								Normal	
7	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	
8	1				30.00	✓	Sum of lanes	1924					Normal	
9	1				35.00	✓	Sum of lanes	1554	✓	1800		✓	Normal	
10	1				35.00	✓	Sum of lanes	1829	✓	1800	✓		Normal	
11	1			✓	83.84								Normal	
12	1				100.00	✓	Sum of lanes	1833	✓	1800	✓		Normal	
13	1				35.00	✓	Sum of lanes	2080	✓	1800	✓		Normal	
14	1				35.00	✓	Sum of lanes	2027	✓	1800	✓		Normal	
15	1				50.00	✓	Sum of lanes	2080					Normal	
16	1			✓	118.42								Normal	
17	1			✓	121.12								Normal	
18	1				100.00	✓	Sum of lanes	1795			✓		Normal	
19	1				100.00								Normal	
20	1				14.00	✓	Sum of lanes	1664	✓	1800		✓	Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	43	9.71	✓	1819
2	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
3	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
4	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
5	1	1	(untitled)											
6	1	1	(untitled)											
7	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664
8	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	37	66.82	✓	1924
9	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.05	✓	1554
10	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	87	21.54	✓	1829
11	1	1	(untitled)											
12	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	49	12.57	✓	1833
13	1	1	(untitled)		✓	N/A	N/A	0	3.25		0	100.00		2080
14	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	56.93		2027
15	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	0	99999.00		2080
16	1	1	(untitled)											
17	1	1	(untitled)											
18	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	88	16.38	✓	1795
19	1	1	(untitled)											
20	1	1	(untitled)		✓	N/A	N/A	0	3.25	✓	100	6.00		1664

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	A	
3	1	1	A	
10	1	1	C	
12	1	1	B	
13	1	1	B	
14	1	1	B	
18	1	1	C	

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Number of storage spaces	Use connector turning radius	Radius of turn (m)	Visibility restricted
7	1	Movement	✓	0	✓	6.00	
9	1	Movement	✓	0	✓	99999.00	
20	1	Movement	✓	0	✓	6.00	

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Unopposed) (PCU/hr)	Percentage opposed (%)
7	1	1	11/1	1664	100
9	1	1	5/1	1554	100
		2	6/1	1554	100
20	1	1	19/1	1664	100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Upstream signals visible	Conflict shift	Conflict duration
7	1	1	11/1		TrafficStreamMovement	12/1	5/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
					TrafficStreamMovement	13/1	11/1	100		0	0
9	1	1	5/1		TrafficStreamMovement	18/1	5/1	100		0	0
					TrafficStreamMovement	13/1	5/1	100		0	0
		2	6/1		TrafficStreamMovement	18/1	6/1	100		0	0
					TrafficStreamMovement	12/1	6/1	100		0	0
20	1	1	19/1		TrafficStreamMovement	1/1	19/1	100		0	0
					TrafficStreamMovement	1/1	17/1	100		0	0
					TrafficStreamMovement	2/1	16/1	100		0	0

Signal Timings

Network Default: 100s cycle time; 100 steps

Interstage Matrix for Controller Stream 1

		To			
		1	2	3	4
From	1	0	0	5	0
	2	0	0	6	0
	3	6	6	0	0
	4	0	0	0	0

Resultant Stages

Controller stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	83	89	6	1	1
	2	✓	2	A,B	89	37	48	1	7
	3	✓	3	C	43	63	20	1	7
	4	✓	4	D	63	83	20	1	20

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1	1	A	131	1819	54	0.00	13	587	23.20	11.20	47.26	1.72	
2	1		1	1	A	301	2080	54	0.00	26	242	17.34	12.54	49.56	4.14	
3	1		1	1	A	143	2080	54	0.44	13	614	16.04	11.24	47.23	1.88	
4	1		2			444	2080	100	0.00	21	322	6.23	0.23	0.00	0.03	
5	1					386	Unrestricted	100	0.00	0	Unrestricted	13.86	0.00	0.00	0.00	
6	1					386	Unrestricted	100	0.00	0	Unrestricted	13.87	0.00	0.00	0.00	
7	1		1			143	1472	100	45.00	10	826	1.89	0.21	2.59	1.45	
8	1		3			678	1924	100	6.83	38	138	4.50	0.90	7.88	2.00	
9	1		1			424	1223	100	4.00	35	160	5.21	1.01	6.19	1.54	
10	1		1	1	C	254 <	1829	20	0.00	66	36	49.15	44.95	90.88	6.43 +	
11	1					285	Unrestricted	100	20.00	0	Unrestricted	10.06	0.00	0.00	0.00	
12	1		1	1	B	221	1833	48	0.00	25	266	27.44	15.44	55.65	3.42	
13	1		1	1	B	113	2080	48	0.00	11	712	18.18	13.98	53.21	1.67	
14	1		1	1	B	47	2027	48	47.11	5	1798	17.69	13.49	51.09	1.45	
15	1		4			160	2080	100	0.00	8	1070	6.07	0.07	0.00	0.00	
16	1					544	Unrestricted	100	10.00	0	Unrestricted	14.21	0.00	0.00	0.00	
17	1					186	Unrestricted	100	18.00	0	Unrestricted	14.53	0.00	0.00	0.00	
18	1		1	1	C	288	1795	20	0.00	76	18	63.98	51.98	106.33	8.71	
19	1					135	Unrestricted	100	23.00	0	Unrestricted	12.00	0.00	0.00	0.00	
20	1		1			47	1292	100	96.00	4	2373	2.79	1.11	46.03	1.45	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	377.83	23.73	15.92	11.14	158.18	14.14	0.00	172.32
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	377.83	23.73	15.92	11.14	158.18	14.14	0.00	172.32

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2023 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:01:57

»Junction 2 2023 DM - 2023, AM
»Junction 2 2023 DM - 2023, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 2 2023 DM - 2023							
Stream B-CD	0.2	8.07	0.17	A	0.5	9.53	0.31	A
Stream B-A	0.3	13.19	0.19	B	0.2	12.70	0.18	B
Stream AB-CD	0.0	5.47	0.01	A	0.0	4.75	0.01	A
Stream D-ABC	0.0	8.60	0.02	A	0.0	0.00	0.00	A
Stream CD-AB	0.7	7.94	0.30	A	0.2	7.78	0.12	A

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

File summary

File Description

Title	Junction 2 2023 DM
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 2 2023 DM	100.000

Junction 2 2023 DM - 2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		1.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	8.30			0.0	✓	0.00
C	8.30			0.0	✓	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

Arm	Minor arm type	Lane width (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)
B	One lane plus flare		10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75
D	One lane	3.00								75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
1	A-B-D	574	-	-	-	-	-	0.200	0.200	0.200	-	-
1	B-A	531	0.087	0.220	0.220	-	-	0.139	0.315	-	0.139	0.315
1	B-C-D	712	0.098	0.248	0.248	-	-	-	-	-	-	-
1	C-D-B	574	0.200	0.200	0.200	-	-	-	-	-	-	-
1	D-A-B	671	-	-	-	-	-	0.234	0.234	0.093	-	-
1	D-C	539	-	0.141	0.319	0.141	0.319	0.223	0.223	0.088	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	352	100.000
B		✓	159	100.000
C		✓	381	100.000
D		✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	52	299	1
	B	66	0	92	1
	C	270	110	0	1
	D	3	2	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C-D	0.17	8.07	0.2	A
B-A	0.19	13.19	0.3	B
A-B				
A-C				
A-D				
AB-C-D	0.01	5.47	0.0	A
AB-C				
D-A-B-C	0.02	8.60	0.0	A
C-D				
C-A				
C-B				
C-D-A-B	0.30	7.94	0.7	A
C-D-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C-D	70	633	0.111	69	0.1	7.022	A
B-A	50	423	0.117	49	0.1	10.568	B
A-B	39			39			
A-C	225			225			
A-D	0.75			0.75			
AB-C-D	3	726	0.003	3	0.0	5.472	A
AB-C	293			293			
D-A-B-C	7	514	0.013	7	0.0	7.802	A
C-D	0.75			0.75			
C-A	203			203			
C-B	83			83			
C-D-A-B	122	667	0.183	120	0.3	7.238	A
C-D-A	168			168			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C-D	84	616	0.136	83	0.2	7.428	A
B-A	59	402	0.148	59	0.2	11.542	B
A-B	47			47			
A-C	269			269			
A-D	0.90			0.90			
AB-C-D	3	758	0.004	3	0.0	5.246	A
AB-C	350			350			
D-A-B-C	8	496	0.016	8	0.0	8.116	A
C-D	0.90			0.90			
C-A	243			243			
C-B	99			99			
C-D-A-B	157	687	0.229	157	0.5	7.479	A
C-D-A	189			189			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C-D	102	593	0.173	102	0.2	8.060	A
B-A	73	373	0.195	72	0.3	13.163	B
A-B	57			57			
A-C	329			329			
A-D	1			1			
AB-C-D	5	803	0.006	5	0.0	4.959	A
AB-C	428			428			
D-A-B-C	10	471	0.021	10	0.0	8.596	A
C-D	1			1			
C-A	297			297			
C-B	121			121			
C-D-A-B	214	715	0.299	213	0.7	7.908	A
C-D-A	210			210			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	102	593	0.173	102	0.2	8.070	A
B-A	73	373	0.195	73	0.3	13.195	B
A-B	57			57			
A-C	329			329			
A-D	1			1			
AB-C D	5	803	0.006	5	0.0	4.958	A
AB-C	428			428			
D-ABC	10	471	0.021	10	0.0	8.597	A
C-D	1			1			
C-A	297			297			
C-B	121			121			
CD-AB	214	715	0.300	214	0.7	7.937	A
CD-A	210			210			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	84	616	0.136	84	0.2	7.443	A
B-A	59	402	0.148	60	0.2	11.581	B
A-B	47			47			
A-C	269			269			
A-D	0.90			0.90			
AB-C D	3	758	0.004	3	0.0	5.244	A
AB-C	350			350			
D-ABC	8	496	0.016	8	0.0	8.118	A
C-D	0.90			0.90			
C-A	243			243			
C-B	99			99			
CD-AB	158	687	0.229	159	0.5	7.517	A
CD-A	188			188			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	70	632	0.111	70	0.1	7.045	A
B-A	50	423	0.117	50	0.1	10.618	B
A-B	39			39			
A-C	225			225			
A-D	0.75			0.75			
AB-C D	3	727	0.003	3	0.0	5.469	A
AB-C	293			293			
D-ABC	7	514	0.013	7	0.0	7.805	A
C-D	0.75			0.75			
C-A	203			203			
C-B	83			83			
CD-AB	122	667	0.183	123	0.4	7.289	A
CD-A	167			167			

Junction 2 2023 DM - 2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		1.93	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	398	100.000
B		✓	233	100.000
C		✓	169	100.000
D		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	14	382	2
	B	64	0	169	0
	C	117	50	0	2
	D	1	0	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.31	9.53	0.5	A
B-A	0.18	12.70	0.2	B
A-B				
A-C				
A-D				
AB-C D	0.01	4.75	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.12	7.78	0.2	A
CD-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	127	647	0.197	126	0.3	7.581	A
B-A	48	422	0.114	48	0.1	10.551	B
A-B	11			11			
A-C	288			288			
A-D	2			2			
AB-C D	3	836	0.004	3	0.0	4.752	A
AB-C	412			412			
D-ABC	0	531	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	88			88			
C-B	38			38			
CD-AB	44	577	0.077	44	0.1	7.426	A
CD-A	81			81			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	152	628	0.242	152	0.3	8.301	A
B-A	58	406	0.142	57	0.2	11.364	B
A-B	13			13			
A-C	343			343			
A-D	2			2			
AB-C D	4	889	0.005	4	0.0	4.474	A
AB-C	493			493			
D-ABC	0	517	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	105			105			
C-B	45			45			
CD-AB	55	578	0.095	55	0.1	7.567	A
CD-A	95			95			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	186	602	0.309	186	0.5	9.502	A
B-A	70	382	0.184	70	0.2	12.675	B
A-B	15			15			
A-C	421			421			
A-D	2			2			
AB-C D	6	962	0.006	6	0.0	4.141	A
AB-C	602			602			
D-ABC	0	498	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	129			129			
C-B	55			55			
CD-AB	71	580	0.122	71	0.2	7.772	A
CD-A	113			113			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	186	602	0.309	186	0.5	9.529	A
B-A	70	382	0.184	70	0.2	12.697	B
A-B	15			15			
A-C	421			421			
A-D	2			2			
AB-C D	6	962	0.006	6	0.0	4.139	A
AB-C	603			603			
D-ABC	0	497	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	129			129			
C-B	55			55			
CD-AB	71	580	0.122	71	0.2	7.777	A
CD-A	113			113			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	152	628	0.242	152	0.4	8.337	A
B-A	58	406	0.142	58	0.2	11.393	B
A-B	13			13			
A-C	343			343			
A-D	2			2			
AB-C D	4	890	0.005	4	0.0	4.472	A
AB-C	494			494			
D-ABC	0	517	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	105			105			
C-B	45			45			
CD-AB	55	578	0.095	55	0.1	7.579	A
CD-A	95			95			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	127	647	0.197	128	0.3	7.627	A
B-A	48	422	0.114	48	0.1	10.593	B
A-B	11			11			
A-C	288			288			
A-D	2			2			
AB-C D	3	837	0.004	3	0.0	4.748	A
AB-C	414			414			
D-ABC	0	530	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	88			88			
C-B	38			38			
CD-AB	45	577	0.077	45	0.1	7.441	A
CD-A	81			81			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2023 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:03:01

»2023 DN - 2023, AM
»2023 DN - 2023, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2023 DN - 2023							
Stream B-C	0.2	7.29	0.16	A	0.5	9.00	0.30	A
Stream B-A	0.2	11.16	0.16	B	0.2	11.85	0.17	B
Stream C-AB	0.5	7.31	0.23	A	0.2	7.74	0.12	A

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

File summary

File Description

Title	Junction 2 2023 DN
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	08:00	09:30	15
D2	2023	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	2023 DN	100.000

2023 DN - 2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Carmanhall Road E		Major
B	Corrig Road		Minor
C	Carmanhall Road W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.30			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	526	0.086	0.218	0.137	0.312
1	B-C	718	0.099	0.250	-	-
1	C-B	574	0.200	0.200	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	08:00	09:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	193	100.000
B		✓	152	100.000
C		✓	312	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	38	155
	B	60	0	92
	C	218	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.16	7.29	0.2	A
B-A	0.16	11.18	0.2	B
C-AB	0.23	7.31	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	669	0.104	69	0.1	6.591	A
B-A	45	454	0.100	45	0.1	9.665	A
C-AB	94	659	0.143	93	0.2	6.990	A
C-A	141			141			
A-B	29			29			
A-C	117			117			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	83	659	0.126	83	0.2	6.672	A
B-A	54	440	0.123	54	0.2	10.256	B
C-AB	119	677	0.176	119	0.3	7.103	A
C-A	161			161			
A-B	34			34			
A-C	139			139			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	101	644	0.157	101	0.2	7.287	A
B-A	66	420	0.157	66	0.2	11.170	B
C-AB	158	701	0.225	157	0.4	7.292	A
C-A	186			186			
A-B	42			42			
A-C	171			171			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	101	644	0.157	101	0.2	7.292	A
B-A	66	420	0.157	66	0.2	11.182	B
C-AB	158	701	0.225	158	0.5	7.305	A
C-A	185			185			
A-B	42			42			
A-C	171			171			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	83	658	0.126	83	0.2	6.882	A
B-A	54	440	0.123	54	0.2	10.277	B
C-AB	119	677	0.176	120	0.3	7.124	A
C-A	161			161			
A-B	34			34			
A-C	139			139			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	69	668	0.104	69	0.1	6.610	A
B-A	45	454	0.100	45	0.1	9.696	A
C-AB	95	660	0.143	95	0.2	7.023	A
C-A	140			140			
A-B	29			29			
A-C	117			117			

2023 DN - 2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023	PM	ONE HOUR	17:00	18:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	324	100.000
B		✓	229	100.000
C		✓	147	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	315
	B	60	0	169
	C	97	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.30	9.00	0.5	A
B-A	0.17	11.85	0.2	B
C-AB	0.12	7.74	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	665	0.191	126	0.3	7.340	A
B-A	45	434	0.104	45	0.1	10.159	B
C-AB	43	577	0.075	43	0.1	7.409	A
C-A	68			68			
A-B	7			7			
A-C	237			237			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	649	0.234	152	0.3	7.963	A
B-A	54	420	0.128	54	0.2	10.816	B
C-AB	53	578	0.092	53	0.1	7.542	A
C-A	79			79			
A-B	8			8			
A-C	283			283			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	626	0.297	186	0.5	8.978	A
B-A	66	400	0.165	66	0.2	11.834	B
C-AB	68	580	0.117	67	0.2	7.733	A
C-A	94			94			
A-B	10			10			
A-C	347			347			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	186	626	0.297	186	0.5	8.997	A
B-A	66	400	0.165	66	0.2	11.849	B
C-AB	68	580	0.117	68	0.2	7.739	A
C-A	94			94			
A-B	10			10			
A-C	347			347			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	152	648	0.234	152	0.3	7.993	A
B-A	54	420	0.128	54	0.2	10.836	B
C-AB	53	578	0.092	53	0.1	7.553	A
C-A	79			79			
A-B	8			8			
A-C	283			283			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	127	664	0.192	128	0.3	7.380	A
B-A	45	434	0.104	45	0.1	10.194	B
C-AB	43	577	0.075	43	0.1	7.423	A
C-A	68			68			
A-B	7			7			
A-C	237			237			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2023 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:03:53

»Junction 2 2023 DS - 2023, AM
»Junction 2 2023 DS - 2023, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 2 2023 DS - 2023							
Stream B-CD	0.2	7.52	0.16	A	0.5	9.13	0.30	A
Stream B-A	0.2	11.63	0.17	B	0.2	12.10	0.17	B
Stream AB-CD	0.0	5.90	0.01	A	0.0	4.93	0.01	A
Stream D-ABC	0.0	8.13	0.02	A	0.0	0.00	0.00	A
Stream CD-AB	0.5	7.40	0.24	A	0.2	7.66	0.12	A

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

File summary

File Description

Title	Junction 2 2023 DS
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 2 2023 DS	100.000

Junction 2 2023 DS - 2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		1.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	8.30			0.0	✓	0.00
C	8.30			0.0	✓	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

Arm	Minor arm type	Lane width (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)
B	One lane plus flare		10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75
D	One lane	3.00								75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
1	AB-D	574	-	-	-	-	-	0.200	0.200	0.200	-	-
1	B-A	530	0.087	0.219	0.219	-	-	0.138	0.313	-	0.138	0.313
1	B-CD	714	0.099	0.249	0.249	-	-	-	-	-	-	-
1	CD-B	574	0.200	0.200	0.200	-	-	-	-	-	-	-
1	D-AB	671	-	-	-	-	-	0.234	0.234	0.093	-	-
1	D-C	539	-	0.141	0.319	0.141	0.319	0.223	0.223	0.088	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	237	100.000
B		✓	157	100.000
C		✓	323	100.000
D		✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	50	186	1
	B	64	0	92	1
	C	228	94	0	1
	D	3	2	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.16	7.52	0.2	A
B-A	0.17	11.63	0.2	B
A-B				
A-C				
A-D				
AB-C D	0.01	5.90	0.0	A
AB-C				
D-ABC	0.02	8.13	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.24	7.40	0.5	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	70	657	0.107	69	0.1	6.730	A
B-A	48	449	0.107	48	0.1	9.859	A
A-B	38			38			
A-C	140			140			
A-D	0.75			0.75			
AB-C D	2	673	0.003	2	0.0	5.901	A
AB-C	208			208			
D-ABC	7	532	0.013	7	0.0	7.541	A
C-D	0.75			0.75			
C-A	172			172			
C-B	71			71			
CD-AB	98	660	0.149	97	0.3	7.028	A
CD-A	148			148			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	84	645	0.130	83	0.2	7.045	A
B-A	58	433	0.133	57	0.2	10.536	B
A-B	45			45			
A-C	167			167			
A-D	0.90			0.90			
AB-C D	3	694	0.004	3	0.0	5.728	A
AB-C	249			249			
D-ABC	8	517	0.016	8	0.0	7.778	A
C-D	0.90			0.90			
C-A	205			205			
C-B	85			85			
CD-AB	125	678	0.184	124	0.3	7.162	A
CD-A	169			169			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	102	629	0.163	102	0.2	7.519	A
B-A	70	411	0.171	70	0.2	11.607	B
A-B	55			55			
A-C	205			205			
A-D	1			1			
AB-C D	4	723	0.005	4	0.0	5.903	A
AB-C	304			304			
D-ABC	10	497	0.020	10	0.0	8.130	A
C-D	1			1			
C-A	251			251			
C-B	103			103			
CD-AB	166	703	0.237	166	0.5	7.381	A
CD-A	194			194			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	102	629	0.163	102	0.2	7.523	A
B-A	70	411	0.171	70	0.2	11.626	B
A-B	55			55			
A-C	205			205			
A-D	1			1			
AB-C D	4	723	0.005	4	0.0	5.504	A
AB-C	304			304			
D-ABC	10	497	0.020	10	0.0	8.131	A
C-D	1			1			
C-A	251			251			
C-B	103			103			
CD-AB	166	703	0.237	166	0.5	7.396	A
CD-A	194			194			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	84	645	0.130	84	0.2	7.057	A
B-A	58	433	0.133	58	0.2	10.563	B
A-B	45			45			
A-C	167			167			
A-D	0.90			0.90			
AB-C D	3	694	0.004	3	0.0	5.726	A
AB-C	249			249			
D-ABC	8	517	0.016	8	0.0	7.780	A
C-D	0.90			0.90			
C-A	205			205			
C-B	85			85			
CD-AB	125	678	0.184	126	0.4	7.184	A
CD-A	169			169			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	70	657	0.107	70	0.1	6.750	A
B-A	48	449	0.107	48	0.1	9.897	A
A-B	38			38			
A-C	140			140			
A-D	0.75			0.75			
AB-C D	2	674	0.003	2	0.0	5.899	A
AB-C	209			209			
D-ABC	7	532	0.013	7	0.0	7.543	A
C-D	0.75			0.75			
C-A	172			172			
C-B	71			71			
CD-AB	98	660	0.149	99	0.3	7.061	A
CD-A	148			148			

Junction 2 2023 DS - 2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		2.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	339	100.000
B		✓	232	100.000
C		✓	162	100.000
D		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	13	324	2
	B	63	0	169	0
	C	110	50	0	2
	D	1	0	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.30	9.13	0.5	A
B-A	0.17	12.10	0.2	B
A-B				
A-C				
A-D				
AB-C D	0.01	4.93	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.12	7.66	0.2	A
CD-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	127	660	0.193	126	0.3	7.409	A
B-A	47	432	0.110	47	0.1	10.270	B
A-B	10			10			
A-C	244			244			
A-D	2			2			
AB-C D	3	807	0.003	3	0.0	4.925	A
AB-C	369			369			
D-ABC	0	536	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	83			83			
C-B	38			38			
CD-AB	44	582	0.075	43	0.1	7.354	A
CD-A	77			77			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	152	643	0.236	152	0.3	8.055	A
B-A	57	417	0.136	56	0.2	10.973	B
A-B	12			12			
A-C	291			291			
A-D	2			2			
AB-C D	4	854	0.004	4	0.0	4.658	A
AB-C	441			441			
D-ABC	0	523	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	99			99			
C-B	45			45			
CD-AB	54	584	0.093	54	0.1	7.477	A
CD-A	90			90			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	186	620	0.300	186	0.5	9.110	A
B-A	69	397	0.175	69	0.2	12.083	B
A-B	14			14			
A-C	357			357			
A-D	2			2			
AB-C D	5	918	0.006	5	0.0	4.336	A
AB-C	539			539			
D-ABC	0	506	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	121			121			
C-B	55			55			
CD-AB	69	587	0.118	69	0.2	7.653	A
CD-A	107			107			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	186	620	0.300	186	0.5	9.134	A
B-A	69	397	0.175	69	0.2	12.102	B
A-B	14			14			
A-C	357			357			
A-D	2			2			
AB-C D	5	919	0.006	5	0.0	4.335	A
AB-C	540			540			
D-ABC	0	506	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	121			121			
C-B	55			55			
CD-AB	70	587	0.118	70	0.2	7.660	A
CD-A	107			107			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	152	643	0.236	152	0.3	8.086	A
B-A	57	417	0.136	57	0.2	10.997	B
A-B	12			12			
A-C	291			291			
A-D	2			2			
AB-C D	4	854	0.004	4	0.0	4.657	A
AB-C	442			442			
D-ABC	0	523	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	99			99			
C-B	45			45			
CD-AB	54	584	0.093	54	0.1	7.488	A
CD-A	90			90			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	127	659	0.193	128	0.3	7.450	A
B-A	47	432	0.110	48	0.1	10.309	B
A-B	10			10			
A-C	244			244			
A-D	2			2			
AB-C D	3	808	0.003	3	0.0	4.921	A
AB-C	370			370			
D-ABC	0	536	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	83			83			
C-B	38			38			
CD-AB	44	582	0.076	44	0.1	7.371	A
CD-A	76			76			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2038 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:05:44

»Junction 2 2038 DM - 2038, AM
»Junction 2 2038 DM - 2038, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 2 2038 DM - 2038							
Stream B-CD	0.3	8.55	0.20	A	0.6	10.62	0.36	B
Stream B-A	0.3	14.43	0.23	B	0.3	13.80	0.22	B
Stream AB-CD	0.0	5.36	0.01	A	0.0	4.58	0.01	A
Stream D-ABC	0.0	8.88	0.02	A	0.0	0.00	0.00	A
Stream CD-AB	0.9	8.29	0.35	A	0.2	7.95	0.14	A

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

File summary

File Description

Title	Junction 2 2038 DM
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15
D2	2038	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 2 2038 DM	100.000

Junction 2 2038 DM - 2038, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		2.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	8.30			0.0	✓	0.00
C	8.30			0.0	✓	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

Arm	Minor arm type	Lane width (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)
B	One lane plus flare		10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75
D	One lane	3.00								75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
1	AB-D	574	-	-	-	-	-	0.200	0.200	0.200	-	-
1	B-A	530	0.087	0.220	0.220	-	-	0.138	0.314	-	0.138	0.314
1	B-CD	714	0.098	0.249	0.249	-	-	-	-	-	-	-
1	CD-B	574	0.200	0.200	0.200	-	-	-	-	-	-	-
1	D-AB	671	-	-	-	-	-	0.234	0.234	0.093	-	-
1	D-C	539	-	0.141	0.319	0.141	0.319	0.223	0.223	0.088	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	379	100.000
B		✓	183	100.000
C		✓	423	100.000
D		✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	57	321	1
	B	75	0	107	1
	C	299	123	0	1
	D	3	2	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.20	8.55	0.3	A
B-A	0.23	14.43	0.3	B
A-B				
A-C				
A-D				
AB-CD	0.01	5.36	0.0	A
AB-C				
D-ABC	0.02	8.88	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.35	8.29	0.9	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	81	627	0.130	81	0.2	7.239	A
B-A	56	412	0.137	56	0.2	11.089	B
A-B	43			43			
A-C	242			242			
A-D	0.75			0.75			
AB-CD	3	741	0.004	3	0.0	5.365	A
AB-C	320			320			
D-ABC	7	504	0.013	7	0.0	7.956	A
C-D	0.75			0.75			
C-A	225			225			
C-B	93			93			
CD-AB	141	679	0.208	140	0.4	7.338	A
CD-A	180			180			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	97	606	0.160	97	0.2	7.740	A
B-A	67	389	0.173	67	0.2	12.296	B
A-B	51			51			
A-C	289			289			
A-D	0.90			0.90			
AB-CD	4	776	0.005	4	0.0	5.125	A
AB-C	383			383			
D-ABC	8	484	0.017	8	0.0	8.319	A
C-D	0.90			0.90			
C-A	269			269			
C-B	111			111			
CD-AB	184	701	0.262	183	0.6	7.659	A
CD-A	200			200			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	119	582	0.204	119	0.3	8.532	A
B-A	83	357	0.231	82	0.3	14.382	B
A-B	63			63			
A-C	353			353			
A-D	1			1			
AB-CD	5	826	0.006	5	0.0	4.824	A
AB-C	468			468			
D-ABC	10	456	0.022	10	0.0	8.882	A
C-D	1			1			
C-A	329			329			
C-B	135			135			
CD-AB	253	733	0.346	252	0.9	8.252	A
CD-A	217			217			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	119	582	0.204	119	0.3	8.548	A
B-A	83	357	0.231	83	0.3	14.431	B
A-B	63			63			
A-C	353			353			
A-D	1			1			
AB-C D	5	826	0.006	5	0.0	4.824	A
AB-C	468			468			
D-ABC	10	456	0.022	10	0.0	8.883	A
C-D	1			1			
C-A	329			329			
C-B	135			135			
CD-AB	254	734	0.346	254	0.9	8.295	A
CD-A	216			216			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	97	608	0.160	97	0.2	7.761	A
B-A	67	389	0.173	68	0.2	12.353	B
A-B	51			51			
A-C	289			289			
A-D	0.90			0.90			
AB-C D	4	776	0.005	4	0.0	5.123	A
AB-C	383			383			
D-ABC	8	484	0.017	8	0.0	8.322	A
C-D	0.90			0.90			
C-A	269			269			
C-B	111			111			
CD-AB	185	702	0.263	186	0.6	7.711	A
CD-A	199			199			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	81	626	0.130	81	0.2	7.276	A
B-A	56	412	0.137	57	0.2	11.157	B
A-B	43			43			
A-C	242			242			
A-D	0.75			0.75			
AB-C D	3	741	0.004	3	0.0	5.361	A
AB-C	321			321			
D-ABC	7	504	0.013	7	0.0	7.960	A
C-D	0.75			0.75			
C-A	225			225			
C-B	93			93			
CD-AB	142	680	0.209	143	0.4	7.403	A
CD-A	179			179			

Junction 2 2038 DM - 2038, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		2.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	442	100.000
B		✓	265	100.000
C		✓	189	100.000
D		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	16	424	2
	B	73	0	192	0
	C	130	57	0	2
	D	1	0	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.36	10.62	0.6	B
B-A	0.22	13.80	0.3	B
A-B				
A-C				
A-D				
AB-C D	0.01	4.58	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.14	7.95	0.2	A
CD-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	145	636	0.227	143	0.3	8.015	A
B-A	55	413	0.133	54	0.2	11.029	B
A-B	12			12			
A-C	319			319			
A-D	2			2			
AB-C D	3	868	0.004	3	0.0	4.579	A
AB-C	461			461			
D-ABC	0	522	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	98			98			
C-B	43			43			
CD-AB	52	578	0.089	51	0.1	7.516	A
CD-A	89			89			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	173	614	0.281	172	0.4	8.945	A
B-A	66	394	0.167	65	0.2	12.045	B
A-B	14			14			
A-C	381			381			
A-D	2			2			
AB-C D	4	927	0.005	4	0.0	4.290	A
AB-C	551			551			
D-ABC	0	507	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	117			117			
C-B	51			51			
CD-AB	64	579	0.111	64	0.2	7.689	A
CD-A	104			104			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	211	584	0.362	211	0.6	10.571	B
B-A	80	367	0.219	80	0.3	13.765	B
A-B	18			18			
A-C	467			467			
A-D	2			2			
AB-C D	7	1009	0.007	7	0.0	3.948	A
AB-C	673			673			
D-ABC	0	485	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	143			143			
C-B	63			63			
CD-AB	83	582	0.143	83	0.2	7.943	A
CD-A	122			122			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	211	584	0.362	211	0.6	10.617	B
B-A	80	367	0.219	80	0.3	13.801	B
A-B	18			18			
A-C	467			467			
A-D	2			2			
AB-C D	7	1010	0.007	7	0.0	3.946	A
AB-C	674			674			
D-ABC	0	485	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	143			143			
C-B	63			63			
CD-AB	83	582	0.143	83	0.2	7.952	A
CD-A	122			122			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	173	614	0.281	173	0.4	8.997	A
B-A	66	394	0.167	66	0.2	12.089	B
A-B	14			14			
A-C	381			381			
A-D	2			2			
AB-C D	4	928	0.005	4	0.0	4.288	A
AB-C	552			552			
D-ABC	0	507	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	117			117			
C-B	51			51			
CD-AB	64	579	0.111	65	0.2	7.701	A
CD-A	104			104			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	145	636	0.227	145	0.3	8.079	A
B-A	55	413	0.133	55	0.2	11.086	B
A-B	12			12			
A-C	319			319			
A-D	2			2			
AB-C D	3	869	0.004	3	0.0	4.573	A
AB-C	482			482			
D-ABC	0	522	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	98			98			
C-B	43			43			
CD-AB	52	578	0.090	52	0.1	7.535	A
CD-A	89			89			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2038 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:06:28

»2038 DN - 2038, AM
»2038 DN - 2038, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2038 DN - 2038							
Stream B-C	0.3	7.70	0.19	A	0.6	9.94	0.35	A
Stream B-A	0.3	12.05	0.19	B	0.3	12.76	0.19	B
Stream C-AB	0.8	7.52	0.27	A	0.2	7.90	0.14	A

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

File summary

File Description

Title	Junction 2 2038 DN
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	08:00	09:30	15
D2	2038	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	2038 DN	100.000

2038 DN - 2038, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Carmanhall Road E		Major
B	Corrig Road		Minor
C	Carmanhall Road W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.30			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	527	0.086	0.218	0.137	0.312
1	B-C	718	0.099	0.250	-	-
1	C-B	574	0.200	0.200	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	08:00	09:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	220	100.000
B		✓	177	100.000
C		✓	354	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	43	177
	B	70	0	107
	C	247	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.19	7.70	0.3	A
B-A	0.19	12.05	0.3	B
C-AB	0.27	7.52	0.6	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	81	661	0.122	80	0.2	6.806	A
B-A	53	444	0.119	52	0.1	10.086	B
C-AB	111	671	0.166	110	0.3	7.058	A
C-A	155			155			
A-B	32			32			
A-C	133			133			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	96	649	0.148	96	0.2	7.159	A
B-A	63	428	0.147	63	0.2	10.839	B
C-AB	142	691	0.206	142	0.4	7.221	A
C-A	176			176			
A-B	39			39			
A-C	159			159			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	118	632	0.186	118	0.2	7.691	A
B-A	77	406	0.190	77	0.3	12.032	B
C-AB	190	718	0.265	190	0.6	7.497	A
C-A	199			199			
A-B	47			47			
A-C	195			195			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	118	632	0.186	118	0.3	7.700	A
B-A	77	406	0.190	77	0.3	12.054	B
C-AB	191	719	0.265	191	0.6	7.515	A
C-A	199			199			
A-B	47			47			
A-C	195			195			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	96	649	0.148	96	0.2	7.175	A
B-A	63	428	0.147	63	0.2	10.867	B
C-AB	142	691	0.206	143	0.4	7.246	A
C-A	176			176			
A-B	39			39			
A-C	159			159			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	81	661	0.122	81	0.2	6.833	A
B-A	53	444	0.119	53	0.1	10.129	B
C-AB	112	671	0.167	112	0.3	7.099	A
C-A	155			155			
A-B	32			32			
A-C	133			133			

2038 DN - 2038, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038	PM	ONE HOUR	17:00	18:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	368	100.000
B		✓	260	100.000
C		✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	357
	B	68	0	192
	C	110	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.35	9.94	0.6	A
B-A	0.19	12.76	0.3	B
C-AB	0.14	7.90	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	145	654	0.221	143	0.3	7.738	A
B-A	51	424	0.121	51	0.1	10.583	B
C-AB	50	577	0.087	50	0.1	7.903	A
C-A	76			76			
A-B	8			8			
A-C	269			269			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	635	0.272	172	0.4	8.543	A
B-A	61	408	0.150	61	0.2	11.401	B
C-AB	62	579	0.107	62	0.2	7.659	A
C-A	88			88			
A-B	10			10			
A-C	321			321			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	211	610	0.347	211	0.6	9.905	A
B-A	75	385	0.194	75	0.3	12.732	B
C-AB	79	581	0.137	79	0.2	7.894	A
C-A	104			104			
A-B	12			12			
A-C	393			393			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	211	610	0.347	211	0.6	9.942	A
B-A	75	385	0.194	75	0.3	12.757	B
C-AB	79	581	0.137	79	0.2	7.903	A
C-A	104			104			
A-B	12			12			
A-C	393			393			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	635	0.272	173	0.4	8.586	A
B-A	61	408	0.150	61	0.2	11.433	B
C-AB	62	579	0.107	62	0.2	7.672	A
C-A	88			88			
A-B	10			10			
A-C	321			321			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	145	653	0.221	145	0.3	7.794	A
B-A	51	424	0.121	51	0.2	10.629	B
C-AB	50	578	0.087	50	0.1	7.517	A
C-A	76			76			
A-B	8			8			
A-C	269			269			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 2 2038 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:08:25

»Junction 2 2038 DS - 2038, AM
»Junction 2 2038 DS - 2038, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 2 2038 DS - 2038							
Stream B-CD	0.3	7.95	0.19	A	0.6	10.10	0.35	B
Stream B-A	0.3	12.59	0.21	B	0.3	13.06	0.20	B
Stream AB-CD	0.0	5.78	0.01	A	0.0	4.74	0.01	A
Stream D-ABC	0.0	8.39	0.02	A	0.0	0.00	0.00	A
Stream CD-AB	0.6	7.63	0.28	A	0.2	7.82	0.14	A

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

File summary

File Description

Title	Junction 2 2038 DS
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15
D2	2038	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 2 2038 DS	100.000

Junction 2 2038 DS - 2038, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	8.30			0.0	✓	0.00
C	8.30			0.0	✓	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

Arm	Minor arm type	Lane width (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)
B	One lane plus flare		10.00	8.10	5.20	4.50	4.50	✓	3.00	75	75
D	One lane	3.00								75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
1	AB-D	574	-	-	-	-	-	0.200	0.200	0.200	-	-
1	B-A	529	0.087	0.219	0.219	-	-	0.138	0.313	-	0.138	0.313
1	B-CD	715	0.099	0.249	0.249	-	-	-	-	-	-	-
1	CD-B	574	0.200	0.200	0.200	-	-	-	-	-	-	-
1	D-AB	671	-	-	-	-	-	0.234	0.234	0.093	-	-
1	D-C	539	-	0.141	0.319	0.141	0.319	0.223	0.223	0.088	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	264	100.000
B		✓	182	100.000
C		✓	366	100.000
D		✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	55	208	1
	B	74	0	107	1
	C	256	107	0	1
	D	3	2	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.19	7.95	0.3	A
B-A	0.21	12.59	0.3	B
A-B				
A-C				
A-D				
AB-C D	0.01	5.78	0.0	A
AB-C				
D-ABC	0.02	8.39	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.28	7.63	0.6	A
CD-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	81	650	0.125	81	0.2	6.949	A
B-A	56	438	0.127	55	0.2	10.314	B
A-B	41			41			
A-C	157			157			
A-D	0.75			0.75			
AB-C D	2	687	0.003	2	0.0	5.781	A
AB-C	236			236			
D-ABC	7	522	0.013	7	0.0	7.686	A
C-D	0.75			0.75			
C-A	194			194			
C-B	81			81			
CD-AB	116	672	0.172	115	0.3	7.093	A
CD-A	163			163			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	97	636	0.153	97	0.2	7.341	A
B-A	67	421	0.158	66	0.2	11.174	B
A-B	49			49			
A-C	187			187			
A-D	0.90			0.90			
AB-C D	3	711	0.004	3	0.0	5.590	A
AB-C	282			282			
D-ABC	8	505	0.016	8	0.0	7.965	A
C-D	0.90			0.90			
C-A	232			232			
C-B	96			96			
CD-AB	149	693	0.215	148	0.4	7.281	A
CD-A	184			184			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	119	617	0.193	119	0.3	7.941	A
B-A	81	396	0.206	81	0.3	12.565	B
A-B	61			61			
A-C	229			229			
A-D	1			1			
AB-C D	4	745	0.006	4	0.0	5.345	A
AB-C	345			345			
D-ABC	10	482	0.021	10	0.0	8.385	A
C-D	1			1			
C-A	284			284			
C-B	118			118			
CD-AB	200	721	0.278	200	0.6	7.601	A
CD-A	207			207			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	119	617	0.193	119	0.3	7.953	A
B-A	81	396	0.206	81	0.3	12.594	B
A-B	61			61			
A-C	229			229			
A-D	1			1			
AB-C D	4	745	0.006	4	0.0	5.345	A
AB-C	345			345			
D-ABC	10	482	0.021	10	0.0	8.385	A
C-D	1			1			
C-A	284			284			
C-B	118			118			
CD-AB	201	722	0.278	201	0.6	7.625	A
CD-A	207			207			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	97	636	0.153	97	0.2	7.359	A
B-A	67	420	0.158	67	0.2	11.210	B
A-B	49			49			
A-C	187			187			
A-D	0.90			0.90			
AB-C D	3	712	0.004	3	0.0	5.588	A
AB-C	282			282			
D-ABC	8	505	0.016	8	0.0	7.966	A
C-D	0.90			0.90			
C-A	232			232			
C-B	96			96			
CD-AB	149	693	0.215	150	0.4	7.309	A
CD-A	184			184			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	81	649	0.125	81	0.2	6.975	A
B-A	56	438	0.127	56	0.2	10.362	B
A-B	41			41			
A-C	157			157			
A-D	0.75			0.75			
AB-C D	2	688	0.003	2	0.0	5.776	A
AB-C	237			237			
D-ABC	7	522	0.013	7	0.0	7.689	A
C-D	0.75			0.75			
C-A	194			194			
C-B	81			81			
CD-AB	116	673	0.173	117	0.3	7.140	A
CD-A	162			162			

Junction 2 2038 DS - 2038, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		2.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	382	100.000
B		✓	263	100.000
C		✓	182	100.000
D		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	14	366	2
	B	71	0	192	0
	C	123	57	0	2
	D	1	0	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C D	0.35	10.10	0.6	B
B-A	0.20	13.06	0.3	B
A-B				
A-C				
A-D				
AB-C D	0.01	4.74	0.0	A
AB-C				
D-ABC	0.00	0.00	0.0	A
C-D				
C-A				
C-B				
CD-AB	0.14	7.82	0.2	A
CD-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	145	649	0.223	143	0.3	7.810	A
B-A	53	422	0.127	53	0.2	10.707	B
A-B	11			11			
A-C	276			276			
A-D	2			2			
AB-C D	3	838	0.004	3	0.0	4.740	A
AB-C	417			417			
D-ABC	0	528	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	93			93			
C-B	43			43			
CD-AB	51	582	0.088	51	0.1	7.446	A
CD-A	84			84			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	173	630	0.274	172	0.4	8.642	A
B-A	64	405	0.157	64	0.2	11.585	B
A-B	13			13			
A-C	329			329			
A-D	2			2			
AB-C D	4	892	0.005	4	0.0	4.460	A
AB-C	499			499			
D-ABC	0	513	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	111			111			
C-B	51			51			
CD-AB	63	585	0.108	63	0.2	7.591	A
CD-A	99			99			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	211	603	0.350	211	0.6	10.064	B
B-A	78	382	0.205	78	0.3	13.026	B
A-B	15			15			
A-C	403			403			
A-D	2			2			
AB-C D	6	966	0.006	6	0.0	4.126	A
AB-C	610			610			
D-ABC	0	493	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	135			135			
C-B	63			63			
CD-AB	82	588	0.139	81	0.2	7.813	A
CD-A	116			116			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	211	603	0.350	211	0.6	10.102	B
B-A	78	381	0.205	78	0.3	13.055	B
A-B	15			15			
A-C	403			403			
A-D	2			2			
AB-C D	6	966	0.006	6	0.0	4.124	A
AB-C	610			610			
D-ABC	0	493	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	135			135			
C-B	63			63			
CD-AB	82	589	0.139	82	0.2	7.821	A
CD-A	116			116			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	173	630	0.274	173	0.4	8.689	A
B-A	64	405	0.158	64	0.2	11.621	B
A-B	13			13			
A-C	329			329			
A-D	2			2			
AB-C D	4	892	0.005	4	0.0	4.459	A
AB-C	500			500			
D-ABC	0	513	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	111			111			
C-B	51			51			
CD-AB	63	585	0.108	64	0.2	7.602	A
CD-A	98			98			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C D	145	649	0.223	145	0.3	7.867	A
B-A	53	422	0.127	54	0.2	10.759	B
A-B	11			11			
A-C	276			276			
A-D	2			2			
AB-C D	3	839	0.004	3	0.0	4.734	A
AB-C	419			419			
D-ABC	0	528	0.000	0	0.0	0.000	A
C-D	2			2			
C-A	93			93			
C-B	43			43			
CD-AB	51	583	0.088	51	0.1	7.461	A
CD-A	84			84			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2023 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:09:26

»Junction 3 - 2023 DM, AM
»Junction 3 - 2023 DM, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2023 DM							
Stream B-C	1.5	21.80	0.58	C	171.8	1570.52	1.94	F
Stream B-A	0.1	33.53	0.10	D	24.2	1664.36	1.86	F
Stream C-AB	2.0	13.73	0.47	B	0.4	15.40	0.21	C

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DM	AM	ONE HOUR	07:45	09:15	15
D2	2023 DM	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2023 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road S		Major
B	Carmanhall Road		Minor
C	Blackthorn Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1400	100.000
B		✓	236	100.000
C		✓	405	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	617	783
	B	12	0	224
	C	322	83	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.58	21.80	1.5	C
B-A	0.10	33.53	0.1	D
C-AB	0.47	13.73	2.0	B
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	169	534	0.316	167	0.5	10.716	B
B-A	9	254	0.036	9	0.0	16.144	C
C-AB	113	545	0.206	111	0.5	9.108	A
C-A	192			192			
A-B	465			465			
A-C	589			589			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	201	490	0.411	200	0.7	13.609	B
B-A	11	205	0.053	11	0.1	20.353	C
C-AB	160	547	0.292	159	0.8	10.229	B
C-A	204			204			
A-B	555			555			
A-C	704			704			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	247	428	0.576	244	1.4	21.200	C
B-A	13	133	0.099	13	0.1	32.963	D
C-AB	258	554	0.466	254	1.9	13.358	B
C-A	188			188			
A-B	679			679			
A-C	862			862			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	247	428	0.577	246	1.5	21.799	C
B-A	13	131	0.101	13	0.1	33.526	D
C-AB	261	556	0.469	261	2.0	13.731	B
C-A	185			185			
A-B	679			679			
A-C	862			862			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	201	490	0.411	204	0.8	13.969	B
B-A	11	203	0.053	11	0.1	20.618	C
C-AB	162	551	0.294	167	0.9	10.513	B
C-A	202			202			
A-B	555			555			
A-C	704			704			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	169	534	0.316	170	0.5	10.902	B
B-A	9	253	0.036	9	0.0	16.256	C
C-AB	114	547	0.208	115	0.5	9.252	A
C-A	191			191			
A-B	465			465			
A-C	589			589			

Junction 3 - 2023 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		428.55	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DM	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1378	100.000
B		✓	557	100.000
C		✓	123	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	197	1181
	B	67	0	490
	C	78	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.94	1570.52	171.8	F
B-A	1.86	1664.36	24.2	F
C-AB	0.21	15.40	0.4	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	369	452	0.817	353	3.9	35.953	E
B-A	50	141	0.357	48	0.6	41.637	E
C-AB	40	400	0.099	39	0.1	10.947	B
C-A	53			53			
A-B	148			148			
A-C	889			889			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	440	384	1.147	372	21.0	152.308	F
B-A	60	53	1.145	44	4.7	308.061	F
C-AB	50	369	0.136	50	0.2	12.426	B
C-A	60			60			
A-B	177			177			
A-C	1062			1062			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	540	292	1.847	292	83.0	677.480	F
B-A	74	43	1.705	42	12.6	875.815	F
C-AB	68	325	0.208	67	0.4	15.333	C
C-A	68			68			
A-B	217			217			
A-C	1300			1300			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	540	278	1.941	278	148.4	1517.067	F
B-A	74	40	1.864	39	21.2	1660.412	F
C-AB	68	325	0.208	68	0.4	15.403	C
C-A	68			68			
A-B	217			217			
A-C	1300			1300			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	440	347	1.269	347	171.8	1570.519	F
B-A	60	49	1.237	48	24.2	1664.358	F
C-AB	50	369	0.136	51	0.2	12.494	B
C-A	60			60			
A-B	177			177			
A-C	1062			1062			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	369	401	0.920	399	164.4	1518.422	F
B-A	50	56	0.902	53	23.4	1604.204	F
C-AB	40	401	0.099	40	0.1	11.001	B
C-A	53			53			
A-B	148			148			
A-C	889			889			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2023 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:09:55

»Junction 3 - 2023 DN, AM
»Junction 3 - 2023 DN, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2023 DN							
Stream B-C	0.7	14.04	0.40	B	5.5	56.55	0.86	F
Stream B-A	0.0	19.37	0.02	C	0.2	69.92	0.15	F
Stream C-AB	0.6	15.01	0.32	C	0.2	13.55	0.16	B

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DN	AM	ONE HOUR	07:45	09:15	15
D2	2023 DN	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2023 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road N		Major
B	Carmanhall Road		Minor
C	Blackthorn Road S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DN	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1168	100.000
B		✓	178	100.000
C		✓	175	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	432	736
	B	4	0	174
	C	94	81	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.40	14.04	0.7	B
B-A	0.02	19.37	0.0	C
C-AB	0.32	15.01	0.6	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	131	563	0.233	130	0.3	9.111	A
B-A	3	300	0.010	3	0.0	13.321	B
C-AB	73	442	0.164	72	0.3	10.657	B
C-A	59			59			
A-B	325			325			
A-C	554			554			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	526	0.298	156	0.5	10.698	B
B-A	4	263	0.014	4	0.0	15.250	C
C-AB	91	419	0.218	91	0.4	12.082	B
C-A	66			66			
A-B	388			388			
A-C	662			662			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	192	474	0.405	190	0.7	13.934	B
B-A	4	209	0.021	4	0.0	19.316	C
C-AB	122	387	0.316	121	0.6	14.902	B
C-A	70			70			
A-B	476			476			
A-C	810			810			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	192	474	0.405	192	0.7	14.037	B
B-A	4	209	0.021	4	0.0	19.369	C
C-AB	122	387	0.316	122	0.6	15.010	C
C-A	70			70			
A-B	476			476			
A-C	810			810			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	526	0.298	157	0.5	10.791	B
B-A	4	263	0.014	4	0.0	15.293	C
C-AB	92	419	0.219	93	0.4	12.187	B
C-A	66			66			
A-B	388			388			
A-C	662			662			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	131	563	0.233	132	0.3	9.190	A
B-A	3	300	0.010	3	0.0	13.354	B
C-AB	73	443	0.164	73	0.3	10.745	B
C-A	59			59			
A-B	325			325			
A-C	554			554			

Junction 3 - 2023 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		13.53	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DN	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1099	100.000
B		✓	352	100.000
C		✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	159	940
	B	9	0	343
	C	33	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.86	56.55	5.5	F
B-A	0.15	69.92	0.2	F
C-AB	0.16	13.55	0.2	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	258	541	0.477	254	1.0	13.638	B
B-A	7	270	0.025	7	0.0	15.045	C
C-AB	35	417	0.084	35	0.1	10.343	B
C-A	23			23			
A-B	120			120			
A-C	708			708			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	308	499	0.618	306	1.7	20.167	C
B-A	8	204	0.040	8	0.0	20.185	C
C-AB	43	388	0.111	43	0.1	11.483	B
C-A	26			26			
A-B	143			143			
A-C	845			845			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	378	440	0.857	365	4.9	46.196	E
B-A	10	81	0.123	10	0.1	55.329	F
C-AB	54	347	0.156	54	0.2	13.524	B
C-A	31			31			
A-B	175			175			
A-C	1035			1035			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	378	440	0.858	375	5.5	56.548	F
B-A	10	66	0.150	10	0.2	69.920	F
C-AB	54	347	0.156	54	0.2	13.549	B
C-A	31			31			
A-B	175			175			
A-C	1035			1035			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	308	499	0.618	323	1.9	24.128	C
B-A	8	192	0.042	9	0.0	21.634	C
C-AB	43	388	0.111	43	0.2	11.514	B
C-A	26			26			
A-B	143			143			
A-C	845			845			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	258	541	0.477	262	1.0	14.345	B
B-A	7	267	0.025	7	0.0	15.251	C
C-AB	35	417	0.084	35	0.1	10.373	B
C-A	23			23			
A-B	120			120			
A-C	708			708			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2023 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:11:38

»Junction 3 - 2023 DS, AM
»Junction 3 - 2023 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2023 DS							
Stream B-C	1.0	15.82	0.47	C	6.6	66.04	0.89	F
Stream B-A	0.0	20.65	0.04	C	0.3	104.87	0.23	F
Stream C-AB	0.7	15.24	0.32	C	0.2	13.78	0.16	B

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DS	AM	ONE HOUR	07:45	09:15	15
D2	2023 DS	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2023 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road S		Major
B	Carmanhall Road		Minor
C	Blackthorn Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DS	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1178	100.000
B		✓	207	100.000
C		✓	176	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	442	736
	B	7	0	200
	C	94	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.47	15.82	1.0	C
B-A	0.04	20.65	0.0	C
C-AB	0.32	15.24	0.7	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	151	561	0.268	149	0.4	9.573	A
B-A	5	297	0.018	5	0.0	13.554	B
C-AB	74	441	0.167	73	0.3	10.729	B
C-A	59			59			
A-B	333			333			
A-C	554			554			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	180	523	0.344	179	0.6	11.488	B
B-A	6	258	0.024	6	0.0	15.707	C
C-AB	93	417	0.222	92	0.4	12.196	B
C-A	66			66			
A-B	397			397			
A-C	662			662			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	220	470	0.468	219	0.9	15.642	C
B-A	8	200	0.039	8	0.0	20.564	C
C-AB	124	385	0.322	123	0.7	15.126	C
C-A	70			70			
A-B	487			487			
A-C	810			810			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	220	470	0.468	220	1.0	15.820	C
B-A	8	199	0.039	8	0.0	20.652	C
C-AB	124	385	0.323	124	0.7	15.241	C
C-A	70			70			
A-B	487			487			
A-C	810			810			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	180	523	0.344	181	0.6	11.636	B
B-A	6	258	0.024	6	0.0	15.768	C
C-AB	93	417	0.223	94	0.4	12.308	B
C-A	65			65			
A-B	397			397			
A-C	662			662			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	151	561	0.268	151	0.4	9.679	A
B-A	5	297	0.018	5	0.0	13.595	B
C-AB	74	441	0.167	74	0.3	10.817	B
C-A	59			59			
A-B	333			333			
A-C	554			554			

Junction 3 - 2023 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		16.07	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DS	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1114	100.000
B		✓	362	100.000
C		✓	78	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	174	940
	B	10	0	352
	C	33	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.89	66.04	6.6	F
B-A	0.23	104.87	0.3	F
C-AB	0.16	13.78	0.2	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	539	0.491	261	1.0	14.023	B
B-A	8	266	0.028	7	0.0	15.315	C
C-AB	36	415	0.087	36	0.1	10.427	B
C-A	23			23			
A-B	131			131			
A-C	708			708			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	316	497	0.637	313	1.8	21.190	C
B-A	9	197	0.046	9	0.1	21.015	C
C-AB	44	385	0.114	44	0.2	11.611	B
C-A	26			26			
A-B	156			156			
A-C	845			845			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	388	438	0.885	372	5.6	51.469	F
B-A	11	67	0.165	10	0.2	69.911	F
C-AB	55	343	0.162	55	0.2	13.744	B
C-A	30			30			
A-B	192			192			
A-C	1035			1035			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	388	437	0.886	384	6.6	66.041	F
B-A	11	48	0.229	11	0.3	104.874	F
C-AB	56	343	0.162	56	0.2	13.775	B
C-A	30			30			
A-B	192			192			
A-C	1035			1035			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	316	496	0.638	335	2.1	26.765	D
B-A	9	182	0.049	10	0.1	23.177	C
C-AB	44	385	0.114	44	0.2	11.644	B
C-A	26			26			
A-B	156			156			
A-C	845			845			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	265	539	0.491	269	1.1	14.845	B
B-A	8	262	0.029	8	0.0	15.557	C
C-AB	36	415	0.087	36	0.1	10.463	B
C-A	23			23			
A-B	131			131			
A-C	708			708			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2038 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:12:19

»Junction 3 - 2038 DM, AM
»Junction 3 - 2038 DM, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2038 DM							
Stream B-C	2.7	37.40	0.73	E	287.2	2905.84	2.61	F
Stream B-A	0.2	63.88	0.19	F	37.5	2999.94	2.54	F
Stream C-AB	4.3	22.36	0.65	C	0.6	18.80	0.28	C

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DM	AM	ONE HOUR	07:45	09:15	15
D2	2038 DM	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2038 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1577	100.000
B		✓	263	100.000
C		✓	430	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	678	899
	B	13	0	250
	C	336	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.73	37.40	2.7	E
B-A	0.19	63.88	0.2	F
C-AB	0.65	22.36	4.3	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	188	504	0.374	186	0.6	12.346	B
B-A	10	224	0.044	10	0.0	18.442	C
C-AB	136	529	0.256	133	0.6	9.987	A
C-A	188			188			
A-B	510			510			
A-C	677			677			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	225	454	0.496	223	1.0	17.064	C
B-A	12	167	0.070	12	0.1	25.531	D
C-AB	199	530	0.376	197	1.2	11.968	B
C-A	188			188			
A-B	610			610			
A-C	808			808			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	275	380	0.724	269	2.6	34.028	D
B-A	14	80	0.178	14	0.2	59.045	F
C-AB	344	535	0.643	333	4.0	20.180	C
C-A	129			129			
A-B	746			746			
A-C	990			990			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	275	379	0.727	275	2.7	37.396	E
B-A	14	76	0.188	14	0.2	63.884	F
C-AB	352	542	0.649	350	4.3	22.358	C
C-A	122			122			
A-B	746			746			
A-C	990			990			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	225	453	0.496	231	1.1	18.339	C
B-A	12	162	0.072	12	0.1	26.596	D
C-AB	205	539	0.380	216	1.4	12.913	B
C-A	182			182			
A-B	610			610			
A-C	808			808			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	188	504	0.374	190	0.7	12.697	B
B-A	10	222	0.044	10	0.1	18.668	C
C-AB	138	532	0.259	140	0.7	10.245	B
C-A	186			186			
A-B	510			510			
A-C	677			677			

Junction 3 - 2038 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		775.07	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DM	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1542	100.000
B		✓	606	100.000
C		✓	134	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	220	1322
	B	69	0	537
	C	83	51	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	2.61	2905.84	287.2	F
B-A	2.54	2999.94	37.5	F
C-AB	0.28	18.80	0.6	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	404	412	0.980	368	9.1	66.101	F
B-A	52	62	0.842	42	2.4	166.368	F
C-AB	46	378	0.122	45	0.2	11.879	B
C-A	55			55			
A-B	166			166			
A-C	995			995			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	483	340	1.418	338	45.3	355.655	F
B-A	62	47	1.321	43	7.1	565.729	F
C-AB	59	342	0.172	58	0.3	13.953	B
C-A	62			62			
A-B	198			198			
A-C	1188			1188			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	591	236	2.508	236	134.1	1355.467	F
B-A	76	32	2.387	31	18.2	1580.578	F
C-AB	82	294	0.279	81	0.6	18.614	C
C-A	66			66			
A-B	242			242			
A-C	1456			1456			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	591	227	2.607	227	225.3	2333.175	F
B-A	76	30	2.540	30	29.7	2455.951	F
C-AB	82	294	0.280	82	0.6	18.795	C
C-A	65			65			
A-B	242			242			
A-C	1456			1456			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	483	291	1.661	291	273.3	2736.289	F
B-A	62	38	1.632	38	35.8	2842.788	F
C-AB	59	343	0.172	60	0.3	14.095	B
C-A	61			61			
A-B	198			198			
A-C	1188			1188			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	404	349	1.159	349	287.2	2905.835	F
B-A	52	45	1.144	45	37.5	2999.939	F
C-AB	46	378	0.122	47	0.2	11.961	B
C-A	55			55			
A-B	166			166			
A-C	995			995			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2038 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:14:53

»Junction 3 - 2038 DN, AM
»Junction 3 - 2038 DN, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2038 DN							
Stream B-C	1.1	19.04	0.52	C	28.8	230.67	1.11	F
Stream B-A	0.0	25.78	0.03	D	1.9	713.95	1.10	F
Stream C-AB	1.1	19.08	0.42	C	0.3	15.82	0.20	C

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DN	AM	ONE HOUR	07:45	09:15	15
D2	2038 DN	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2038 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road S		Major
B	Carmanhall Road		Minor
C	Blackthorn Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DN	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1346	100.000
B		✓	206	100.000
C		✓	200	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	493	853
	B	5	0	201
	C	108	92	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.52	19.04	1.1	C
B-A	0.03	25.78	0.0	D
C-AB	0.42	19.08	1.1	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	151	533	0.284	150	0.4	10.289	B
B-A	4	271	0.014	4	0.0	14.784	B
C-AB	86	424	0.202	84	0.3	11.648	B
C-A	65			65			
A-B	371			371			
A-C	642			642			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	181	489	0.369	180	0.6	12.759	B
B-A	4	227	0.020	4	0.0	17.802	C
C-AB	110	397	0.277	109	0.5	13.774	B
C-A	70			70			
A-B	443			443			
A-C	767			767			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	221	429	0.516	219	1.1	18.703	C
B-A	6	160	0.034	5	0.0	25.575	D
C-AB	152	361	0.421	150	1.0	18.753	C
C-A	68			68			
A-B	543			543			
A-C	939			939			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	221	429	0.516	221	1.1	19.038	C
B-A	6	159	0.035	6	0.0	25.778	D
C-AB	153	362	0.422	152	1.1	19.084	C
C-A	68			68			
A-B	543			543			
A-C	939			939			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	181	489	0.369	183	0.7	12.991	B
B-A	4	226	0.020	5	0.0	17.917	C
C-AB	110	398	0.278	112	0.6	14.021	B
C-A	69			69			
A-B	443			443			
A-C	767			767			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	151	533	0.284	152	0.4	10.428	B
B-A	4	271	0.014	4	0.0	14.843	B
C-AB	86	424	0.203	87	0.3	11.795	B
C-A	64			64			
A-B	371			371			
A-C	642			642			

Junction 3 - 2038 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		56.49	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DN	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1263	100.000
B		✓	402	100.000
C		✓	86	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	182	1081
	B	11	0	391
	C	37	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.11	230.67	28.8	F
B-A	1.10	713.95	1.9	F
C-AB	0.20	15.82	0.3	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	294	508	0.579	289	1.4	17.589	C
B-A	8	224	0.037	8	0.0	18.311	C
C-AB	40	394	0.101	39	0.1	11.153	B
C-A	25			25			
A-B	137			137			
A-C	814			814			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	352	460	0.765	345	3.1	32.660	D
B-A	10	131	0.076	10	0.1	32.729	D
C-AB	49	360	0.135	48	0.2	12.719	B
C-A	29			29			
A-B	164			164			
A-C	972			972			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	430	392	1.099	375	17.0	120.919	F
B-A	12	11	1.099	7	1.5	621.306	F
C-AB	62	313	0.199	62	0.3	15.765	C
C-A	33			33			
A-B	200			200			
A-C	1190			1190			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	430	388	1.110	383	28.8	230.665	F
B-A	12	14	0.862	10	1.9	713.949	F
C-AB	62	313	0.199	62	0.3	15.819	C
C-A	32			32			
A-B	200			200			
A-C	1190			1190			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	352	454	0.774	438	7.1	159.667	F
B-A	10	17	0.576	10	1.9	438.333	F
C-AB	49	360	0.135	49	0.2	12.775	B
C-A	29			29			
A-B	164			164			
A-C	972			972			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	294	504	0.584	316	1.6	23.235	C
B-A	8	208	0.040	16	0.0	21.343	C
C-AB	40	394	0.101	40	0.1	11.201	B
C-A	25			25			
A-B	137			137			
A-C	814			814			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 2038 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:15:36

»Junction 3 - 2038 DS, AM
»Junction 3 - 2038 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 3 - 2038 DS							
Stream B-C	1.5	22.37	0.59	C	33.8	263.60	1.14	F
Stream B-A	0.1	28.85	0.06	D	2.0	753.53	1.13	F
Stream C-AB	1.1	19.65	0.43	C	0.3	16.11	0.21	C

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

File summary

File Description

Title	Junction 3
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DS	AM	ONE HOUR	07:45	09:15	15
D2	2038 DS	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 3	100.000

Junction 3 - 2038 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road S		Major
B	Carmanhall Road		Minor
C	Blackthorn Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	6.80	4.29	4.00	4.00	4.00		1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.083	0.209	0.131	0.299
1	B-C	756	0.111	0.280	-	-
1	C-B	574	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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DS	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1356	100.000
B		✓	234	100.000
C		✓	202	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	503	853
	B	8	0	226
	C	108	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.59	22.37	1.5	C
B-A	0.06	28.85	0.1	D
C-AB	0.43	19.65	1.1	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	170	531	0.321	168	0.5	10.857	B
B-A	6	268	0.023	6	0.0	15.123	C
C-AB	88	422	0.208	86	0.3	11.766	B
C-A	64			64			
A-B	379			379			
A-C	642			642			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	203	487	0.417	202	0.8	13.858	B
B-A	7	220	0.033	7	0.0	18.568	C
C-AB	112	395	0.285	112	0.5	13.980	B
C-A	69			69			
A-B	452			452			
A-C	767			767			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	249	425	0.585	246	1.5	21.740	C
B-A	9	148	0.060	9	0.1	28.463	D
C-AB	156	359	0.434	154	1.1	19.280	C
C-A	67			67			
A-B	554			554			
A-C	939			939			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	249	425	0.585	249	1.5	22.370	C
B-A	9	146	0.060	9	0.1	28.851	D
C-AB	156	360	0.435	156	1.1	19.654	C
C-A	66			66			
A-B	554			554			
A-C	939			939			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	203	487	0.417	206	0.8	14.239	B
B-A	7	219	0.033	7	0.0	18.747	C
C-AB	113	396	0.285	115	0.6	14.252	B
C-A	69			69			
A-B	452			452			
A-C	767			767			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	170	531	0.321	171	0.5	11.050	B
B-A	6	267	0.023	6	0.0	15.205	C
C-AB	88	422	0.208	89	0.4	11.921	B
C-A	64			64			
A-B	379			379			
A-C	642			642			

Junction 3 - 2038 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		64.58	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DS	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1277	100.000
B		✓	411	100.000
C		✓	67	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	196	1081
	B	11	0	400
	C	37	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	1.14	263.60	33.8	F
B-A	1.13	753.53	2.0	F
C-AB	0.21	16.11	0.3	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	301	507	0.594	295	1.5	18.182	C
B-A	8	219	0.038	8	0.0	18.731	C
C-AB	41	392	0.103	40	0.1	11.248	B
C-A	25			25			
A-B	148			148			
A-C	814			814			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	360	458	0.785	352	3.4	34.958	D
B-A	10	121	0.082	10	0.1	35.508	E
C-AB	50	357	0.139	49	0.2	12.870	B
C-A	29			29			
A-B	176			176			
A-C	972			972			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	440	390	1.129	376	19.5	133.982	F
B-A	12	11	1.129	6	1.5	643.896	F
C-AB	64	309	0.205	63	0.3	16.055	C
C-A	32			32			
A-B	216			216			
A-C	1190			1190			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	440	386	1.140	383	33.8	263.597	F
B-A	12	14	0.893	10	2.0	753.533	F
C-AB	64	310	0.205	64	0.3	16.115	C
C-A	32			32			
A-B	216			216			
A-C	1190			1190			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	360	453	0.794	438	14.1	203.447	F
B-A	10	16	0.601	10	2.0	455.531	F
C-AB	50	357	0.139	50	0.2	12.930	B
C-A	29			29			
A-B	176			176			
A-C	972			972			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	301	502	0.599	351	1.8	33.769	D
B-A	8	181	0.046	16	0.1	25.012	D
C-AB	41	392	0.104	41	0.1	11.297	B
C-A	25			25			
A-B	148			148			
A-C	814			814			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2019 Base.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:16:01

»Junction 4 - 2019 Base, AM
»Junction 4 - 2019 Base, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2019 Base							
Stream B-C	0.1	7.41	0.08	A	0.1	7.14	0.08	A
Stream B-A	0.2	10.91	0.16	B	0.3	9.87	0.19	A
Stream C-AB	0.8	6.99	0.29	A	0.4	5.86	0.17	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15
D2	2019 Base	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	604	0.076	0.193	0.122	0.276
1	B-C	692	0.074	0.186	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	537	100.000
B		✓	104	100.000
C		✓	485	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	201	336
	B	64	0	40
	C	390	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.08	7.41	0.1	A
B-A	0.16	10.91	0.2	B
C-AB	0.29	6.99	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	617	0.049	30	0.1	6.741	A
B-A	48	488	0.099	48	0.1	8.991	A
C-AB	121	722	0.167	119	0.4	6.569	A
C-A	245			245			
A-B	151			151			
A-C	253			253			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	36	601	0.060	36	0.1	7.002	A
B-A	58	465	0.124	57	0.2	9.715	A
C-AB	161	753	0.213	160	0.5	6.690	A
C-A	275			275			
A-B	181			181			
A-C	302			302			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	579	0.076	44	0.1	7.403	A
B-A	70	433	0.163	70	0.2	10.896	B
C-AB	228	797	0.286	227	0.8	6.962	A
C-A	306			306			
A-B	221			221			
A-C	370			370			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	579	0.076	44	0.1	7.406	A
B-A	70	433	0.163	70	0.2	10.914	B
C-AB	229	798	0.287	229	0.8	6.988	A
C-A	305			305			
A-B	221			221			
A-C	370			370			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	36	601	0.060	36	0.1	7.010	A
B-A	58	465	0.124	58	0.2	9.739	A
C-AB	161	754	0.214	162	0.5	6.726	A
C-A	275			275			
A-B	181			181			
A-C	302			302			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	617	0.049	30	0.1	6.752	A
B-A	48	487	0.099	48	0.1	9.022	A
C-AB	121	722	0.168	122	0.4	6.616	A
C-A	244			244			
A-B	151			151			
A-C	253			253			

Junction 4 - 2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019 Base	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	290	100.000
B		✓	118	100.000
C		✓	463	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	104	186
	B	88	0	30
	C	403	60	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.14	0.1	A
B-A	0.19	9.87	0.3	A
C-AB	0.17	5.86	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	616	0.037	22	0.0	6.668	A
B-A	66	538	0.123	66	0.2	8.372	A
C-AB	76	753	0.101	75	0.2	5.843	A
C-A	273			273			
A-B	78			78			
A-C	140			140			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	605	0.045	27	0.1	6.855	A
B-A	79	521	0.152	79	0.2	8.953	A
C-AB	100	789	0.127	100	0.3	5.756	A
C-A	316			316			
A-B	93			93			
A-C	167			167			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	588	0.056	33	0.1	7.140	A
B-A	97	498	0.194	97	0.3	9.853	A
C-AB	141	839	0.168	140	0.4	5.675	A
C-A	369			369			
A-B	115			115			
A-C	205			205			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	587	0.056	33	0.1	7.142	A
B-A	97	498	0.195	97	0.3	9.868	A
C-AB	141	840	0.168	141	0.4	5.681	A
C-A	369			369			
A-B	115			115			
A-C	205			205			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	604	0.045	27	0.1	6.862	A
B-A	79	521	0.152	79	0.2	8.968	A
C-AB	100	789	0.127	101	0.3	5.769	A
C-A	316			316			
A-B	93			93			
A-C	167			167			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	616	0.037	23	0.0	6.678	A
B-A	66	538	0.123	66	0.2	8.403	A
C-AB	76	753	0.101	76	0.2	5.862	A
C-A	272			272			
A-B	78			78			
A-C	140			140			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2023 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:16:28

»Junction 4 - 2023 DM, AM
»Junction 4 - 2023 DM, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2023 DM							
Stream B-C	0.1	7.75	0.08	A	0.1	7.28	0.06	A
Stream B-A	0.3	11.70	0.21	B	0.3	10.26	0.22	B
Stream C-AB	0.9	7.12	0.31	A	0.5	5.83	0.18	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DM	AM	ONE HOUR	07:45	09:15	15
D2	2023 DM	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2023 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	610	0.077	0.195	0.123	0.279
1	B-C	684	0.073	0.184	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	572	100.000
B		✓	123	100.000
C		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	217	355
	B	81	0	42
	C	412	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.08	7.75	0.1	A
B-A	0.21	11.70	0.3	B
C-AB	0.31	7.12	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	602	0.053	31	0.1	6.938	A
B-A	61	486	0.125	60	0.2	9.290	A
C-AB	131	730	0.179	129	0.4	6.578	A
C-A	255			255			
A-B	163			163			
A-C	267			267			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	584	0.065	38	0.1	7.249	A
B-A	73	462	0.158	73	0.2	10.176	B
C-AB	176	764	0.230	175	0.6	6.741	A
C-A	285			285			
A-B	195			195			
A-C	319			319			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	558	0.083	46	0.1	7.741	A
B-A	89	428	0.208	89	0.3	11.670	B
C-AB	252	811	0.310	250	0.9	7.090	A
C-A	312			312			
A-B	239			239			
A-C	391			391			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	557	0.083	46	0.1	7.746	A
B-A	89	428	0.209	89	0.3	11.699	B
C-AB	252	812	0.311	252	0.9	7.119	A
C-A	311			311			
A-B	239			239			
A-C	391			391			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	584	0.065	38	0.1	7.259	A
B-A	73	461	0.158	73	0.2	10.212	B
C-AB	176	765	0.231	178	0.6	6.781	A
C-A	284			284			
A-B	195			195			
A-C	319			319			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	601	0.053	32	0.1	6.950	A
B-A	61	486	0.126	61	0.2	9.332	A
C-AB	132	731	0.180	133	0.4	6.640	A
C-A	254			254			
A-B	163			163			
A-C	267			267			

Junction 4 - 2023 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DM	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	310	100.000
B		✓	128	100.000
C		✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	114	196
	B	96	0	32
	C	425	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.28	0.1	A
B-A	0.22	10.26	0.3	B
C-AB	0.18	5.83	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	611	0.039	24	0.0	6.741	A
B-A	72	534	0.135	72	0.2	8.558	A
C-AB	82	762	0.107	81	0.2	5.811	A
C-A	286			286			
A-B	86			86			
A-C	148			148			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	598	0.048	29	0.1	6.950	A
B-A	86	516	0.167	86	0.2	9.209	A
C-AB	109	801	0.136	109	0.3	5.728	A
C-A	330			330			
A-B	102			102			
A-C	176			176			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	580	0.061	35	0.1	7.274	A
B-A	106	492	0.215	105	0.3	10.246	B
C-AB	154	854	0.181	154	0.5	5.665	A
C-A	383			383			
A-B	126			126			
A-C	216			216			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	579	0.061	35	0.1	7.277	A
B-A	106	491	0.215	106	0.3	10.265	B
C-AB	155	854	0.181	155	0.5	5.674	A
C-A	383			383			
A-B	126			126			
A-C	216			216			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	598	0.048	29	0.1	6.955	A
B-A	86	516	0.167	87	0.2	9.233	A
C-AB	109	801	0.136	110	0.3	5.745	A
C-A	330			330			
A-B	102			102			
A-C	176			176			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	611	0.039	24	0.0	6.752	A
B-A	72	533	0.135	72	0.2	8.593	A
C-AB	82	763	0.108	83	0.2	5.832	A
C-A	285			285			
A-B	86			86			
A-C	148			148			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2023 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:16:53

»Junction 4 - 2023 DN, AM
»Junction 4 - 2023 DN, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2023 DN							
Stream B-C	0.1	7.55	0.06	A	0.1	7.24	0.06	A
Stream B-A	0.2	11.34	0.18	B	0.3	10.19	0.21	B
Stream C-AB	0.9	7.11	0.31	A	0.5	5.83	0.18	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DN	AM	ONE HOUR	07:45	09:15	15
D2	2023 DN	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2023 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	604	0.077	0.193	0.122	0.276
1	B-C	691	0.074	0.186	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DN	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	567	100.000
B		✓	110	100.000
C		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	212	355
	B	68	0	42
	C	412	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.08	7.55	0.1	A
B-A	0.18	11.34	0.2	B
C-AB	0.31	7.11	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	612	0.052	31	0.1	6.814	A
B-A	51	482	0.106	51	0.1	9.178	A
C-AB	131	731	0.179	129	0.4	6.572	A
C-A	255			255			
A-B	160			160			
A-C	267			267			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	595	0.063	38	0.1	7.101	A
B-A	61	457	0.134	61	0.2	9.981	A
C-AB	175	764	0.230	175	0.6	6.731	A
C-A	285			285			
A-B	191			191			
A-C	319			319			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	571	0.081	46	0.1	7.545	A
B-A	75	424	0.177	75	0.2	11.321	B
C-AB	252	812	0.310	250	0.9	7.079	A
C-A	312			312			
A-B	233			233			
A-C	391			391			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	571	0.081	46	0.1	7.548	A
B-A	75	424	0.177	75	0.2	11.342	B
C-AB	252	812	0.310	252	0.9	7.107	A
C-A	312			312			
A-B	233			233			
A-C	391			391			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	595	0.063	38	0.1	7.107	A
B-A	61	457	0.134	61	0.2	10.013	B
C-AB	176	765	0.230	177	0.6	6.773	A
C-A	284			284			
A-B	191			191			
A-C	319			319			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	612	0.052	32	0.1	6.829	A
B-A	51	481	0.106	51	0.1	9.214	A
C-AB	132	731	0.180	132	0.4	6.634	A
C-A	254			254			
A-B	160			160			
A-C	267			267			

Junction 4 - 2023 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DN	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	306	100.000
B		✓	125	100.000
C		✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	110	196
	B	93	0	32
	C	425	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.24	0.1	A
B-A	0.21	10.19	0.3	B
C-AB	0.18	5.83	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	613	0.039	24	0.0	6.718	A
B-A	70	533	0.131	69	0.2	8.526	A
C-AB	82	763	0.107	81	0.2	5.808	A
C-A	286			286			
A-B	83			83			
A-C	148			148			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	601	0.048	29	0.1	6.922	A
B-A	84	516	0.162	83	0.2	9.161	A
C-AB	109	801	0.136	108	0.3	5.724	A
C-A	330			330			
A-B	99			99			
A-C	176			176			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	582	0.061	35	0.1	7.237	A
B-A	102	491	0.208	102	0.3	10.168	B
C-AB	154	855	0.180	154	0.5	5.658	A
C-A	383			383			
A-B	121			121			
A-C	216			216			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	582	0.061	35	0.1	7.239	A
B-A	102	491	0.208	102	0.3	10.186	B
C-AB	154	855	0.181	154	0.5	5.669	A
C-A	383			383			
A-B	121			121			
A-C	216			216			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	600	0.048	29	0.1	6.929	A
B-A	84	515	0.162	84	0.2	9.184	A
C-AB	109	801	0.136	110	0.3	5.741	A
C-A	330			330			
A-B	99			99			
A-C	176			176			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	613	0.039	24	0.0	6.729	A
B-A	70	533	0.131	70	0.2	8.562	A
C-AB	82	763	0.108	83	0.2	5.831	A
C-A	285			285			
A-B	83			83			
A-C	148			148			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2023 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:17:22

»Junction 4 - 2023 DS, AM
»Junction 4 - 2023 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2023 DS							
Stream B-C	0.1	7.75	0.06	A	0.1	7.28	0.06	A
Stream B-A	0.3	11.70	0.21	B	0.3	10.26	0.22	B
Stream C-AB	0.9	7.12	0.31	A	0.5	5.83	0.18	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DS	AM	ONE HOUR	07:45	09:15	15
D2	2023 DS	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2023 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	610	0.077	0.195	0.123	0.279
1	B-C	684	0.073	0.184	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 DS	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	572	100.000
B		✓	123	100.000
C		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	217	355
	B	81	0	42
	C	412	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.08	7.75	0.1	A
B-A	0.21	11.70	0.3	B
C-AB	0.31	7.12	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	602	0.053	31	0.1	6.938	A
B-A	61	486	0.125	60	0.2	9.290	A
C-AB	131	730	0.179	129	0.4	6.578	A
C-A	255			255			
A-B	163			163			
A-C	267			267			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	584	0.065	38	0.1	7.249	A
B-A	73	462	0.158	73	0.2	10.176	B
C-AB	176	764	0.230	175	0.6	6.741	A
C-A	285			285			
A-B	195			195			
A-C	319			319			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	558	0.083	46	0.1	7.741	A
B-A	89	428	0.208	89	0.3	11.670	B
C-AB	252	811	0.310	250	0.9	7.090	A
C-A	312			312			
A-B	239			239			
A-C	391			391			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	46	557	0.083	46	0.1	7.746	A
B-A	89	428	0.209	89	0.3	11.699	B
C-AB	252	812	0.311	252	0.9	7.119	A
C-A	311			311			
A-B	239			239			
A-C	391			391			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	584	0.065	38	0.1	7.259	A
B-A	73	461	0.158	73	0.2	10.212	B
C-AB	176	765	0.231	178	0.6	6.781	A
C-A	284			284			
A-B	195			195			
A-C	319			319			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	601	0.053	32	0.1	6.950	A
B-A	61	486	0.126	61	0.2	9.332	A
C-AB	132	731	0.180	133	0.4	6.640	A
C-A	254			254			
A-B	163			163			
A-C	267			267			

Junction 4 - 2023 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 DS	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	310	100.000
B		✓	128	100.000
C		✓	488	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	114	196
	B	96	0	32
	C	425	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.28	0.1	A
B-A	0.22	10.26	0.3	B
C-AB	0.18	5.83	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	611	0.039	24	0.0	6.741	A
B-A	72	534	0.135	72	0.2	8.558	A
C-AB	82	762	0.107	81	0.2	5.811	A
C-A	286			286			
A-B	86			86			
A-C	148			148			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	598	0.048	29	0.1	6.950	A
B-A	86	516	0.167	86	0.2	9.209	A
C-AB	109	801	0.136	109	0.3	5.728	A
C-A	330			330			
A-B	102			102			
A-C	176			176			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	580	0.061	35	0.1	7.274	A
B-A	106	492	0.215	105	0.3	10.246	B
C-AB	154	854	0.181	154	0.5	5.665	A
C-A	383			383			
A-B	126			126			
A-C	216			216			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	579	0.061	35	0.1	7.277	A
B-A	106	491	0.215	106	0.3	10.265	B
C-AB	155	854	0.181	155	0.5	5.674	A
C-A	383			383			
A-B	126			126			
A-C	216			216			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	598	0.048	29	0.1	6.955	A
B-A	86	516	0.167	87	0.2	9.233	A
C-AB	109	801	0.136	110	0.3	5.745	A
C-A	330			330			
A-B	102			102			
A-C	176			176			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	611	0.039	24	0.0	6.752	A
B-A	72	533	0.135	72	0.2	8.593	A
C-AB	82	763	0.108	83	0.2	5.832	A
C-A	285			285			
A-B	86			86			
A-C	148			148			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2038 DM.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:17:49

»Junction 4 - 2038 DM, AM
»Junction 4 - 2038 DM, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2038 DM							
Stream B-C	0.1	8.20	0.10	A	0.1	7.56	0.07	A
Stream B-A	0.4	13.19	0.25	B	0.4	11.19	0.25	B
Stream C-AB	1.3	7.62	0.38	A	0.6	5.78	0.22	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DM	AM	ONE HOUR	07:45	09:15	15
D2	2038 DM	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2038 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	608	0.077	0.195	0.123	0.278
1	B-C	686	0.073	0.185	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	650	100.000
B		✓	141	100.000
C		✓	585	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	246	404
	B	91	0	50
	C	471	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	8.20	0.1	A
B-A	0.25	13.19	0.4	B
C-AB	0.38	7.62	1.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	592	0.064	37	0.1	7.138	A
B-A	69	467	0.147	68	0.2	9.898	A
C-AB	162	755	0.215	160	0.5	6.652	A
C-A	279			279			
A-B	185			185			
A-C	304			304			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	571	0.079	45	0.1	7.533	A
B-A	82	439	0.186	82	0.2	11.065	B
C-AB	221	794	0.279	220	0.7	6.919	A
C-A	305			305			
A-B	221			221			
A-C	363			363			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	538	0.102	55	0.1	8.191	A
B-A	100	401	0.250	100	0.4	13.140	B
C-AB	325	850	0.383	323	1.3	7.561	A
C-A	319			319			
A-B	271			271			
A-C	445			445			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	538	0.102	55	0.1	8.201	A
B-A	100	400	0.250	100	0.4	13.192	B
C-AB	326	851	0.384	326	1.3	7.616	A
C-A	318			318			
A-B	271			271			
A-C	445			445			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	570	0.079	45	0.1	7.547	A
B-A	82	439	0.186	82	0.3	11.120	B
C-AB	222	796	0.279	224	0.8	6.991	A
C-A	304			304			
A-B	221			221			
A-C	363			363			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	591	0.064	38	0.1	7.157	A
B-A	69	467	0.147	69	0.2	9.959	A
C-AB	163	756	0.216	164	0.5	6.723	A
C-A	277			277			
A-B	185			185			
A-C	304			304			

Junction 4 - 2038 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DM	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	350	100.000
B		✓	145	100.000
C		✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	128	222
	B	109	0	36
	C	481	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	7.56	0.1	A
B-A	0.25	11.19	0.4	B
C-AB	0.22	5.78	0.6	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	603	0.045	27	0.1	6.878	A
B-A	82	522	0.157	81	0.2	8.971	A
C-AB	100	788	0.127	99	0.3	5.748	A
C-A	316			316			
A-B	96			96			
A-C	167			167			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	587	0.055	32	0.1	7.136	A
B-A	98	502	0.195	98	0.3	9.796	A
C-AB	136	832	0.163	135	0.4	5.693	A
C-A	362			362			
A-B	115			115			
A-C	200			200			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	564	0.070	40	0.1	7.552	A
B-A	120	474	0.253	120	0.4	11.161	B
C-AB	196	893	0.220	195	0.6	5.685	A
C-A	413			413			
A-B	141			141			
A-C	244			244			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	564	0.070	40	0.1	7.556	A
B-A	120	474	0.253	120	0.4	11.191	B
C-AB	196	894	0.220	196	0.6	5.699	A
C-A	412			412			
A-B	141			141			
A-C	244			244			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	587	0.055	32	0.1	7.145	A
B-A	98	502	0.195	98	0.3	9.833	A
C-AB	136	833	0.163	137	0.4	5.712	A
C-A	361			361			
A-B	115			115			
A-C	200			200			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	602	0.045	27	0.1	6.888	A
B-A	82	522	0.157	82	0.2	9.019	A
C-AB	101	789	0.128	101	0.3	5.777	A
C-A	315			315			
A-B	96			96			
A-C	167			167			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2038 DN.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:18:47

»Junction 4 - 2038 DN, AM
»Junction 4 - 2038 DN, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2038 DN							
Stream B-C	0.1	7.96	0.10	A	0.1	7.50	0.07	A
Stream B-A	0.3	12.68	0.21	B	0.4	11.07	0.24	B
Stream C-AB	1.3	7.60	0.38	A	0.6	5.77	0.22	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DN	AM	ONE HOUR	07:45	09:15	15
D2	2038 DN	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2038 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	602	0.076	0.193	0.121	0.276
1	B-C	694	0.074	0.187	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DN	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	645	100.000
B		✓	127	100.000
C		✓	585	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	241	404
	B	77	0	50
	C	471	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	7.96	0.1	A
B-A	0.21	12.68	0.3	B
C-AB	0.38	7.60	1.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	602	0.062	37	0.1	7.005	A
B-A	58	463	0.125	57	0.2	9.747	A
C-AB	162	755	0.214	160	0.5	8.646	A
C-A	279			279			
A-B	181			181			
A-C	304			304			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	582	0.077	45	0.1	7.366	A
B-A	69	435	0.159	69	0.2	10.802	B
C-AB	221	794	0.278	220	0.7	6.910	A
C-A	305			305			
A-B	217			217			
A-C	363			363			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	553	0.100	55	0.1	7.948	A
B-A	85	397	0.213	84	0.3	12.637	B
C-AB	325	850	0.382	323	1.3	7.547	A
C-A	319			319			
A-B	265			265			
A-C	445			445			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	553	0.100	55	0.1	7.956	A
B-A	85	397	0.213	85	0.3	12.676	B
C-AB	326	851	0.383	326	1.3	7.605	A
C-A	318			318			
A-B	265			265			
A-C	445			445			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	582	0.077	45	0.1	7.378	A
B-A	69	435	0.159	70	0.2	10.845	B
C-AB	222	796	0.279	224	0.8	6.982	A
C-A	304			304			
A-B	217			217			
A-C	363			363			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	602	0.063	38	0.1	7.019	A
B-A	58	463	0.125	58	0.2	9.800	A
C-AB	163	756	0.216	164	0.5	6.719	A
C-A	277			277			
A-B	181			181			
A-C	304			304			

Junction 4 - 2038 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DN	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	346	100.000
B		✓	141	100.000
C		✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	124	222
	B	105	0	36
	C	481	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	7.50	0.1	A
B-A	0.24	11.07	0.4	B
C-AB	0.22	5.77	0.6	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	605	0.045	27	0.1	6.848	A
B-A	79	521	0.152	78	0.2	8.925	A
C-AB	100	788	0.127	99	0.3	5.744	A
C-A	316			316			
A-B	93			93			
A-C	167			167			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	590	0.055	32	0.1	7.098	A
B-A	94	501	0.188	94	0.3	9.725	A
C-AB	135	832	0.163	135	0.4	5.686	A
C-A	362			362			
A-B	111			111			
A-C	200			200			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	568	0.070	40	0.1	7.498	A
B-A	116	474	0.244	115	0.3	11.039	B
C-AB	196	894	0.219	195	0.6	5.680	A
C-A	413			413			
A-B	137			137			
A-C	244			244			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	567	0.070	40	0.1	7.502	A
B-A	116	473	0.244	116	0.4	11.066	B
C-AB	196	894	0.220	196	0.6	5.695	A
C-A	413			413			
A-B	137			137			
A-C	244			244			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	590	0.055	32	0.1	7.107	A
B-A	94	501	0.188	95	0.3	9.758	A
C-AB	136	833	0.163	137	0.4	5.708	A
C-A	361			361			
A-B	111			111			
A-C	200			200			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	605	0.045	27	0.1	6.858	A
B-A	79	521	0.152	79	0.2	8.970	A
C-AB	101	789	0.128	101	0.3	5.773	A
C-A	315			315			
A-B	93			93			
A-C	167			167			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 2038 DS.j9
Path: N:\Projects\R-Jobs\R478\1.0 WIP\DESIGN\CIVIL\CALCS
Report generation date: 08/07/2019 14:19:14

»Junction 4 - 2038 DS, AM
»Junction 4 - 2038 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Junction 4 - 2038 DS							
Stream B-C	0.1	8.20	0.10	A	0.1	7.56	0.07	A
Stream B-A	0.4	13.19	0.25	B	0.4	11.19	0.25	B
Stream C-AB	1.3	7.62	0.38	A	0.6	5.78	0.22	A

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

File summary

File Description

Title	Junction 4
Location	
Site number	
Date	12/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OCSC\shane.mcgivney
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DS	AM	ONE HOUR	07:45	09:15	15
D2	2038 DS	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Junction 4	100.000

Junction 4 - 2038 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Blackthorn Road W		Major
B	Corrig Road		Minor
C	Blackthorn Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.00			0.0	✓	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

Arm	Minor arm type	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)
B	One lane plus flare	9.50	5.50	4.20	4.00	4.00	✓	1.00	75	75

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	608	0.077	0.195	0.123	0.278
1	B-C	686	0.073	0.185	-	-
1	C-B	574	0.155	0.155	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038 DS	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	650	100.000
B		✓	141	100.000
C		✓	585	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	246	404
	B	91	0	50
	C	471	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	8.20	0.1	A
B-A	0.25	13.19	0.4	B
C-AB	0.38	7.62	1.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	592	0.064	37	0.1	7.138	A
B-A	69	467	0.147	68	0.2	9.898	A
C-AB	162	755	0.215	160	0.5	6.652	A
C-A	279			279			
A-B	185			185			
A-C	304			304			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	571	0.079	45	0.1	7.533	A
B-A	82	439	0.186	82	0.2	11.065	B
C-AB	221	794	0.279	220	0.7	6.919	A
C-A	305			305			
A-B	221			221			
A-C	363			363			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	538	0.102	55	0.1	8.191	A
B-A	100	401	0.250	100	0.4	13.140	B
C-AB	325	850	0.383	323	1.3	7.561	A
C-A	319			319			
A-B	271			271			
A-C	445			445			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	538	0.102	55	0.1	8.201	A
B-A	100	400	0.250	100	0.4	13.192	B
C-AB	326	851	0.384	326	1.3	7.616	A
C-A	318			318			
A-B	271			271			
A-C	445			445			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	570	0.079	45	0.1	7.547	A
B-A	82	439	0.186	82	0.3	11.120	B
C-AB	222	796	0.279	224	0.8	6.991	A
C-A	304			304			
A-B	221			221			
A-C	363			363			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	591	0.064	38	0.1	7.157	A
B-A	69	467	0.147	69	0.2	9.959	A
C-AB	163	756	0.216	164	0.5	6.723	A
C-A	277			277			
A-B	185			185			
A-C	304			304			

Junction 4 - 2038 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2038 DS	PM	ONE HOUR	16:00	17:30	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	350	100.000
B		✓	145	100.000
C		✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	128	222
	B	109	0	36
	C	481	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Generated on 08/07/2019 14:19:23 using Junctions 9 (9.5.0.6896)

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	7.56	0.1	A
B-A	0.25	11.19	0.4	B
C-AB	0.22	5.78	0.6	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	603	0.045	27	0.1	6.878	A
B-A	82	522	0.157	81	0.2	8.971	A
C-AB	100	788	0.127	99	0.3	5.748	A
C-A	316			316			
A-B	96			96			
A-C	167			167			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	587	0.055	32	0.1	7.136	A
B-A	98	502	0.195	98	0.3	9.796	A
C-AB	136	832	0.163	135	0.4	5.693	A
C-A	362			362			
A-B	115			115			
A-C	200			200			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	564	0.070	40	0.1	7.552	A
B-A	120	474	0.253	120	0.4	11.161	B
C-AB	196	893	0.220	195	0.6	5.685	A
C-A	413			413			
A-B	141			141			
A-C	244			244			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	564	0.070	40	0.1	7.556	A
B-A	120	474	0.253	120	0.4	11.191	B
C-AB	196	894	0.220	196	0.6	5.699	A
C-A	412			412			
A-B	141			141			
A-C	244			244			

Generated on 08/07/2019 14:19:23 using Junctions 9 (9.5.0.6896)

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	587	0.055	32	0.1	7.145	A
B-A	98	502	0.195	98	0.3	9.833	A
C-AB	136	833	0.163	137	0.4	5.712	A
C-A	361			361			
A-B	115			115			
A-C	200			200			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	602	0.045	27	0.1	6.888	A
B-A	82	522	0.157	82	0.2	9.019	A
C-AB	101	789	0.128	101	0.3	5.777	A
C-A	315			315			
A-B	96			96			
A-C	167			167			

Appendix E: Gocar Letter

The Sandyford Central Partnership,
Sandyford GP Limited
Embassy House,
Ballsbridge,
Dublin 4

To Whom It May Concern,

This is a letter to confirm that GoCar intends to provide a 10-vehicle shared car club service in the proposed Sandyford Central residential development opposite the Stillorgan Green Luas station in Sandyford. GoCar representatives have discussed the project with representatives of the partnership responsible for this proposed development and are excited to provide a car club at this location.

It is understood that the vehicles situated at this development will be used exclusively by the residents living therein. GoCar will work with the eventual management company to work out how best to sign residents up to the service as the development comes online.

GoCar is Ireland's leading car sharing service with over 50,000 members and over 700 cars and vans on fleet. Each GoCar which is placed in a community has the potential to replace the journeys of up to 15 private cars. The Department of Housing's Design Standards for New Apartments - Guidelines for Planning Authorities 2018 outline: "For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure... provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles."

Carsharing is a sustainable service. By allowing multiple people to use the same vehicle at different times, car sharing reduces car ownership, car dependency, congestion, noise and air pollution. It frees up land which would otherwise be used for additional parking spaces. Most GoCar users only use a car when necessary, and walk and use public transport more often than car owners.

By having GoCar vehicles in a residential development such as this, residents will have access to pay-as-you-go driving, in close proximity to their homes, which will increase usership of the service.

I trust that this information is satisfactory. For any queries, please do not hesitate to contact me.

Regards,

Rob Kearns
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GoCar Carsharing Limited
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E: rob.kearns@gocar.ie

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